SmartPTT

SmartPTT Enterprise 9.12.100

Dispatcher Guide

Revision History

Revision	Description	Date

4.1	Fifth release of the document. The document is compliant with SmartPTT Enterprise 9.12.100.
	
	• Multiple enhancements
	
	• Modified:
	
	    • Licenses
	
	    • Configuring SmartPTT Dispatcher at First Start
	
	    • Operators
	
	    • Viewing License Items
	
	    • Installing License
	
	    • Configuring Radio GPS Settings
	
	    • Managing Operator Accounts
		April 2023

4.0	Fourth release of the document. The document is compliant with SmartPTT Enterprise 9.12.	November 2022
3.0	Third release of the document. The document is compliant with SmartPTT Enterprise 9.11.	July 2022
2.0	Second release of the document. The document is compliant with SmartPTT Enterprise 9.10.	October 2021
1.0	First release of the document. The document replaces SmartPTT Dispatcher Guide. The document is compliant with SmartPTT Enterprise 9.9.	July 2021

Contents

About This Document

This document provides information on the dispatch console configuration and dispatch functions. It is intended for dispatch console administrators who configure SmartPTT Dispatcher and operators who will use it.

Additional Information

The document assumes that radioserver is properly configured and started. All the required configuration is presented in *SmartPTT Installation and Configuration Guide*.

The document does **not** provide information on dispatch console computer configuration and its operating system administration. All the necessary information can be obtained from the Microsoft Docs website, a Microsoft documentation storage for end users, developers, and IT professionals.

Chapter 1. First Start

1.1 Configuring SmartPTT Dispatcher at First Start

Follow the procedure to configure SmartPTT Dispatcher at its first startup.

Prerequisites:

- Install SmartPTT. For details, see "Software Installation" in *SmartPTT Installation and Configuration Guide*.

- Obtain the IP address / domain name of the DBMS host.

- Obtain the DBMS process name.

- To use SQL Server authorization, obtain the corresponding credentials. For details, see "Adding SQL Server Users" in *SmartPTT Installation and Configuration Guide*.

- *(Optional)* Configure and start the desired radioserver.

- *(Optional)* From the desired radioserver configuration, obtain the following information:

  - IP address or domain name of the computer with installed radioserver.

  - Radioserver WCF port (default value: *8888*).

  - Client name and password (if authentication for desktop clients is used on the radioserver).
    For information on the radioserver configuration for SmartPTT Dispatcher connection, see "Configuring Desktop Clients Connection" in *SmartPTT Installation and Configuration Guide*.

Procedure:

1. Start SmartPTT Dispatcher (Client.exe).
   The **Select Language** window appears.
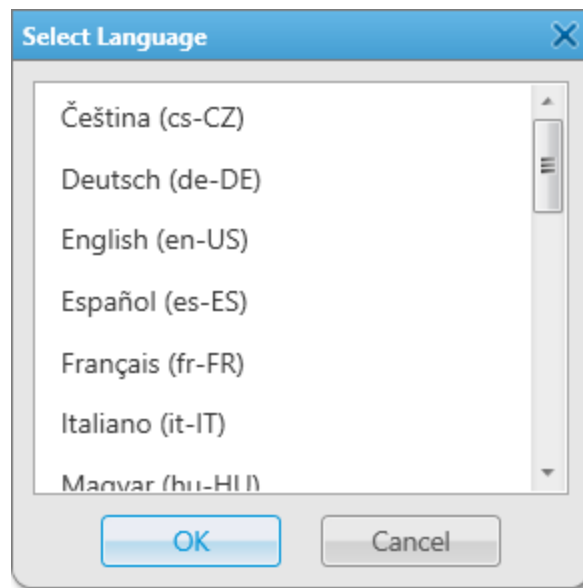
2. In the window that appears, select the desired language for the SmartPTT Dispatcher interface and click **OK**.
   The Configuration Wizard appears.

3. In the Configuration Wizard click **Next**.
   The **Database** window appears.

4. In the **Database** window, in the **Database server name** field, type the DBMS address.

> **NOTE**
> For a database server installed with the SmartPTT Dispatcher application, type the address using the following format:
> *<Computer Name>\SQLExpress* (for example, *MYCOMP\SQLExpress*).

5. Configure authorization:

To use Windows authorization,	from the **Authorization mode** list, select *Windows NT Authorization*.
To use DBMS authorization,	perform the following actions: 1. From the **Authorization mode** list, select *SQL Server Authorization*. 2. In the **Account name** field, type the SQL Server account login. 3. In the **Password** field, type the SQL Server account password.

6. Click **Establish Connection** to connect to SQL Server.
    If connection is successful, in the **Database** area, the *Connection to the database server is established* message appears.
    Otherwise, at the bottom of the window, the message with an error description appears.

7.   In the **Database** area, click **Create database**.
     The **Create Database** window appears.
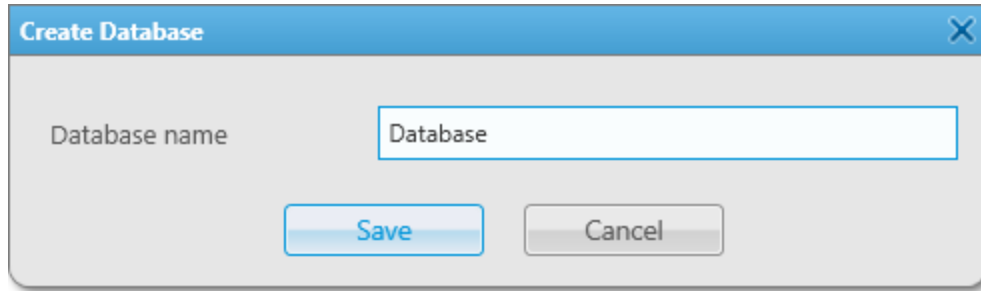
8.   In the window that appears, in the **Database name** field, type the name of the new database, and then click **Save**.
     If creation is successful, in the **Database** area of the **Database** window, the *Database <database name> was successfully created!*
     message appears.

9.   In the **Database** window, click **Next**.
     The **Radioservers** window appears.
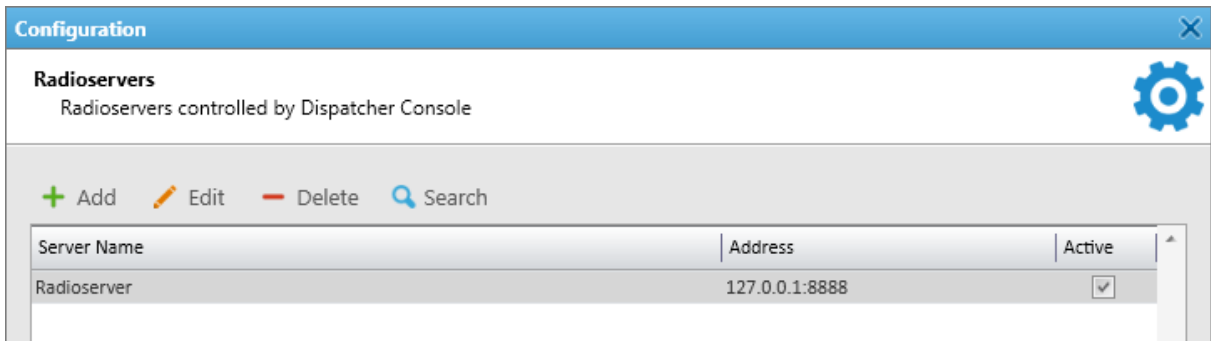
10. *(Optional)* In the window that appears, configure the desired radioserver connection:

     a.   Click **Add**.
          The **Radioserver** window appears.
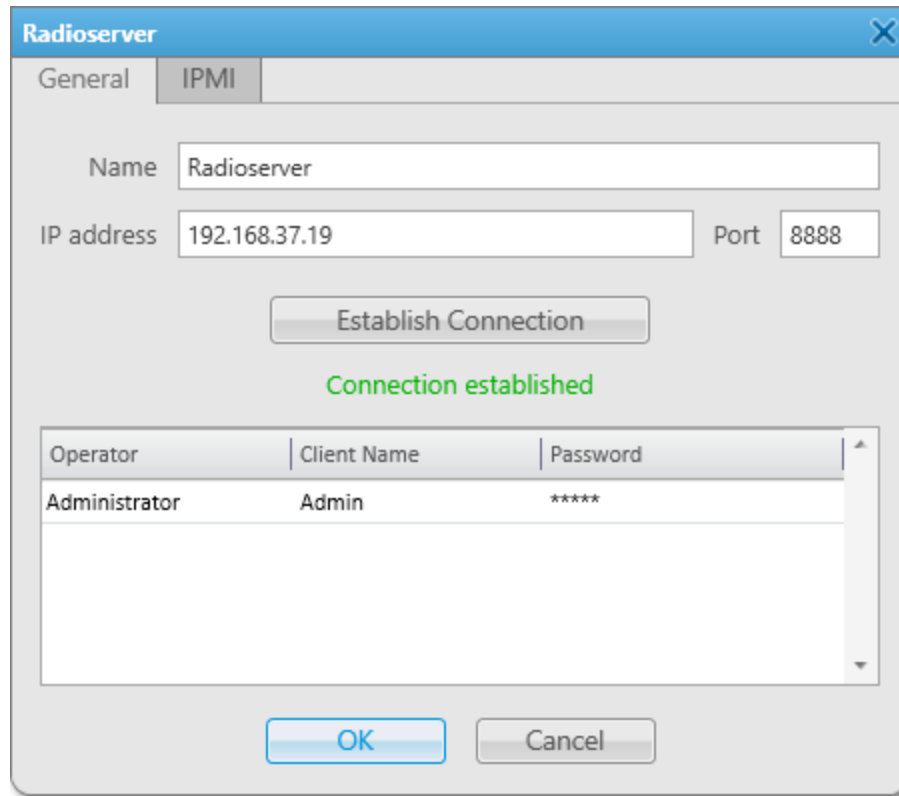
b. In the **Radioserver** window, open the **General** tab.

c. In the **Name** field, type the desired radioserver name.

d. In the **IP Address** field, type the IP address of the radioserver or domain name of the computer with installed radioserver.

e. In the **Port** field, enter the radioserver WCF port number. The default value is *8888*.

f. Click **Establish Connection** to connect to the specified radioserver.

g. *(Optional)* If server authentication is enabled in SmartPTT Radioserver Configurator, the Operator Table appears in the window. In the *Administrator* entry, perform the following actions:

   i. In the **Client Name** column, type the client account name configured in SmartPTT Radioserver Configurator.

   ii. In the **Password** column, type the client account password configured in SmartPTT Radioserver Configurator. For details, see "Managing Account Parameters" in *SmartPTT Installation and Configuration Guide*.

h. Click **OK** to confirm changes and close the window.

11. In the **Radioservers** window, click **Finish**.
The **Authorization** window appears.
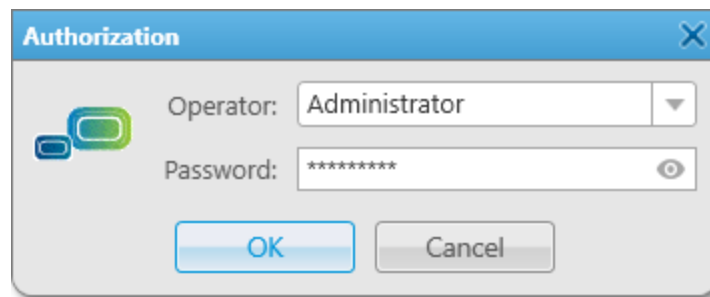
12. Leave the **Password** field empty and click **OK**.
The **Set Password** window appears. When you start the SmartPTT Dispatcher application for the first time, the password for the *Administrator* account is absent by default.
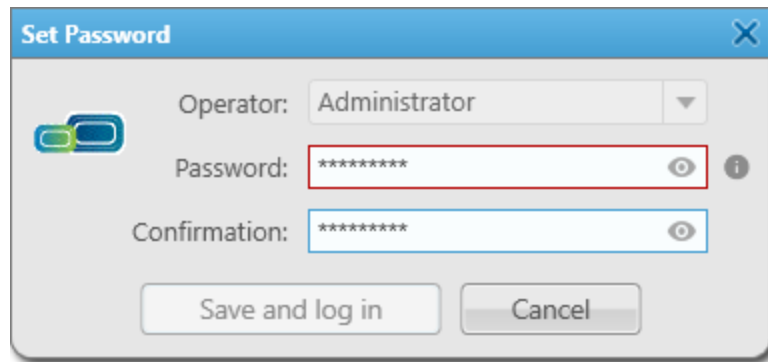
13. In the window that appears, in the **Password** field, set the password for the account with the *Administrator* status. In the **Confirmation** field, type the password again. To view the entered password, click the eye icon (👁).
For security reasons, the password will not be available for viewing in subsequent sessions.
SmartPTT does not support entering a password using the Input Method Editor (IME).
The account with the *Administrator* status is created in SmartPTT Dispatcher by default.

NOTE
Your password must comply with the minimum complexity requirements. The default requirements are to use 8 or more characters from at least three categories: uppercase and lowercase letters (A–Z, a–z), numbers (0–9), and special characters (for example, !, $, #, %). You can hover your mouse cursor over the info icon (❶) to see which requirements your password does not meet. To change password policy, submit a request to the SmartPTT Technical Support Center.

WARNING
The password cannot be restored, but it can be reset. To reset the password, submit a request to the SmartPTT Technical Support Center.

14. Click **Save and log in**.
The SmartPTT Dispatcher window appears.

Postrequisites:

•   Install the purchased license. For details, see Installing License.

•   *(Optional)* Create operator accounts. For details, see Operators.

Chapter 2. SmartPTT Dispatcher Functionality Configuration

This chapter describes SmartPTT Dispatcher features configuration. It includes sections regarding the following topics:

- SmartPTT Dispatcher general settings configuration. For details, see General Settings.

- License installation. For details, see Licenses.

- SmartPTT Radioserver connection configuration. For details, see Radioservers.

- SmartPTT Dispatcher database configuration. For details, see Database.

- Control devices settings and hotkeys configuration. For details, see Control Devices.

- General sound settings and settings of connected audio input/output devices configuration. For details, see Audio System.

- Supported devices configuration. For details, see Supported Devices.

- Creating operator accounts and configuring their rights. For details, see Operators.

- Adding and configuring radios. For details, see Radios Configuration.

- Positioning settings configuration, including map / building plan creation and configuration. For details, see Positioning Settings Configuration.

- Job ticket statuses configuration. For details, see Job Ticket Statuses Configuration.

- Telemetry actions configuration. For details, see Telemetry Configuration.

- Event Log configuration. For details, see Event Log Configuration.

- Call records configuration. For details, see Call Records Configuration.

- Telephony configuration. For details, see Telephone Interconnect Settings.

- Data acquisition module activation and Avigilon configuration. For details, see Third-Party Solutions Configuration.

- Dispatcher list configuration to communicate with other operators. For details, see Dispatcher List Configuration.

- Custom rules, positioning rules, and the Lone Worker mode configuration. For details, see Rules and Lone Worker Mode.

2.1 General Settings

The **General Settings** window provides the Administrator with the ability to set basic parameters of operators' work in SmartPTT Dispatcher:

- Language.
  SmartPTT Dispatcher interface is available in various languages. To apply a new language, you need to restart SmartPTT Dispatcher.

- Windows authentication.
  SmartPTT Dispatcher provides the ability to automatically log in the application using the current Windows account. To use Windows authentication, you must create a SmartPTT Dispatcher operator account with the same name as a Windows user or the group to which the user belongs. For details, see Operators.

- Launching the dispatch console on Windows start.
  SmartPTT Dispatcher launches automatically at Windows startup using a specific operator's profile.

- Confirmation before closing or changing the operator.
  SmartPTT Dispatcher can be configured to ask for confirmation every time you close the program or change the operator.

- Displaying radio user name.
SmartPTT Dispatcher provides the ability to display the name of the radio user next to the radio name in SmartPTT Dispatcher.
For information on the user authorization service, see "Radio Users" in *SmartPTT Installation and Configuration Guide*.

- Outgoing call tone.
SmartPTT Dispatcher activates playback of a special tone after clicking the PTT button in the application. The tone indicates that the channel is free and the dispatcher can start speaking.

- Call Alert.
SmartPTT Dispatcher provides the ability to configure a tone played in the application when the Call Alert command is received from the radio.
For information on the Call Alert command, see Signaling Features.

2.1.1 Configuring General Settings

Follow the procedure to configure basic SmartPTT Dispatcher parameters.

Prerequisites:

- To use Windows authentication, create a SmartPTT Dispatcher operator account with the same name as a Windows user or the group to which the user belongs. For details, see Managing Operator Accounts.

- To configure the dispatch console to launch on Windows start, run SmartPTT Dispatcher as the Administrator.

- To display the name of the radio user, activate the user authorization service and add users in SmartPTT Radioserver Configurator. For details, see "Radio Users" in *SmartPTT Installation and Configuration Guide*.

Procedure:

1. On the menu bar, click **Settings (⚙) → Interface → General Settings**.
    The **General Settings** window appears.
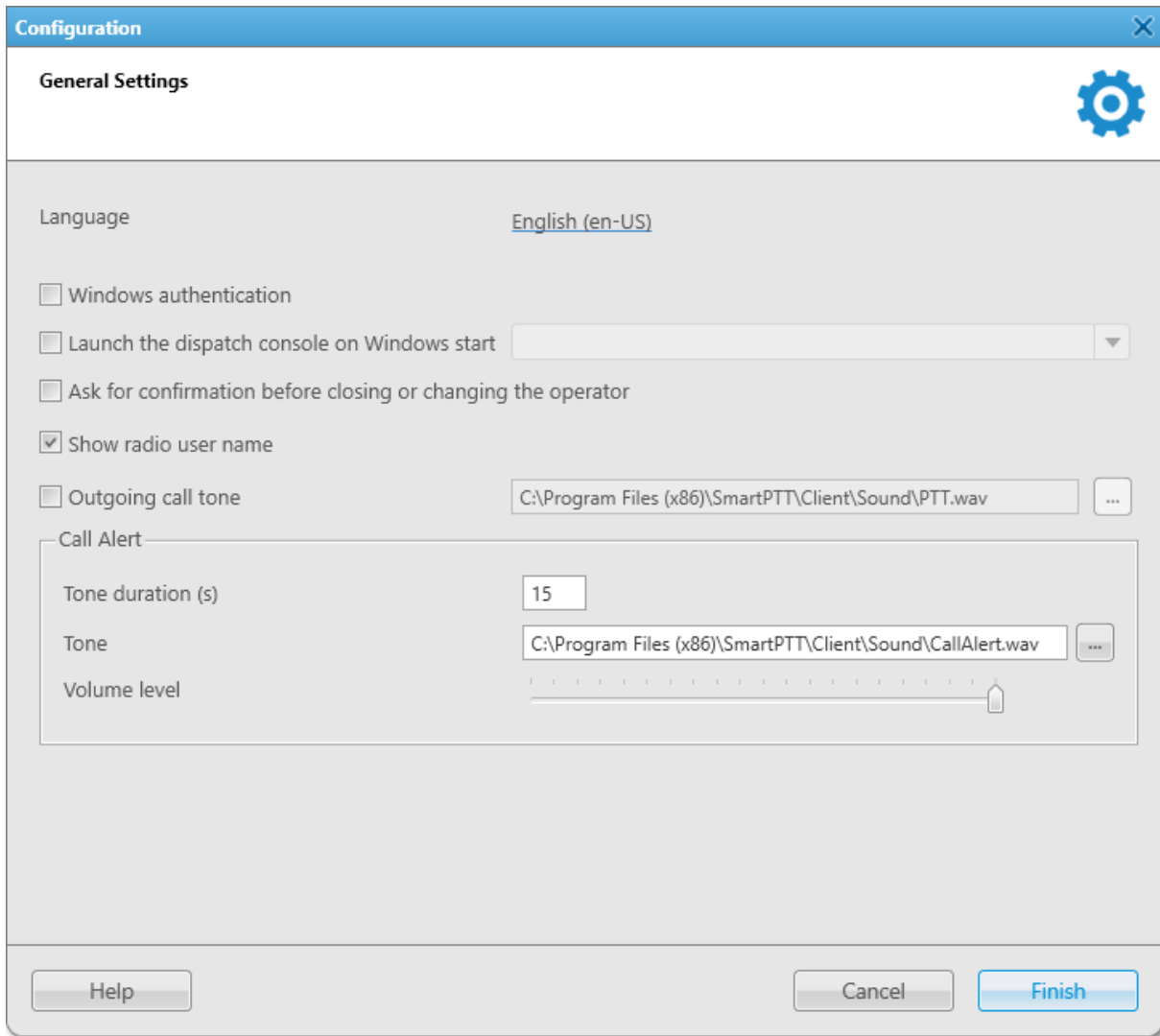
2. In the window that appears, perform the desired actions:

To change the language of the SmartPTT Dispatcher interface,	perform the following actions:
	1. Click the current **Language** value. The **Select Language** window appears.

Select Language

Čeština (cs-CZ)

Deutsch (de-DE)

English (en-US)

Español (es-ES)

Français (fr-FR)

Italiano (it-IT)

Magyar (hu-HU)

OK   Cancel
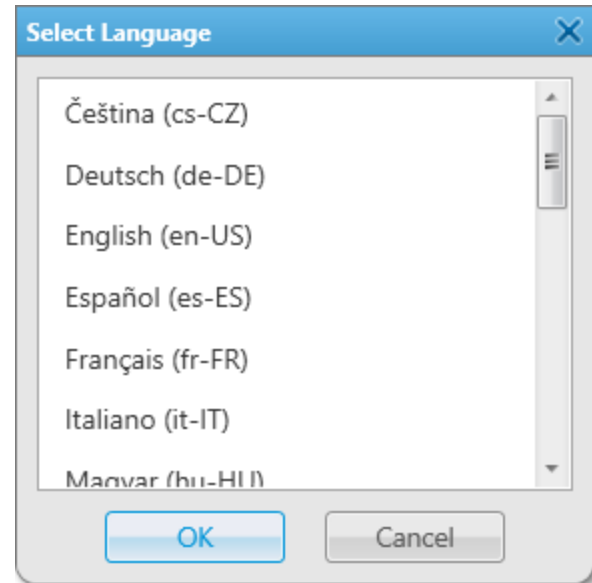
2. In the window that appears, select the desired language from the list.

3. Click **OK**.

To use credentials of the current authorized Windows user at SmartPTT Dispatcher startup,	select the **Windows authentication** check box.

To launch SmartPTT Dispatcher automatically at Windows startup,	perform the following actions:
	
	1. Select the **Launch the dispatch console on Windows start** check box.
	
	2. *(Optional)* To launch SmartPTT Dispatcher on Windows start using a specific operator's profile, perform the following actions:
	
	   a. Clear the **Windows authentication** check box.
	
	   b. From the list to the right of the **Launch the dispatch console on Windows start** check box, select the desired operator account.

To ask for confirmation when closing SmartPTT Dispatcher or changing an operator,	select the **Ask for confirmation before closing or changing the operator** check box.
To display the name of the radio user next to the radio name in SmartPTT Dispatcher,	select the **Show radio user name** check box.
To configure a sound notification when clicking the PTT button in SmartPTT Dispatcher,	perform the following actions: 1. Select the **Outgoing call tone** check box. 2. Click the Browse (⬚) button to the right of the text field. The **Sound File Selection** window appears. 3. In the window that appears, specify the desired audio file, and then click **Open**.

To configure the call alert tone played in SmartPTT Dispatcher,

perform the following actions:

1. In the **Tone duration (s)** field, type the desired duration (in seconds) of the call alert tone.

2. *(Optional)* To the right of the **Tone** field, click the Browse (...) button, specify the desired call alert tone audio file in the **Sound File Selection** window, and then click **Open**. The specified path and file name are displayed in the **Tone** field.

> **NOTE**
> You can also type or paste the full file path into this field.

3. Move the **Volume level** slider to the desired level of the call alert tone volume.

3. Click **Finish** at the bottom of the window to save changes and close the window.

Postrequisites:

If you change the interface language, restart SmartPTT Dispatcher to apply the new language.

2.2 Licenses

To use SmartPTT Dispatcher, you must install a license. If SmartPTT Radioserver and the dispatch console are installed on the same computer, you can install licenses either in SmartPTT Radioserver Configurator or in SmartPTT Dispatcher. If SmartPTT Radioserver and the dispatch console are installed on different computers, you must install licenses for both applications. If the radioserver and the dispatch console are installed on different computers, the license installation requirements depend on the client profile settings in the radioserver. If the client profile allows radioserver to apply its license to the desktop client, it is sufficient to install the license only on the radioserver. Otherwise, the license must be installed in both applications. For information on applying the radioserver license to SmartPTT Dispatcher, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

If SmartPTT Dispatcher without its own license is connected to several radioservers and in its profile it is allowed to copy licenses, it will use all available licenses. In this case, it will have access to all features within these licenses.

If SmartPTT Dispatcher has its own local license, it will use it regardless of the number of radioservers it is connected to.

Each functionality item in the license is available until its expiration date.

> **Important**
> You cannot install software that was released after the update subscription expiration date specified in the **Update subscription expiration date** entry of the **Licenses** window.

Licensing includes the following actions:

- Ordering a license. For details, see "Licensing" in *SmartPTT Installation and Configuration Guide*.

- License file installation. For details, see Installing License.

2.2.1 Installing License

Follow the procedure to install a SmartPTT license in SmartPTT Dispatcher.

> **NOTE**
> You can configure a radioserver to apply its license to connected SmartPTT Dispatchers. In this case, SmartPTT Dispatcher can use a license from this radioserver if they are connected. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

Prerequisites:

• Obtain the SmartPTT license file (.spttlx).

• Run SmartPTT Dispatcher as the Administrator.

Procedure:

1. On the menu bar, click **Settings (⚙) →Licenses**.
   The **Licenses** window appears.
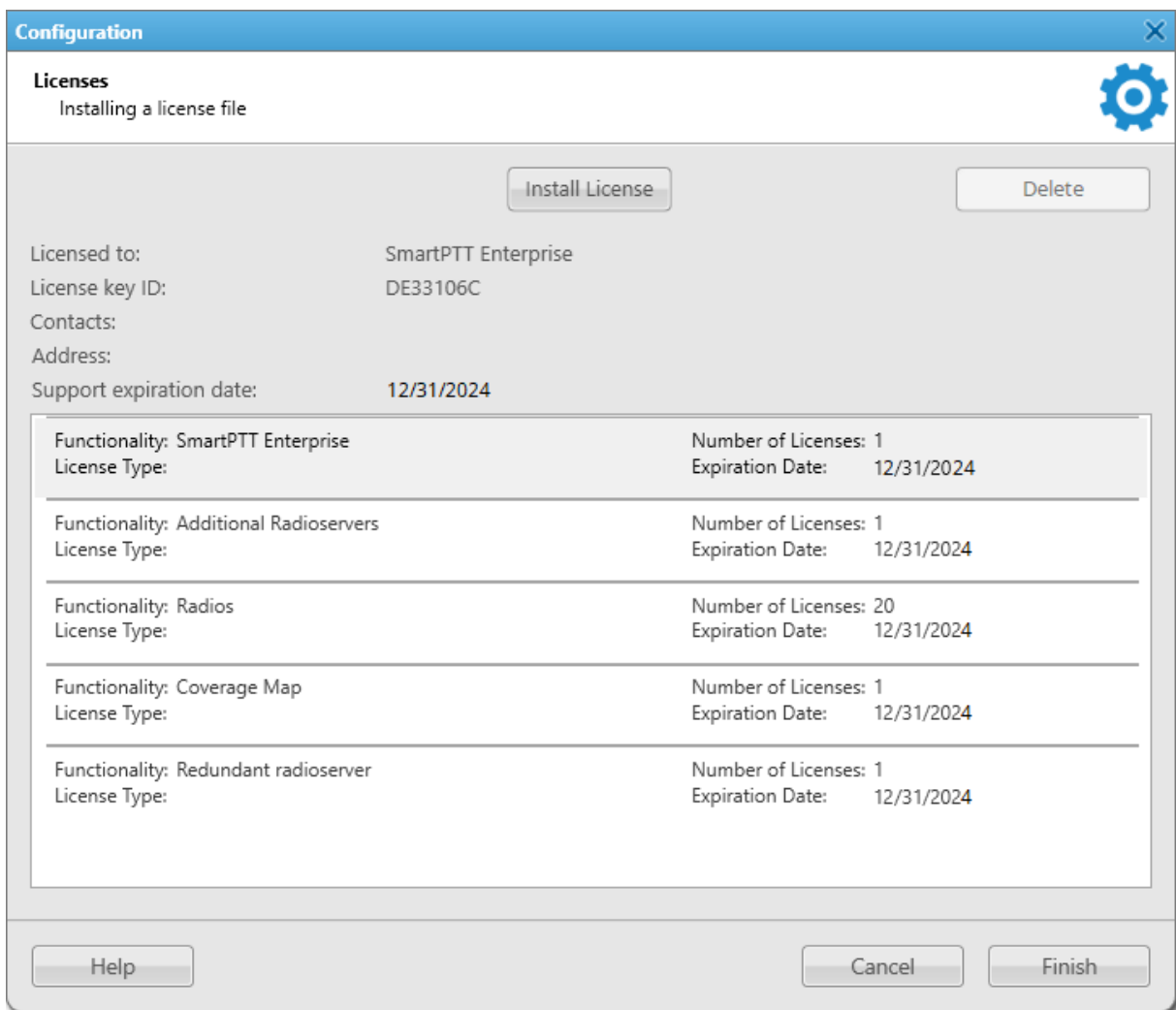
2. In the **Licenses** window, click **Install License**.
   The file selection window appears.

3. In the window that appears, select the desired license file and click **Open**.

4. Ensure that the licensed services and their expiration dates are correct. Otherwise, click **Restore License**, and then click **Install License** to select a different license file, or submit a request to the SmartPTT Technical Support Center.

5.   Click **Finish**.

Postrequisites:

- Restart SmartPTT Dispatcher to apply the new license.

- If you want to remove the current license, click the **Delete** button, and then restart the application for the changes to take effect.

2.2.2 Viewing License Items

To view a list of functions that your acquired license allows to use in SmartPTT, on the menu bar, click **Settings (⚙) → Licenses**. The **Configuration** window appears.
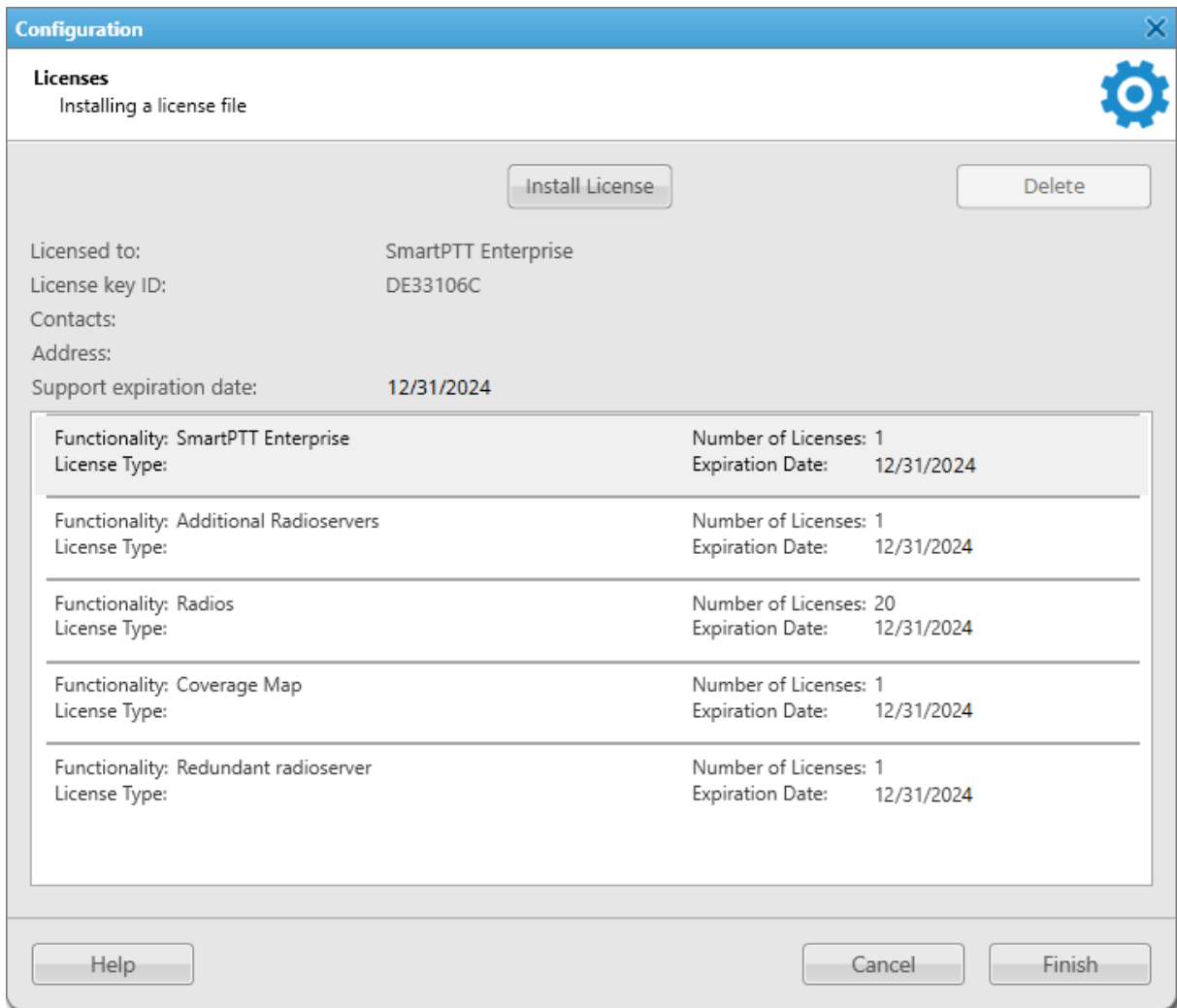
The License table contains information about the SmartPTT features, the type and number of licenses, and the expiration date for each feature. The date indicates the last time when you can upgrade SmartPTT for free. Later versions of the SmartPTT software released after this date will not work with this license.

2.3 Radioservers

SmartPTT Dispatcher provides the ability to connect to several radioservers simultaneously. Connected radioservers are displayed on the **Radio Fleet** panel as parent nodes. You can expand a radioserver node to access objects of the radio systems configured on this radioserver.

> **Important**
> Before adding a radioserver to SmartPTT Dispatcher, desktop clients connection must be configured in SmartPTT Radioserver Configurator. For details, see "Configuring Desktop Clients Connection" in *SmartPTT Installation and Configuration Guide*.

If desktop client authentication on SmartPTT Radioserver is enabled, to connect to SmartPTT Radioserver, it is necessary to type credentials of the client accounts configured in SmartPTT Radioserver Configurator for the desired operators. For details, see Operators.

SmartPTT Dispatcher also provides the ability to control added radioservers remotely using IPMI. For details, see IPMI Settings.

2.3.1 Managing Radioservers

Follow the procedure to add a new radioserver connection or to edit the existing one.

Prerequisites:

- Obtain IP address or domain name of a computer with installed radioserver.

- Obtain radioserver WCF port number set in SmartPTT Radioserver Configurator.

- If authentication for desktop clients is used in SmartPTT Radioserver Configurator, obtain the client name and password.

- Add the desired operator accounts. For details, see Managing Operator Accounts.

Procedure:

1. On the menu bar, click **Settings (⚙) → Radioservers**.
   The **Radioservers** window appears.

2.   In the window that appears, perform one of the following actions:

To add a new connection to a radioserver,	click **Add** (+). The **Radioserver** window appears.
To edit an existing connection to a radioserver,	in the Radioservers Table, select the desired radioserver, and then click **Edit** (✎). The **Radioserver** window appears.
To delete a connection to a radioserver,	perform the following actions: 1. In the Radioservers Table, select the desired radioserver. 2. Click **Delete** (—). 3. In the **Confirmation** window, click **OK**. The radioserver is deleted from the table. 4. Proceed to the last step.
To find all running radioservers in the network,	click **Search** (🔍). Available radioservers appear in the Radioservers Table.

To display a radioserver in SmartPTT Dispatcher,   for the desired entry of the Radioservers Table, in the **Active** column, select the check box.

3. In the **Radioserver** window, open the **General** tab.

4. *(Optional)* In the **Name** field, type the desired radioserver name.

5. In the **IP Address** field, type the IP address of the radioserver or domain name of the computer with installed radioserver.

6. In the **Port** field, enter the radioserver WCF port number.

7. Click **Establish Connection** to establish connection to the specified radioserver.
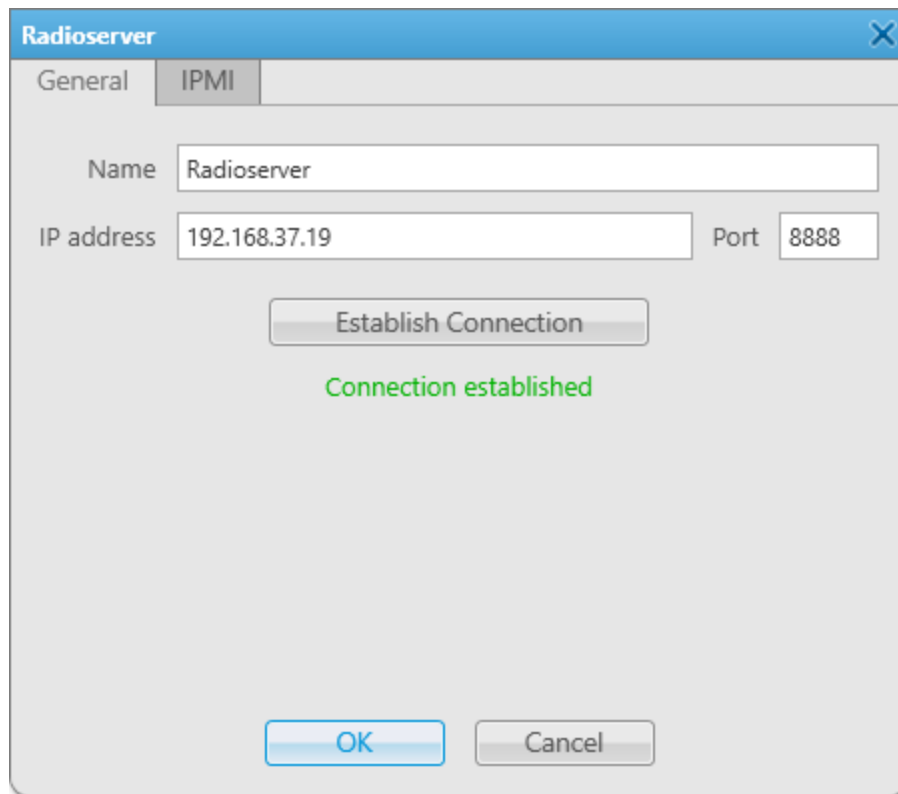
8. *(Optional)* If server authentication is enabled in SmartPTT Radioserver Configurator, the Operator Table appears in the window. In the *Administrator* line, perform the following actions:

   a. In the **Client Name** column, type the client account name configured in SmartPTT Radioserver Configurator.

   b. In the **Password** column, type the client account password configured in SmartPTT Radioserver Configurator. For details, see "Managing Account Parameters" in *SmartPTT Installation and Configuration Guide*.
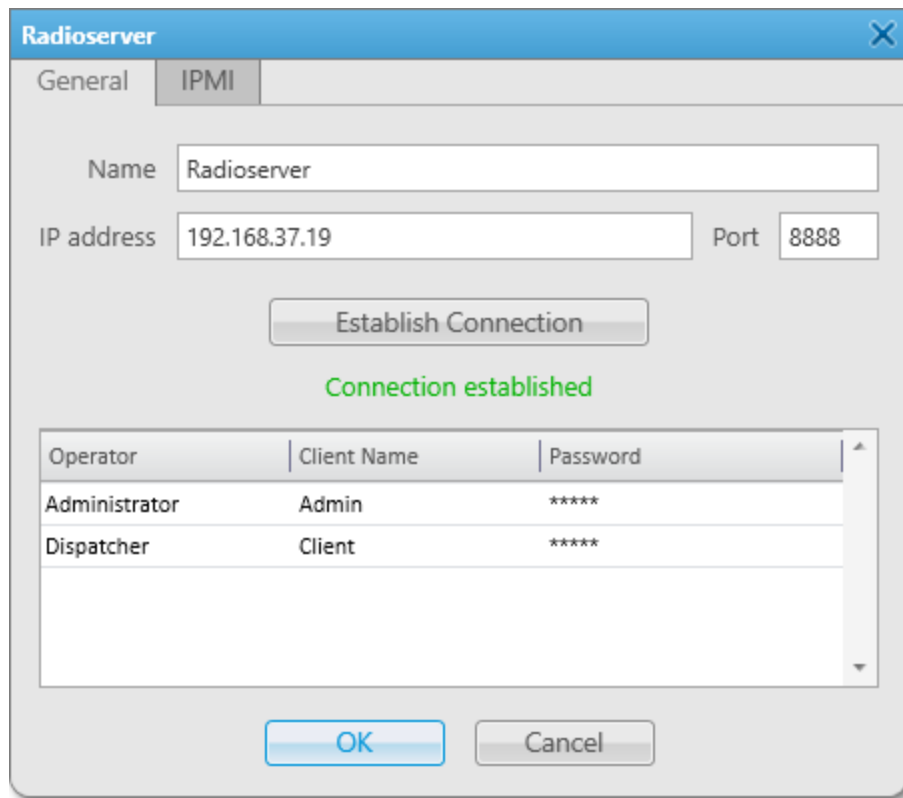
9.   *(Optional)* Repeat the previous step for other operator accounts.

10. Click **OK** to apply changes and close the window.

11. In the **Radioservers** window, click **Finish**.

2.3.2 IPMI Settings

IPMI (Intelligent Platform Management Interface) is a standardized computer system interface that is used for out-of-band management of computer systems, and monitoring system operation.

SmartPTT system uses IPMI for remote radioserver managing and monitoring. You can use IMPI to reset, turn on or off the radioserver computer, or view its hardware characteristics.

You can configure IPMI settings for the radioserver on the **IPMI** tab of the **Radioserver** window. For details, see Configuring IPMI Settings.

Remote control of the radioserver computer is available on the **Topology** panel. For details, see Radioserver Remote Control.

2.3.2.1 Configuring IPMI Settings
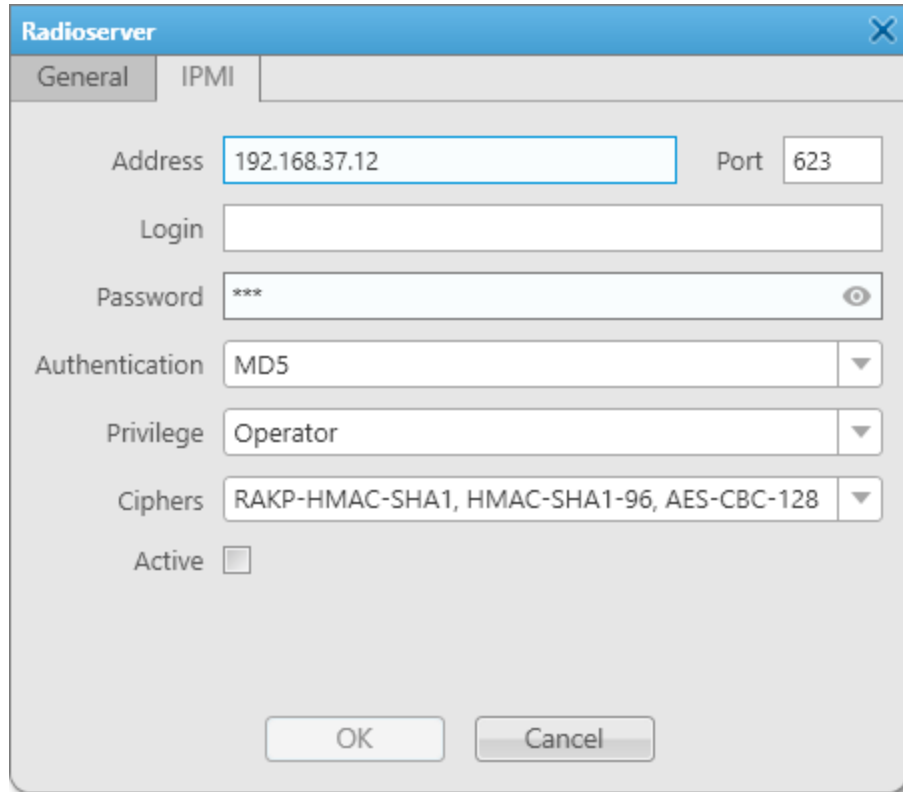
Follow the procedure to configure the radioserver IPMI settings.

Prerequisites:

•   Add and configure the desired radioserver. For details, see Managing Radioservers.

•   Obtain the IP address and port number of the SmartPTT Radioserver computer used to establish IPMI connection.

•   From the IPMI configuration settings on the SmartPTT Radioserver computer, obtain the login and password.

Procedure:

1. On the menu bar, click **Settings (⚙) →Radioservers**.
   The **Radioservers** window appears.

2. In the window that appears, double-click the desired radioserver.
   The **Radioserver** window appears.

3. In the **Radioserver** window, open the **IPMI** tab.

4. On the **IPMI** tab, perform the following actions:

   a. In the **Address** and **Port** fields, type the IP address and port number of the SmartPTT Radioserver host used for establishing IPMI connection.

   b. In the **Login** and **Password** fields, type the login and password set in the IPMI configuration settings on the SmartPTT Radioserver host. To view the entered password, click the eye icon (⊙). For security reasons, the password will not be available for viewing in subsequent sessions.

   c. From the **Authentication** list, select the desired authentication type.

   d. From the **Privilege** list, select the desired privilege for the dispatcher.

   e. From the **Ciphers** list, select the desired cipher.

   NOTE
   In the **Authentication**, **Privilege**, and **Ciphers** lists, it is recommended to use the default values.

   f. *(Optional)* To activate remote connection to the radioserver, select the **Active** check box.

5. Click **OK** to apply changes and close the window.

2.4 Database

SmartPTT Dispatcher supports Microsoft SQL Server database management systems (DBMS). It is recommended to use Microsoft SQL Server 2014 Express included in the SmartPTT installation package.
For information on DBMS configuration, see "DBMS Configuration" in *SmartPTT Installation and Configuration Guide*.

DBMS access and authorization are managed by various services. For details, see "DBMS Utilization" in "Logging" in *SmartPTT Installation and Configuration Guide*.

> **WARNING**
> Only one dispatch console can be connected to the same database.

The SmartPTT Dispatcher database stores the Event Log, operator accounts, registered subscribers data, and geolocation data. You can view the summary of information stored in the SmartPTT Dispatcher database in the **Statistics** window by clicking **Service → Statistics** on the menu bar.

The **Statistics** window provides information on the number of various system events (subscribers' registrations, incoming and outgoing calls, system alarms, etc.) and displays the database name, current size, and maximum size.
The window also provides information on the size of the folder where SmartPTT Dispatcher stores audio records.
For information on selecting the folder for audio records, see Configuring Audio Recording.

The maximum database size is set during the SQL Server configuration and depends on the SQL Server version and edition. When the database reaches 90 % of its maximum size, a warning message prompting to perform the automatic database cleanup appears. When the database reaches its maximum size, another warning message appears. It indicates that new records cannot be added to the database.

SmartPTT Dispatcher provides the following database-related features:

- Automatic backup of the database. For details, see Database Auto Backup.

- Saving current settings, layout, and database. For details, see Save Dispatcher Settings.

- Importing settings, layout and database from the previously created files. For details, see Restore Dispatcher Settings.

SmartPTT Dispatcher Database Configuration

SmartPTT Dispatcher database configuration includes the following actions:

- SmartPTT Dispatcher must be connected to DBMS. For details, see Configuring Database Server Connection.

- Database must be selected. For details, see Managing Databases.

- *(Optional)* Database automatic backup can be configured. For details, see Configuring SmartPTT Dispatcher Database Auto Backup.

2.4.1 Configuring Database Server Connection

Follow the procedure to configure the SmartPTT Dispatcher connection to the database management system (DBMS).

Prerequisites:

- Obtain the IP address / domain name of the DBMS host.

- Obtain the DBMS process name.

- To use SQL Server authorization, obtain the corresponding credentials. For details, see "Adding SQL Server Users" in *SmartPTT Installation and Configuration Guide*.

Procedure:

1. On the menu bar, click **Settings (⚙)** →**Database**.
   The **Database** window appears.

2. In the window that appears, in the **Database server name** field, type the DBMS address.

NOTE
For the database server installed with the SmartPTT Dispatcher application, type the address using the following format: *<Computer Name>\SQLExpress* (for example, *MYCOMP\SQLExpress*).

3. Configure authorization:

To use Windows authorization,	from the **Authorization mode** list, select *Windows NT Authorization*.
To use DBMS authorization,	perform the following actions:
	1. From the **Authorization Mode** list, select *SQL Server Authorization*.
	2. In the **Account name** field, type the SQL Server account login.

3. In the **Password** field, type the SQL Server account password. To view the entered password, click the eye icon (👁).

4. Click **Establish Connection** to connect to SQL Server.
    If connection is successful, in the **Database** area, the *Connection to the database server is established* message appears. Otherwise, at the bottom of the window, a message with an error description appears.

5. Click **Finish** to save changes.

Postrequisites:

Configure the current database. For details, see Managing Databases.

2.4.2 Managing Databases

Follow the procedure to create a new database, select an existing database, or restore a database from a backup.

Prerequisites:

- Configure the database management system (DBMS) connection. For details, see Configuring Database Server Connection.

- To restore the current database from an automatic backup file, configure the automatic database backup. For details, see Configuring SmartPTT Dispatcher Database Auto Backup.

Procedure:

1. On the menu bar, click **Settings (⚙) →Database**.
   The **Database** window appears.

2. In the window that appears, in the **Database** area, perform one of the following actions:

To create a new database,   perform the following actions:

1. Click **Create database**.
   The **Create Database** window appears.

2. In the window that appears, in the **Database name** field, type the name of the new database, and then click **Save**.
   If creation is successful, in the **Database** area of the **Database** window, the *Database <database name> was successfully created!* message appears.

To use an existing database,	from the **Current database** list, select the desired database.
To restore a local database from a backup file,	perform the following actions: 1. Click **Restore database**. The **Restore Database** window appears.
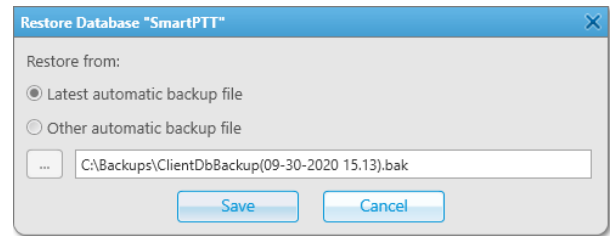
2. In the window that appears, perform one of the following actions:

   • To restore the database from the latest automatic backup file, select **Latest automatic backup file**.

   • To restore the database from any other backup file, select **Other automatic backup file**, click Browse (⊡), and then select the desired database backup file in the BAK format.

3. Click **Save**.

4. In the **Confirmation** window, click **OK**.
   If restoration is successful, in the **Database** area of the **Database** window, the *Database <database name> is restored successfully* message appears.

To restore a remote database from a backup file located on a remote computer,	use DBMS tools.

3. Click **Finish** to save changes and close the **Database** window.

Postrequisites:

Restart SmartPTT Dispatcher to apply the changes.

2.4.3 Database Auto Backup

The Database Auto Backup functionality provides the ability to perform automatic backup of the SmartPTT Dispatcher database. Regular backups help prevent data loss in case of the SmartPTT Radioserver hardware or software failure. For security purposes, it is recommended to configure the database automatic backup.

You can back up both local and remote databases. The restoration of the backed up database by means of SmartPTT Dispatcher can be performed only from a backup file stored on the local computer. If the backup file is located on a remote computer, use DBMS tools to restore the database.

For information on configuring automatic database backup, see Configuring SmartPTT Dispatcher Database Auto Backup.

Examples of Auto Backup Settings

If, in the **Database Auto Backup Settings** window, you select **Daily**, set *4* in the **Interval (days)** field, and *9:00* in the **Time** field, the database is backed up every fourth day at 9:00.

If you select **Weekly**, select the *Mo* and *We* check boxes, set *3* in the **Interval (weeks)** field, and *11:00* in the **Time** field, the database is backed up every third week on Monday and Wednesday at 11:00.

If you select **Monthly**, set *5* in the **Day of month** field, set 2 in the **Interval (months)** field, and *15:00* in the **Time** field, the database is backed up on the fifth day of every second month at 15:00.

2.4.3.1 Configuring Database Auto Backup

Follow the procedure to configure the automatic database backup settings in SmartPTT Dispatcher.

Procedure:

1. On the menu bar, click **Settings (⚙)** →**Information Storage** →**Database Auto Backup**.
   The **Database Auto Backup Settings** window appears.

2. In the window that appears, select the **Allow Database Auto Backup** check box.
   The areas below become available.

3. To the left of the **Backup folder** field, click Browse (⊡), and then, in the window that appears, select a folder for storing database backup files.
    The path to the selected folder appears in the **Backup folder** field.

4. In the **Backup Settings** area, configure the backup period:

To create backups every few days,	perform the following actions:
	1. Select **Daily**.
	2. In the **Interval (days)** field, enter the number of days between backups (*1* means daily backups).
To create backups on specific days of the week,	perform the following actions:
	1. Select **Weekly**.
	2. Select check boxes that are related to the days of the week when the backup must be created.
	3. In the **Interval (weeks)** field, enter the number of weeks between backups (*1* means weekly backups).
To create backups once in several months,	perform the following actions:
	1. Select **Monthly**.
	2. In the **Day of month** field, enter the day of the month when the backup must be created.
	3. In the **Interval (month)** field, enter the number of months between backups (*1* means monthly backups).

5. In the **Time** field, enter the time of the day when the database backup creation starts.

6. *(Optional)* In the **Backup Period** area, configure start and end dates of the time interval when the backups must be created:

    a. In the **Start Date** field, enter the start date of the backup creation.

    b. Configure the end date of the time interval:

To specify the end date,	perform the following actions:
	1. Select **End Date**.
	2. In the unlocked field, enter the end date.
To unset the end date,	select **No End Date**.

7. Click **Finish** to save changes and close the window.

Postrequisites:

Restore the database from an automatic backup file. For details, see <u>Managing Databases</u>.

2.4.4 Save Dispatcher Settings

The Save Dispatcher Settings feature provides the ability to export the SmartPTT Dispatcher database and settings to a ZIP file for their further transfer to the same or another SmartPTT Dispatcher. For details, see Restore Dispatcher Settings.

NOTE
The feature is unavailable if SmartPTT Dispatcher is connected to a remote database.

Export of the SmartPTT Dispatcher settings and database can be useful for the following purposes:

- Transfer of the SmartPTT Dispatcher database and current configuration settings to another SmartPTT Dispatcher

- Transfer of the current SmartPTT Dispatcher position to another computer

- Settings and database backup

The exported file is an archive in the ZIP format that contains XML and JSON files storing data on the current configuration settings.

The SmartPTT Dispatcher database is exported to a BAK file stored in the same archive.

2.4.4.1 Saving Dispatcher Settings

Follow the procedure to export the SmartPTT Dispatcher database and/or settings in their current state to a ZIP file.

Prerequisites:

Ensure that you have access to the desired export destination folder.

Procedure:

1. On the menu bar, click **Service → Save Dispatcher Settings**.
   The **Save Dispatcher Settings** window appears.
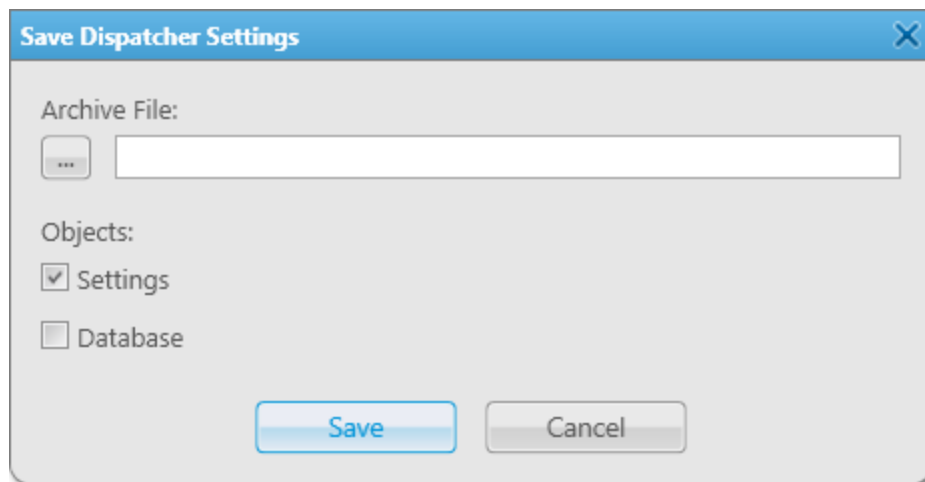
2. In the **Archive File** area, click Browse (...).

3. In the **Specify File Name** window, specify the path to the desired folder and the name of the exported ZIP file, and then click **Save**.

4. In the **Objects** area, configure the desired export parameters:

To export the SmartPTT Dispatcher settings,	select the **Settings** check box.
To export the SmartPTT Dispatcher database,	select the **Database** check box.
To export the SmartPTT Dispatcher database and settings,	select the **Settings** and **Database** check boxes.

5. At the bottom of the **Save Dispatcher Settings** window, click **Save**.

6. In the window indicating successful export, click **OK**.

Postrequisites:

Import the SmartPTT Dispatcher database and/or settings. For details, see Restoring Dispatcher Settings.

2.4.5 Restore Dispatcher Settings

The Restore Dispatcher Settings feature provides the ability to import the SmartPTT Dispatcher database and settings from the current or another SmartPTT Dispatcher. For details, see Save Dispatcher Settings.

> **NOTE**
> The feature is unavailable if SmartPTT Dispatcher is connected to a remote database.

Using this feature, you can perform the following actions:

- Import SmartPTT Dispatcher settings, including language settings, layout, and other configuration settings

- Import the SmartPTT database

- Overwrite the Globally Unique Identifier (GUID) of the current SmartPTT Dispatcher with the imported one

Import of the SmartPTT Dispatcher settings and database can be useful for the following purposes:

- Transfer of the SmartPTT database and configuration settings from another SmartPTT Dispatcher

- Transfer of a SmartPTT Dispatcher position from one computer to another

- Restoring the SmartPTT Dispatcher settings and database from a backup file

Dispatch Console GUID

Each SmartPTT dispatch console has a globally unique identifier (GUID), which is assigned to it when installing the SmartPTT Dispatcher application and is used to access records in a database.

Simultaneous operation of two dispatch consoles with the same GUID within the same system is impossible.

The dispatch console GUID can be restored from a file in the **Restore Dispatcher Settings** window only alongside with other settings of the dispatch console.

Restoring GUID is required only if the dispatch console must continue working with the same database with which operated the dispatch console where the recovery file was generated.

> **WARNING**
> If the dispatch console GUID is restored from a file generated in another dispatch console, ensure that the dispatch console in which the recovery file was generated has stopped its operation. Otherwise, only one of these consoles will be able to receive data from the radioserver.

> **Important**
> When recovering a database from another SmartPTT Dispatcher, you also need to restore the dispatch console GUID to save access to records in the database to be restored.

2.4.5.1 Restoring Dispatcher Settings

Follow the procedure to import the SmartPTT Dispatcher database and/or settings from a ZIP file and/or overwrite the Globally Unique Identifier (GUID) of the current SmartPTT Dispatcher.

Procedure:

1. On the menu bar, click **Service →Restore Dispatcher Settings**.
   The **Restore Dispatcher Settings** window appears.
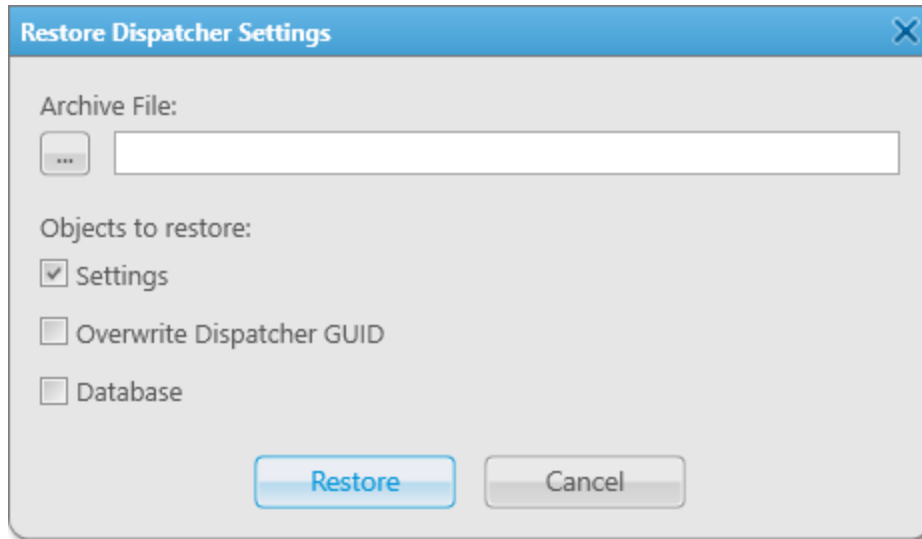
2. In the **Archive File** area, click Browse (…).

3. In the **Specify File Name** window, specify the path to the desired ZIP file, and then click **Open**.

4. In the **Objects to restore** area, depending on the desired and available import parameters, perform the following actions:

To import the SmartPTT Dispatcher settings,	select the **Settings** check box.
To import the SmartPTT Dispatcher database,	select the **Database** check box.
	Important When recovering a database from another SmartPTT Dispatcher, you also need to restore the dispatch console GUID to save access to records in the database to be restored.
To replace your GUID with the GUID from the imported file,	perform the following actions: 1. Select the **Settings** check box. 2. Select the **Overwrite Dispatcher GUID** check box. **WARNING** Do **not** replace GUID if you want to keep using the SmartPTT Dispatcher from which the settings were exported. If two dispatch consoles with the same GUID operate in the radio system at the same time, it may lead to errors and malfunctioning.

5.   At the bottom of the **Restore Dispatcher Settings** window, click **Restore**.

6.   In the window indicating successful import, click **OK**.

7.   Restart SmartPTT Dispatcher to apply changes.

2.5 Control Devices

SmartPTT Dispatcher provides support for the following types of control devices:

- Computer mouse

- Touchscreen

- Keyboard

Pointing Devices

Pointing devices in SmartPTT Dispatcher include a computer mouse and a touchscreen.

For pointing devices, SmartPTT Dispatcher provides the ability to set the following actions that will be executed after clicking the call element:

- Select (the call element is selected when you click or tap it)

- Call (a call is initiated when you click or tap the call element)

In SmartPTT Dispatcher, the following modes are available for calls:

- Hold (initiate a transmission when the control is pressed and finish it when it is released)

- Single click (initiate a transmission with a single press of the control)

Keys

SmartPTT Dispatcher provides the ability to add and assign hotkeys to system objects and actions.

In SmartPTT Dispatcher, the following call modes are available for hotkeys:

- Hold (you must press and hold the hotkey to initiate and continue a call)

- Single click (you must press the hotkey once to perform an action)

You can add any amount of hotkeys but each hotkey must have the unique key or key combination assigned.

SmartPTT Dispatcher supports the following hotkey input devices:

- A standard keyboard connected to the computer.

- An external DirectInput device connected to the computer via USB port.

    Important
    If you use the D-9 by Holmco microphone, do not select it as a DirectInput device.

- An external HID device connected to the computer via USB port.

    NOTE
    The SmartPTT system provides a dispatcher with the ability to assign all the actions listed on the **Keys** tab of the **Control Devices** window to the keys programmable on the Tipro console. For details, see Tipro Console.

- An external device connected to the computer via COM port.

For information on some other supported devices configuration, see Supported Devices.

If you use a keyboard as an input device, use the following information to assign hotkeys properly:

- Esc, Print Screen, and Windows keys cannot be assigned as hotkeys.

- F1 and Enter keys can be assigned only in Alt+Key and Shift+Alt+Key combinations.

Other keys can be used either separately or in the following combinations:

- Alt+Key

- Shift+Key

- Ctrl+Key

- Shift+Ctrl+Key

- Shift+Alt+Key

- Ctrl+Alt+Key

For information on objects and actions for which hotkey assigning is available, see the SmartPTT Dispatcher embedded help.

Control Device Configuration

In SmartPTT Dispatcher, you can configure control devices in the following ways:

- Configure the call element actions. For details, see Configuring Call Element Actions.

- Assign hotkeys. For details, see Assigning Hotkeys.

2.5.1 Configuring Call Element Actions

Follow the procedure to configure actions on clicking or tapping the call element for interaction with the radio object using a pointing device.

Procedure:

1. On the menu bar, click **Settings (⚙)** → **Equipment** → **Control Devices**.
   The **Control Devices** window appears.

2. In the windows that appears, open the **Pointing Devices** tab.
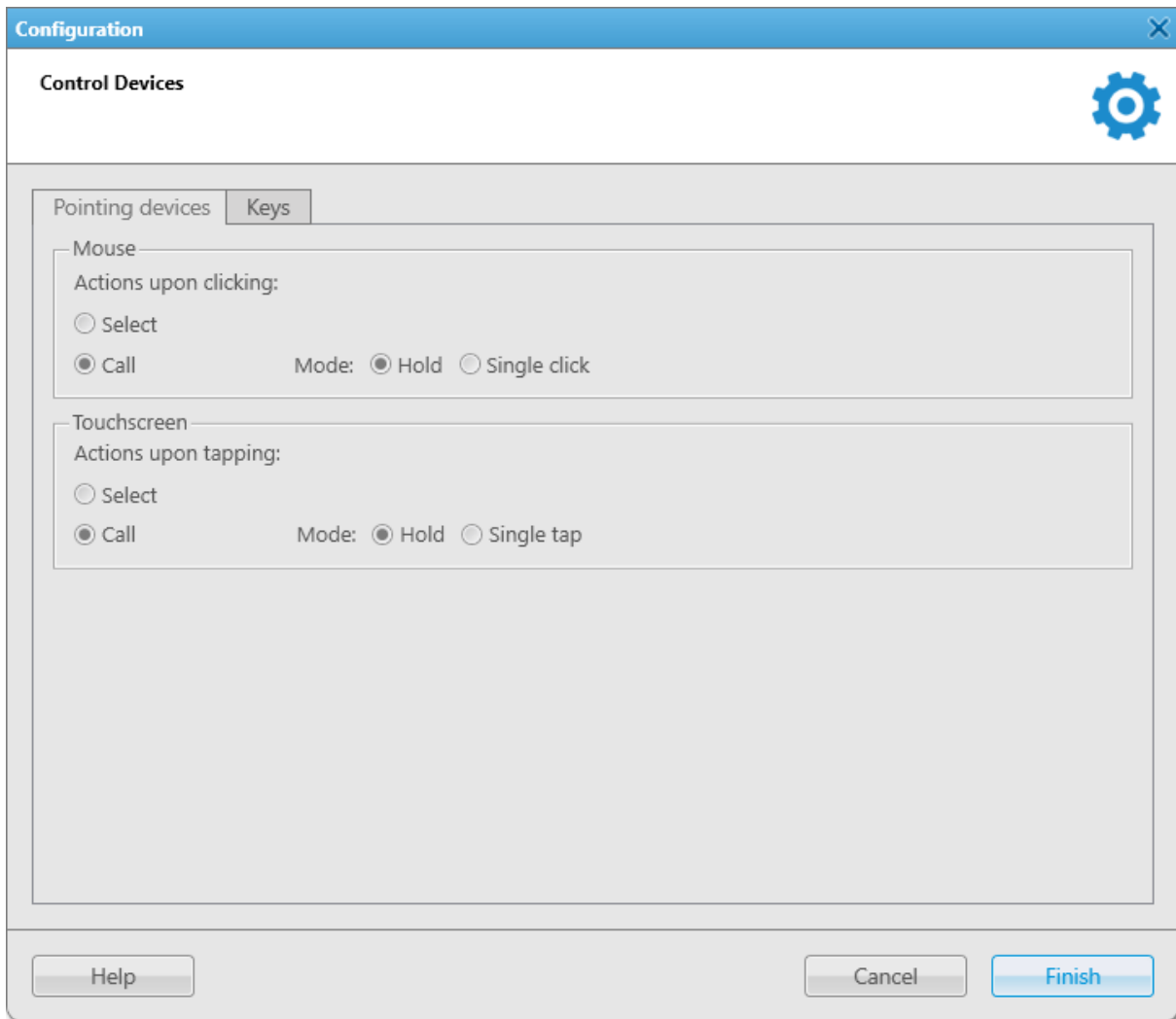
3. Configure the desired pointing device:

To configure a mouse,	in the **Mouse** area, perform one of the following actions:
	• To configure selection upon clicking, select **Select**.
	• To configure call upon clicking, perform one of the following actions:
	• Select **Hold** for clicking and holding the call element to initiate and continue a call.
	• Select **Single click** for clicking the call element once to initiate and continue a call.
To configure a touchscreen,	in the **Touchscreen** area, perform one of the following actions:
	• To configure selection upon tapping, select **Select**.
	• To configure call upon tapping, perform one of the following actions:

- Select **Hold** for tapping and holding the call element to initiate and continue a call.

- Select **Single click** for tapping the call element once to initiate and continue a call.

4. Click **Finish** to save changes and close the window.

2.5.2 Assigning Hotkeys

Follow the procedure to assign a hotkey for an action or radio object in the SmartPTT system.

Prerequisites:

Ensure the desired input device is connected to the computer and is active.

Procedure:

1. On the menu bar, click **Settings (⚙)** → **Equipment** → **Control Devices**.
   The **Control Devices** window appears.

2. In the windows that appears, open the **Keys** tab.

3. Perform the desired actions:

To assign a hotkey for an action,	in the **Objects and actions** area, click the desired action. In the **Keys** area, the **Add key (+)** button appears.
To assign a hotkey for an action which is related to the specific object (radio, channel, talkgroup, category, telephone subscriber, or dispatcher),	in the **Objects and actions** area, expand the desired node, and then click the desired object. In the **Keys** area, the **Add key (+)** button appears.
To change the hotkey input device for an action or object,	perform the following actions: 1. In the **Objects and actions** area, select the desired object or action by expanding the desired node. 2. Proceed to step 6.
To assign another hotkey to an action or object,	perform the following actions: 1. In the **Objects and actions** area, select the desired object or action by expanding the desired node. 2. Proceed to step 7.
To delete a hotkey,	perform the following actions: 1. In the **Objects and actions** area, select the desired object or action by expanding the desired node. In the **Keys** area, the hotkey assigned to the object or action appears. 2. To the right of the desired assigned hotkey, click **Delete (—)**. The hotkey disappears from the **Keys** area. 3. Proceed to step 9.
To delete all added hotkeys,	perform the following actions: 1. Click **Reset All**. All the hotkeys assigned to objects and actions in SmartPTT Dispatcher are deleted. **NOTE** The **Reset All** button cannot delete the default Space hotkey entry of the PTT button, but it can reset a hotkey assigned by the user. 2. Proceed to step 9.

4. Click **Add key (+)**.
    Controls for the hotkey configuration appear in the **Keys** area.

5. From the Input Devices list, select the desired input device:

To use a keyboard,	select *Keyboard*.

To use an external DirectInput device connected via USB port,	perform the following actions:
	1. Select *Input Device (DirectInput)*. The list of available devices appears next to the Input Devices list. 2. From the list that appears, select the desired USB device.
To use an external HID device connected via USB port,	perform the following actions:
	1. Select *Input Device (HID)*. The list of available devices appears next to the Input Devices list. 2. From the list that appears, select the desired USB device. **NOTE** Before assigning hotkeys on the Tipro console, configure them as HID buttons using the ChangeMe Utility application.
To use an external device connected via COM port,	perform the following actions:
	1. Select *External Device COM Port*. The list of available pins of COM port appears under the Input Devices list. 2. From the list that appears, select the desired pin. 3. Proceed to step 9.

6. Under the Input Devices list, click the Assign Hotkey ( ) button.
    White dots appear on the button, and the *Press desired key* message appears next to it.

7. Press the key or key combination you want to assign to the object or action. For details, see Control Devices.
    The key or key combination that you pressed is displayed on the Assign Hotkey button, and the *Press desired key* message disappears.

8. Click **Finish** to save changes and close the window.

2.6 Audio System

In SmartPTT Dispatcher, you can configure general sound settings and settings of connected audio output devices.

Audio Input

SmartPTT Dispatcher provides the ability to configure the primary audio input (microphone) used for capturing the dispatcher voice. More than one audio input device cannot be selected. You can configure the following audio input settings:

- Input line used to capture sound.

- Noise reduction to make dispatcher sound clearer by reducing noises.
  You can select a level of noise reduction from 3 to 18 dB.

- Audio input test to check a sound of the audio input device.

Audio Output

SmartPTT Dispatcher provides settings for one primary and an unlimited number of additional audio outputs (speakers, headphones) used for incoming call playback, as well as to play sound alerts and audio archive records.

> **NOTE**
> Additional audio outputs are treated in SmartPTT Dispatcher as virtual sets consisting of the real output devices.

Configuration of additional audio outputs in SmartPTT Dispatcher provides the ability to assign different audio outputs to different objects and thus separate the incoming sound. For example, different speakers can be assigned to the first and second radio network channels, and the headphones can be assigned to selected objects.

SmartPTT Dispatcher provides the ability to assign personal audio outputs separately to the following objects and events:

- Selected objects.
  The objects that are selected or whose Call Window is open and active (the window has the blue title bar, and the PTT button has the blue frame).
  For information on selected objects, see Radio System Object Selection.

> **NOTE**
> Telephone subscribers, other dispatchers, and conferences cannot be selected objects.

- Unselected objects.

- Channels of a radio network or a control station.

- Talkgroups, dynamic groups.

- Emergency and emergency calls.

- System sounds.

SmartPTT Dispatcher supports the ability to turn on and off the sound as well as adjust the volume for various radio system objects. For details, see Sound Management.

Sound Customization Options

SmartPTT Dispatcher provides the Administrator with the ability to configure such volume parameters as:

- Minimum volume.
  Dispatcher cannot mute SmartPTT Dispatcher sound, but only turn down the volume to minimum.

> **NOTE**
> The minimum volume level affects only SmartPTT Dispatcher and depends on the volume level of the operating system.

- Disable muting of private calls to dispatcher.
  Incoming transmissions are not muted in SmartPTT Dispatcher, even if the channel sound is muted.

- Mute incoming calls while transmitting.

- Mute other dispatcher transmissions in the system.

- Amplification of dispatcher voice in outgoing transmissions.

- Automatic gain control to adjust the volume of incoming calls.

Sound Configuration

To configure sound in SmartPTT Dispatcher, the following actions must be performed:

- General sound settings must be configured. For details, see Configuring General Sound Settings.

- *(Optional)* Multichannel sound can be configured. For details, see <u>Configuring Audio Output Devices</u> and <u>Assigning Audio Output Devices</u>.

- *(Optional)* Additional volume options can be configured. For details, see <u>Configuring Additional Sound Settings</u>.

2.6.1 Configuring General Sound Settings

Follow the procedure to configure general sound settings in SmartPTT Dispatcher.

Prerequisites:

Ensure the desired audio input or output devices are connected and enabled.

Procedure:

1. On the menu bar, click **Settings (⚙)** →**Equipment** →**Sound**.
   The **Sound Settings** window appears.

2. In the window that appears, open the **General Settings** tab.
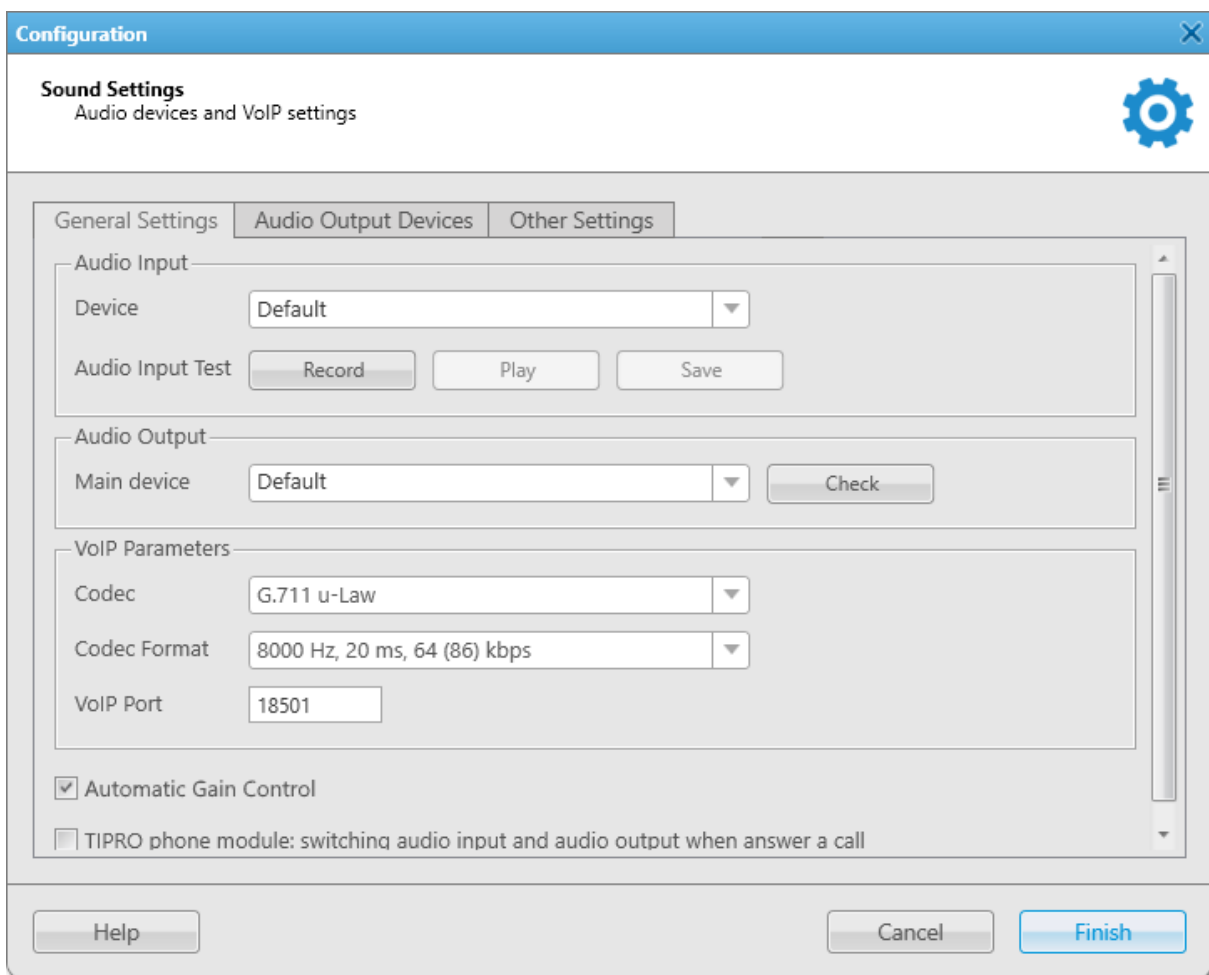
3. In the **Audio Input** area, in the **Device** list, select the desired input device.

4. Check audio input:

   a. Click **Record** and speak into the device.
      The button changes to **Stop**.

   b. Click **Stop** to stop the recording.
      The button changes to **Record** and other buttons become unlocked.

  c. Click **Play** to listen to the recorded voice.
    The button changes to **Stop**, and you will hear the voice if the input device works properly.

  a. *(Optional)* To save the recorded voice sample, click **Save**.

5. In the **Audio Output** area, configure settings of the audio output device:

  a. From the **Main device** list, select the desired output device.

  b. Click **Check** to check the selected output device.
    The button changes to **Stop**, and you will hear the sound if the output device works properly.

  c. Click **Stop** to stop the output device check.

6. In the **VoIP Parameters** area, configure settings of the voice transmitting:

  a. From the **Codec** list, select the desired audio stream compression method.

  b. From the **Codec Format** list, select the desired audio stream sampling frequency.

  c. In the **VoIP Port** field, type a number of the desired port for sound stream receiving.

7. *(Optional)* To adjust the volume of incoming calls, select the **Automatic Gain Control** check box.

> **Important**
> The **TIPRO phone module: switching audio input and audio output when answer a call** check box must always be cleared.

8. Click **Finish** to save changes and close the window.

2.6.2 Configuring Audio Output Devices

Follow the procedure to configure virtual audio output device.

Prerequisites:

Ensure the desired audio input or output devices are connected and enabled.

Procedure:

1. On the menu bar, click **Settings (⚙)** →**Equipment** →**Sound**.
  The **Sound Settings** window appears.

2.　In the window that appears, open the **Audio Output Devices** tab.
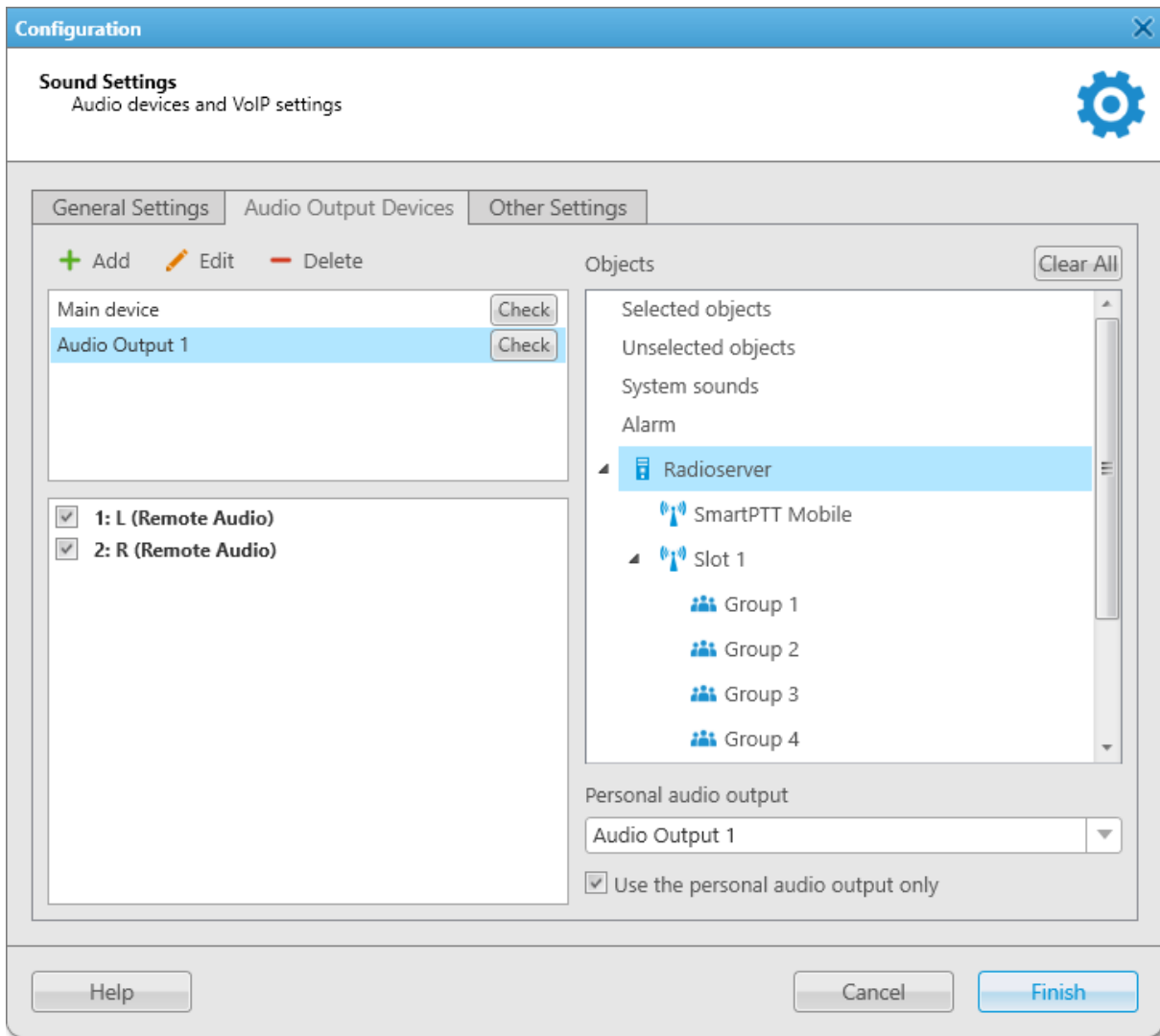
3.　Perform the following actions:

To add a new output device,	click **Add** (+). A new audio output device appears in the upper-left area.
To rename the added output device,	perform the following actions: 1.　Select the desired device and click **Edit** (✎). **NOTE** For the main output device, editing is not available. 2.　Type the desired name. 3.　Proceed to step 7.
To delete the output device,	perform the following actions: 1.　Select the desired device and click **Delete** (—). **NOTE** For the main output device, deletion is not available.

2.   Proceed to step 7.

4.   At the lower-left area, select the desired sound channels for the added audio output device.

5.   In the upper-left area, next to the selected device, click **Check** to check the selected sound channels.
The button changes to **Stop**.

6.   Click **Stop** to stop the sound check.

7.   Click **Finish** to save changes and close the window.

Postrequisites:

Assign devices to the desired system objects and events. For details, see Assigning Audio Output Devices.

2.6.3 Assigning Audio Output Devices

Follow the procedure to assign virtual audio output device to a system object or event.

Prerequisites:

Ensure the desired virtual audio device is added and properly configured. For details, see Configuring Audio Output Devices.

Procedure:

1.   On the menu bar, click **Settings (⚙) →Equipment →Sound**.
The **Sound Settings** window appears.

2. In the window that appears, open the **Audio Output Devices** tab.
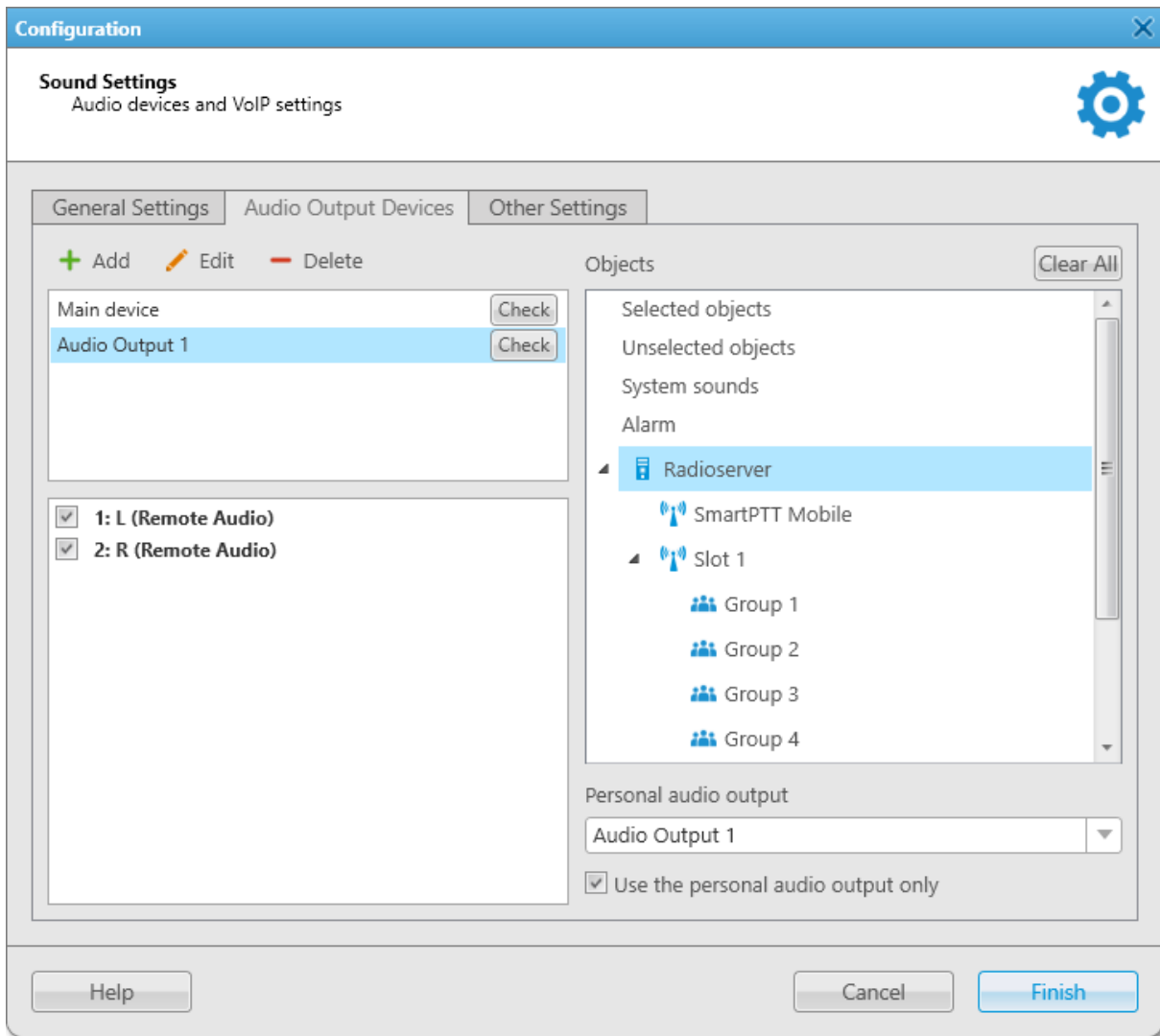
3. In the **Objects** area of the **Audio Output Devices** tab, select the desired object.

4. From the **Personal audio output** list, select a virtual device for the object.

5. *(Optional)* For the system object to use only the device selected from the **Personal audio output** list, select the **Use the personal audio output only** check box.

> **NOTE**
> The check box is unavailable to selected/unselected objects, system sounds, and alarm.

6. Click **Finish** to save changes and close the window.

Postrequisites:

To reset all manually assigned output devices, click **Clear All**.

2.6.4 Configuring Additional Sound Settings

Follow the procedure to configure muting options.

Procedure:

1. On the menu bar, click **Settings (⚙)** → **Equipment** → **Sound**.
   The **Sound Settings** window appears.

2. In the window that appears, open the **Other Settings** tab.
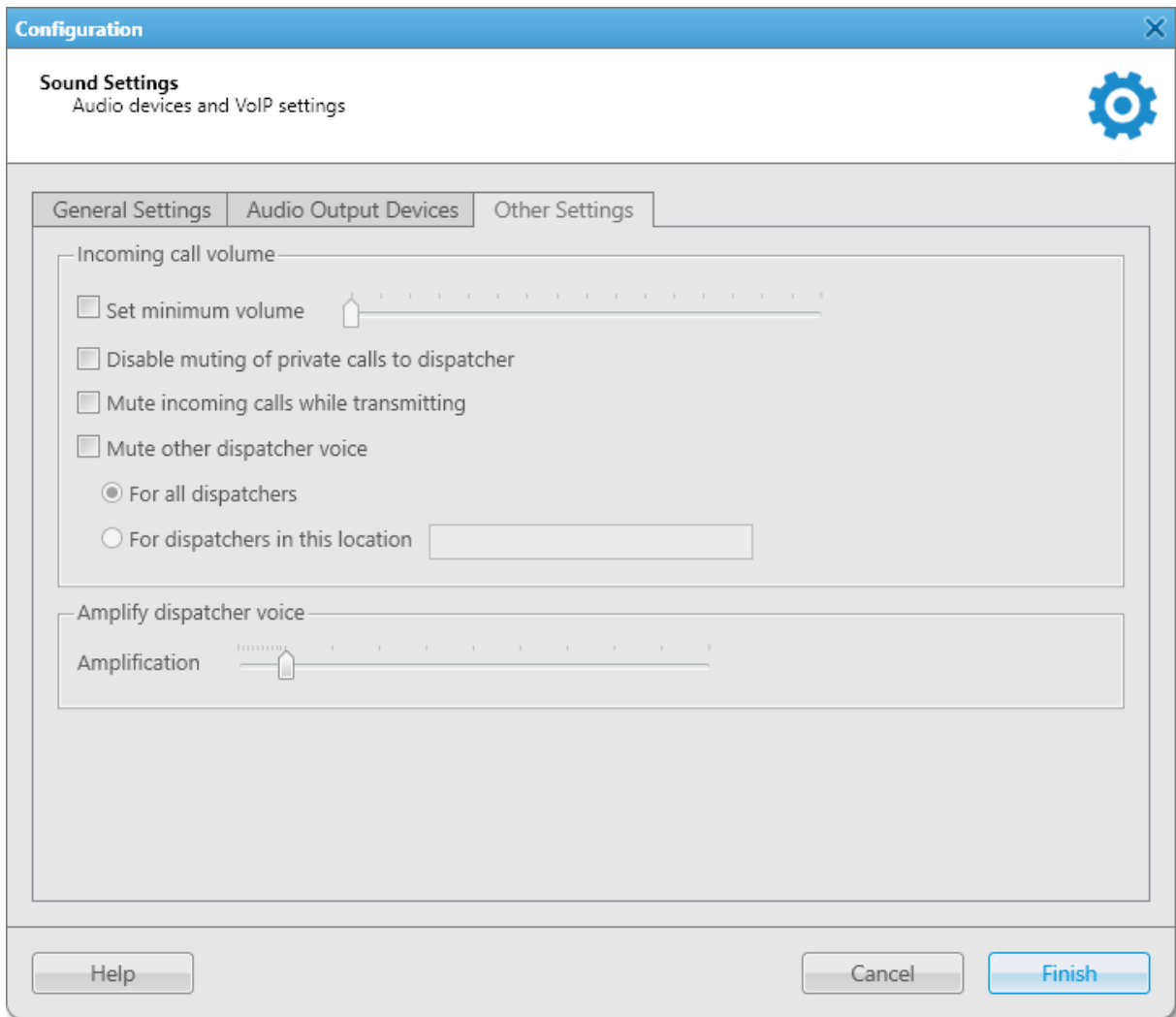
3. In the **Incoming call volume** area, configure the mute settings:

To disable muting of incoming private calls,	select the **Disable muting of private calls to dispatcher** check box.
To mute all incoming calls during outgoing transmissions,	select the **Mute incoming calls while transmitting** check box.
To mute transmissions from all other dispatchers in the system,	perform the following actions: 1. Select the **Mute other dispatcher voice** check box. 2. Select **For all dispatchers**.

To mute transmissions from specific other dispatchers in the system,	perform the following actions:
	1. Select the **Mute other dispatcher voice** check box.
	2. Select **For dispatchers in this location**, and then, in the unlocked field on the right, type the name or number of the location where the desired dispatchers are located.
	3. Repeat these steps for other SmartPTT Dispatcher applications whose operators should not hear each other. Operators who have identical data in the **For dispatchers in this location** field of SmartPTT Dispatcher are unable to hear each other. The location value can contain no more than 50 characters.

4. Configure sound parameters for a dispatcher:

To prevent dispatchers from completely muting SmartPTT Dispatcher sound,	perform the following actions:
	1. In the **Incoming call volume** area, select the **Set minimum volume** check box.
	2. Move the slider to the desired minimum volume level. The specified volume level will be used when the dispatcher turns off the sound.
To amplify dispatcher voice in outgoing transmissions,	in the **Amplify dispatcher voice** area, move the **Amplification** slider to the desired volume level.

5. Click **Finish** to save changes and close the window.

2.7 Supported Devices

SmartPTT Dispatcher supports third-party digital and analog devices including the following:

- VM-1S USB Dispatch Microphone.
  For information on the VM-1S USB microphone configuration, see Configuring VM-1S USB Microphone.

- VCC-3 USB Dispatch Microphone.
  For information on the VCC-3 USB microphone configuration, see Configuring VCC-3USB Microphone.

- D-9 Dispatch Microphone.
  For information on the D-9 microphone configuration, see Configuring D-9 Microphone.

- PTT13-USB PTX-QD Microphone.
  For information on the PTT13-USB PTX-QD microphone configuration, see Configuring PTT13-USB PTX-QD Microphone.

- PS12/PS20 USB Microphone.
  For information on the PS12/PS20 USB microphone configuration, see Configuring PS12/PS20 USB Microphone.

- DM-160 Microphone.
  For information on the DM-160 microphone configuration, see Configuring DM-160 Microphone.

- C310-M/C320-M USB Headset.
  For information on the C310-M/C320-M USB Headset configuration, see Configuring C310-M/C320-M USB Headset.

- X-keys XK-3 Foot Switch.
  For information on the X-keys XK-3 foot switch configuration, see Configuring X-keys XK-3 Foot Switch.

- Tipro Modular Console. For details, see Tipro Console.

For the full list of supported devices, see "Third-Party Products" in *SmartPTT Installation and Configuration Guide*.

For information on connection of the aforementioned supported devices, see the sections below.

2.7.1 Configuring VM-1S USB Microphone

Follow the procedure to configure the VM-1S USB microphone.

Prerequisites:

Connect your microphone to the computer with SmartPTT Dispatcher installed and ensure that it appears in Windows Device Manager without errors.

Procedure:

1. In SmartPTT Dispatcher, on the menu bar, click **Settings (⚙) → Equipment → Sound**.
   The **Sound Settings** window appears.

2. In the window that appears, open the **General Settings** tab.
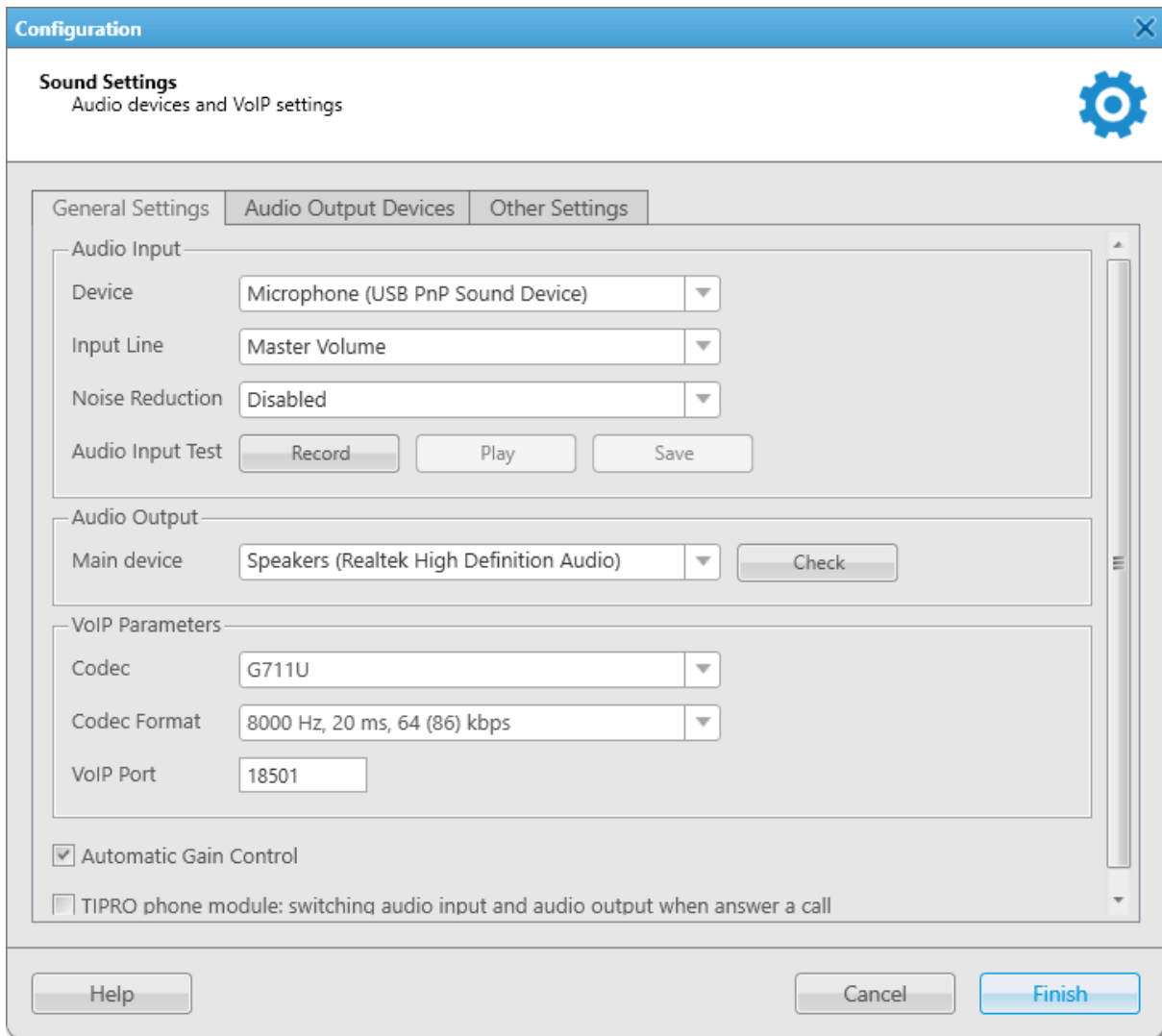
3. In the **Audio Input** area, configure settings of the audio input device:

   a. From the **Device** list, select *Microphone (USB PnP Sound Device)*.

b.　From the **Input Line** list, select the desired audio mixer line used to connect a microphone.

c.　*(Optional)* From the **Noise Reduction** list, select the desired level of noise reduction.

4.　Check the selected audio input device:

a.　Click **Record** and speak into the device.
The button changes to **Stop**.

b.　Click **Stop** to stop the recording.
The button changes to **Record** and other buttons become unlocked.

c.　Click **Play** to listen to the recorded voice.
The button changes to **Stop**. If the device works properly, you will hear the record.

d.　*(Optional)* To save the recorded voice sample, click **Save**.

5.　On the menu bar, click **Settings (⚙) →Equipment →Control Devices**.
The **Control Devices** window appears.

6.　In the window that appears, open the **Keys** tab.

7.　From the **Objects and actions** list, select *PTT Key*.

8.　*(Optional)* To add a new key, click **Add key (+)**.

9. Select *Input Device (HID)*.
    The list of available USB devices appears next to the Input Devices list.

10. From the list that appears, select *FP-1*.

11. Under the Input Devices list, click the Assign Hotkey ([_____]) button.
    White dots appear on the button, and the *Press desired key* message appears next to it.

12. Press the PTT button on the VM-1S USB microphone base.
    The *Button 1* text is displayed on the Assign Hotkey button, and the *Press desired key* message disappears.

13. Click **Finish** to save changes and close the window.

2.7.2 Configuring VCC-3USB Microphone

Follow the procedure to configure the VCC-3 USB microphone.

Prerequisites:

Connect your microphone to the computer with SmartPTT Dispatcher installed and ensure that it appears in Windows Device Manager without errors.

Procedure:

1. In SmartPTT Dispatcher, on the menu bar, click **Settings (⚙)** → **Equipment** → **Sound**.
    The **Sound Settings** window appears.

2. In the window that appears, open the **General Settings** tab.
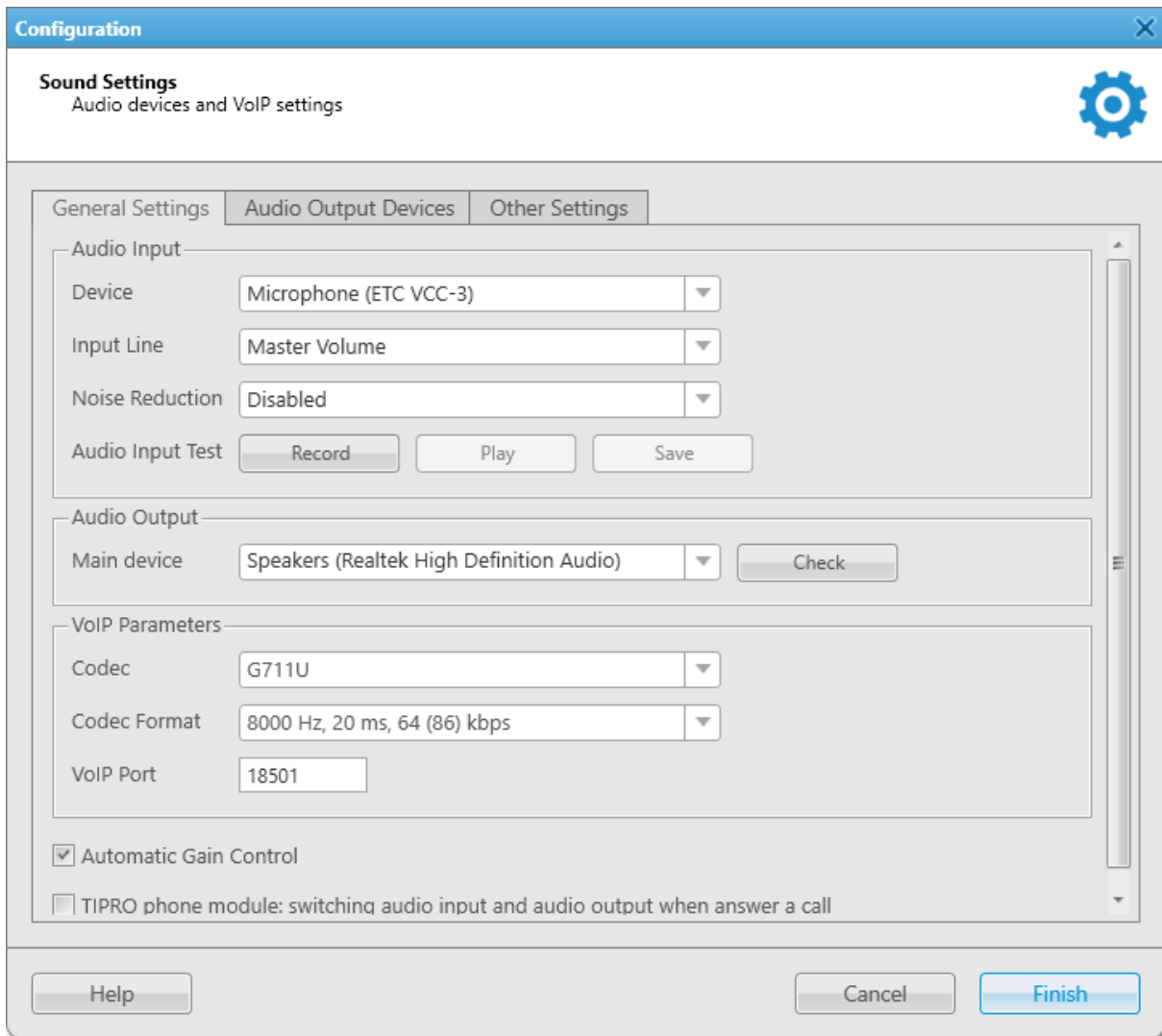
3. In the **Audio Input** area, configure settings of the audio input device:

    a. From the **Device** list, select *Microphone (ETC VCC-3)*.

    b. From the **Input Line** list, select the desired audio mixer line used to connect a microphone.

    c. *(Optional)* From the **Noise Reduction** list, select the desired level of noise reduction.

4. Check the selected audio input device:

    a. Click **Record** and speak into the device.
        The button changes to **Stop**.

    b. Click **Stop** to stop the recording.
        The button changes to **Record** and other buttons become unlocked.

    c. Click **Play** to listen to the recorded voice.
        The button changes to **Stop**. If the device works properly, you will hear the record.

    d. *(Optional)* To save the recorded voice sample, click **Save**.

5. On the menu bar, click **Settings ( )** → **Equipment** → **Control Devices**.
    The **Control Devices** window appears.

6. In the window that appears, open the **Keys** tab.

7. From the **Objects and actions** list, select *PTT Key*.

8. *(Optional)* To add a new key, click **Add key (+)**.

9. Select *Keyboard*.

10. Under the Input Devices list, click the Assign Hotkey (‒) button.
    White dots appear on the button, and the *Press desired key* message appears next to it.

11. Press the PTT button on the VCC-3 USB microphone base.
    The *F8* text is displayed on the Assign Hotkey button, and the *Press desired key* message disappears.

> **Important**
> The PTT button of the VCC-3 USB microphone is displayed in the system as the F8 key, therefore when you assign actions to this button they will also be executed when you press the F8 key on the keyboard.

12. Click **Finish** to save changes and close the window.

2.7.3 Configuring D-9 Microphone

Follow the procedure to configure the D-9 microphone by Holmco.

Prerequisites:

Connect your microphone to the computer with SmartPTT Dispatcher installed and ensure that the microphone appears in Windows Device Manager without errors.

Procedure:

1. In SmartPTT Dispatcher, on the menu bar, click **Settings (⚙)** → **Equipment** → **Sound**. The **Sound Settings** window appears.

2. In the window that appears, open the **General Settings** tab.
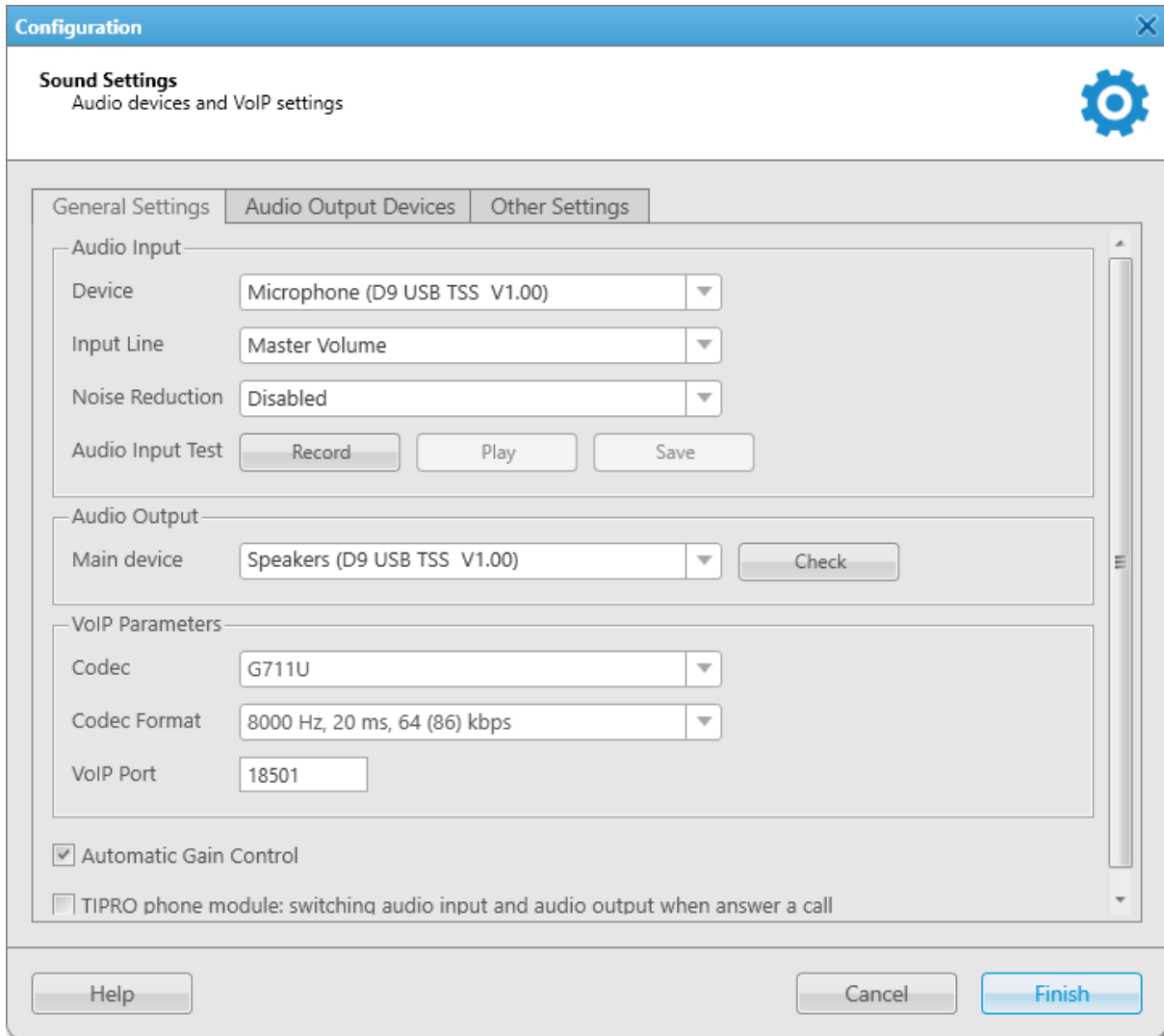
3. In the **Audio Input** area, configure settings of the audio input device:

   a. From the **Device** list, select *Microphone (D9 USB TSS V1.00)*.

   b. From the **Input Line** list, select the desired audio mixer line used to connect a microphone.

   c. *(Optional)* From the **Noise Reduction** list, select the desired level of noise reduction.

4. Check the selected audio input device:

    a.   Click **Record** and speak into the microphone.
            The button changes to **Stop**.

    b.   Click **Stop** to stop the recording.
            The button changes to **Record**. The **Play** and **Save** buttons become unlocked.

    c.   Click **Play** to listen to the recorded voice.
            The button changes to **Stop**. If the device works properly, you will hear the record.

    d.   *(Optional)* To save the recorded voice sample as a file, click **Save**.

5.   In the **Audio Output** area, select a device that will play the sound. If you want to use D-9, from the **Main device** list, select *Speakers (D9 USB TSS V1.00)*.

6.   Check the selected audio output device by clicking the **Check** button.
       The button changes to **Stop**. If the device works properly, you will hear the sound.

7.   On the menu bar, click **Settings (⚙)** → **Equipment** → **Control Devices**.
       The **Control Devices** window appears.

8.   In the window that appears, open the **Keys** tab.
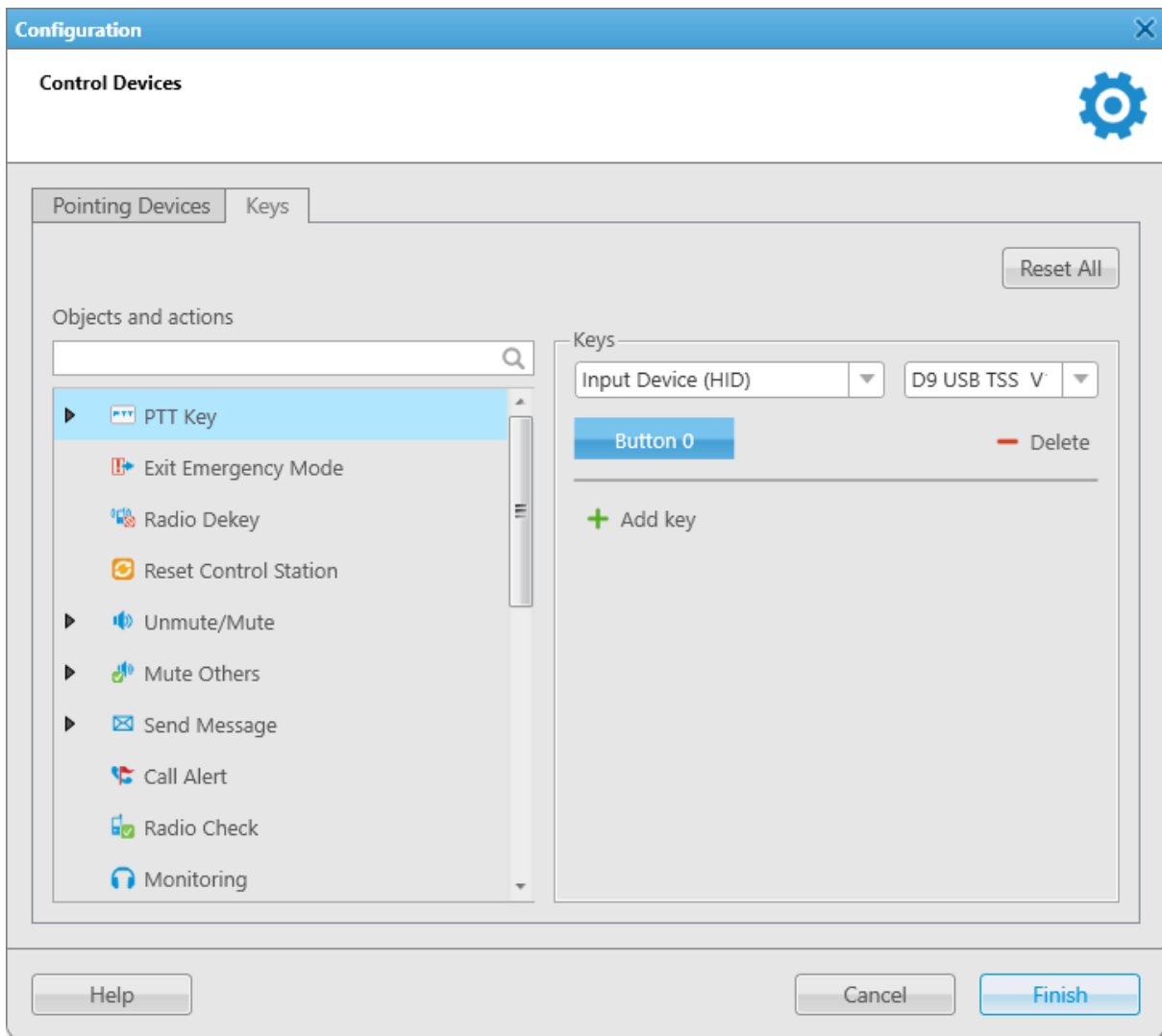
9.   From the **Objects and actions** list, select *PTT Key*.

10. *(Optional)* To add a new key, click **Add key (+)**.

11. Select *Input Device (HID)*.
    The list of available USB devices appears to the right of the Input Devices list.

12. From the list that appears, select *D9 USB TSS V1.00*.

13. Under the Input Devices list, click the Assign Hotkey (   ) button.
    The ellipsis symbol appears on the button, and the *Press desired key* message appears to the right of the button.

14. Press the PTT button on the D-9 microphone base.
    The *Button 0* text is displayed on the Assign Hotkey button.

15. Click **Finish** to save changes and close the window.

2.7.4 Configuring PTT13-USB PTX-QD Microphone

Follow the procedure to configure the PTT13-USB PTX-QD microphone by Imtradex.

Prerequisites:

Connect your microphone to the computer with SmartPTT Dispatcher installed and ensure that the microphone appears in Windows Device Manager without errors.
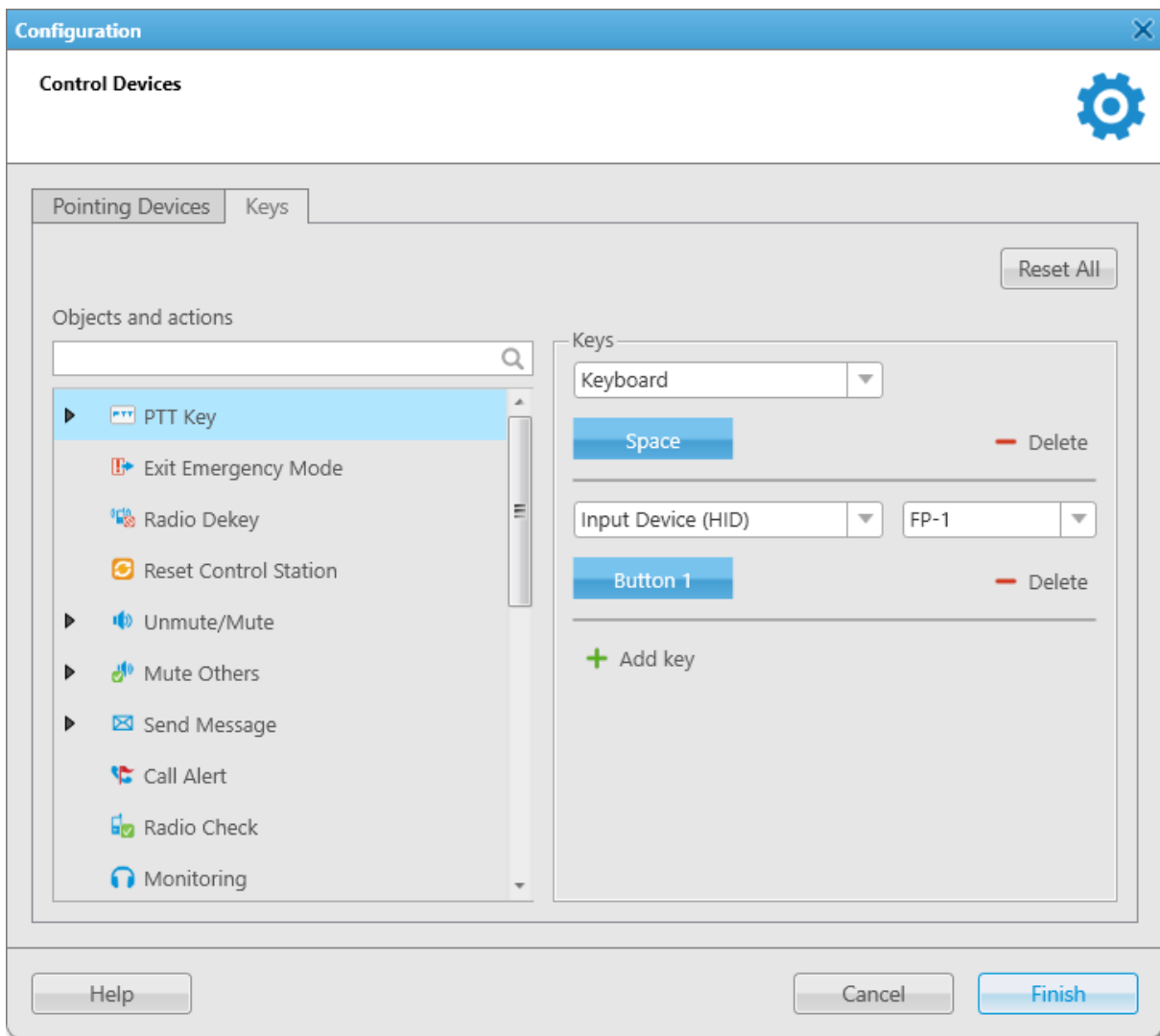
Procedure:

1. In SmartPTT Dispatcher, on the menu bar, click **Settings (⚙)** → **Equipment** → **Sound**.
   The **Sound Settings** window appears.

2.   In the window that appears, open the **General Settings** tab.
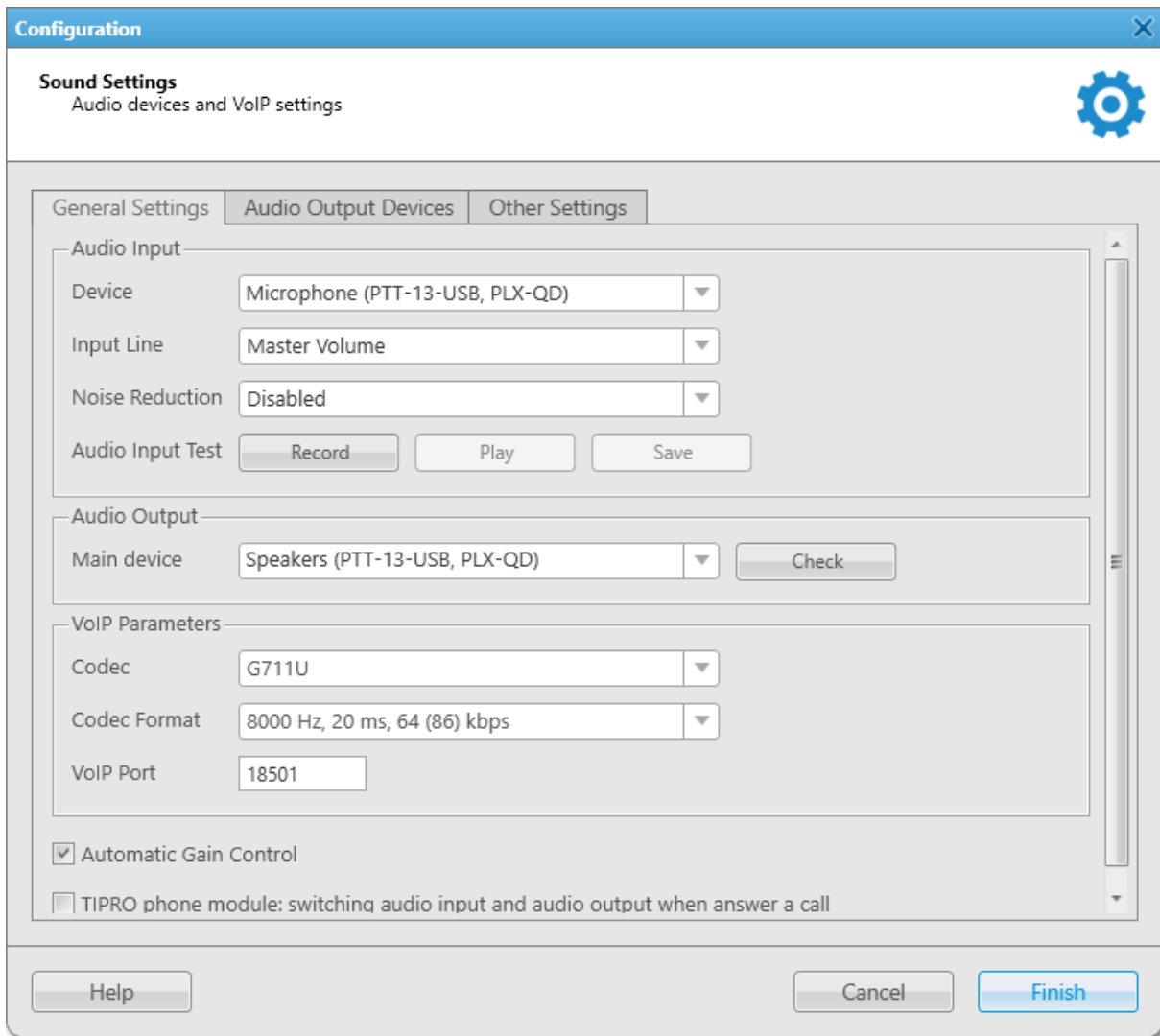
3.   In the **Audio Input** area, configure settings of the audio input device:

      a.   From the **Device** list, select *Microphone (PTT-13-USB, PLX-QD)*.

      b.   From the **Input Line** list, select the desired audio mixer line used to connect a microphone.

      c.   *(Optional)* From the **Noise Reduction** list, select the desired level of noise reduction.

4.   Check the selected audio input device:

      a.   Click **Record** and speak into the microphone.
            The button changes to **Stop**.

      b.   Click **Stop** to stop the recording.
            The button changes to **Record**. The **Play** and **Save** buttons become unlocked.

      c.   Click **Play** to listen to the recorded voice.
            The button changes to **Stop**. If the input device works properly, you will hear the record playing.

      d.   *(Optional)* To save the recorded voice sample as a file, click **Save**.

5.   In the **Audio Output** area, select a device that will play the sound. If you want to use the PTT13-USB PTX-QD device, from the **Main device** list select *Speakers (PTT-13-USB, PLX-QD)*.

6. Check the selected audio output device by clicking the **Check** button.
    The button changes to **Stop**. If the device works properly, you will hear the sound.

7. On the menu bar, click **Settings (⚙) →Equipment →Control Devices**.
    The **Control Devices** window appears.

8. In the window that appears, open the **Keys** tab.
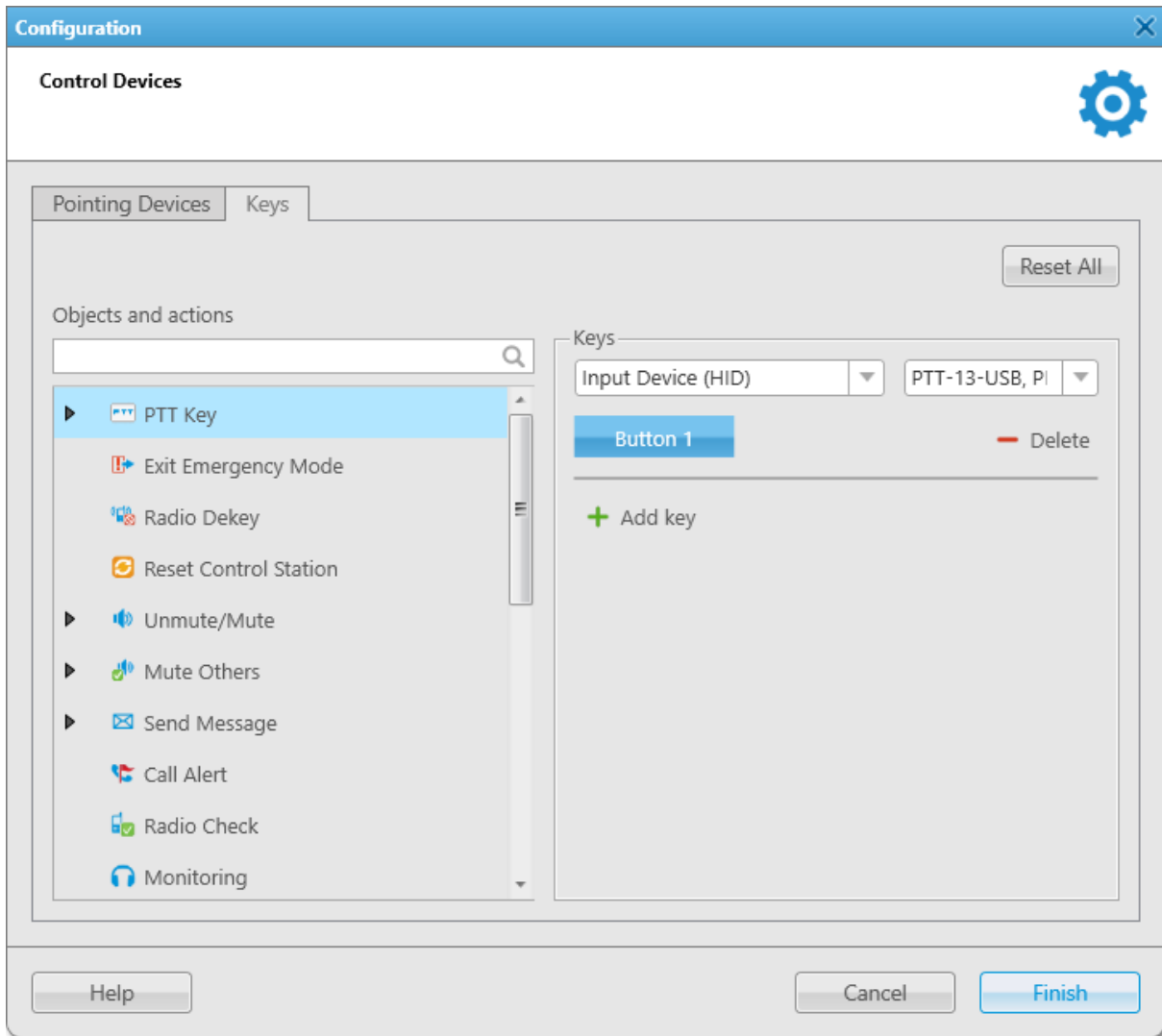
9. From the **Objects and actions** list, select *PTT Key*.

10. *(Optional)* To add a new key, click **Add key (✚)**.

11. Select *Input Device (HID)*.
    The list of available USB devices appears to the right of the Input Devices list.

12. From the list that appears, select *PTT13-USB, PTX-QD*.

13. Under the Input Devices list, click the Assign Hotkey (▭▭▭) button.
    The ellipsis symbol appears on the button, and the *Press desired key* message appears to the right of the button.

14. Press the PTT button on the PTT13-USB PTX-QD handle.
    The *Button 1* text is displayed on the Assign Hotkey button.

15. Click **Finish** to save changes and close the window.

2.7.5 Configuring PS12/PS20 USB Microphone

Follow the procedure to configure the PS12 USB or PS20 USB microphone by pei tel.

Prerequisites:

Connect your microphone to the computer with SmartPTT Dispatcher installed and ensure that the microphone appears in Windows Device Manager without errors.

Procedure:

1. In SmartPTT Dispatcher, on the menu bar, click **Settings (⚙)** →**Equipment** →**Sound**.
   The **Sound Settings** window appears.

2. In the window that appears, open the **General Settings** tab.
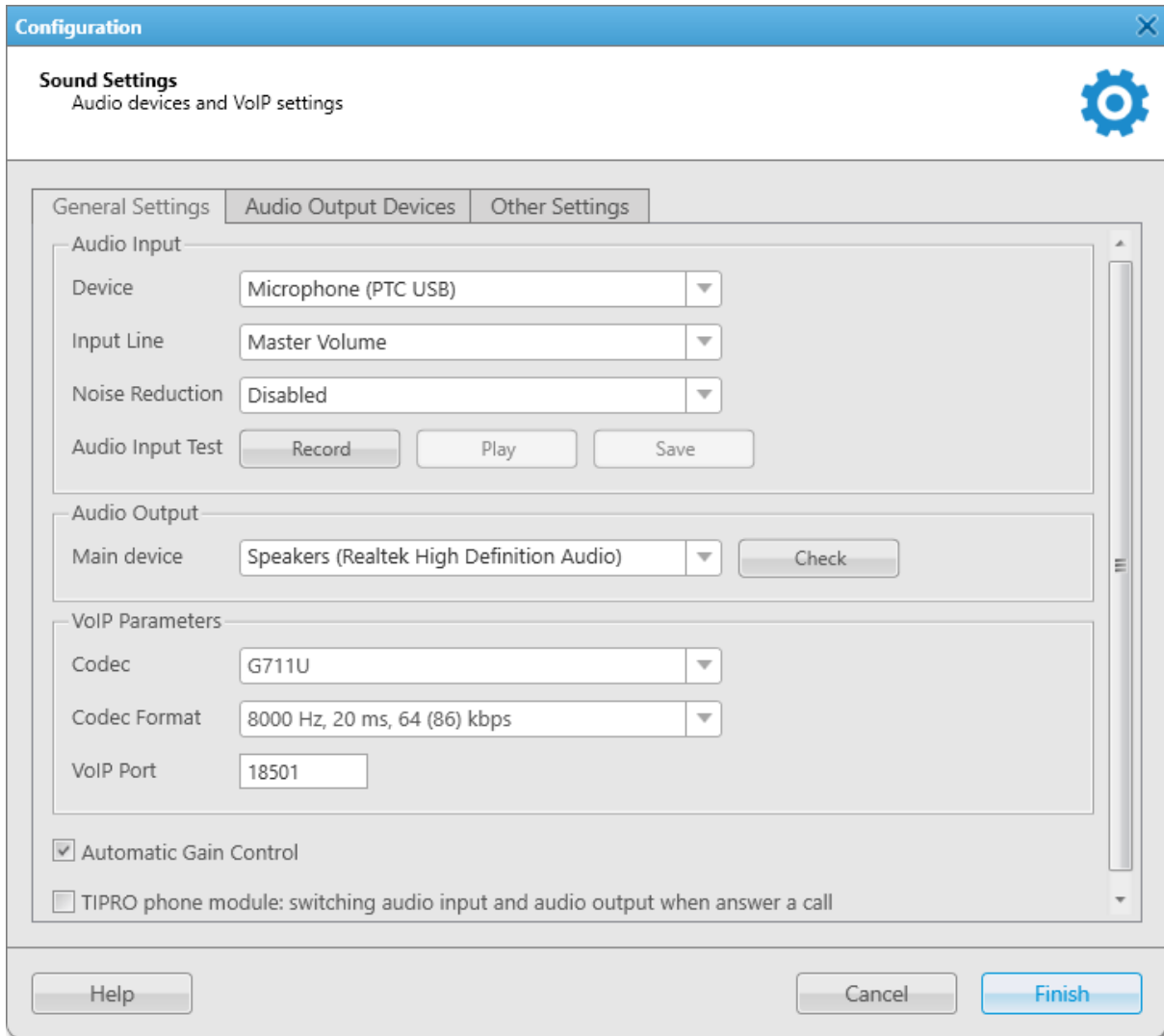
3. In the **Audio Input** area, configure settings of the audio input device:

   a. From the **Device** list, select *Microphone (PTC USB)*.

   b. From the **Input Line** list, select the desired audio mixer line used to connect a microphone.

   c. *(Optional)* From the **Noise Reduction** list, select the desired level of noise reduction.

4. Check the selected audio input device:

a. Click **Record** and speak into the microphone.
    The button changes to **Stop**.

b. Click **Stop** to stop the recording.
    The button changes to **Record**. The **Play** and **Save** buttons become unlocked.

c. Click **Play** to listen to the recorded voice.
    The button changes to **Stop**. If the input device works properly, you will hear the record playing.

d. *(Optional)* To save the recorded voice sample as a file, click **Save**.

5. In the **Audio Output** area, from the **Main device** list, select a device that will play the sound.

6. Check the selected audio output device by clicking the **Check** button.
    The button changes to **Stop**. If the device works properly, you will hear the sound.

7. On the menu bar, click **Settings (⚙) →Equipment →Control Devices**.
    The **Control Devices** window appears.

8. In the window that appears, open the **Keys** tab.

9. From the **Objects and actions** list, select *PTT Key*.

10. *(Optional)* To add a new key, click **Add key (+)**.

11. Select *Input Device (HID)*.
     The list of available USB devices appears to the right of the Input Devices list.

12. From the list that appears, select *PTC USB*.

13. Under the Input Devices list, click the Assign Hotkey (⬛⬛⬛⬛) button.
     The ellipsis symbol appears on the button, and the *Press desired key* message appears to the right of the button.

14. Press the button on the microphone base.

If you use the PS12 USB microphone,	the *Button 0* text is displayed on the Assign Hotkey button.
If you use the PS20 USB microphone,	one of the following texts is displayed on the Assign Hotkey button:

- *Button 0* if you press the green key.

- *Button 1* if you press the black key.

- *Button 2* if you press the red key.

15. *(Optional)* If you need to assign other actions to other PS20 USB microphone hardware keys, select the required action from the **Objects and actions** list, and then repeat the procedure starting from step 10.

> **Important**
> If you use the PS20 USB microphone, you can assign only one object or one action to one of the three hardware keys.

16. Click **Finish** to save changes and close the window.

## 2.7.6 Configuring DM-160 Microphone

Follow the procedure to configure the DM-160 microphone by CXD.

Prerequisites:

Connect your microphone to the computer with SmartPTT Dispatcher installed and ensure that the microphone appears in Windows Device Manager without errors.

Procedure:

1. In SmartPTT Dispatcher, on the menu bar, click **Settings (⚙)** → **Equipment** → **Sound**.
    The **Sound Settings** window appears.

2. In the window that appears, open the **General Settings** tab.
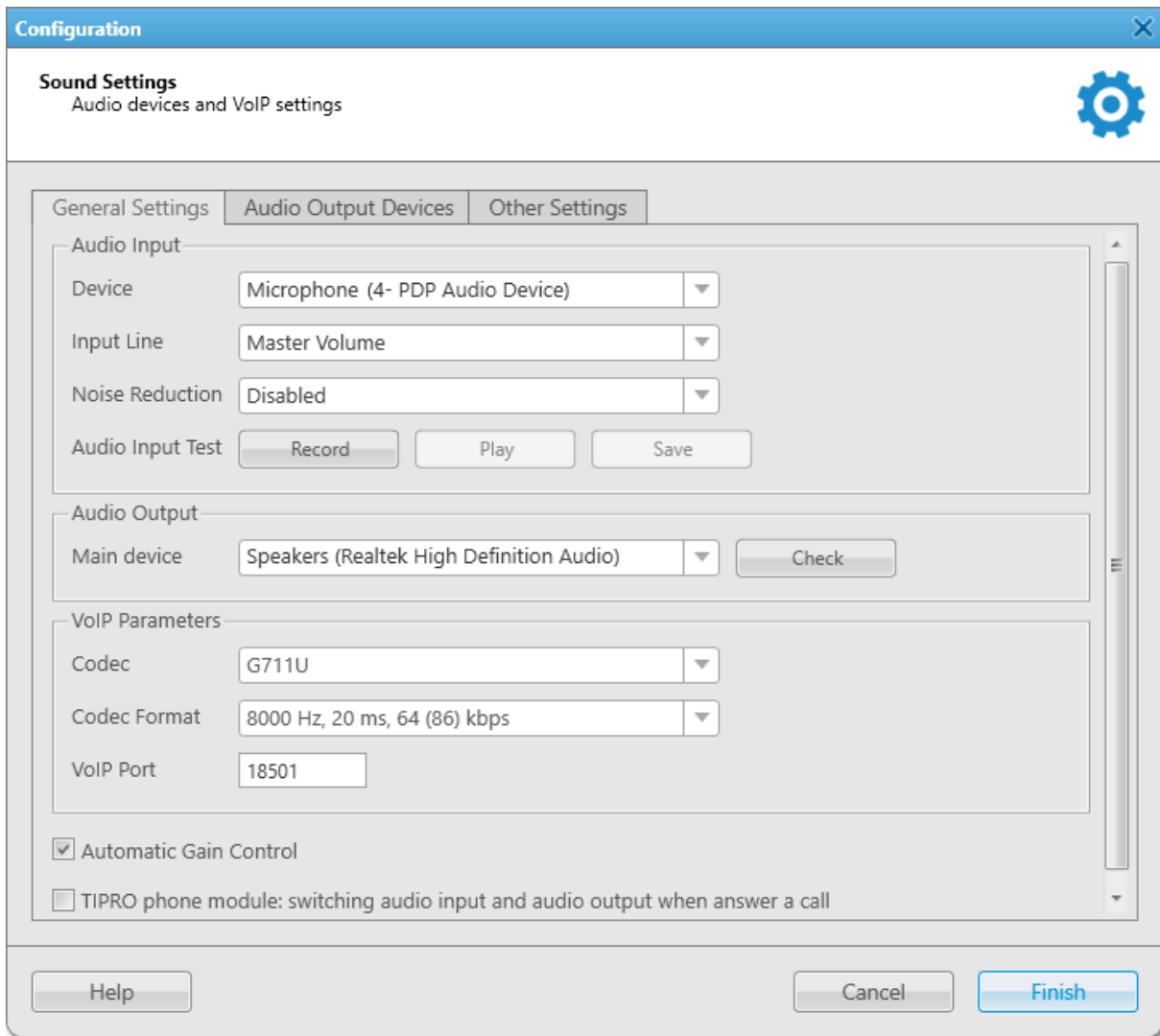
3. In the **Audio Input** area, configure settings of the audio input device:

    a. From the **Device** list, select *Microphone (4- PDP Audio Device)*.

    b. From the **Input Line** list, select the desired audio mixer line used to connect a microphone.

    c. *(Optional)* From the **Noise Reduction** list, select the desired level of noise reduction.

4. Check the selected audio input device:

    a. Click **Record** and speak into the microphone.
        The button changes to **Stop**.

    b. Click **Stop** to stop the recording.
        The button changes to **Record**. The **Play** and **Save** buttons become unlocked.

    c. Click **Play** to listen to the recorded voice.
        The button changes to **Stop**. If the input device works properly, you will hear the record playing.

    d. *(Optional)* To save the recorded voice sample as a file, click **Save**.

5. In the **Audio Output** area, from the **Main device** list, select a device that will play the sound.

6. Check the selected audio output device by clicking the **Check** button.
    The button changes to **Stop**. If the device works properly, you will hear the sound.

7. On the menu bar, click **Settings (⚙) → Equipment → Control Devices**.
    The **Control Devices** window appears.

8. In the window that appears, open the **Keys** tab.

9. From the **Objects and actions** list, select *PTT Key*.

10. *(Optional)* To add a new key, click **Add key (✚)**.

11. Select *Input Device (HID)*.
    The list of available USB devices appears to the right of the Input Devices list.

12. From the list that appears, select *4- PDP Audio Device*.

13. Under the Input Devices list, click the Assign Hotkey (▭) button.
    The ellipsis symbol appears on the button, and the *Press desired key* message appears to the right of the button.

14. Press the PTT button on the DM-160 microphone base.
    The *Button 0* text is displayed on the Assign Hotkey button.

15. Click **Finish** to save changes and close the window.

2.7.7 Configuring C310-M/C320-M USB Headset

Follow the procedure to configure the C310-M/C320-M USB headset by Plantronics.

Prerequisites:

Connect your headset to the computer with SmartPTT Dispatcher installed and ensure that the headset appears in Windows Device Manager without errors.

Procedure:

1. In SmartPTT Dispatcher, on the menu bar, click **Settings (⚙) →Equipment →Sound**.
   The **Sound Settings** window appears.

2. In the window that appears, open the **General Settings** tab.
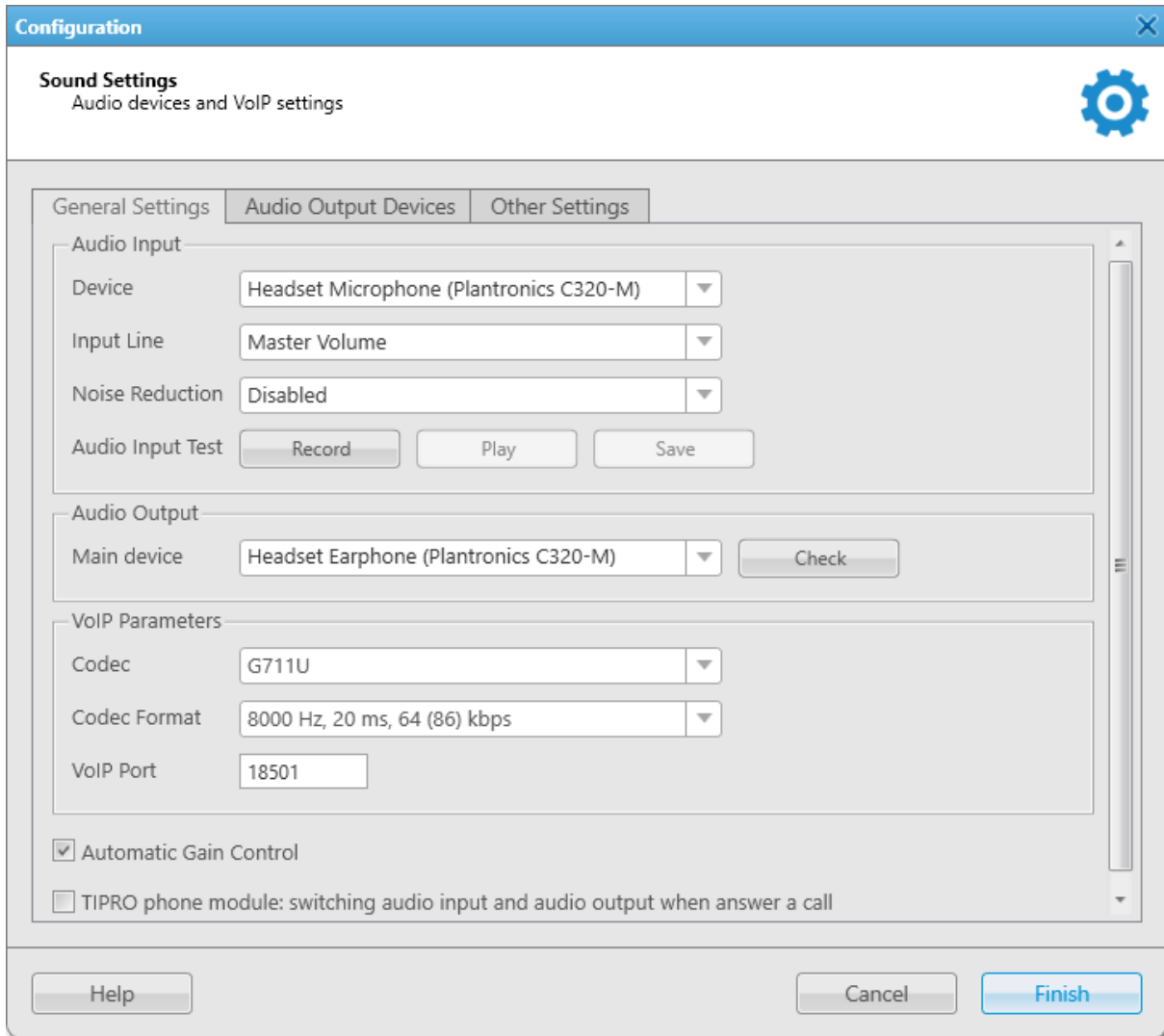
3. In the **Audio Input** area, configure settings of the audio input device:

   a. From the **Device** list, select *Headset Microphone (Plantronics C310-M)* or *Headset Microphone (Plantronics C320-M)* depending on your model.

   b. From the **Input Line** list, select the desired audio mixer line used to connect a headset.

   c. *(Optional)* From the **Noise Reduction** list, select the desired level of noise reduction.

4. Check the selected audio input device:

     a.   Click **Record** and speak into the microphone.
          The button changes to **Stop**.

     b.   Click **Stop** to stop the recording.
          The button changes to **Record**. The **Play** and **Save** buttons become unlocked.

     c.   Click **Play** to listen to the recorded voice.
          The button changes to **Stop**. If the input device works properly, you will hear the record playing.

     d.   *(Optional)* To save the recorded voice sample as a file, click **Save**.

5.   In the **Audio Output** area, select a device that will play the sound. If you want to use the C310-M/C320-M USB headset, from the **Main device** list, select *Headset Earphone (Plantronics C310-M)* or *Headset Earphone (Plantronics C320-M)*.

6.   Check the selected audio output device by clicking the **Check** button.
       The button changes to **Stop**. If the device works properly, you will hear the sound.

7.   On the menu bar, click **Settings (⚙) → Equipment → Control Devices**.
       The **Control Devices** window appears.

8.   In the window that appears, open the **Keys** tab.
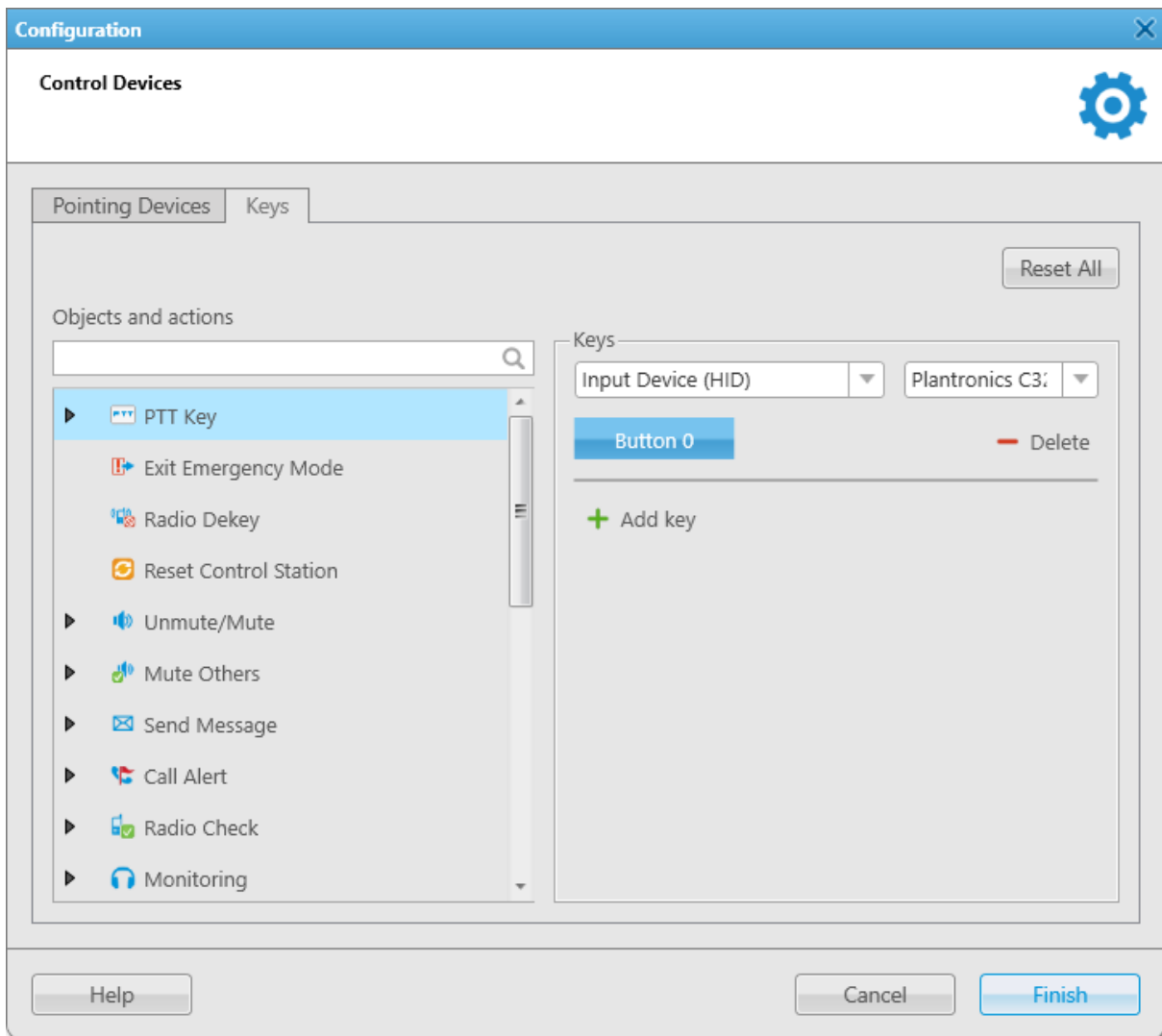
9.   From the **Objects and actions** list, select *PTT Key*.

10. *(Optional)* To add a new key, click **Add key (+)**.

11. Select *Input Device (HID)*.
    The list of available USB devices appears to the right of the Input Devices list.

12. From the list that appears, select *Plantronics C310-M* or *Plantronics C320-M* depending on your model.

13. Under the Input Devices list, click the Assign Hotkey (▭) button.
    The white dots appear on the button, and the *Press desired key* message appears to the right of the button.

14. Press the Answer button on the headset inline control.
    The *Button 0* text is displayed on the Assign Hotkey button.

15. Click **Finish** to save changes and close the window.

2.7.8 Configuring X-keys XK-3 Foot Switch

Follow the procedure to configure the X-keys XK-3 foot switch by P.I. Engineering to work as a PTT button.

Prerequisites:

Connect the foot switch to the computer with SmartPTT Dispatcher installed and ensure that it appears without errors in the Human Interface Devices section of the Windows Device Manager.

Procedure:

1. In SmartPTT Dispatcher, on the menu bar, click **Settings (⚙)** → **Equipment** → **Control Devices**.
   The **Control Devices** window appears.

2. In the window that appears, open the **Keys** tab.
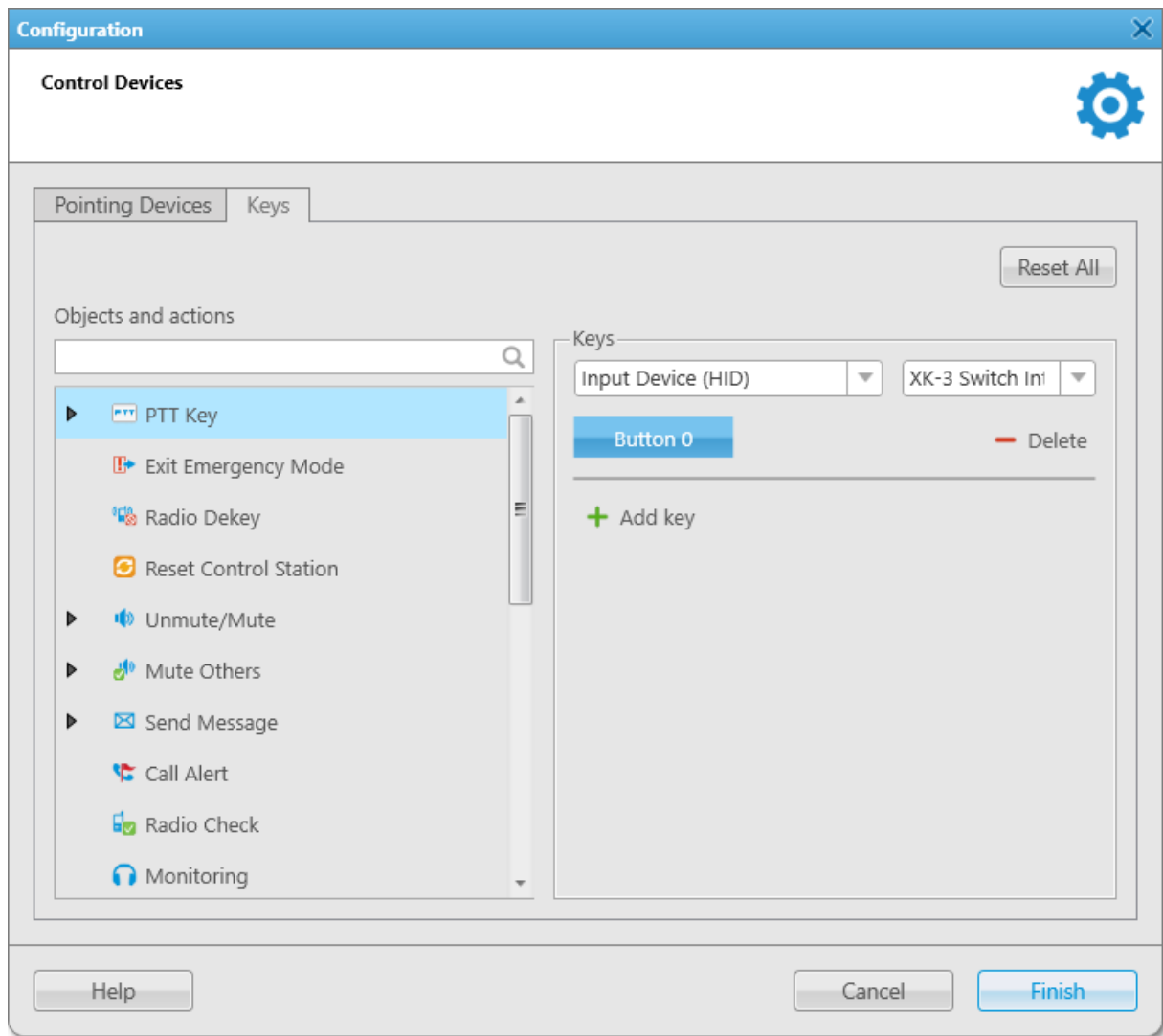
3. From the **Objects and actions** list, select *PTT Key*.

4. *(Optional)* To add a new key, click **Add key (+)**.

5. Select *Input Device (HID)*.
    The list of available USB devices appears to the right of the Input Devices list.

6. From the list that appears, select *XK-3 Switch Interface Thumb*.

7. Under the Input Devices list, click the Assign Hotkey (   ) button.
    The ellipsis symbol appears on the button, and the *Press desired key* message appears to the right of the button.

8. Press the X-keys XK-3 foot switch.
    The *Button 0* text is displayed on the Assign Hotkey button.

9. Click **Finish** to save changes and close the window.

2.7.9 Tipro Console

SmartPTT Dispatcher supports the Tipro modular console. The hardware buttons located on different modules of the Tipro console can be programmed and assigned to objects and actions in SmartPTT Dispatcher.

The Tipro modular console can consist of the following modules:

- Touchcomputer module

- Speakerbox module (equipped with programmable buttons)

- Handset module (equipped with 2 programmable buttons)

- Keyboard module with dial pad (equipped with programmable buttons)

Due to this modularity, the Tipro console switches audio output between the speakerbox and the handset. The handset is activated when it is lifted from the base and the speakerbox is activated when the handset is placed on the base.

The hardware buttons located on different modules of the Tipro console can be programmed and assigned to objects and actions in SmartPTT Dispatcher. It optimizes the dispatcher's workstation and the response time to various events.

In SmartPTT Dispatcher, a dispatcher can assign actions to the programmable buttons of the speakerbox module (increase or decrease the sound level, mute or unmute the microphone, enable the hands-free module, switch between the audio bargraph modes), as well as assign actions to 2 programmable buttons of the handset module and to the programmable buttons of the keyboard module with dial pad.

> **Important**
> Currently, only the Tipro TM-HHA-6AW console with analog interface has been tested with SmartPTT. For more information on this model, see the documentation on the Tipro website. Other models are connected and programmed in a similar way. The number of programmable buttons may vary depending on the Tipro model.

Preparing to Tipro Configuration in SmartPTT

Before you start configuring the Tipro console in SmartPTT Dispatcher, you must perform the following actions:

- For Tipro modular console without touchcomputer, connect the Tipro console to the PC with SmartPTT Dispatcher installed.

- Install additional applications: ChangeMe Utility, Tipro OPOS (these are delivered together with the Tipro console), Microsoft Point of Service for .NET v1.14 (POS for .NET).

- Contact SmartPTT Technical Support Center for obtaining the Tipro configuration file.

Configuring Tipro in SmartPTT

To configure the Tipro console, perform the following actions:

- Upload the SmartPttTiproConfig file onto the Tipro console.

- Update the Tipro console settings in the ChangeMe Utility application according to the config file and program the desired buttons.

- Install SmartPTT Dispatcher on the Tipro console (for a Tipro console with a BeFREE touchcomputer) or install SmartPTT Dispatcher on the computer (for a Tipro console without a touchcomputer).

- In SmartPTT Dispatcher, configure the general sound settings for the Tipro console. For details, see Configuring Tipro in SmartPTT Dispatcher.

- Assign hotkeys. For details, see Configuring Tipro in SmartPTT Dispatcher.
  SmartPTT Dispatcher provides a dispatcher with the ability to assign all actions listed on the **Keys** tab of the **Control Devices** window to the programmable buttons on the Tipro console.

Tipro Buttons Programming in SmartPTT

SmartPTT Dispatcher provides the ability to assign hotkeys to radio objects and actions. The Tipro console is one of the devices that support hotkey assignment. When assigning hotkeys, the Tipro console can be treated as a HID input device or as a keyboard.

Before assigning hotkeys to objects and actions in SmartPTT Dispatcher, you must configure the Tipro console programmable buttons using the ChangeMe Utility application.

> **Important**
> ChangeMe Utility provides the ability to configure only a limited number of hardware buttons as HID buttons.

In ChangeMe Utility, you can program as HID buttons 15 buttons of the keyboard module, dial pad (12 telephone buttons), as well as 2 HID commands, they are Hook switch and Microphone mute.

> **Important**
> If you want to use the dial pad for dialing, its buttons must be programmed as keyboard keys, not HID buttons.

The two buttons on the handset module can also be programmed as HID buttons. One button is located on the handset itself, and the second one is triggered when you pick up the handset.

The speakerbox module is equipped with 6 buttons that can be programmed as HID buttons. However, these buttons are preset with default actions, so they do not need to be programmed as HID buttons.

2.7.9.1 Configuring Tipro without Touchscreen in ChangeMe Utility

Follow the procedure to configure the Tipro console in the ChangeMe Utility application.

> **NOTE**
> If you have any questions about the application, you can open the ChangeMe Utility embedded help from the **Help** menu at the top of the application or in the button settings window.

Prerequisites:

Obtain the Tipro configuration file from SmartPTT Technical Support Center.

Procedure:

1.   Run the ChangeMe Utility application.

2. In the left part of the application, open the configuration file by clicking the **Open** button.
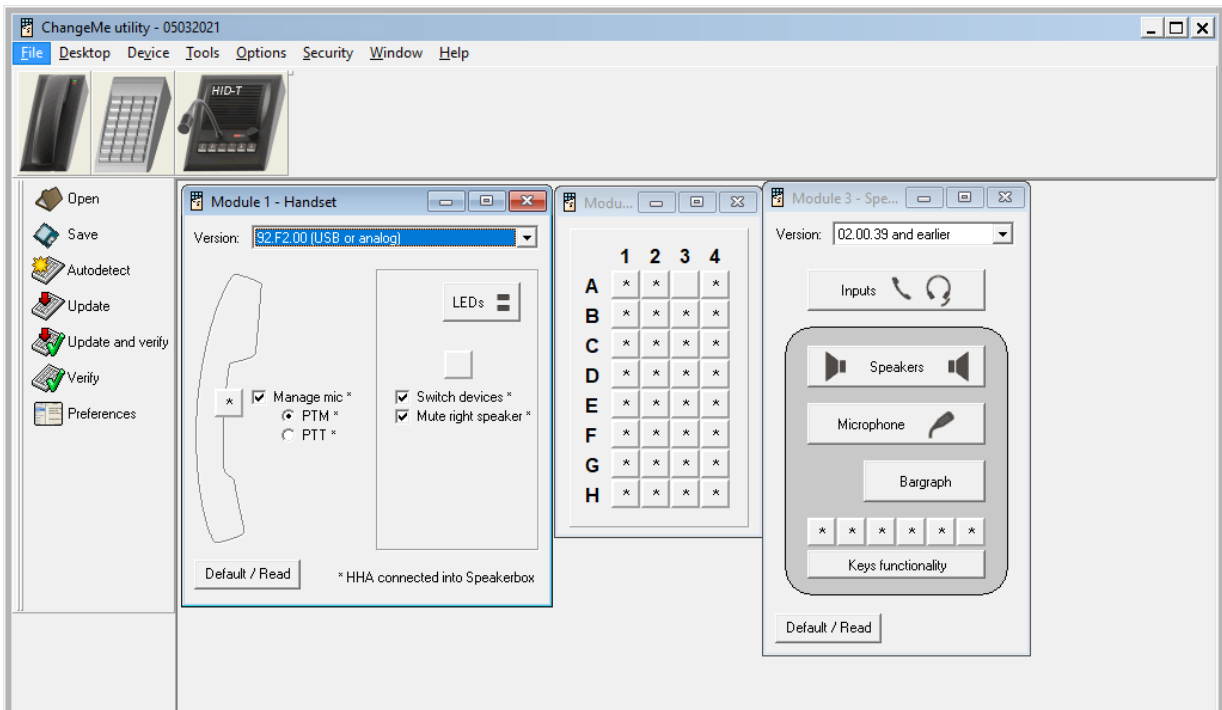
3. In the left part of the application, click the **Update** button to update the Tipro console settings according to the configuration file.

4. At the top of the application, click the image of the desired module to program its buttons.
   The settings window of the desired module appears.

5. In the window that appears, configure the buttons of the desired module:

To program buttons as HID buttons,	perform the following actions:
	1. Click the ***** icon located on the desired button. The button settings window appears. 2. In the window that appears, in the **Layer 1** field, right click, and then select **HID Telephony Module3 (SBX)** →**Programmable button**→**<number of the button>**. The button's HID identifier appears in the **Layer 1** field. 3. Click **OK** to apply changes and close the window.
To program buttons as HID commands Hook switch (switching between speakers) or Microphone mute (switching off the microphone sound),	perform the following actions:
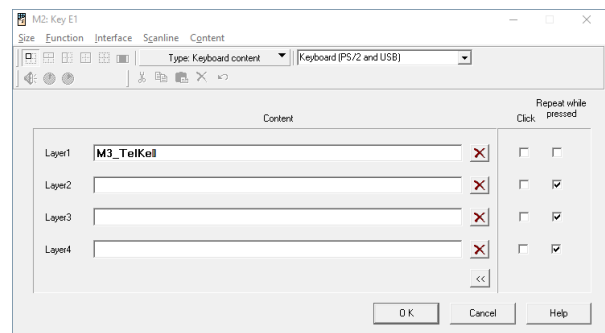
1. Click the ***** icon located on the desired button.
   The button settings window appears.
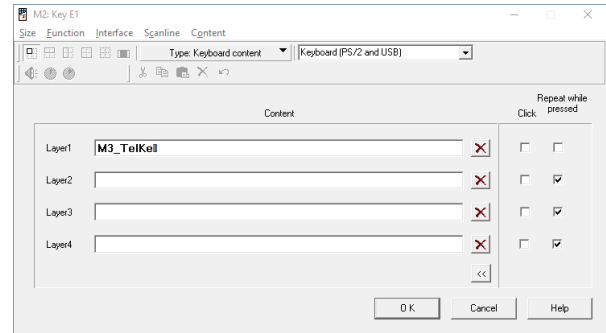
2. In the window that appears, in the **Layer 1** field, right click, and then select **HID Telephony Module3 (SBX)→Hook switch** or **HID Telephony Module3 (SBX)→Microphone mute**.
   The button's HID identifier appears in the **Layer 1** field.

3. Click **OK** to apply changes and close the window.

To program the dial pad buttons located on the keyboard module as HID buttons,

perform the following actions:

1. Click the ***** icon located on the desired button.
   The button settings window appears.
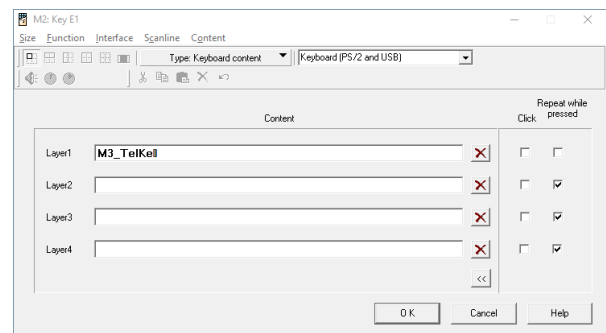
2. In the window that appears, in the **Layer 1** field, right click, and then select **HID Telephony Module3 (SBX)→Phone keys→<number of the button>**.
   The button's HID identifier appears in the **Layer 1** field.

   NOTE
   Dial pad button 1 is not the same as HID phone key 1.

3. Click **OK** to apply changes and close the window.

To program the dial pad buttons located on the keyboard module as keyboard keys,

perform the following actions:

NOTE
Do this if you want to use the dial pad to dial telephone numbers.

1.   Click the ***** icon located on the desired button.
     The button settings window appears.
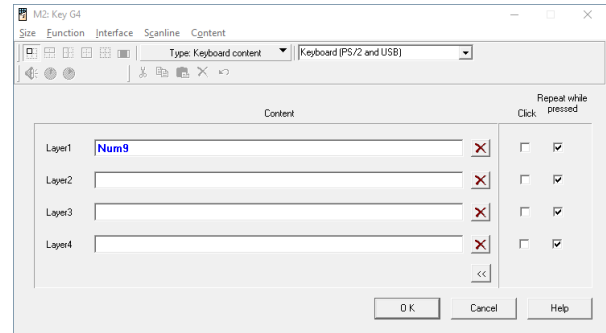
2.   In the window that appears, click the **Layer 1** field, and then
     press the desired dial pad button on the keyboard module.
     The button's identifier appears in the **Layer 1** field.

3.   Click **OK** to apply changes and close the window.

To program preconfigured functions of the buttons of
the speakerbox module,

perform the following actions:

1.   In the settings window of the speakerbox module, click
     Keys functionality.
     The **Keys functionality** window appears.
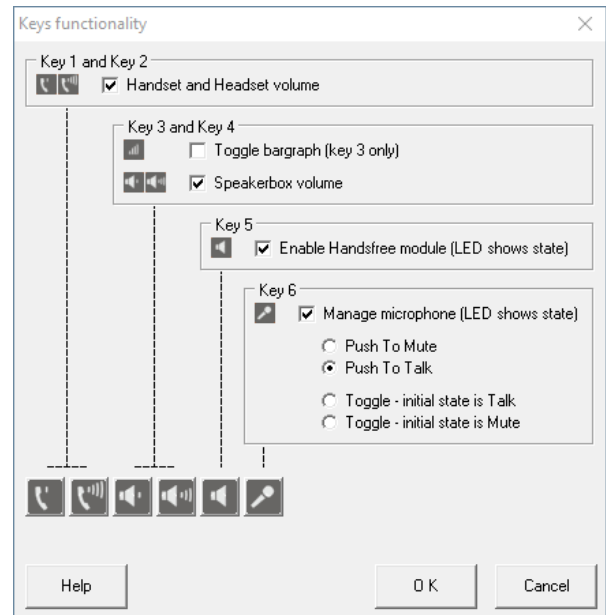
2.   In the window that appears, configure the buttons you want
     to use:

     a.   For buttons 1 and 2, select the check box to use them
          to control handset and headset volume.

     b.   For buttons 3 and 4, choose between using button 3 to
          toggle audio bargraph display and using both buttons
          to control speakerbox volume.

     c.   For button 5, select the check box to use it to toggle
          hands-free mode.

        d.   For button 6, select the check box to use it to toggle muting or unmuting the microphone.

     3.   Click **OK** to apply changes and close the window.

6.   Click the **Update and verify** button in the left part of the application to update and confirm the changes in the Tipro configuration.

7.   Close ChangeMe Utility.

2.7.9.2 Configuring Tipro with Touchscreen in ChangeMe Utility

Follow the procedure to configure the Tipro console in the ChangeMe Utility application.

> **NOTE**
> If you have any questions about the application, you can open the ChangeMe Utility embedded help from the **Help** menu at the top of the application or in the key settings window.

Prerequisites:

Obtain the Tipro configuration file from SmartPTT Technical Support Center.

Procedure:

1.   Run the ChangeMe Utility application.

2.   In the left part of the application, open the configuration file by clicking the **Open** button.

3.   In the left part of the application, click the **Update** button to update the Tipro console settings according to the configuration file.

4.   At the top part of the application, click **Tools > TTY Terminal**.

5.   In the window that appears, select the COM port connecting the keyboard module to the touchcomputer module, and then click **OK**.
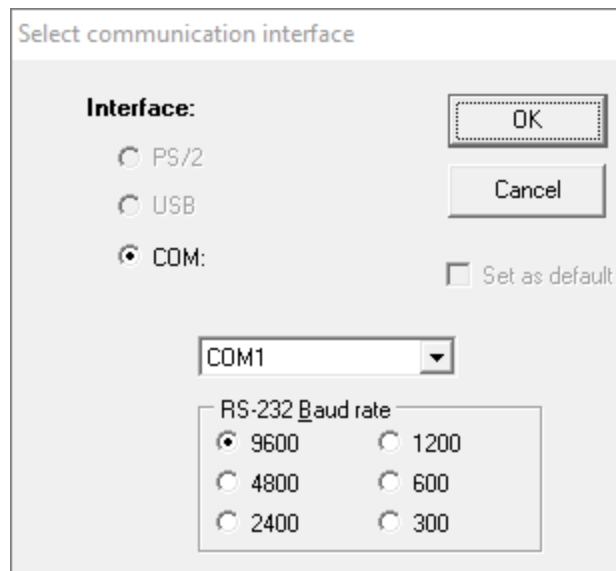
6. Check whether the COM port is selected correctly. To check, type something using the keyboard with the dial pad. If symbols appear, the COM port is selected correctly. If no symbols appear, select another COM port.
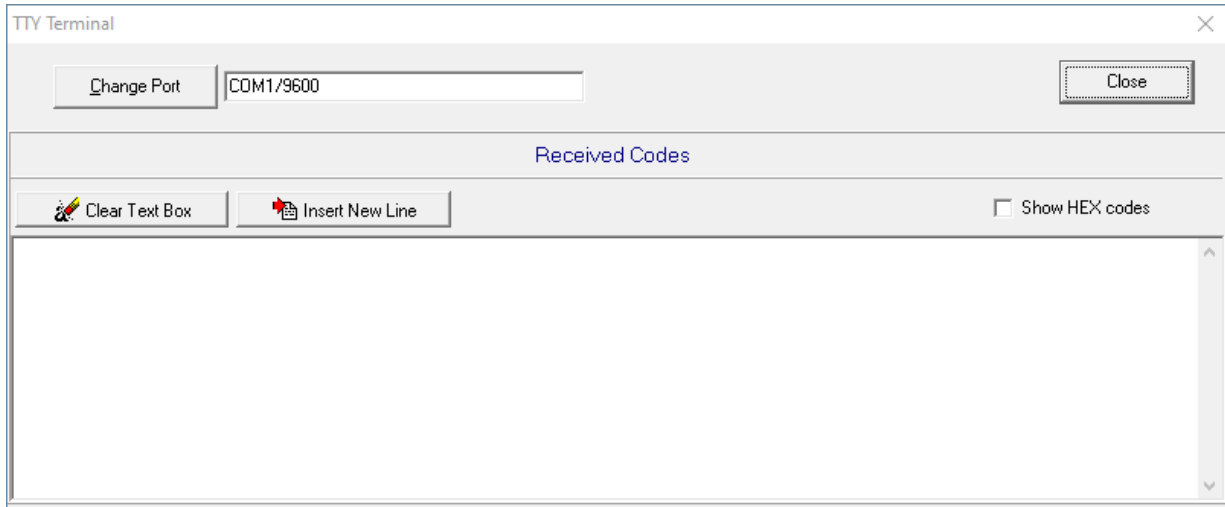
7. Close ChangeMe Utility.

2.7.9.3 Configuring Tipro in SmartPTT Dispatcher

Follow the procedure to configure the Tipro console in SmartPTT Dispatcher.

> **Important**
> Currently, SmartPTT Dispatcher supports only the Tipro TM-HHA-6AW console with analog interface.

Prerequisites:

Configure the programmable buttons as HID buttons using the ChangeMe Utility application.
ChangeMe Utility allows to configure only a limited number of hardware buttons as HID buttons.

Procedure:

1. Install and run SmartPTT Dispatcher.

2. To configure sound for the Tipro console, perform the following actions:

    a. On the menu bar, click **Settings (⚙) → Equipment → Sound**.
        The **Sound Settings** window appears.

b. In the window that appears, open the **General Settings** tab.
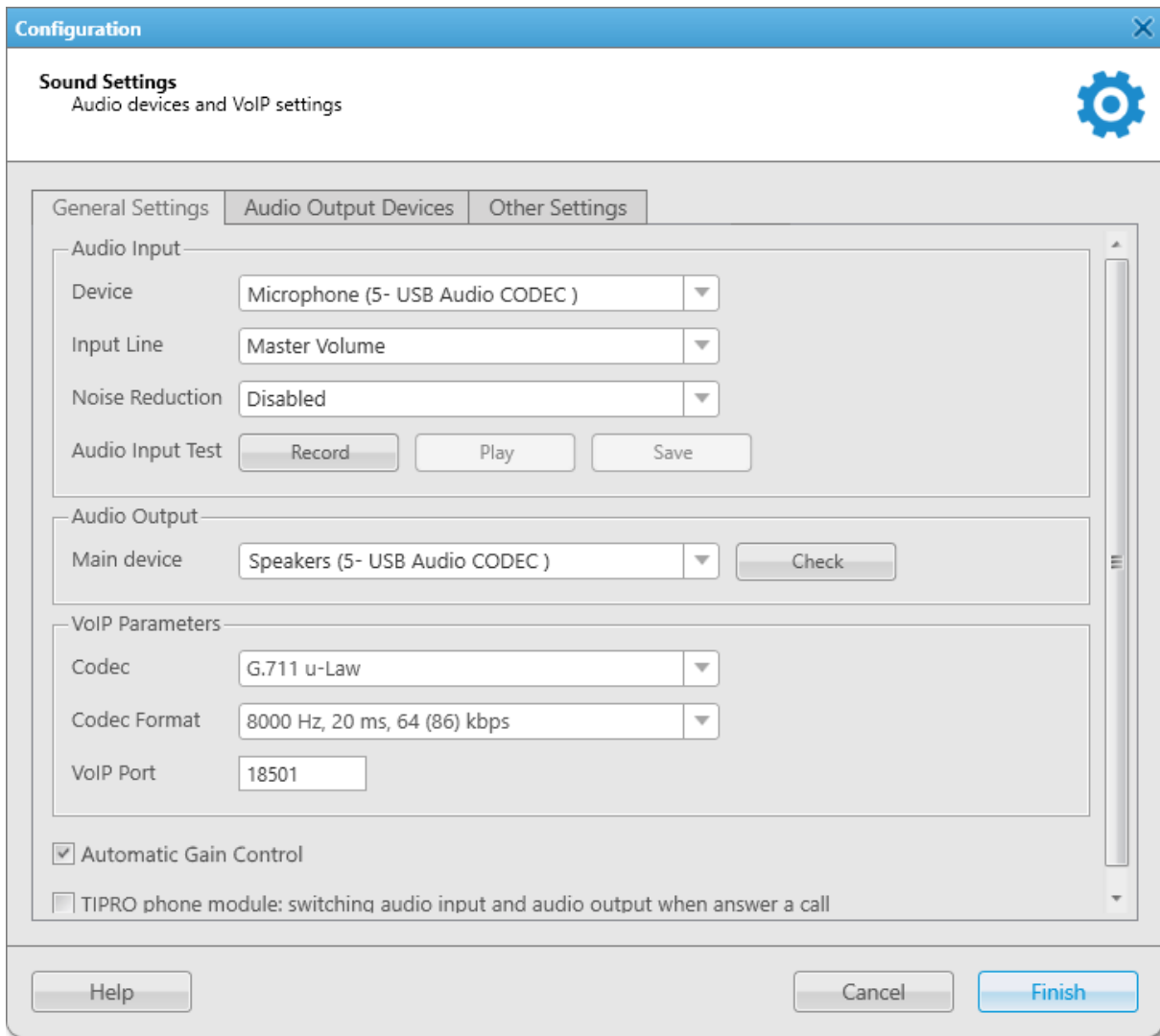
c. In the **Audio Input** area, configure settings of the Tipro console:

i. From the **Device** list, select the Tipro console microphone.

ii. Click **Record** and speak into the speakerbox module microphone, to check audio input. Pick up the phone on the handset module and speak into the receiver.
The button changes to **Stop**.

iii. Click **Stop** to stop the recording.
The button changes to **Record** and other buttons become unlocked.

iv. Click **Play** to listen to the recorded voice.
The button changes to **Stop**, and you will hear the voice if the Tipro console microphone works properly.

v. *(Optional)* To save the recorded voice sample, click **Save**.

d. In the **Audio Output** area, configure settings of the Tipro console:

i. From the **Main device** list, select the Tipro console speakerbox.

ii. Click **Check** to check the Tirpo console.
The button changes to **Stop**, and you will hear the sound if the Tipro console speakerbox works properly.

iii. Click **Stop** to stop the Tipro console speakerbox check.

e.   Click **Finish** to save changes and close the window

> **Important**
> The **TIPRO phone module: switching audio input and audio output when answer a call** check box must always be cleared.

3.   To configure hotkeys, on the **Keys** tab, perform the following actions:

a.   On the menu bar, click **Settings (⚙)** → **Equipment** → **Control Devices**.
     The **Control Devices** window appears.
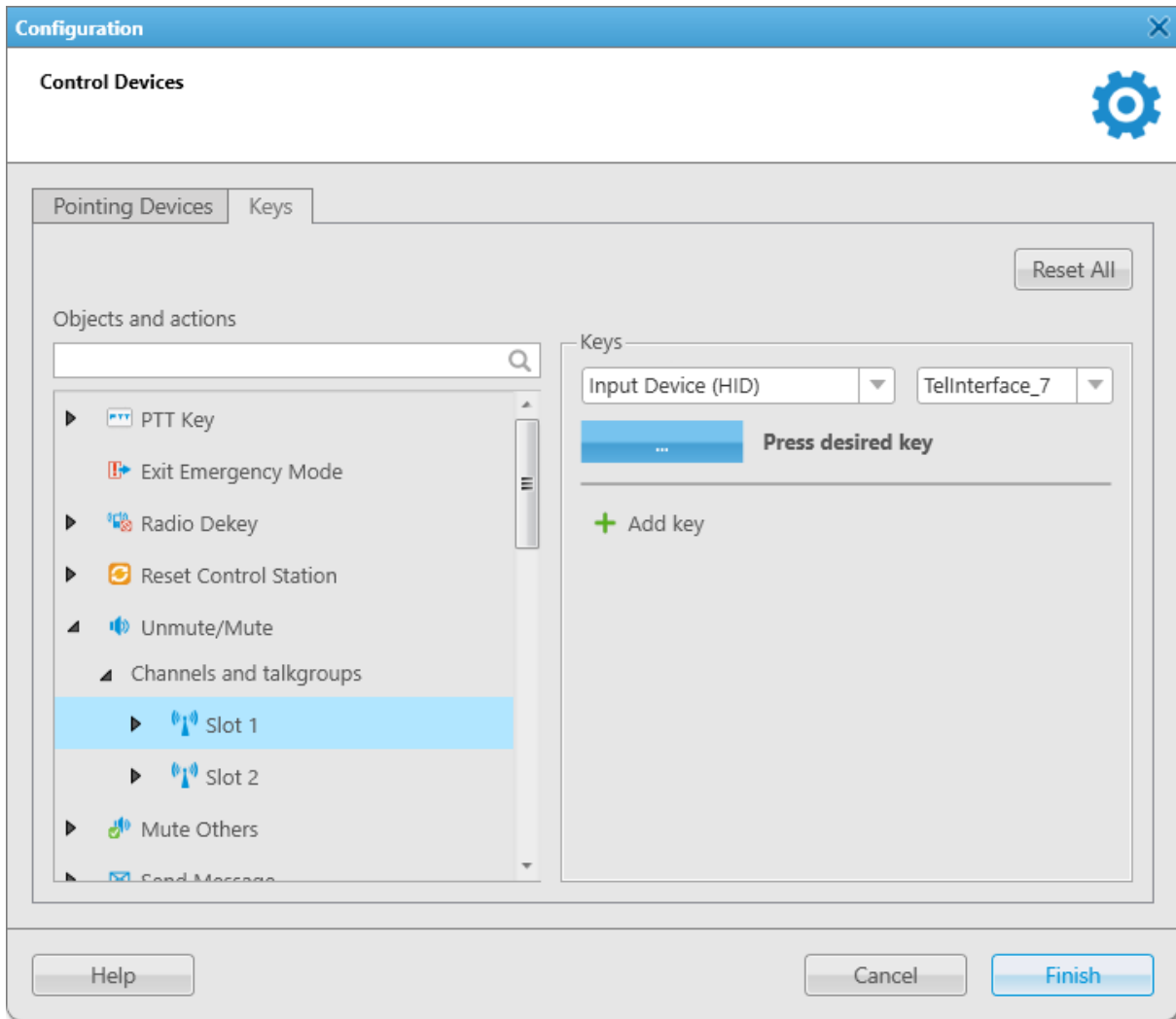
b.   In the windows that appears, open the **Keys** tab.

c.   In the **Objects and actions** area, select a radio object or an action for which it is required to assign a hotkey on the Tipro console:

To assign a hotkey for an action,	in the **Objects and actions** area, click the desired action. In the **Keys** area, the **Add key (✚)** button appears.
To assign a hotkey for an action which is related to the specific object (radio, channel, talkgroup, category, telephone subscriber, or dispatcher),	in the **Objects and actions** area, expand the desired node, and then click the desired object. In the **Keys** area, the **Add key (✚)** button appears.

d.   Click **Add key (✚)**.
     Controls for the hotkey configuration appear in the **Keys** area.

e.   From the Input Devices list, select the desired device:

To assign objects and actions to Tipro buttons programmed as HID buttons,	select *Input Device (HID)*, and then, from the list that appears next to it, select the Tipro console.
To assign objects and actions to Tipro buttons programmed as keyboard keys,	select *Keyboard*.

f.   Under the Input Devices list, click the Assign Hotkey (⬚⬚⬚) button.
      White dots appear on the button, and the *Press desired key* message appears next to it.

g.   On the Tipro console, press the desired button for an object or an action.
      The button's HID identifier will be displayed on the Assign Hotkey button, and the *Press desired key* message disappears.

NOTE
You cannot assign two or more actions or objects to the same button.

h.   Click **Finish** to save changes and close the window.

Postrequisites:

- To delete the hotkey, in the **Objects and actions** area, select the desired object or action by expanding the desired node, and then, to the right of the desired assigned hotkey, click **Delete (➖)**.

- To delete all assigned hotkeys, click **Reset All**.

2.8 Operators

SmartPTT Dispatcher provides two types of roles for its users: Administrator and operator. The role determines the rights granted to the user of the application.

Administrator Role

The Administrator account has unlimited access to all functionality of the system, including the possibility to add new administrator and operator accounts and provide operators with access to the specific functionality of SmartPTT Dispatcher. For example, most of the functionality in the **Settings (⚙)** menu is available only to administrators.

The first Administrator account is created by default when you start SmartPTT for the first time. It cannot be deleted. The *Administrator* role can be assigned to any operator account created by the first administrator.

Upon configuring SmartPTT Dispatcher for the first time after installing the SmartPTT software, you must set a password for the Administrator account. For details, see Configuring SmartPTT Dispatcher at First Start.

Operator Role

An operator account is limited by functionality that the Administrator determined. The number of operator accounts in SmartPTT Dispatcher is unlimited.

For an operator account, two types of status are available:

- The *Active* status is applied for operator accounts that are used currently.

- The *Archive* status is used for operator accounts which are not used any longer, but cannot be removed from the system as the Event Log contains entries referring to them.

The following operator rights can be limited by the Administrator in SmartPTT Dispatcher:

Right	Description
Edit radio lists	Allows/denies adding, editing, or deleting radios on the **Radio Fleet** panel and in the **Radios** window.
Manage unregistered radios	Shows/hides radios which were not added to SmartPTT Dispatcher.
Make voice calls	Allows/denies initiating voice calls (except conference calls).
Connect with external dispatchers	Allows/denies communicating with other SmartPTT dispatchers.
Make telephone calls	Allows/denies communicating with telephone subscribers.
Change channel on control station	Allows/denies selecting control station channels.
Block/Unblock radios	Allows/denies using **Block Radio** and **Unblock Radio** commands.
Remote monitor	Allows/denies using the **Remote Monitor** command (turning on the microphone on the radio).
Reboot control station	Allows/denies rebooting (restarting) control stations.
Manage radio location settings	Allow/denies configuring settings of radio location update.
Request radio location	Allows/denies performing the following actions related to the radio location: • Set Location ( ) • Find on Map ( ) • Show Address ( ) • Remove from Map ( ) • Find on Indoor Map ( )
Send text messages	Allows/denies sending text messages to radios, talkgroups, and radio categories.
Send telemetry commands	Allows/denies sending telemetry commands. **NOTE** The right does not affect the data acquisition module.
Manage bridging settings	Allows/denies configuring bridging service for SmartPTT Radioserver.
Manage routes	Allows/denies managing routes on a map and building plan.
Manage geofences	Allows/denies managing geofences on a map and building plan.
Manage points of interest	Allows/denies managing points of interest on a map.
Manage cameras	Allows/denies managing camera markers on a map.
Manage tracks	Allows/denies displaying tracks and the radio movement along the track on a map.

Right	Description
View coverage map	Allows/denies working with a coverage map.
Build reports	Allows/denies building reports.
Edit custom radio properties	Allows/denies managing parameters on the **Others** tab of the **Radio Properties** window.
Make conference calls	Allows/denies initiating conference calls.
View radioserver event log	Allows/denies showing the SmartPTT Radioserver Event Log.
Create deferred actions	Allows/denies creating deferred actions for radios.
Manage statuses	Allows/denies managing radio statuses.
Manage custom rules	Allows/denies managing custom rules.
Manage positioning rules	Allows/denies managing positioning rules.
Manage lone worker rules	Allows/denies managing Lone Worker profiles.

Assigning Client Accounts to Operators

You can limit the functionality available in SmartPTT Dispatcher using client accounts.

If desktop client authentication on SmartPTT Radioserver is enabled, you must specify the credentials of the client account to connect an operator's account to SmartPTT Radioserver. This allows the radioserver to send to operators in SmartPTT Dispatcher only information that is permitted for the client account. If the client's name and password are not set for an operator, this operator will not be able to connect to the radioserver.

If no client account is assigned, an operator can manage all radios, talkgroups, and services provided by the radioserver.

For information on clients and their authentication, see "Client Connections" in *SmartPTT Installation and Configuration Guide*.

> **Important**
> The same client account can be used for different operator accounts.

> **Important**
> The functionality available in SmartPTT Dispatcher can also be limited by licenses. For details, see Licenses.

Windows Authentication

For the Administrator and operator accounts, configuring of automatic authorization for the current Windows account is available.

Windows authentication is activated in the SmartPTT Dispatcher general settings. For details, see Configuring SmartPTT Dispatcher General Settings.

To use Windows authentication, the operator account name must match the name of a Windows user or the group to which the user belongs.

> **NOTE**
> Starting from Windows 8, users can be authorized if they are members of either domain or local user groups.

NOTE
To access the SmartPTT Dispatcher **Authorization** window when Windows authentication is enabled, start the program using a Windows user account whose name or the name of the group to which the user belongs does not match the name of the existing SmartPTT Dispatcher operator account.

Operators Configuration

SmartPTT Dispatcher provides the ability to perform the following operator-related actions:

- Add, edit or delete operator accounts. For details, see Managing Operator Accounts.

- Assign a client account to an operator if authentication of desktop clients is enabled on SmartPTT Radioserver. For details, see Managing Radioservers.

- Log over SmartPTT Dispatcher using other operator credentials. For details, see Changing Operator.

2.8.1 Managing Operator Accounts

Follow the procedure to add a new operator, edit or delete an existing operator account.

Prerequisites:

Ensure that you are logged in as the operator with the *Administrator* status.

Procedure:

1. On the menu bar, click **Settings (⚙) → Operators**.
   The **Operators** window appears.
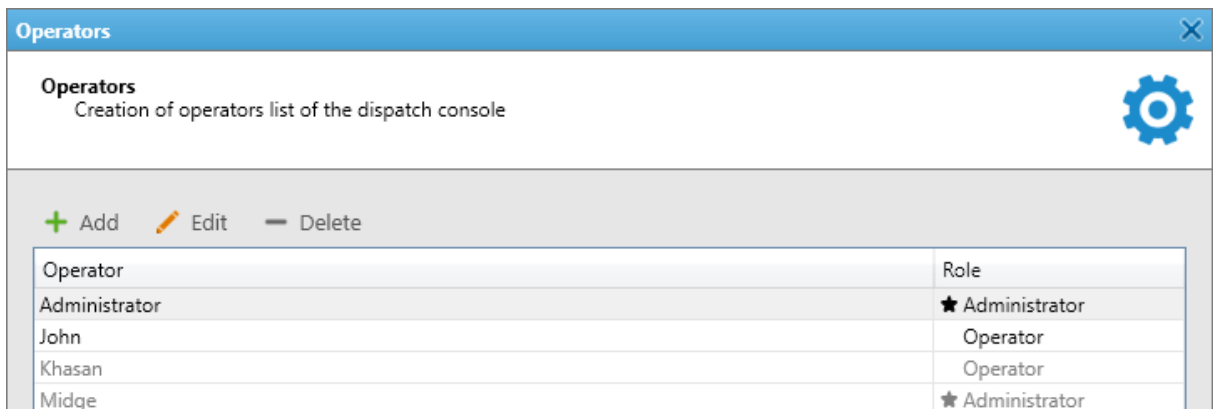
2. In the window that appears, perform one of the following actions:

To add a new operator,	click **Add (➕)**. The **Operator** window appears.
To edit an existing operator account,	select the desired account, and then click **Edit (✏)**. The **Operator** window appears.
To delete an operator account,	perform the following actions: 1. Select the desired account. 2. Click **Delete (➖)**.
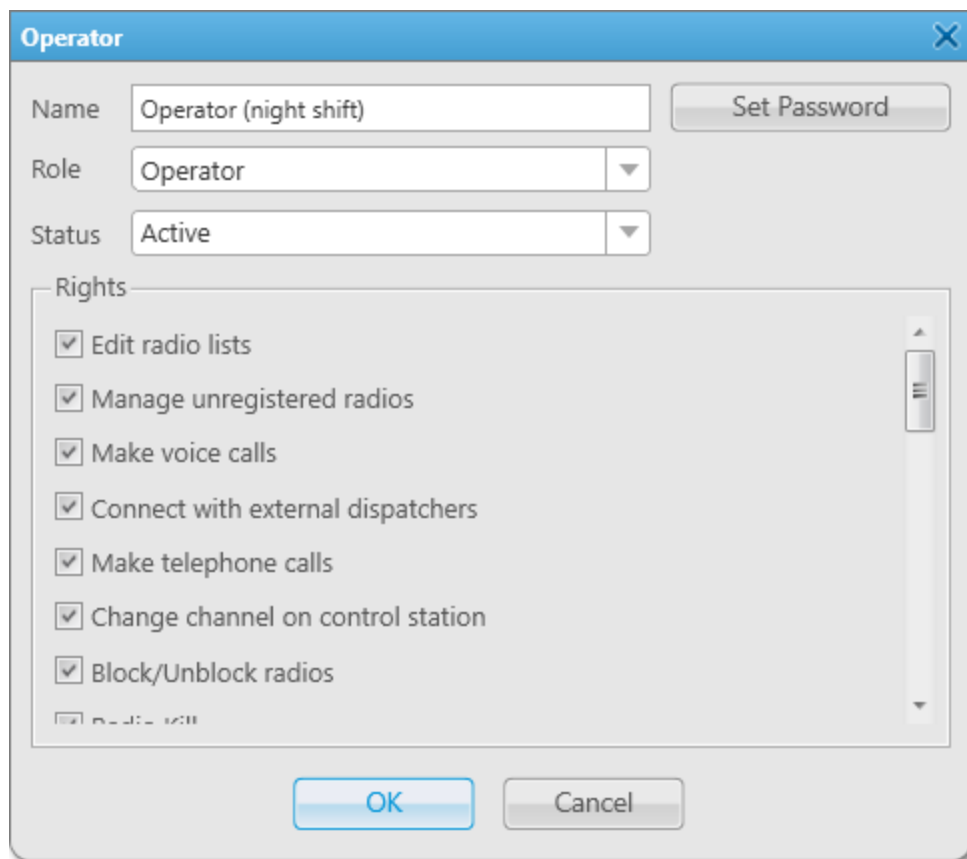
> **NOTE**
> An operator account cannot be deleted if the Event Log has entries associated with it.
> For information on the Event Log, see Event Log and Notification Panels.

    3.   In the **Delete Record** window, click **OK**.

    4.   Proceed to the last step of the procedure.

3.   In the **Operator** window, in the **Name** field, type the desired operator name.

If Windows authentication is activated, the account name must match the name of a Windows user or group.

> **Important**
> If using Windows authentication, the name of the Windows user or group must not match the operator account name with the *Administrator* status not to lose access to the Administrator account.

4. To set or change an account password, perform the following actions:

    a. Click **Set/Change Password**.
       The **<Operator name>: Enter/Change Password** window appears.
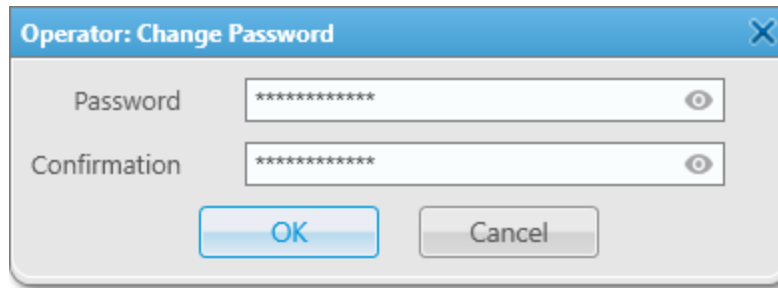
    b. In the window that appears, in the **Password** field, type the desired password using 8 or more characters from at least three categories: uppercase and lowercase letters (A–Z, a–z), numbers (0–9), and special characters (!, $, #, %, etc.). To view the entered password, click the eye icon (👁).
       SmartPTT does not support entering a password using the Input Method Editor (IME).

    c. In the **Confirmation** field, type the desired password again.

    d. Click **OK** to save the changes and close the window.

5. From the **Role** list, select the desired operator role: *Operator* or *Administrator*.

6. From the **Status** list, select the desired status:

To make an account available for authorization,	select *Active*.
To make an account not available for authorization,	select *Archive*.

7. *(Optional)* For an operator account, isn the **Rights** area, select the desired check boxes for assigning rights to an operator. For details, see Operators.

8. Click **OK** to apply changes and close the window.

9. In the **Operators** window, click **Finish**.

2.8.2 Changing Operator

Follow the procedure to log in to SmartPTT Dispatcher using other operator credentials.

Procedure:

1. On the menu bar, click **Change Operator (⊟)**.
The user logs off from SmartPTT Dispatcher, and the **Authorization** window appears.
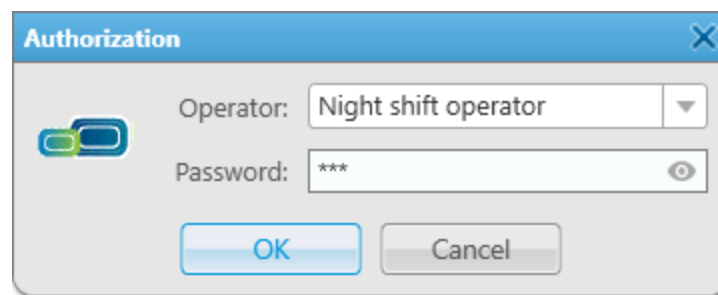
2. In the window that appears, from the **Operator** list, select the desired operator account.

3.   In the **Password** field, type the operator's password. To view the entered password, click the eye icon (👁).
     SmartPTT does not support entering a password using the Input Method Editor (IME).

4.   Click **OK** to log in SmartPTT Dispatcher and get started.

2.9 Radios Configuration

Added radios are stored in the SmartPTT Dispatcher database providing the operator the ability to manage radios when they are offline.

Unregistered radios are not displayed in SmartPTT Dispatcher when they are offline. An operator can perform the same actions with unregistered radios as with registered ones, but can not add them to categories and select as a condition for triggering a positioning rule.

> **Important**
> Managing radios that are not saved in SmartPTT Dispatcher is available only to the Administrator and operators with the **Manage unregistered radios** right. For operators who are not granted this permission, SmartPTT Dispatcher does not display unregistered radios, but provides the ability to monitor voice calls involving them.
> For information on operator rights, see Operators.

> **NOTE**
> Radios with the ID in the MDC-1200 or 5 Tone format always appear offline because they do not provide registration information.

For radio configuration, the following actions are available:

- Adding radios in SmartPTT Dispatcher. For details, see Adding Radios.

- Radio settings configuration. For details, see Radio Configuration.

- Configuration of radio display on the Radios panel. For details, see Configuring Radios Panel.

For detailed information on radios as SmartPTT system objects, radio management, and radio list export/import, see Radios.

Radio List Export and Import

The current list of radios can be exported for further configuration of other SmartPTT Dispatcher instances, adding new radios, and updating their properties. Radio lists can also be used for generating reports.
For information on radio list export and import, see Radio List Export and Import.

2.9.1 Adding Radios

To add radios to SmartPTT Dispatcher manually, you can perform the following actions:

- Add a new radio using the **Radio Fleet** panel. For details, see Adding Radios on Radio Fleet Panel.

- Add one radio to the SmartPTT Dispatcher list of radios. For details, see Adding Single Radio to List of Radios.

- Add multiple radios to the SmartPTT Dispatcher list of radios. For details, see Adding Multiple Radios to List of Radios.

> **Important**
> Adding radios is available only to the Administrator and operators with the **Edit radio lists** right. For details, see Operators.

2.9.1.1 Adding Radios on Radio Fleet Panel
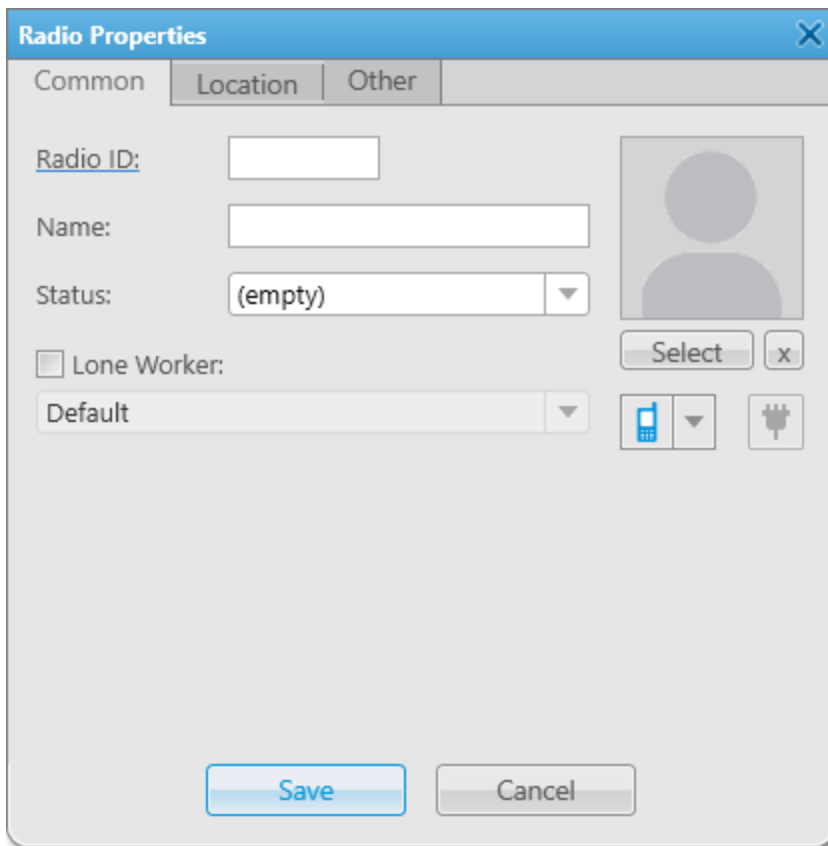
Follow the procedure to add a new radio to the dispatch system manually using the **Radio Fleet** panel.

Prerequisites:

Ensure the operator has the **Edit radio lists** right. For details, see Operators.

Procedure:

1. If the **Radio Fleet** panel is closed, on the menu bar, click **Tools → Radio Fleet**.

2. On the **Radio Fleet** panel, click **Add radio (+)**.
    The **Radio Properties** window appears.

3. In the window that appears, open the **Common** tab.

4. In the upper-left corner of the tab, click the underlined **Radio ID**.
    The **Radio ID type** window appears.
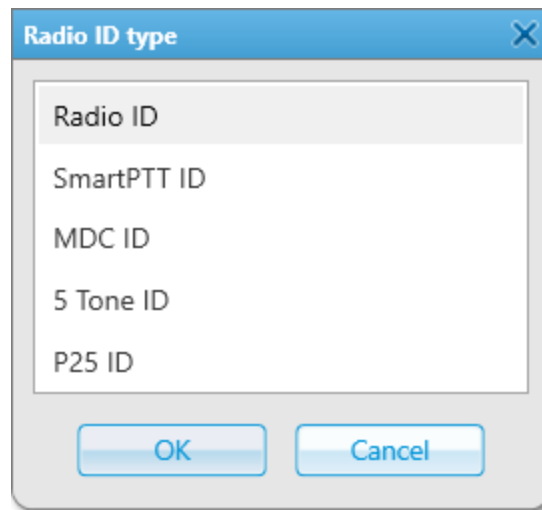
5.   In the window that appears, select the desired ID format:

To add a DMR radio,	select *Radio ID*.
To add a SmartPTT Mobile user,	select *SmartPTT ID*.
To add an MDC radio,	select *MDC ID*.
To add a 5 Tone radio,	select *5 Tone ID*.

6.   Click **OK** to close the **Radio ID type** window.

7.   In the field next to the selected ID format, type the desired radio ID.

8.   Configure the general radio parameters. For details, see Configuring General Radio Parameters.

9.   Configure the radio outdoor and indoor location settings. For details, see Configuring Radio GPS Settings and Configuring Indoor Radio Tracking.

10.   Configure the custom radio properties. For details, see Configuring Custom Radio Properties.

Postrequisites:

To delete the radio, on the **Radio Fleet** panel, select the desired radio, click **Delete radio (━)**, and then, in the confirmation window, click **OK**.

2.9.1.2 Adding Single Radio to List of Radios

Follow the procedure to add a single radio to the SmartPTT Dispatcher list of radios.

Prerequisites:

Ensure the operator has the **Edit radio lists** right. For details, see Operators.

Procedure:

1. On the menu bar, click **Settings (⚙)** →**Radios** →**List of Radios**.
   The **Radios** window appears.

2. In the left part of the window, click **Add (✚)**.
   The new radio properties appear in the **Properties** area on the right.
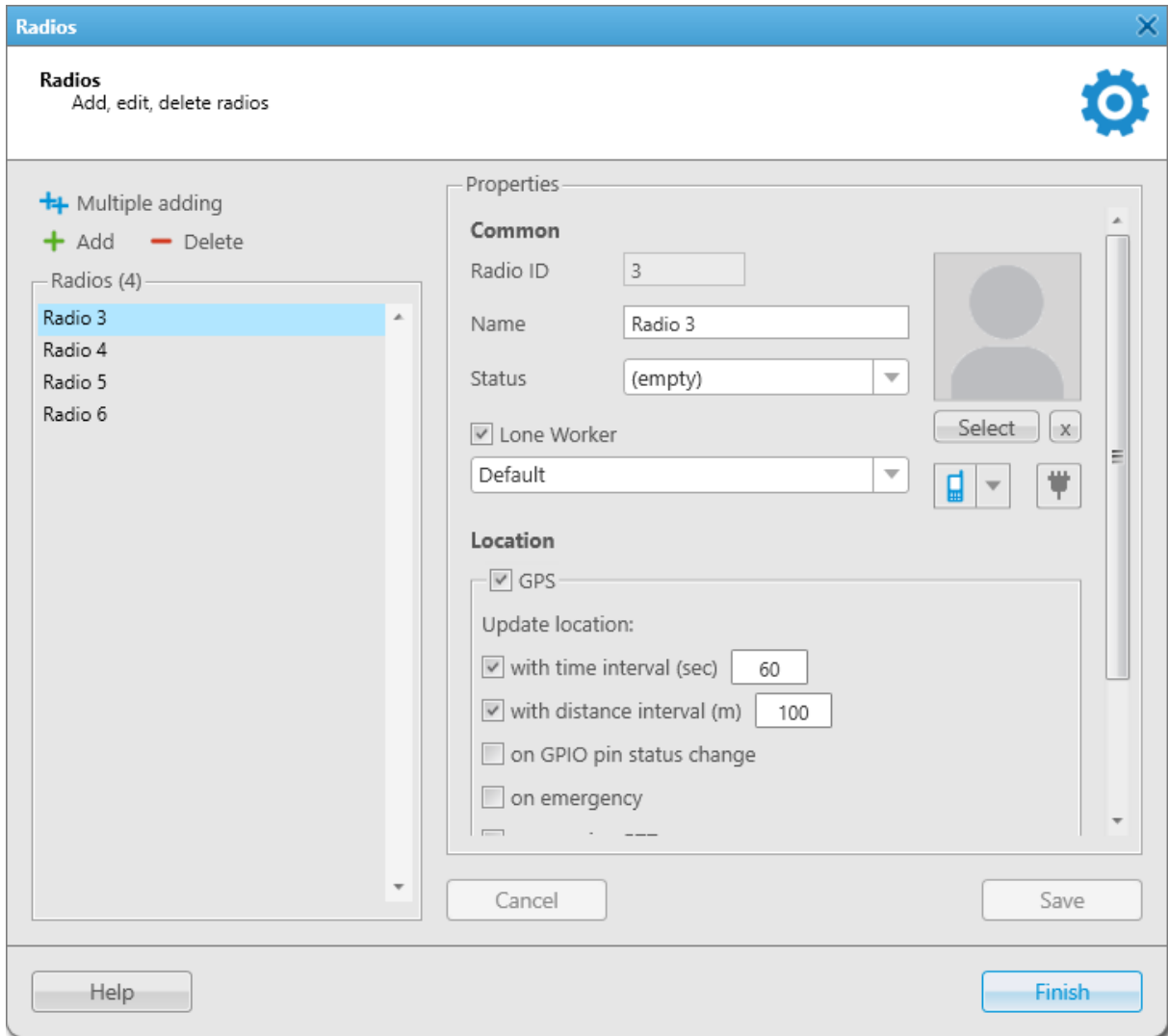
3. In the **Properties** area, under the **Common** heading, specify the radio ID. For details, see Adding Radios on Radio Fleet Panel.

4. In the **Properties** area, under the **Common** heading, specify the other radio parameters. For details, see Configuring General Radio Parameters.

5. *(Optional)* Under the **Location** heading, specify the radio location parameters. For details, see Configuring Radio GPS Settings and Configuring Indoor Radio Tracking.

6. Click **Save**.
   The added radio appears in the **Radios** list.

Postrequisites:

- To edit properties of a radio, see Managing List of Radios.

- To delete a radio, see Managing List of Radios.

2.9.1.3 Adding Multiple Radios to List of Radios

Follow the procedure to add multiple radios to the SmartPTT Dispatcher list of radios.

Prerequisites:

Ensure the operator has the **Edit radio lists** right. For details, see Operators.

Procedure:

1. On the menu bar, click **Settings (⚙)** →**Radios** →**List of Radios**.
   The **Radios** window appears.
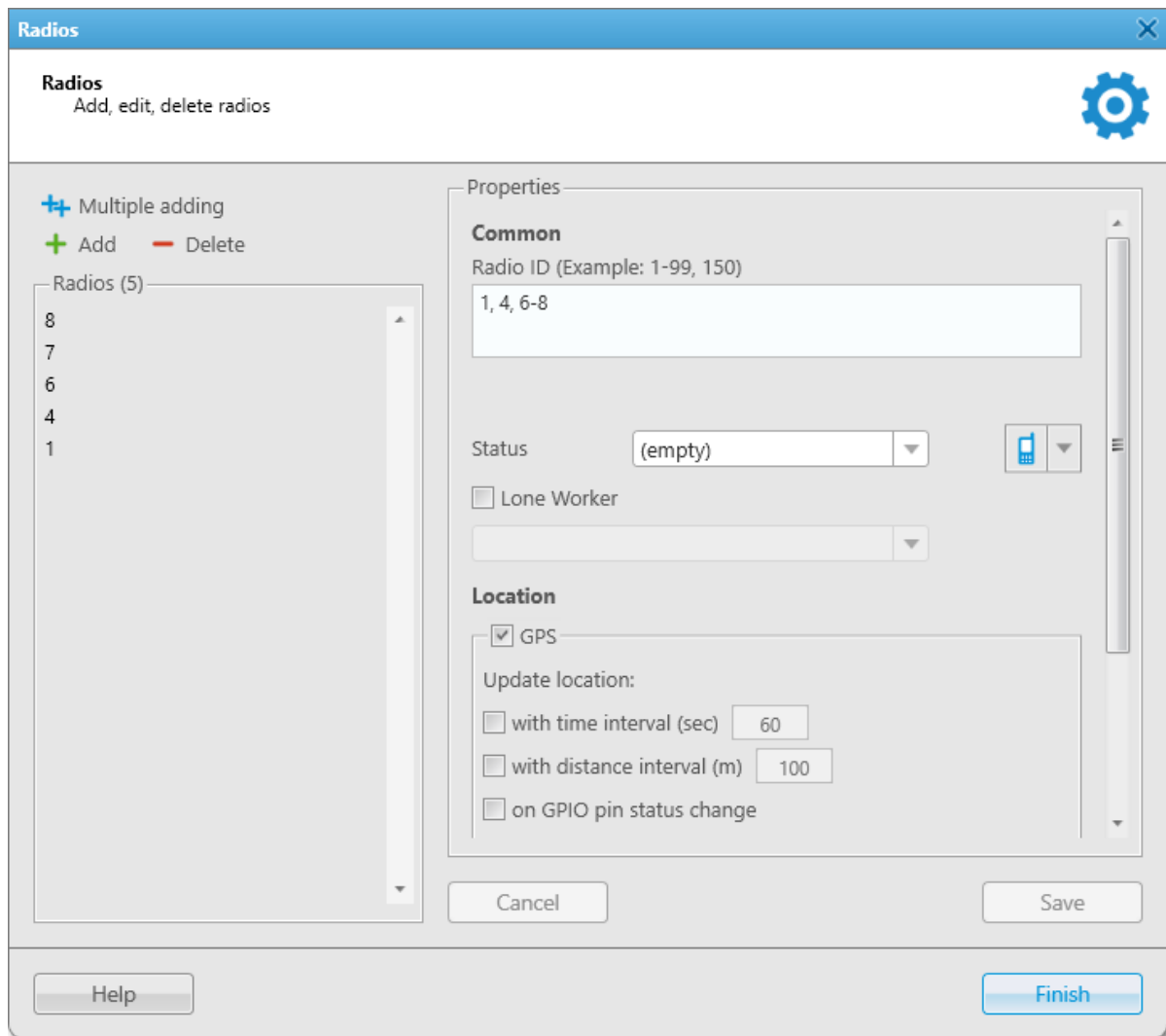
2. In the left part of the window, click **Multiple Adding (✛)**.
   Common radio properties appear in the **Properties** area on the right.

3. In the **Properties** area, in the **Radio ID** field, specify the added radio IDs using hyphens and/or commas. For example, *1-99, 150*.

> **NOTE**
> The Multiple Adding mode is available only for the **Radio ID** input format. SmartPTT Mobile users and radios that use analog signaling (MDC-1200 or 5 Tone) must be added individually. For details, see <u>Adding Single Radio to List of Radios</u>.

4. In the **Properties** area, under the **Common** heading, specify the desired properties of the added radios. For details, see <u>Configuring General Radio Parameters</u>.

5. *(Optional)* Under the **Location** heading, specify the desired location properties of the added radios. For details, see <u>Configuring Radio GPS Settings</u> and <u>Configuring Indoor Radio Tracking</u>.

6. Click **Save**.
   The added radios appear in the **Radios** list.

Postrequisites:

- To edit properties of multiple radios, see <u>Managing List of Radios</u>.

- To delete multiple radios, see <u>Managing List of Radios</u>.

2.9.2 Radio Configuration

To configure radio parameters in SmartPTT Dispatcher, you can perform the following actions:

- Configure general radio settings:

  - Give a name

  - Customize an avatar and icon

  - Select a status

  - Assign a Lone Worker profile

  - Assign telemetry actions

  For details, see <u>Configuring General Radio Parameters</u>.

- Configure radio outdoor and indoor location settings. For details, see <u>Configuring Radio GPS Settings</u> and <u>Configuring Indoor Radio Tracking</u>.

- Edit properties or delete radios using the list of radios. For details, see <u>Managing List of Radios</u>.

- Configure custom radio properties. For details, see <u>Custom Radio Properties</u>.

- Configure radio statuses. For details, see <u>Statuses</u>.

- Configure categories of radios and talkgroups. For details, see <u>Categories</u>.

2.9.2.1 Configuring General Radio Parameters

Follow the procedure to configure or edit the general radio settings.

Prerequisites:

- *(Optional)* Add the radio status. For details, see <u>Managing Statuses</u>.

- *(Optional)* Add the Lone Worker profile. For details, see <u>Managing Lone Worker Profiles</u>.

- *(Optional)* Add a custom radio icon.

Procedure:

1. Open the **Radio Properties** window.

2. In the **Radio Properties** window, open the **Common** tab.

3. In the **Name** field, type the radio name.

4. *(Optional)* Perform the desired actions:

To assign a status to the radio,	from the **Status** list, select the desired status.
To configure the radio user avatar,	perform the following actions: 1. Click **Select**. 2. In the window that appears, select the desired image file and click **Open**.
To delete the selected radio avatar and set the default avatar image,	click **Delete the current radio image (** ⊠ **).**
To set the radio icon,	perform the following actions: 1. Under the **Select** button, click the current radio icon. 2. From the list that appears, select the desired image.

5. *(Optional)* For a DMR radio, perform one of the following actions:

To assign a Lone Worker profile to the radio,	perform the following actions: 1. Select the **Lone Worker** check box. 2. From the list below, select the desired profile.
To assign telemetry actions to the radio,	see <u>Assigning Telemetry to Radios</u>.

6. In the **Radio Properties** window, click **Save**.

2.9.2.2 Managing List of Radios

Follow the procedure to edit properties or delete one or multiple radios.

Prerequisites:

Ensure the operator has the **Edit radio lists** right. For details, see <u>Operators</u>.

Procedure:

1. On the menu bar, click **Settings (⚙)** →**Radios** →**List of Radios**.
    The **Radios** window appears.
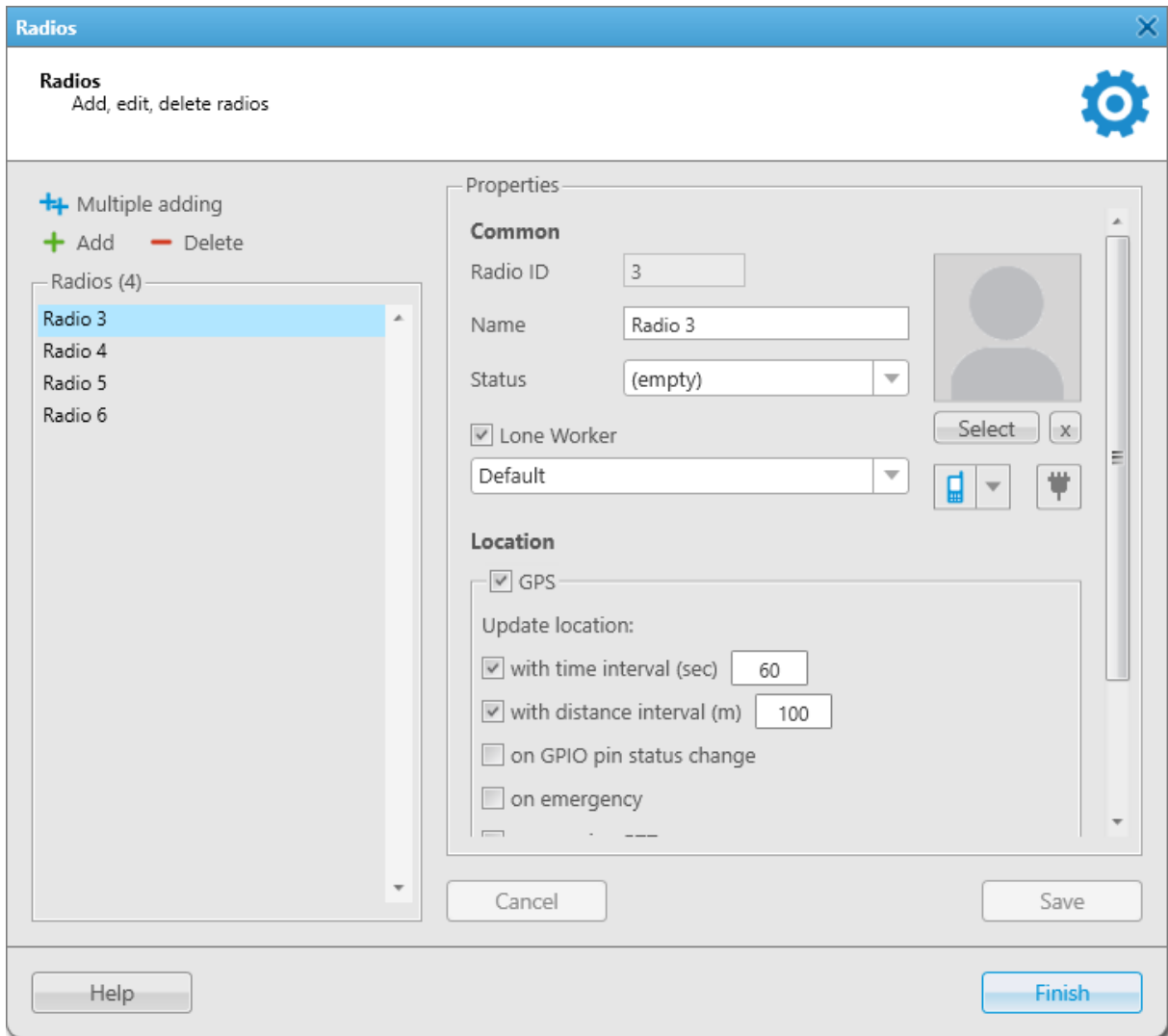
2. In the **Radios** window, perform one of the following actions:

To edit properties of a single radio,	perform the following actions:
	1. In the left part of the window, in the **Radios** area, select the desired radio. The properties of the selected radio appear in the **Properties** area on the right.

2. In the **Properties** area, edit the desired properties, and then click **Save**.

To edit properties of multiple radios,	perform the following actions:

1. In the left part of the window, in the **Radios** area, select the desired radios in one of the following ways:

   • Press and hold Ctrl, and then click the desired radios.

   • Press and hold Shift, and then click the first and the last radio in the desired part of the list.

   Radio properties common to all of the added radios appear in the **Properties** area on the right.

2. In the **Properties** area, edit the desired radio properties, and then click **Save**.

> **NOTE**
> If property values differ among the selected radios, the value in the corresponding field is cleared.
> The check boxes of such properties are filled with solid gray (▣).
> By changing a common property value, you will change it for each of the selected radios.

To delete a single radio,	perform the following actions:

1. In the left part of the window, in the **Radios** area, select the desired radio, and then click **Delete (➖)**.

2. In the **Confirmation** window, click **OK**.
   The radio is deleted from the **Radios** area.

To delete multiple radios,	perform the following actions:

1. In the left part of the window, in the **Radios** area, select the desired radios in one of the following ways:

   • Press and hold Ctrl, and then click the desired radios.

   • Press and hold Shift, and then click the first and the last radio in the desired part of the list.

2. Click **Delete (➖)**, and then, in the **Confirmation** window, click **OK**.
   The selected radios are deleted from the **Radios** area.

2.9.2.3 Custom Radio Properties

SmartPTT Dispatcher provides the ability to create custom properties for providing additional information on a radio user. Custom properties are available for configuration on the **Other** tab of the **Radio Properties** window.

> **Important**
> Creating custom radio properties is available only to the Administrator.
> Configuring custom properties for radios is available only to the Administrator and operators with the **Edit custom radio properties** right.
> For information on operator rights, see Operators.

When creating, it is possible to specify a property type that defines the data input format in the **Radio Properties** window:

- The *Text* type provides data input in the text format.

- The *Numeric* type provides data input in the numeric format.

- The *Date* type provides data input in the date format.

- The *List* type provides the ability to select a value from a preconfigured list.

Custom Radio Properties Configuration

To configure custom radio properties, the following actions must be performed:

- *(Optional)* To create properties of the *List* type, the desired lists must be configured. For details, see Managing Lists.

- Property groups must be created and the desired properties must be added to the groups. For details, see Managing Custom Radio Properties.

- Custom properties must be configured for the desired radios in the **Radio Properties** window. For details, see Configuring Custom Radio Properties.

2.9.2.3.1 Managing Lists

Follow the procedure to create, edit, or delete a list that is used for custom property configuration.

Procedure:

1. On the menu bar, click **Settings (⚙)** → **Radios** → **Custom Radio Properties**.
   The **Custom Radio Properties** window appears.

2. In the window that appears, click **Create/Edit Lists (📤)**.
   The **Lists** window appears.
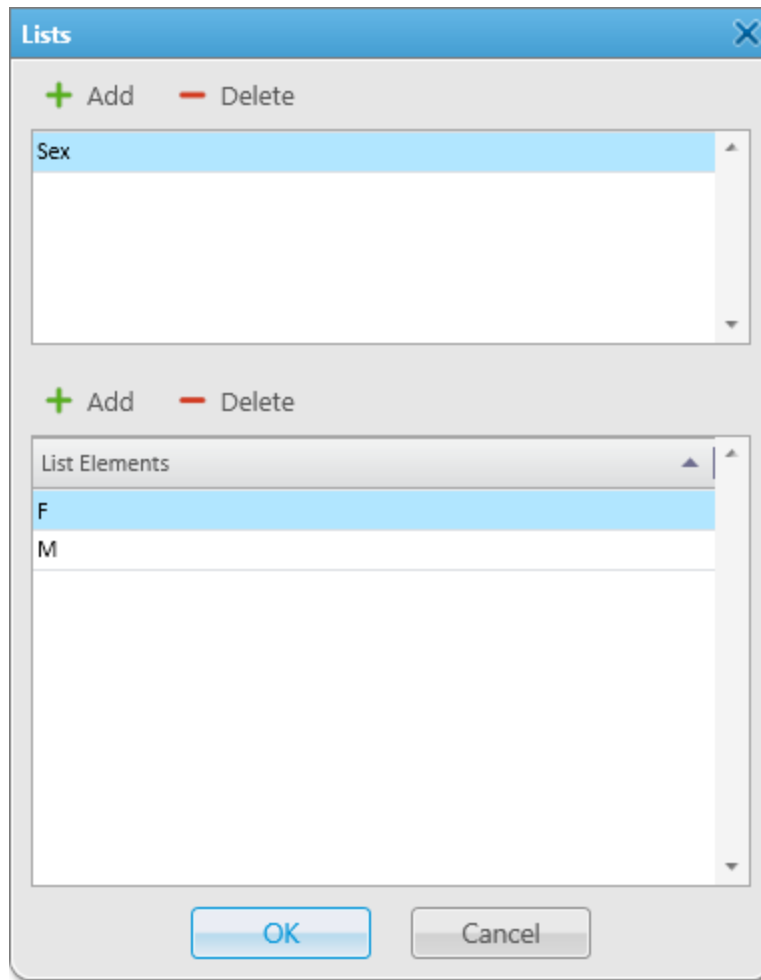
3. At the top of the window that appears, perform one of the following actions:

To add a new list,	click **Add new list (+)**.
To change elements of an existing list,	perform the following actions: 1. Select the desired list. 2. Proceed to step 4.
To change a list name,	perform the following actions: 1. Double-click the desired list name, and then type a new name.

2. Proceed to step 5.

To delete a list,	perform the following actions:
	1. Select the desired list.
	2. Click **Delete selected list (—)**.
	3. Proceed to step 5.

4. At the bottom of the window, perform one of the following actions:

To add a new element to the list,	click **Add list element (+)**. A new element appears in the **List Elements** table.
To change an element name,	in the **List Elements** table, double-click the desired element name, and then type a new name.
To delete an element from the list,	in the **List Elements** table, select the desired element, and then click **Delete selected element (—)**.

5. Click **OK** to confirm changes and close the window.

Postrequisites:

Create a custom radio property of the *List* type. For details, see Managing Custom Radio Properties.

2.9.2.3.2 Managing Custom Radio Properties

Follow the procedure to create, edit, or delete custom radio properties.

Prerequisites:

To create a property of the *List* type, add the desired list in the **Lists** window. For details, see Managing Lists.

Procedure:

1. On the menu bar, click **Settings (⚙)** → **Radios** → **Custom Radio Properties**.
    The **Custom Radio Properties** window appears.
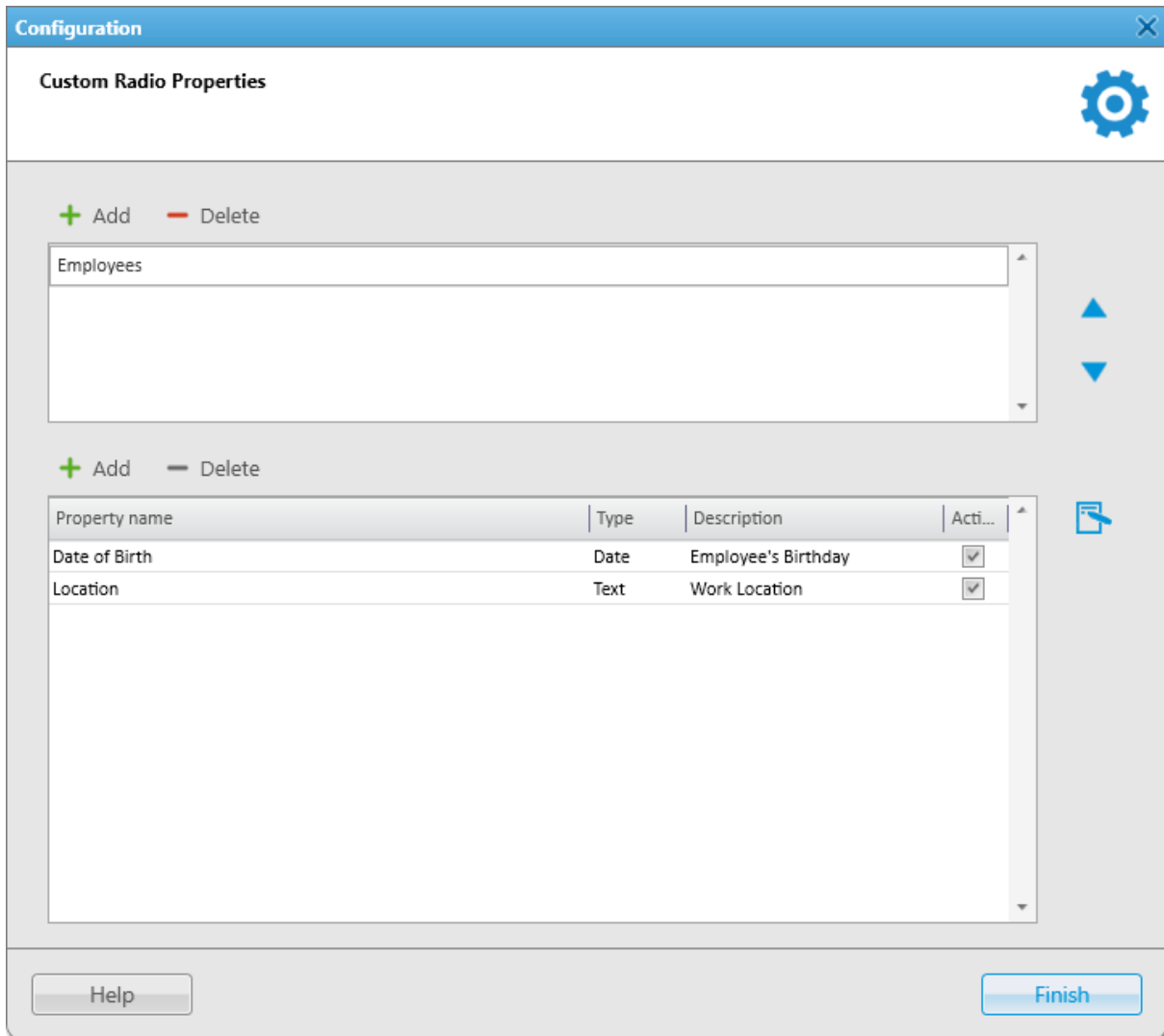
2. At the top of the window that appears, perform one of the following actions:

To add a new property group,	click **Add new property group (+)**.
To change properties of an existing group,	perform the following actions: 1. From the Property Group List, select the desired group. 2. Proceed to step 3.
To change a property group name,	perform the following actions:

1. In the Property Group List, double-click the desired group name, and then type a new name.

2. Proceed to step 9.

To delete a property group, · perform the following actions:

1. From the Property Group List, select the desired property group.

2. Click **Delete selected property group (➖)**.

3. Proceed to step 9.

3. At the bottom of the window, perform one of the following actions:

To add a new property to the group, · click **Add new property to selected group (➕)**.
The **Radio Property** window appears.

To change parameters of an existing property, · · · · · · · · · · · · · · · perform the following actions:

1. In the Group Properties Table, select the desired property, and then perform the following actions:

   a. In the **Property name** column, click the property name, and then type a new name.

   b. In the **Description** column, click the property description, and then type a new description.

   c. In the **Active** column, select or clear the check box to display or hide the property in the **Radio Properties** window.

   > **NOTE**
   > The property type cannot be changed after creation.

2. Proceed to step 9.

To delete a property, · perform the following actions:

1. In the Group Properties Table, select the desired property.

2. Click **Delete selected property (➖)**.

3. Proceed to step 9.

4. In the **Radio Property** window, in the **Name** field, type the property name.

5. From the **Type** list, select the property type that defines an input format on the **Other** tab of the **Radio Properties** window:

To use text format,	select *Text*.
To use numeric format,	select *Numeric*.
To use date format,	select *Date*.
To select values from a preconfigured list,	perform the following actions: 1. Select *List*. 2. From the **List** list, select the desired preconfigured list.

6. *(Optional)* In the **Property Description** field, type additional information about the property.

7. *(Optional)* Select the **Active** check box to display the property in the **Radio Properties** window.

8. Click **OK** to confirm changes and close the **Radio Property** window.
   The property appears in the Group Properties Table.

9. Click **Finish** to close the **Custom Radio Properties** window.

Postrequisites:

Configure custom properties for the desired radio on the **Other** tab of the **Radio Properties** window. For details, see Configuring Custom Radio Properties.

2.9.2.3.3 Configuring Custom Radio Properties

Follow the procedure to configure the custom properties for a radio.

Prerequisites:

- Ensure the additional properties of a radio are created and activated in the **Custom Radio Properties** window. For details, see Managing Custom Radio Properties.

- Ensure the operator has the **Edit custom radio properties** right. For details, see Operators.

Procedure:

1. Open the **Radio Properties** window.

2. In the **Radio Properties** window, open the **Other** tab.

3. To the left of the desired property group name, click Expand (⊞).
    The list of properties appears.

4. For each of the desired properties, perform the following actions:

    a. *(Optional)* To view a property description, click the desired property entry.
        If the property has a description, it appears at the bottom of the **Other** tab.

    b. In the right column, configure the desired properties:

To configure a property with a text or numeric value,	in the corresponding field, type the desired value.
To configure a date property,	in the corresponding field, click Calendar (🔲), and then select the desired date.
To configure a list property,	from the corresponding list, select the desired value.

5. Repeat step 3, and then step 4 for the remaining property groups.

6. In the **Radio Properties** window, click **Save**.

2.9.2.4 Statuses

Statuses provide the ability to specify current condition of radios. These statuses are not related to the ones set in radio codeplugs.

> **Important**
> Configuring statuses is available only to the Administrator and operators with the **Manage statuses** right. For details, see Operators.

The configured status is assigned to the radio in one of the following ways:

- Manually by the dispatcher in the **Radio Properties** window.

- Automatically when a radio sends a specific message to the dispatcher or to any other recipient.
  The dispatcher can set a sound notification for automatic status assignment initiated by the radio.

- Automatically when a rule triggers the corresponding dispatcher alert.

Statuses are displayed:

- On the **Radio Fleet** panel to track and assign statuses, as well as filter radios by their statuses.

- On the **Radios** panel to filter radios by their statuses.

- On the map panel to track current radio statuses (a frame of the status color around radio icon).

- In the radio Call Window to view the current radio status. For details, see Call Windows.

Archived Statuses

If the status is currently assigned or was assigned to a radio, it cannot be deleted. You can move it to the archive, and, if needed, restore the archived status later.

Archived statuses cannot be assigned to radios and cannot be used when configuring alerts for dispatchers in rules. However, the statuses remain valid for rules in which they were configured before moving to the archive.

Archived statuses are also displayed in the Event Log.

Status Configuration and Use

To use a status, perform the following actions:

- Create and configure the desired status. For details, see Managing Statuses.

- Perform the desired actions:

  - Assign the status to the desired radio. For details, see Configuring General Radio Parameters.

  - Assign the status to radios of the desired category. For details, see Managing Categories.

  - Set the status as the value of the **Status** condition for triggering the desired custom rule. For details, see Managing Custom Rules and Positioning Rules.

  - Configure status assignment as a dispatcher alert performed when the desired rule triggers. For details, see Configuring Dispatcher Alerts.

  - Filter radios on the **Radio Fleet** panel by status. For details, see Working with Objects Table.

  - Filter radios on the **Radios** panel by status. For details, see Filtering Radios.

2.9.2.4.1 Managing Statuses

Follow the procedure to add, edit, delete, or restore radio statuses.

Prerequisites:

Ensure the operator has the **Manage statuses** right. For details, see Operators.

Procedure:

1. On the menu bar, click **Settings (⚙)** →**Radios** →**Statuses**.
   The **Statuses** window appears.
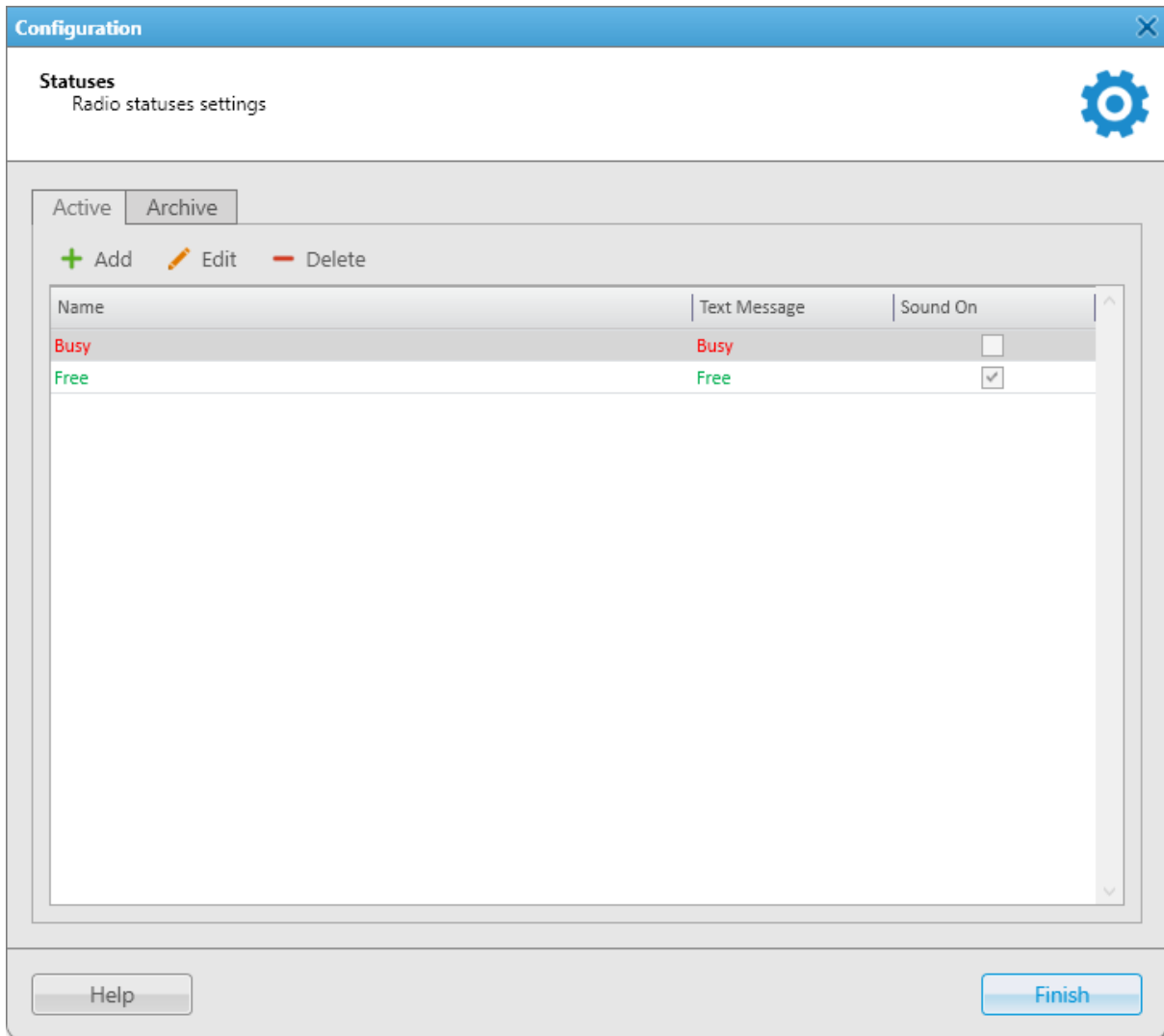
2. In the window that appears, perform one of the following actions:

To add a status,	click **Add (+)**. The **Radio Status** window appears.
To edit an existing status,	select the desired status, and then click **Edit (✎)**. The **Radio Status** window appears.
To delete an existing status,	perform the following actions: 1. Select the desired status, and then click **Delete (—)**.

> **NOTE**
> If the status is currently assigned or was assigned to a radio, it cannot be deleted. You can move it to the archive.

2. In the **Confirmation** window, click **OK**.

3. Proceed to step 5.

To restore an archived status,	perform the following actions:
	1. Open the **Archive** tab.
	2. Select the desired status, and then click **Restore** (⟳).
	3. In the **Confirmation** window, click **OK**.
	4. Proceed to step 5.

3. In the **Radio Status** window, in the **Name** field, type the status name.
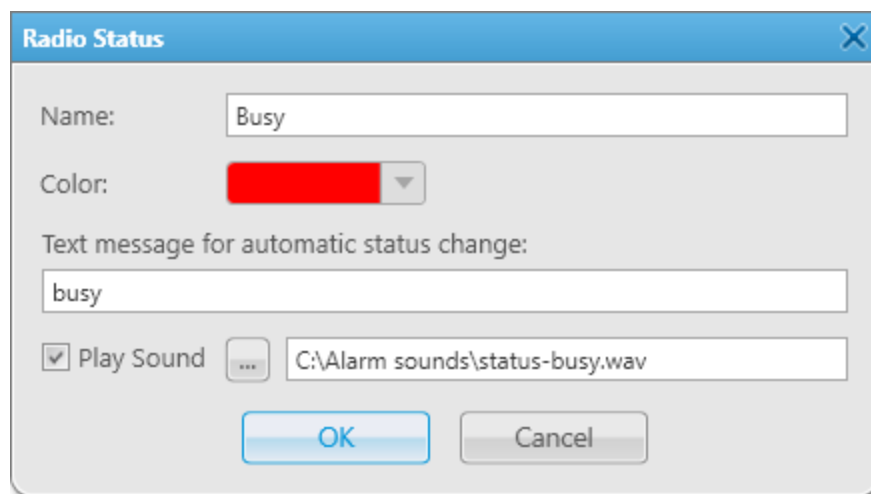
4. Perform the desired actions:

To set a color for the status,	from the expandable **Color** palette, select the desired color.
To configure automatic status assignment initiated by the radio,	perform the following actions:

1. In the **Text message for automatic status change** field, type the desired text of the message that initiates status assignment when sent by the radio.

> **NOTE**
> Text messages cannot be the same for different statuses.

2. *(Optional)* Set a sound notification which will be played when the status is automatically assigned to a radio:

   a. Select the **Play Sound** check box.

   b. Click **Select Sound File** (…).
      The **Sound File Selection** window appears.

   c. In the window that appears, select the desired audio file and click **Open**.

5. In the **Radio Status** window, click **OK**.

6. In the **Statuses** window, click **Finish**.

2.9.2.5 Categories

SmartPTT Dispatcher provides the ability to use categories for grouping radios and talkgroups.

Categories can include the following objects:

*   Radios registered in SmartPTT Dispatcher

*   Talkgroups

*   Dynamic groups

*   Other categories (subcategories)

> **Important**
> Creating categories is available only to the Administrator.
> Operators can edit the created category by clicking **View Properties** ( ) in the category Actions menu. Editing GPS parameters of radios in the category is available only to operators with the **Manage radio location settings** right.
> For information on operator rights, see Operators.

Categories are displayed on the following panels:

*   On the **Radio Fleet** panel to view objects organized according to the categories and sub-categories, as well as perform actions with category objects.
    The dispatcher can configure the display of objects not included in any category under the **No Category** folder.

*   On the **Radios** panel to filter radios by categories.

*   On the map panel to track radios of the category.

You can use categories in SmartPTT Dispatcher as follows:

*   Apply certain actions to all category objects simultaneously:

    *   Assign a status to radios in category properties

    *   Configure the update rules of radio outdoor coordinates in category properties

    *   Send a message to radios using the category Actions menu

    *   Show radios on a map or remove them from a map using the category Actions menu

*   Configure various SmartPTT Dispatcher features using categories:

    *   Set the category of objects that will not be hidden on the map when a radio sends an emergency alarm

    *   Select categories as a condition for triggering a positioning rule

    *   Select categories to send a message when the rule triggers

    *   Select categories to build a coverage map

    *   Select categories to create a report on radio movement

Category Configuration and Use

To use a category, perform the following actions:

- Create and configure the desired category. For details, see Managing Categories.

- Perform the desired actions:

    - Apply the desired action to category objects using the category Actions (≫) menu.

    - Configure displaying radios of the category on a map. For details, see Displaying Radio Categories.

    - Set the category as a category for emergency. For details, see Configuring Emergency Processing.

    - Set the category as a condition for triggering the desired positioning rule. For details, see Adding and Editing Positioning Rules.

    - Configure sending a message to radios of the category when the desired rule triggers. For details, see Configuring Radio Alerts.

    - Set the category as a parameter for building a coverage map. For details, see Building Coverage Map.

    - Set the category as a parameter for creating the **Radio Movement** report. For details, see Creating Radio Movement Report.

    - Filter radios on the **Radios** panel by category. For details, see Filtering Radios.

2.9.2.5.1 Managing Categories

Follow the procedure to add new, or edit/delete an existing category, or configure category settings.

Prerequisites:

- Ensure the desired radios are registered in SmartPTT Dispatcher.

- *(Optional)* To assign a status to all radios of the category, ensure the desired status is created in SmartPTT Dispatcher. For details, see Managing Statuses.

- *(Optional)* To receive outdoor coordinates of the radios included in the category, ensure that GPS is activated in the radio properties. For details, see Configuring Radio GPS Settings.

Procedure:

1. On the menu bar, click **Settings (⚙)** →**Radios** →**Categories**.
    The **Categories** window appears.
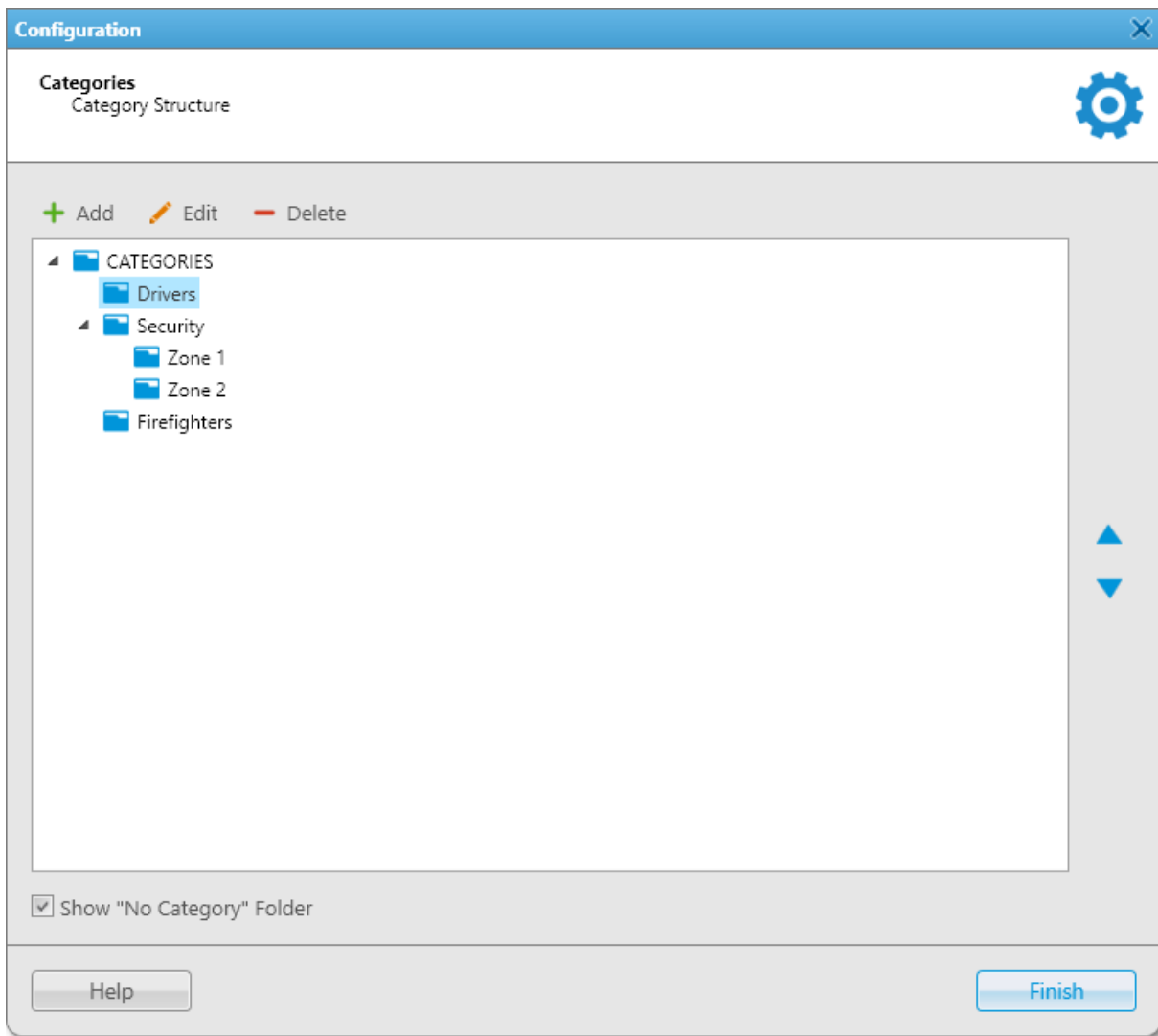
2. In the window that appears, perform one of the following actions:

To add a new category,	click **Add (＋)**. The **Category** window appears.
To edit an existing category,	select the desired category, and then click **Edit (✎)**. The **Category** window appears.
To delete an existing category,	perform the following actions: 1. Select the desired category, and then click **Delete (━)**. **Important** If the selected category has nested categories, these categories will also be deleted. 2. In the **Confirmation** window, click **OK**. 3. Proceed to the last step of the procedure.

To change the order of categories,	perform the following actions:
	1. Select the desired category, and then change its position using the Up (▲) and Down (▼) buttons. 2. Proceed to the last step of the procedure.
To change the nesting of categories,	perform the following actions:
	1. Drag the desired category to another one. 2. Proceed to the last step of the procedure.
To display objects not included in categories on the **Radio Fleet** panel,	perform the following actions:
	1. Select the **Show "No Category" Folder** check box. 2. Proceed to the last step of the procedure.

3. In the **Category** window, in the **Name** field, type the category name.

4. *(Optional)* From the **Status** list, select the status that will be assigned to all radios of the category.

5. Set the category objects:

To add radios to the category,	perform the following actions:
	1. Open the **Radios** tab. 2. Select the check boxes next to the desired radios.

	NOTE You can add several radios simultaneously by selecting them using the Shift or Ctrl key, and then pressing Space.
To add talkgroups to the category,	perform the following actions: 1. Open the **Talkgroups** tab. 2. Expand nodes of the desired radio systems, and then select the check boxes next to the desired talkgroups.
To delete a radio or talkgroup from the category,	perform the following actions: 1. Open the tab with the desired radios or talkgroups. 2. Clear the check boxes next to the desired objects.

6. *(Optional)* On the **Common** tab, configure the update rules of radios' outdoor coordinates:

NOTE
You cannot configure location parameters if the category does not include any radios with GPS enabled.

To apply a parameter to all radios in the category,	perform the following actions: 1. Select the check box (☑) next to the desired parameter. 2. If available, select the desired option or, in the field to the right of the check box, enter the desired value.
To apply parameters that are set in individual settings of each radio in the category,	leave the check box filled with solid gray (■).
To not apply a parameter to all radios in the category,	clear the check box (☐) next to the desired parameter.

7. In the **Category** window, click **OK** to save changes and close the window.

8. In the **Categories** window, click **Finish**.

2.9.3 Radio List Export and Import

SmartPTT Dispatcher provides the ability to export current properties and settings of the radios from the database to a separate file, as well as import a list of radios to the application.

The exported files can be used for the following purposes:

*   Transfer of the exported radio list to another SmartPTT Dispatcher

*   Adding new radios to the radio list

*   Updating properties and settings of the exported radios

*   Performing the radio system analysis

*   Generating reports

For information on exporting the radio list, see Exporting Radio List.

The imported files can be used for the following purposes:

*   Transfer of the radio list from another SmartPTT Dispatcher

- Adding new radios to the SmartPTT Dispatcher radio list

- Updating current properties and settings of radios in the SmartPTT Dispatcher radio list

For information on importing the radio list, see Importing Radio List.

The export or import file can be in one of the following formats:

- Microsoft Excel 97-2003 (XLS)

- XML

- CSV

The choice of the export format depends on the export purposes and does not affect its informational content.

The exported file provides information in the form of a table whose columns correspond to radio properties in SmartPTT Dispatcher.

XLS File Example

Export Radio List

ID	Radio IP address	Network ID	Radio ID	Name	GPS	MDC ID	Icon	Show on map	Lone Worker	Select 5 ID	Indoor Support	Indoor Request	Indoor Update Interval	GPS update with time interval	Time Interval	GPS update with distance interval	Distance Interval	GPS on GPIO pin status change	GPS on emergency	GPS on pressing PTT button
50331660	12.0.0.3	12	3	Radio 1	True			True	False		True	False	60	True	60	True	100	True	True	False
67108876	12.0.0.4	12	4	Radio 2	True			True	False		True	True	60	True	60	False	100	True	True	True
83886092	12.0.0.5	12	5	Radio 3	False			False	False		False	False	60	False	60	False	100	False	False	False

The exported table consists of the following columns:

Column Name	Description
ID	Automatically generated radio ID.
Radio IP address	Radio IP address.
Network ID	Radio network ID that is set in the radio codeplug.
Radio ID	Unique radio identifier.
Name	Radio name in SmartPTT Dispatcher.
GPS	Indicates whether SmartPTT Dispatcher processes the radio GPS coordinates.
MDC ID	Identifier of the radio from an analog radio system in MDC-1200 format.
Icon	Path to the icon that is set for the radio in SmartPTT Dispatcher. If the default icon is used, the cell is left empty.
Show on map	Indicates whether the radio is displayed on the map in SmartPTT Dispatcher.
Lone Worker	Indicates whether the radio is in the Lone Worker mode.
Select 5 ID	Identifier of the radio from an analog radio system in the Select 5 format.
Indoor Support	Indicates whether indoor positioning is enabled for the radio.
Indoor Request	Indicates whether a time interval for sending indoor coordinates requests to the radio is set.

Column Name	Description
Indoor Update Interval	Time interval in seconds after which indoor location data requests are sent to the radio.
GPS update with time interval	Indicates whether a time interval for the radio to send GPS coordinates is set.
Time Interval	Time interval in seconds after which the radio provides its GPS coordinates.
GPS update with distance interval	Indicates whether the radio sends location updates after it travels a certain distance.
Distance Interval	Distance in meters or feet after which the radio provides its GPS coordinates.
GPS on GPIO pin status change	Indicates whether the radio provides its GPS coordinates when it sends a telemetry signal.
GPS on emergency	Indicates whether the radio provides its GPS coordinates when it sends an emergency alarm.
GPS on pressing PTT button	Indicates whether the radio provides its GPS coordinates when the PTT button is pressed on it.

NOTE
Some properties have only two possible values: *True* and *False*.

If a property is not applicable to the radio, the cell in the corresponding column is left empty.

2.9.3.1 Exporting Radio List

Follow the procedure to export the list of radios to a CVS file.

Prerequisites:

Ensure that you have access to the desired export destination folder.

Procedure:

1. On the menu bar, click **Service** →**Export Radio List**.
   The **Export Radio List (*.csv)** window appears.
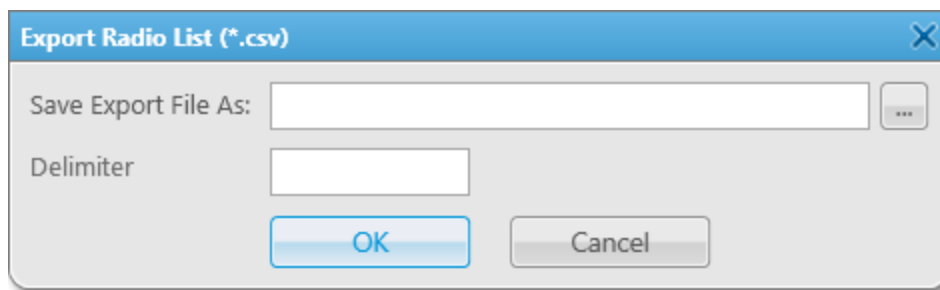
2. To the right of the **Save Export File As** field, click Browse (…).

3. In the **Specify File Name** window, specify the path to the desired folder, and then perform one of the following actions:

To export the radio list to a new file,	in the **File name** field, type the name for the exported file, and then click **Save**. In the **Save Export File As** field, the path to the file and its name appear.

| To export the radio list to an existing file, | select the file that you want to replace, and then click **Save**. In the **Save Export File As** field, the path to the file and its name appear. |

4. In the **Delimiter** field, specify the character that will divide parameters and its values in the exported file. If you leave the field blank, the comma character will be used by default.

5. Click the **OK** button.

6. In the window indicating successful radio list export, click **OK**.

2.9.3.2 Importing Radio List

Follow the procedure to import the list of radios from a file.

Procedure:

1. On the menu bar, click **Service** →**Import Radio List**.
   The **Import Radio List** window appears.
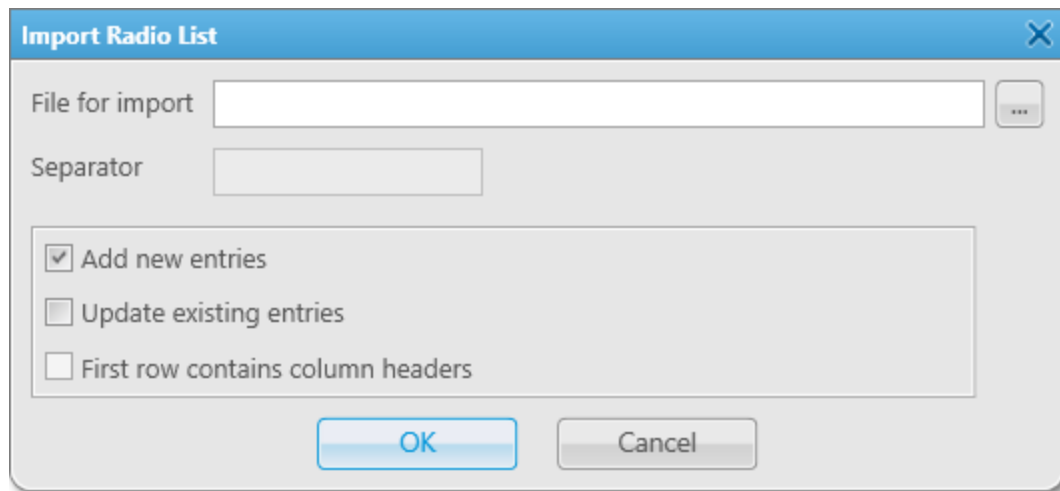
2. To the right of the **File for import** field, click Browse (⊡).

3. In the **Specify File Name** window, specify the file that you want to import, and then click **Open**.

   The specified path and file name are displayed in the **File for import** field.

   NOTE
   You can also type or paste the full file path into this field.

4. In the **Separator** field, specify the character that delimits values in the imported file. If you leave the field blank, the comma character is taken as a delimiter by default.

5. At the bottom of the **Import Radio List** window, select the desired option:

To only add new radios from the imported file,	select the **Add new entries** check box.
To only update properties and settings of existing radios,	select the **Update existing entries** check box.
To both add new and update the existing radios,	select both the **Add new entries** and **Update existing entries** check boxes.

To specify that the first row of the imported file contains column names,	select the **First row contains column names** check box.

6. In the **Import Radio List** window, click **OK**.
    To cancel the radio list import, click **Cancel**.

7. In the window indicating successful radio list import, click **OK**.

8. Restart SmartPTT Dispatcher to complete the radio list import.

> **NOTE**
> If the imported file contains no changes that can be uploaded to the current radio list, a window indicating the absence of changes appears.

2.10 Positioning Settings Configuration

Positioning settings configuration includes the following actions:

*   GPS and Indoor settings configuration. For details, see Configuring Positioning Settings.

*   Radio GPS settings configuration as well as map creation and configuration. For details, see Geopositioning Configuration.

*   Radio indoor tracking settings configuration as well as building plan creation and configuration. For details, see Indoor Tracking Configuration.

For detailed information on positioning in SmartPTT Dispatcher, map types as well as map and building plan actions, see Positioning.

2.10.1 Configuring Positioning Settings

Follow the procedure to configure GPS and Indoor settings.

Prerequisites:

*   *(Optional)* To use Google as the address data provider, obtain the Google API key. For details, see "Google Map Keys" in *SmartPTT Installation and Configuration Guide*.

*   *(Optional)* To use the dedicated OpenStreetMap Nominatim server as the address data provider, obtain the server address.

Procedure:

1. On the menu bar, click **Settings (⚙) →Positioning Systems**.
    The **Positioning Systems** window appears.

2. From the **Source of location data** list, select whether SmartPTT Dispatcher will use subscribers' coordinates obtained from any radio network, or only from the network in which the radio is currently registered.

3. In the **Validity of GPS coordinates (min)** field, specify the period in minutes after which the radio label is removed from the map if new GPS coordinates were not received from the radio.

4. In the **Validity of beacon signals (min)** field, specify the period in minutes after which the radio label is removed from the building plan if new beacon signals were not received from the radio.

5. In the **Time interval for GPS coordinates update (s)** field, specify the interval for updating radio location data in seconds which will be applied to all unregistered radios.

6. In the **Accuracy Radius** field, specify the maximum coordinate error margin required to consider received coordinates valid.

7. *(Optional)* To use the address service (reverse geocoding), perform the following actions:

   a. Select the **Address data provider** check box.

   b. Configure the desired provider:

To use Google,	perform the following actions:
	1. From the list to the right of the **Address data provider** check box, select *Google*.
	2. In the **Google API Key** field, type an API key.

To use the official OpenStreetMap Nominatum server,	from the list to the right of the **Address data provider** check box, select *OpenStreetMap Nominatum*.
To use a private or public OpenStreetMap Nominatim server,	perform the following actions: 1. From the list to the right of the **Address data provider** check box, select *Dedicated OpenStreetMap Nominatim server*. 2. In the **Address** field, type the desired server address.

8. In the **Data Format** area, configure the format of radio location data to display:

    a. From the **Coordinates** list, select the format for displaying GPS coordinates: *Decimal Degrees, Universal Transverse Mercator Coordinate System,* or *Degrees, Minutes, Seconds*.

    b. From the **System of Units** list, select the measurement system for configuring, displaying and saving location data: *Metric* or *Imperial*.

    c. From the **Speed** list, select the units in which radio speed will be displayed.

9. *(Optional)* To save radio GPS data in the SmartPTT Dispatcher database, perform the following actions:

    a. Select the **Save GPS Locations in Database** check box.

    b. In the **Database cleanup settings** area, perform one of the following actions:

To prevent coordinates from deletion by SmartPTT Dispatcher,	select **Do not delete GPS locations**.
To delete outdated coordinates,	perform the following actions: 1. Select **Coordinates retention period (days)**. 2. In the field on the right, type the desired retention period in days.

10. Click **Finish** to save changes and close the window.

2.10.2 Geopositioning Configuration

Geopositioning settings configuration includes the following actions:

*   Radio GPS settings configuration. For details, see <u>Configuring Radio GPS Settings</u>.

*   Map creation and configuration. For details, see <u>Map Creation and Configuration</u>.

For detailed information on positioning in SmartPTT Dispatcher, map types as well as map actions, see <u>GPS</u>.

2.10.2.1 Configuring Radio GPS Settings

Follow the procedure to configure the radio positioning feature using outdoor coordinates received from SmartPTT Radioserver.

Prerequisites:

*   Ensure the GPS location service is configured in SmartPTT Radioserver Configurator. For details, see "Configuring GPS" in *SmartPTT Installation and Configuration Guide*.

*   Ensure an operator has the **Manage radio location settings** and **Request radio location** rights. For details, see <u>Operators</u>.

Procedure:

1. By right-clicking the existing radio on the **Radio Fleet** panel, open the **Radio Properties** window.

2. In the **Radio Properties** window, open the **Location** tab.
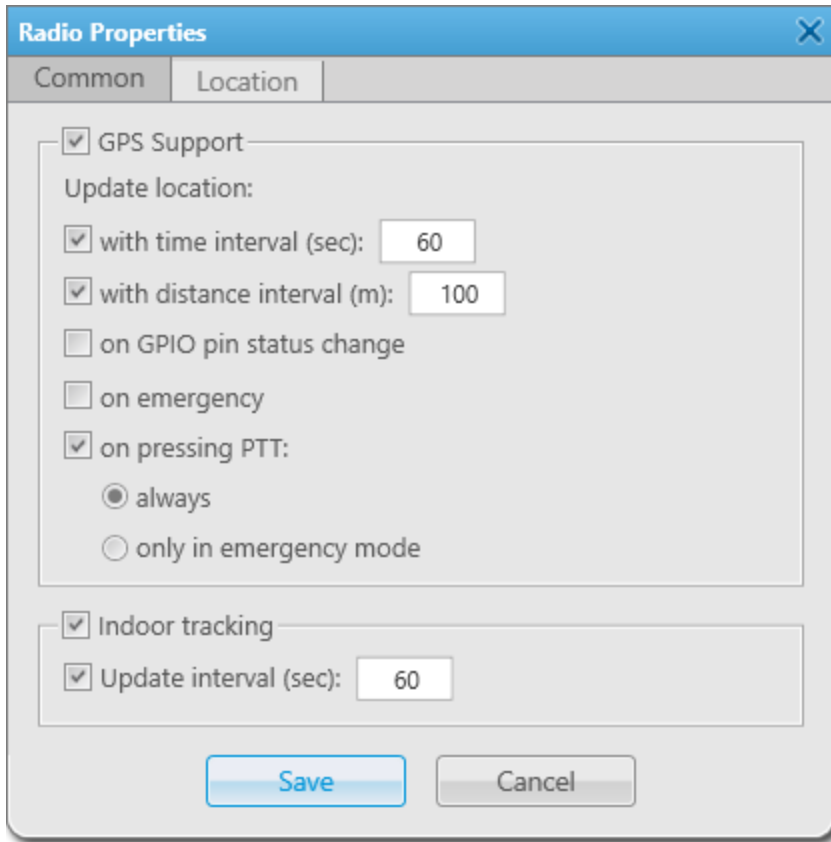
3. Select the **GPS Support** check box to enable the GPS feature for the radio.

4. *(Optional)* Configure the radio-specific update rules of outdoor coordinates:

To update the location of the radio with a specified time interval,	perform the following actions: 1. Select the **with time interval (sec)** check box. 2. In the field next to the check box, type the desired update interval.
To update the location after the radio moves by a specified distance,	perform the following actions: 1. Select the **with distance interval** check box. 2. In the field next to the check box, type the desired distance.
To update the location when the radio sends telemetry data,	select the **on GPIO pin status change** check box. **Important** To ensure correct operation of the feature, the **GNSS Report** check box must be selected for the desired GPIO physical pins in the radio codeplugs.

To update the location when the radio sends an emergency alarm,	select the **on emergency** check box.
To update the location each time the PTT button is pressed on the radio,	perform the following actions: 1. Select the **on pressing PTT** check box. 2. Select **always**.
To update the location only when the PTT button is pressed on the radio to make an emergency call,	perform the following actions: 1. Select the **on pressing PTT** check box. 2. Select **only in emergency mode**.

5.   In the **Radio Properties** window, click **Save**.

2.10.2.2 Map Creation and Configuration

> **NOTE**
> Before you can start working with maps, you must add them to the **Map** menu. For details, see Configuring Maps in Use.

SmartPTT Dispatcher provides the following types of maps:

- Google Maps.

- OpenStreetMap (online and offline).

- Baidu Maps.

- Maps in Polish format

- MapInfo.
  For information on creating and editing MapInfo maps, see Configuring MapInfo Map.

- Raster maps.
  For information on creating and editing raster maps, see Adding and Creating Raster Maps.

- Maps from database.
  For information on database maps configuration, see Managing Maps from Database.

For information on adding maps to the menu as well as the Google Maps, Baidu Maps and OpenStreetMap servers connection, see Configuring Maps in Use.

For detailed information on the available types of maps, see Maps.

To display information about the RSSI signal strength on the specific territory, you can configure a coverage map. For details, see Configuring Coverage Map.

For information on radios on a map display configuration, see Configuring Radios on Map Settings.

You can add radios, cameras, data sources, points of interest, geofences, and routes as well as display tracks on maps. For information on actions with radios, tracks, and objects on a map, see Map Actions.

2.10.2.2.1 Configuring Maps in Use

Follow the procedure to configure maps in use and add the desired maps to the **Map** menu.

Prerequisites:

- Obtain a valid API key for Google or Baidu maps to use Google or Baidu maps. To obtain the key, contact your system administrator.

- Obtain URL address of the OpenStreetMap server to use OpenStreetMap maps. To obtain the address, contact your system administrator.

Procedure:

1. On the menu bar, click **Map** → **Map Settings**.
    The **Map Settings** window appears.

2. In the **Maps in Use** area, select the desired maps:

To enable Google Maps,	perform the following actions:
	1. Select the **Google Maps** check box.
	2. In the **Google API Key** field, type the API key for Google maps. To view the entered key, click the eye icon (👁). For security reasons, the key will not be available for viewing in subsequent sessions.

To enable OpenStreetMap maps located on a server,	perform the following actions:
	1. Select the **OpenStreetMap** check box.
	2. In the **Address** field, type the map server address.

To enable OpenStreetMap from files,	select the **OpenStreetMap (file)** check box.
To enable Baidu Maps,	perform the following actions:

1. Select the **Baidu Maps** check box.

2. In the **Baidu API Key** field, type the API key for Baidu maps. To view the entered key, click the eye icon (👁). For security reasons, the key will not be available for viewing in subsequent sessions.

To enable maps in polish format,	select the **Maps in Polish Format** check box.
To enable MapInfo maps,	select the **MapInfo** check box.
To enable raster maps,	select the **Raster Maps** check box.
To enable maps from databases,	select the **Maps from Database** check box.
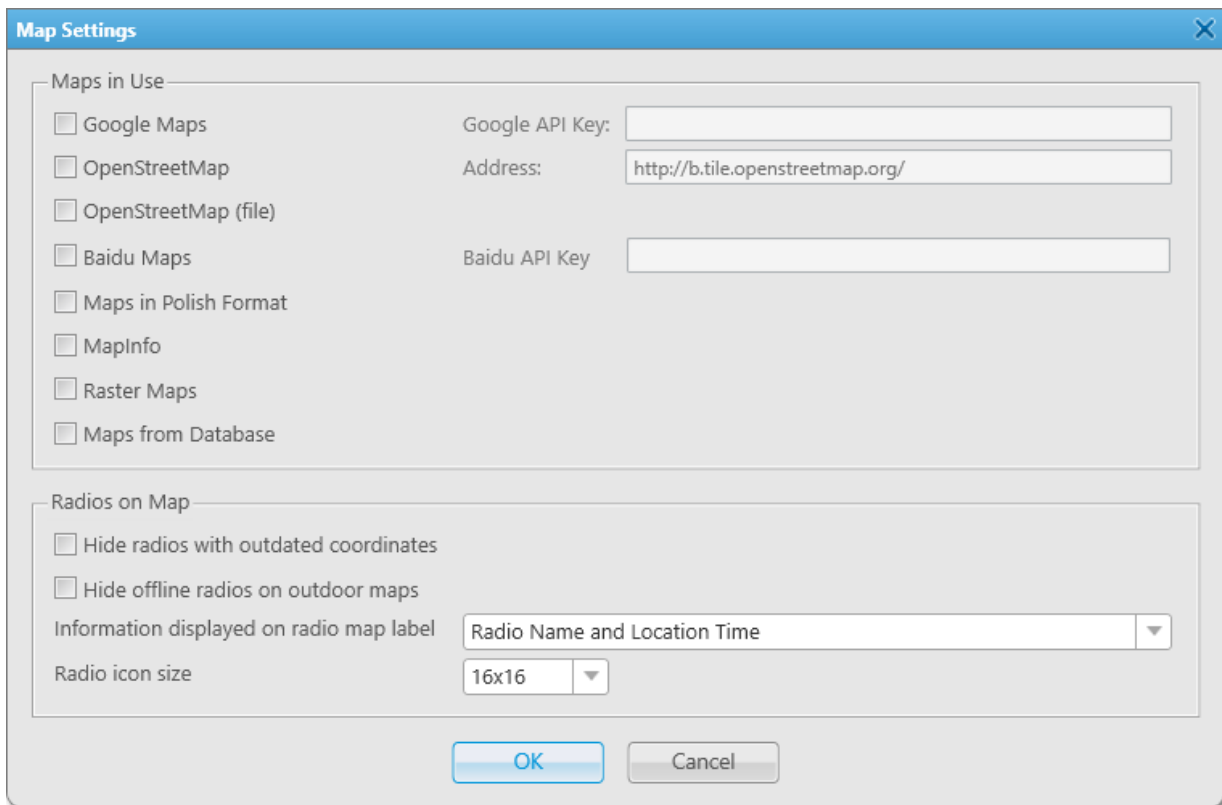
3. Click **OK** to save changes and close the window.

2.10.2.2.2 Configuring Radios on Map Settings

Follow the procedure to configure displaying radios on a map.

Procedure:

1. On the menu bar, click **Map → Map Settings**.
The **Map Settings** window appears.

2.   In the **Radios on Map** field, set the desired displaying settings of radios on outdoor maps:

To hide radios with outdated coordinates,	select the **Hide radios with outdated coordinates** check box.
	NOTE This setting does not affect indoor positioning. Radios whose beacon signal validity timeout has expired are always hidden on building plans.
To hide offline radios,	select the **Hide offline radios on outdoor maps** check box.

3.   From the **Information displayed on Radio Map Label** list, select the information that is displayed on the radio label:

To display radio name and time when coordinates were received,	select *Radio Name and Location Time*.
To display only radio name,	select *Radio Name*.
To display only radio icons,	select *None*.

4.   From the **Radio icon size** list, select the desired size for radio icons on a map:

To set the icon size to 16x16 pixels,	select *16x16*.
To set the icon size to 24x24 pixels,	select *24x24*.

5.   Click **OK** to save changes and close the window.

2.10.2.2.3 Configuring MapInfo Map

Follow the procedure to create or edit the MapInfo map to use in SmartPTT Dispatcher.

Prerequisites:

Ensure that the **MapInfo** check box is selected in the **Map Settings** window. For details, see Configuring Maps in Use.

Procedure:

1.   On the menu bar, click **Map → MapInfo → New Map**.
The **Map Settings** window appears.
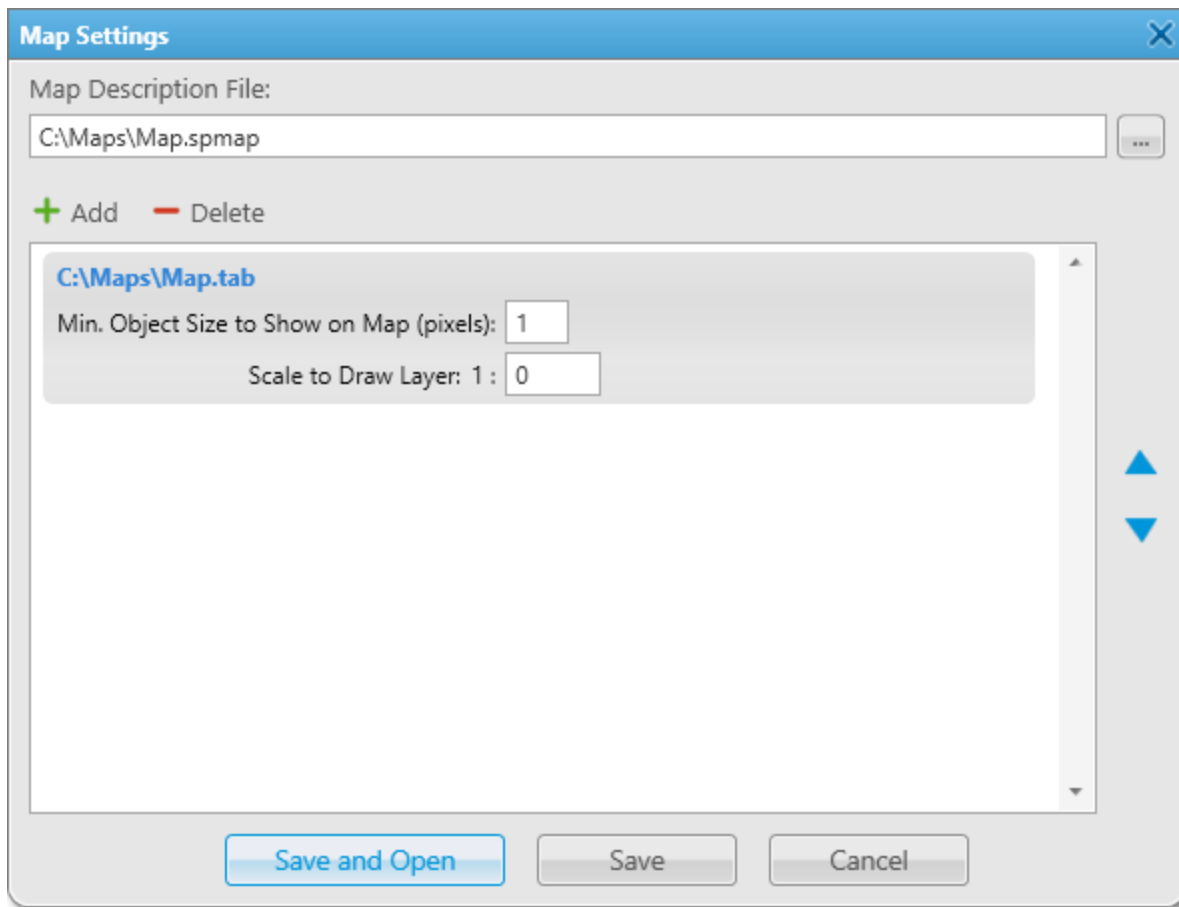
2. To the right of the **Map Description File** field, click the Browse (⬚) button, and then specify the path to the desired SPMAP file or
    enter a new file name and click **Open**.

3. In the **Map Settings** window, perform one of the following actions:

To add a new map layer,	perform the following actions: 1. Click **Add (+)**. The **Select Map Layer File** window appears. 2. In the window that appears, select the desired file with a map layer in the TAB format. 3. Click **Open**.
To edit a layer,	perform the following actions: 1. Select the desired layer. 2. In the **Min. Object Size to Show on Map (pixels)** field, specify the minimum size of the object on the map. 3. In the **Scale to Draw Layer** field, specify the scale factor beyond which the elements of the layer will not be displayed on the map.
To change an order of the layers,	select the desired layer and change its position using the **Move Layer Up (▲)** and **Move Layer Down (▼)** buttons.

To delete a layer,   select the desired layer and click **Delete (━)**.

4. Click **Save** to save changes and close the window.

5. *(Optional)* To open the MapInfo map, perform the following actions:

   a. On the menu bar, click **Map → MapInfo → Open Map**.
      The **Select map file** window appears.

   b. In the window that appears, select the desired file in the SPMAP or TTKGP format and click **Open**.
      The selected map appears in the SmartPTT Dispatcher main area.

> **NOTE**
> You can create a map in the TTKGP format using the free TatukGIS Viewer software.

Postrequisites:

To open the map after saving it, click **Save and Open**.

2.10.2.2.4 Adding and Creating Raster Maps

To create a raster map from the BMP, JPEG, or PNG file to use it in SmartPTT Dispatcher, you must perform the following actions:

- Obtain the coordinates of corresponding points selected on the image and world map to use it as guidelines. For details, see Obtaining Coordinates for Raster Map Configuration.

- Match the image and world map coordinates in the **Raster Map** window. For details, see Configuring Raster Map.

Obtaining Coordinates for Raster Map Configuration

Follow the procedure to obtain coordinates for raster map configuration.

Prerequisites:

Select an image of the desired area in the BMP, JPEG, or PNG format.

Procedure:

1. Open an image of the desired area using an image editing program.

2. On the image, select four points using the following guidelines:

   - Point 1 must be located as close as possible to the upper-left corner of the image.

   - Point 2 must be located as close as possible to the upper-right corner of the image.

   - Point 3 must be located as close as possible to the lower-left corner of the image.

- Point 4 must be located as close as possible to the lower-right corner of the image.

NOTE
It is recommended to use points that are easy to identify on a map (crossroads, tourist attractions, etc.).

3. For each point, note X and Y coordinates in pixels. Coordinates are usually displayed in the lower pane of an image editing program.

4. Find the same points on Google Maps or in a similar service. Note longitudes and latitudes in decimal format.

NOTE
If coordinates are displayed in degrees, minutes, and seconds, convert them to the decimal format using the following formula: Decimal Degrees = Degrees + Minutes/60 + Seconds/3600.

Postrequisites:

In the **Points** area of the **Raster Map** window, enter the obtained values for each point. For details, see Configuring Raster Map.

Configuring Raster Map

Follow the procedure to create or edit a raster map in SmartPTT Dispatcher.

Prerequisites:

- Obtain point coordinates to match. For details, see Obtaining Coordinates for Raster Map Configuration.

- Ensure that the **Raster Maps** check box is selected in the **Map Settings** window. For details, see Configuring Maps in Use.

Procedure:

1. On the menu bar, click **Map → Raster Maps → New Map**.
   The **Raster Map** window appears.

2. In the window that appears, perform one of the following actions:

To create a new map,	perform the following actions: 1. To the right of the **Select Image of Map** field, click the Browse (⋯) button. 2. In the window that appears, select the desired BMP, JPEG, or PNG file and click **Open**. 3. In the **Points** area, specify the coordinates of four guiding points which will be used to draw a map.
To edit an existing raster map,	perform the following actions: 1. Click **Open**. 2. In the window that appears, select the desired MAP file and click **Open**. 3. In the **Points** area, make the desired changes.

3. Once all necessary changes are made, click **Finish**.

4. In the window that appears, enter the map name, specify the path, and then click **Save**.

> **Important**
> The created raster map file and the raster map image must be in the same folder.

5. *(Optional)* To open the raster map, perform the following actions:

    a. On the menu bar, click **Map →Raster Maps →Open Map**.
    The **Select map file** window appears.

    b. In the window that appears, select a file in the MAP format.
    The selected map appears in the SmartPTT Dispatcher main area.

2.10.2.2.5 Managing Maps from Database

Follow the procedure to configure a raster map from a database.

Prerequisites:

- Ensure that the **Maps from Database** check box is selected in the **Map Settings** window. For details, see <u>Configuring Maps in Use</u>.

- Request a raster map database, and then restore it from the received backup.

Procedure:

1. On the menu bar, click **Map →Maps from Database →Settings**.
The **Maps from Database** window appears.
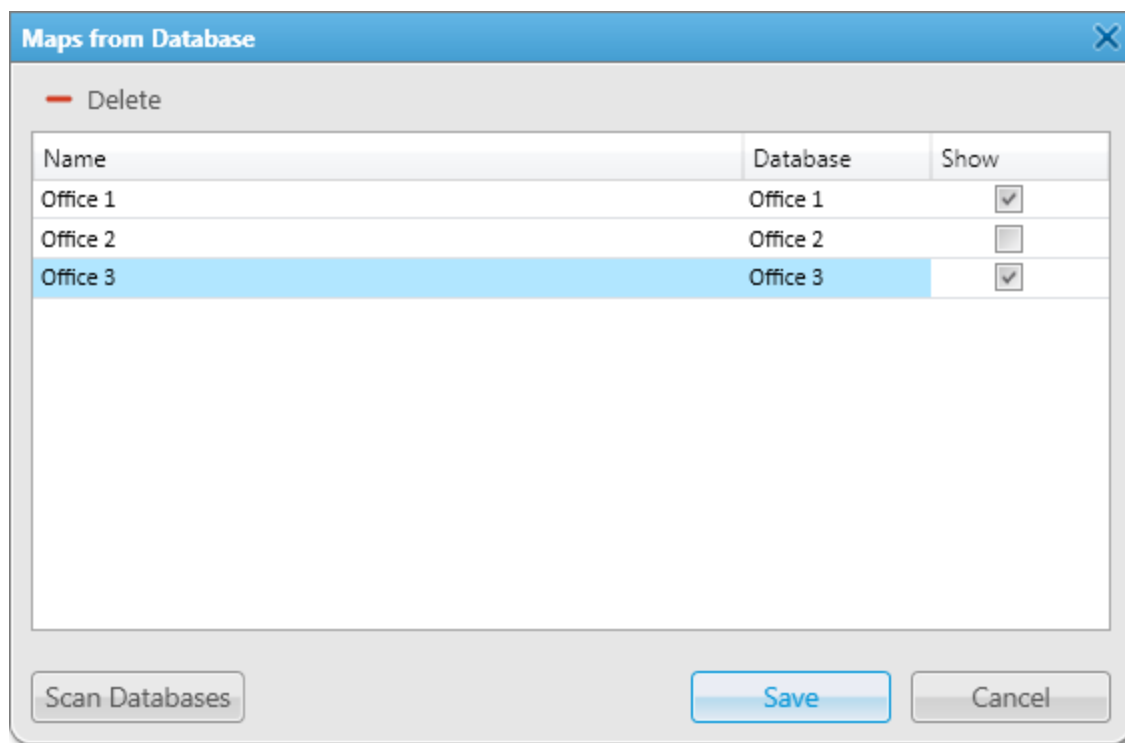
2. In the window that appears, click **Scan Databases** to display all maps from the SmartPTT Dispatcher databases.

3. In the Maps from the Database Table, perform one of the following actions:

To change the map name,	double-click the current map name, and then type the desired name.
To display a map in the **Map** menu,	in the **Show** column, select the check box for the desired map.

To delete a map from the table,	select the desired map, and then click **Delete** (➖).

4.   Click **Save** to confirm changes and close the window.

Postrequisites:

To open the map, select the desired map in **Map →Maps from Database**.

2.10.2.2.6 Configuring Coverage Map

To configure the coverage map for a radio, you must perform the following actions:

*   Configure the RSSI ranges. For details, see Configuring RSSI Ranges.

*   Configure the coverage map building settings. For details, see Building Coverage Map.

Configuring RSSI Ranges

Follow the procedure to configure RSSI ranges.

Prerequisites:

*   Ensure you have the corresponding license. For details, see Licenses.

*   Ensure an operator has the **View coverage map** right. For details, see Operators.

Procedure:

1.   On the menu bar, click **Map →Coverage map →Coverage Map Settings**.
     The **Coverage Map Settings** window appears.
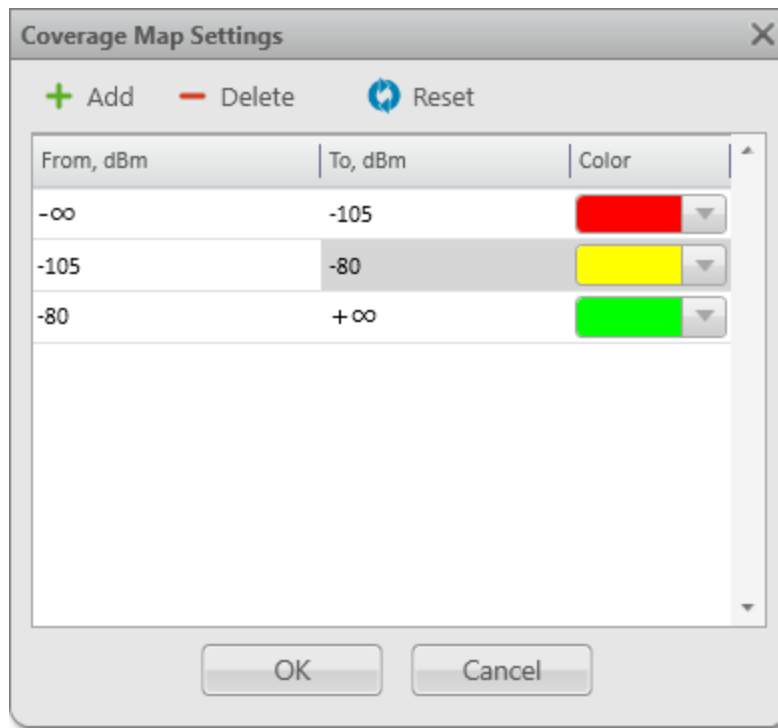
2.   In the window that appears, perform one of the following actions:

To add a new range,	perform the following actions:

	1. Click **Add (+)**.
	2. In the RSSI Range Table, in the **To, dBm** column, specify the end value of the added range.
To delete a range,	in the RSSI Range Table, select the desired range, and then click **Delete** (−).
	NOTE The initial and end ranges cannot be deleted.
To configure the range color,	in the corresponding table entry, in the **Color** column, from the expandable palette, select the desired color.
To reset ranges settings to default,	click **Reset( )**.

3. Click **OK** to confirm changes and close the window.

Postrequisites:

Build the coverage map. For details, see Building Coverage Map.

Building Coverage Map

Follow the procedure to build a coverage map.

Prerequisites:

- Ensure you have the corresponding license. For details, see Licenses.

- Ensure the operator has the **View coverage map** right. For details, see Operators.

- Ensure that the GPS is enabled for the desired radios, and the database contains GPS data. For details, see Configuring Radio GPS Settings.

- Configure RSSI ranges in the RSSI settings window. For details, see Configuring RSSI Ranges.

Procedure:

1. On the menu bar, click **Map → Coverage map → Show**.
 The **Coverage Map Settings** window appears.
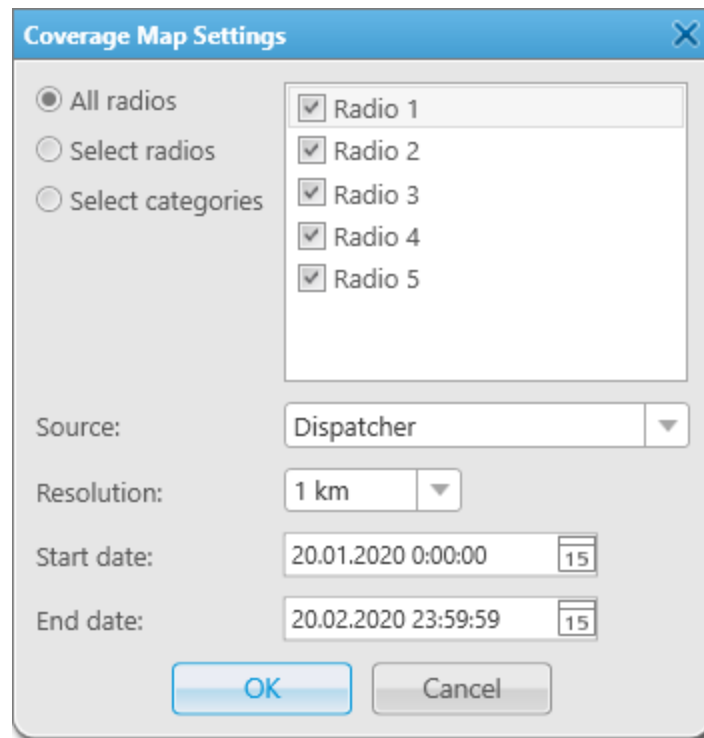
2.   In the window that appears, select radios to build a coverage map:

To build a coverage map for all available radios,	select **All radios**.
To build a coverage map for specific radios,	perform the following actions: 1. Select **Select radios**. 2. Select the desired check boxes in the area on the right.
To build a coverage map for specific radio categories,	perform the following actions: 1. Select **Select categories**. 2. Select the desired check boxes in the area on the right.

3.   From the **Source** list, select the data source to build a coverage map:

To use the SmartPTT Dispatcher database as the data source,	select *Dispatcher*.
To use the database of one of the available radioservers as the data source,	select the value with the desired SmartPTT Radioserver name.

4.   From the **Resolution** list, select the desired radius for checking signal strength.

5.   In the **Start date** and **End date** fields, enter the desired date and time to build a coverage map for a specific period.

6.   Click **OK** to confirm changes and close the window.
      The coverage map appears in the main area of SmartPTT Dispatcher.

Postrequisites:

To hide the coverage map, on the menu bar, click **Map** → **Coverage map** → **Hide**.

2.10.3 Indoor Tracking Configuration

Indoor tracking configuration in SmartPTT Dispatcher includes the following actions:

- Indoor tracking support configuration for a radio in SmartPTT Dispatcher. For details, see Configuring Indoor Radio Tracking.

- Building plan creation and configuration. For details, see Creating and Editing Building Plan.

For detailed information on the indoor tracking feature in SmartPTT Dispatcher, building plans and building plan actions, see Indoor Tracking.

2.10.3.1 Configuring Indoor Radio Tracking

Follow the procedure to configure indoor features support for a radio in SmartPTT Dispatcher.

Prerequisites:

- Ensure the beacon-based location service is configured in SmartPTT Radioserver Configurator. For details, see "Configuring Beacons in SmartPTT" in *SmartPTT Installation and Configuration Guide*.

- Ensure the operator has the **Manage radio location settings** right. For details, see Operators.

Procedure:

1. Open the **Radio Properties** window.

2. In the **Radio Properties** window, open the **Location** tab.
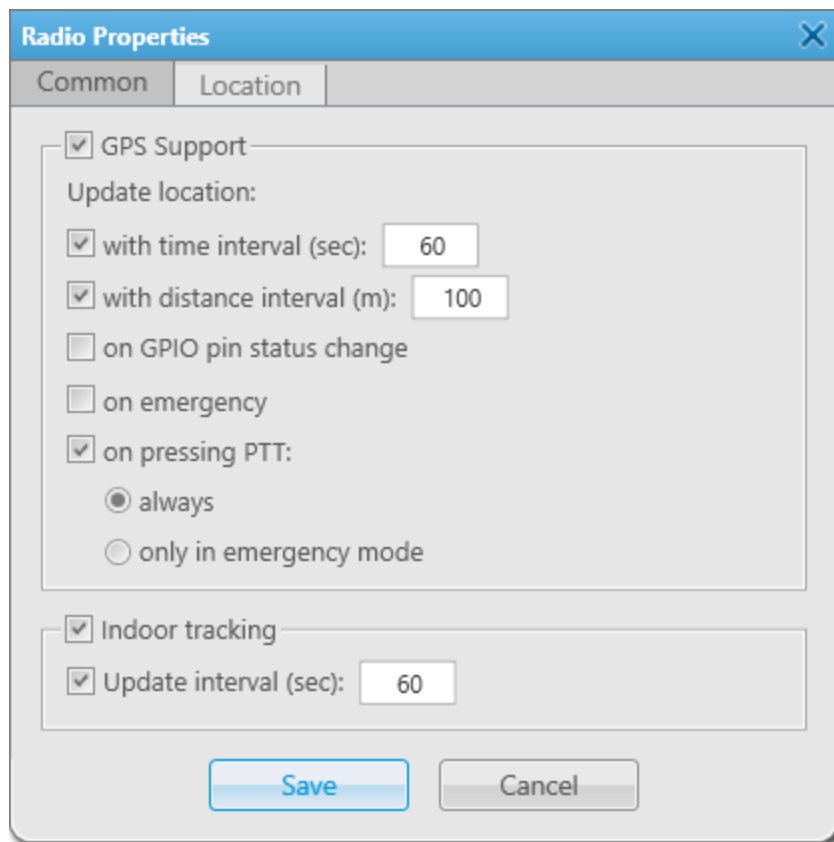
3. Select the **Indoor tracking** check box to enable the Indoor Tracking feature for the radio.

4. If the iBeacon technology is used, configure the radio indoor position update:

    a.   Select the **Update interval (sec)** check box.

    b.   In the field next to the check box, type the position update interval value in seconds.

5.   In the **Radio Properties** window, click **Save**.

2.10.3.2 Creating and Editing Building Plan

Follow the procedure to create or edit a building plan.

Prerequisites:

- Ensure you have the Indoor license. For details, see <u>Licenses</u>.

- Obtain plans of the desired building floors.

Procedure:

1.   Perform one of the following actions:

To create a building plan,	on the menu bar, click **Map →Indoor Tracking →New Building Map**.
To edit a building plan,	perform the following actions: 1. On the indoor map panel, click **Expand the Control Panel (❮)** to expand the Control Panel. 2. On the Control Panel, expand the **Floor Plan (⊞)** tab. 3. Click **Edit Plan (⊞)**.

The **Floor Plan** window appears.
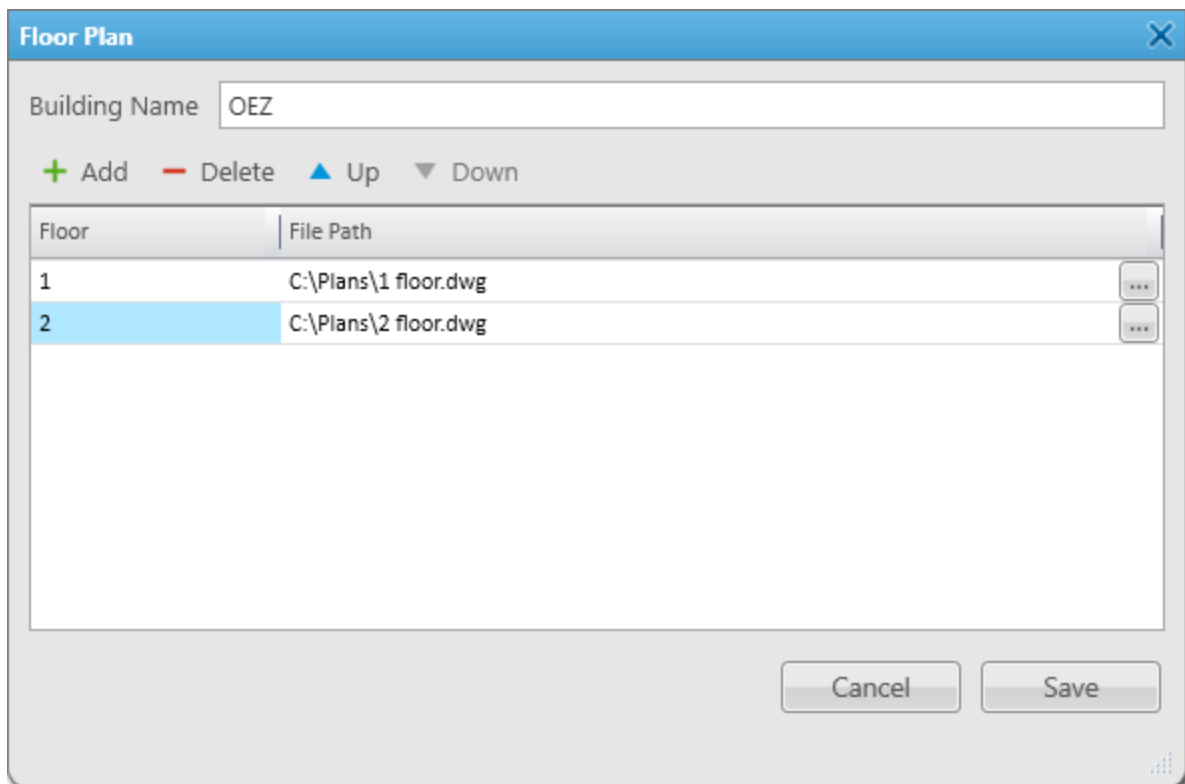
2. In the **Building Name** field, type the desired name of a plan.

3. Perform the desired actions:

To add a new floor to the building plan,	click **Add** (➕). A new floor entry appears in the Floor Table.
To change the name of a floor,	for the desired entry of the Floor Table, in the **Floor** column, click the old name, and then type a new one.
To change the floor order,	in the Floor Table, select the desired entry, and then click **Up** (🔺) or **Down** (🔻).
To link a file to a floor or change the linked file,	perform the following actions: 1. For the desired entry of the Floor Table, in the right part of the **File Path** column, click the Browse (⬚) button. 2. In the window that appears, select the file with the corresponding floor plan and click **Open**. The path to the selected file appears in the **File Path** column.
To remove a floor from the building plan,	perform the following actions: 1. In the Floor Table, select the desired entry. 2. Click **Delete** (➖). An entry with the desired floor is deleted from the Floor Table.

4. Save the changes:

To save a new building plan,	perform the following actions: 1. Click **Save**. 2. In the window that appears, select the file format (SPLAN or SPLANX) that will be used to save the plan and click **Save**. The created file appears on the indoor map panel in SmartPTT Dispatcher.
To save changes added to the created file,	click **Save**.

2.11 Job Ticket Statuses Configuration

SmartPTT Dispatcher provides the ability to create job ticket statuses and configure their settings (for example, assign a color to status or add a sound notification that will play when the status is changed). When a job ticket is sent to a radio, the radio user can change its status to notify the dispatcher about the job implementation phase.

Statuses can be configured in the **Job ticket** window where you can also configure automatic numbering, notifications that are sent to radios when an uncompleted job ticket is deleted, and status that is displayed by default.

For each job ticket status, you can configure the color that is used in the Job Ticket Table and the sound notification to play when the status will be assigned.

For information on job ticket statuses configuration, see Managing Job Ticket Statuses.

Important

Added statuses must match the statuses set in radio codeplugs, otherwise, the color, sound signal, and status completion settings will not be applied to display these statuses in SmartPTT Dispatcher.

NOTE

The Job Tickets feature is not available in Capacity Max systems.

NOTE

The Job Tickets feature is not available to SmartPTT Mobile users.

For information on the mobile application, see "SmartPTT Mobile" in *SmartPTT Installation and Configuration Guide*.

For detailed information on job tickets and actions with them, see Job Tickets.

2.11.1 Managing Job Ticket Statuses

Follow the procedure to add, edit, or delete job ticket statuses.

Important

The job ticket statuses can be configured only by the Administrator.

For information on user roles in SmartPTT Dispatcher, see Operators.

Prerequisites:

Before adding statuses in SmartPTT Dispatcher, ensure the corresponding statuses are set in radio codeplugs.

Procedure:

1. On the menu bar, click **Settings (⚙) → Radios → Job Ticket Statuses**.
   The **Job Tickets** window appears.
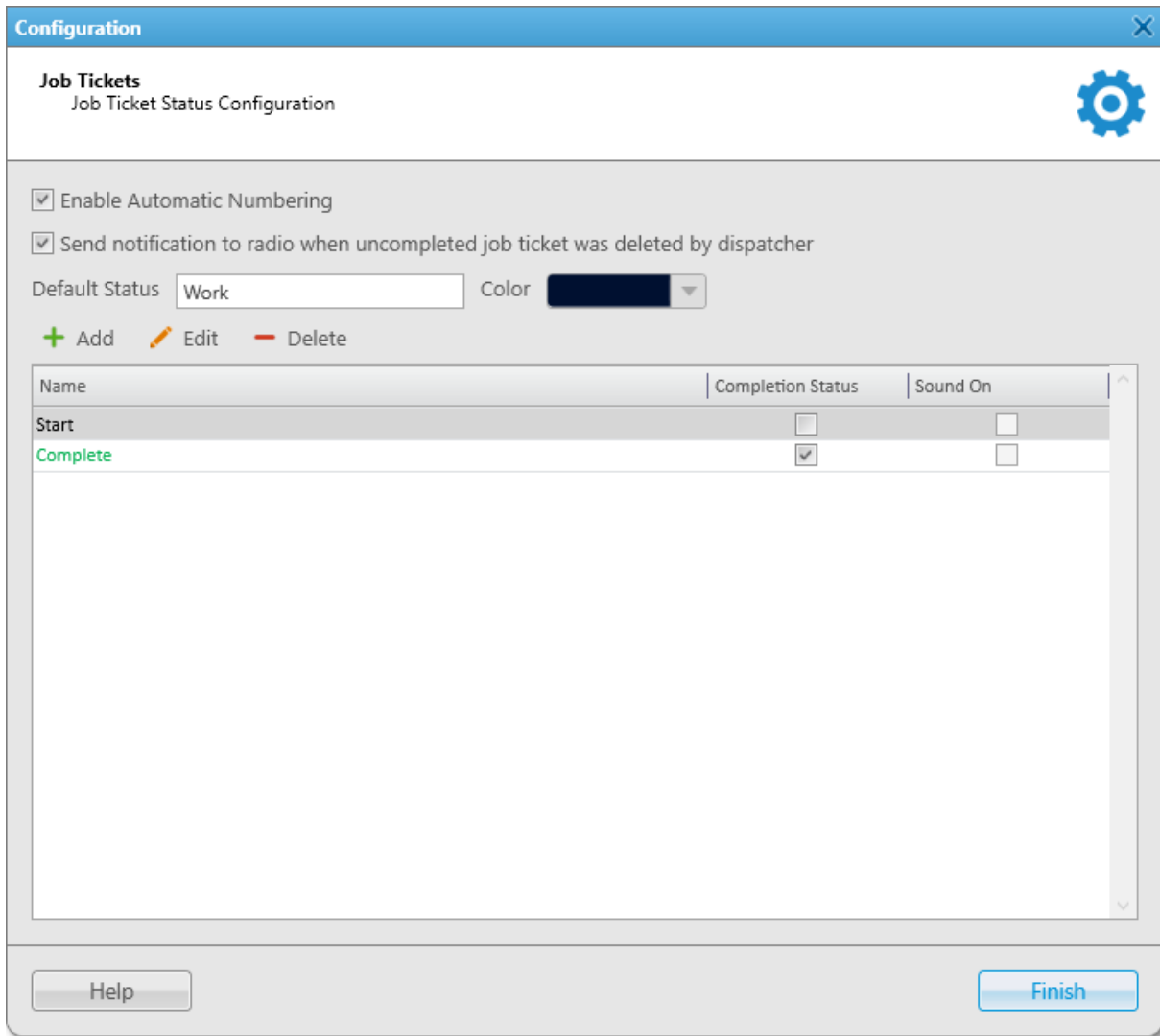
2. *(Optional)* Configure additional job ticket parameters:

To assign a unique number to each new job ticket,	select the **Enable Automatic Numbering** check box.
To send notifications to radios when the dispatcher deletes uncompleted job tickets,	select the **Send notification to radio when uncompleted job ticket was deleted by dispatcher** check box.
To configure the status that will be used for each new job ticket by default,	perform the following actions:

     1. In the **Default Status** field, type the desired status name.

     2. From the expandable **Color** palette, select the desired default status color.

3.   Perform one of the following actions:

To add a new status,	click **Add** (**+**). The **Job Ticket Status** window appears. ![Job Ticket Status window] Name: Rejected Color: (red) ☑ Completion Status ☐ Play Sound [...] OK Cancel
To edit an existing status,	in the Job Ticket Status Table, double-click the desired status or select the status, and then click **Edit** (✏). The **Job Ticket Status** window appears.
To delete a status,	perform the following actions: 1. In the Job Ticket Status Table, select the desired status, and then click **Delete** (**—**). 2. In the **Confirmation** window, click **OK**. The status is deleted from the table. 3. Proceed to step 7.
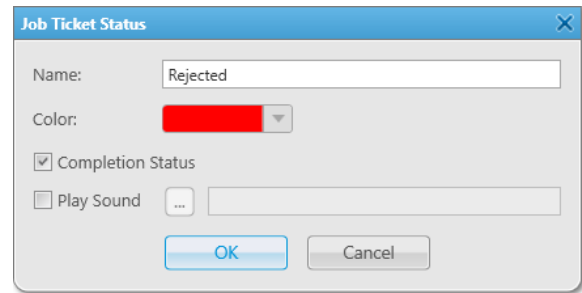
4.   In the **Job Ticket Status** window, in the **Name** field, type the status name.

5.   *(Optional)* Configure additional job ticket status parameters:

To specify a color other than the default for highlighting the status name,	from the expandable **Color** palette, select the desired color.
To hide job tickets with the status from the Job Tickets Table on the **Job Tickets** panel if the **Show completed tickets** check box is cleared in the Management area.	select the **Completion Status** check box.
To configure the sound notification which will be played when the status is assigned to a job ticket,	perform the following actions: 1. Select the **Play Sound** check box. 2. Click **Select Sound File** ([...]). The **Sound File Selection** window appears. 3. In the window that appears, select the desired audio file and click **Open**.

6.   Click **OK** to apply changes and close the window.

7.   Click **Finish** to close the **Job Tickets** window.

Postrequisites:

Add the desired job tickets and send them to a single or multiple radios or talkgroups. For details, see Managing Job Tickets.

2.12 Telemetry Configuration

To configure the Telemetry feature, the following actions must be performed:

- Configure the Telemetry feature in the desired radio codeplug.

- Connect the desired devices to the GPIO (General-purpose Input/Output) pins of the radio.

- Activate the Telemetry feature in SmartPTT Radioserver Configurator. For details, see "Activating Telemetry" in *SmartPTT Installation and Configuration Guide*.

- Add, edit, or delete telemetry actions. For details, see Managing Telemetry Actions.

- *(Optional)* Assign the desired telemetry action to a radio. For details, see Assigning Telemetry to Radios.

> **NOTE**
> The telemetry actions can be assigned only to the radios that are registered in the system. If the radio is not registered, the Telemetry feature will be unavailable.

- *(Optional)* Assign the desired telemetry action to a talkgroup. For details, see Assigning Telemetry to Talkgroups.

The telemetry settings are configured in the **Telemetry Settings** window. You can open the **Telemetry Settings** window by clicking **Settings (⚙)** → **Radios** → **Telemetry** on the menu bar.

> **NOTE**
> The Telemetry feature is available only to DMR radios.

Telemetry Example

> The garage door is equipped with a sensor that monitors the door state (open or close) and an actuator that provides the ability to open or close the door remotely.
>
> For this configuration, you must set the following telemetry settings in SmartPTT Dispatcher:
>
> - Door is closed: GPIO Pin 1, incoming telemetry event, low level of the signal
>
> - Door is open: GPIO Pin 2, incoming telemetry event, high level of the signal
>
> - Open or close the door: GPIO Pin 3, outgoing telemetry event, switch the signal level
>
> When the door is opened or closed, an operator receives a notification about the telemetry event in the SmartPTT Dispatcher Event Log. It is also possible to open or close the door by sending a command from a radio or SmartPTT Dispatcher to switch the signal level.

> **Important**
> Telemetry features are unavailable if desktop client authentication on SmartPTT Radioserver is enabled and the profile assigned to the client prohibits access to telemetry actions. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

For detailed information on telemetry and performing telemetry actions, see Telemetry.

2.12.1 Managing Telemetry Actions

Follow the procedure to add, edit, or delete telemetry actions.

Prerequisites:

- Ensure the operator has the **Send telemetry commands** right.
  For information on operator rights, see Operators.

- Ensure the telemetry service is activated in SmartPTT Radioserver Configurator. For details, see "Activating Telemetry" in
  SmartPTT Installation and Configuration Guide.

Procedure:

1. On the menu bar, click **Settings (⚙) →Radios →Telemetry**.
   The **Telemetry Settings** window appears.
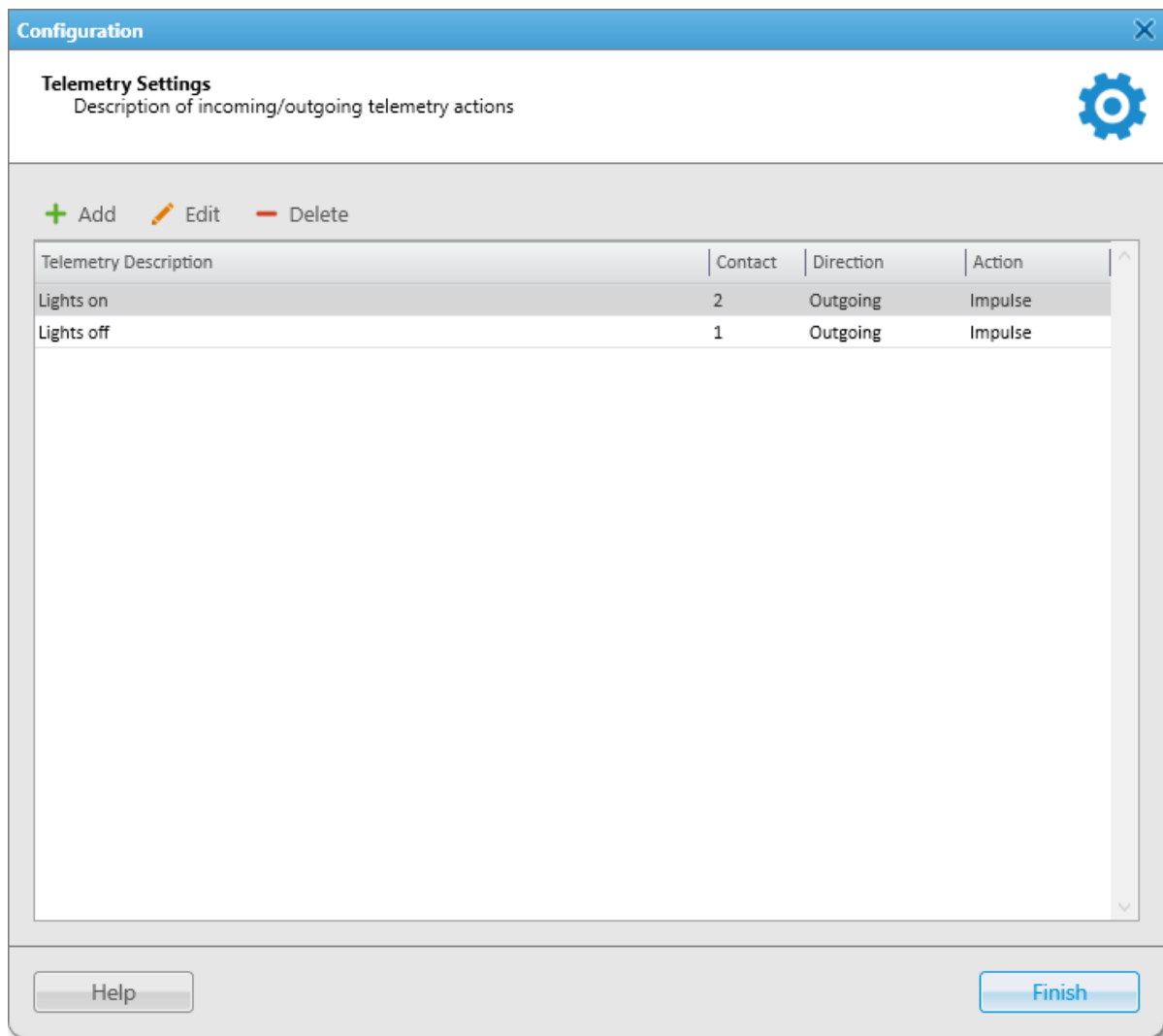
2. In the **Telemetry Settings** window, perform one of the following actions:

To add a new telemetry action,	at the top of the window, click **Add (+)**. The **Telemetry Settings** window appears.
To edit an existing telemetry action,	in the table, select the desired action, and then click **Edit (✎)**. The **Telemetry Settings** window appears.

To delete an existing telemetry action,	perform the following actions:
	1. In the table, select the desired telemetry action, and then click **Delete (➖)**.
	2. In the **Confirmation** window, click **OK**. The action is deleted from the table.
	3. Proceed to .

3. In the window that appears, in the **Description** field, type the name of the telemetry action.
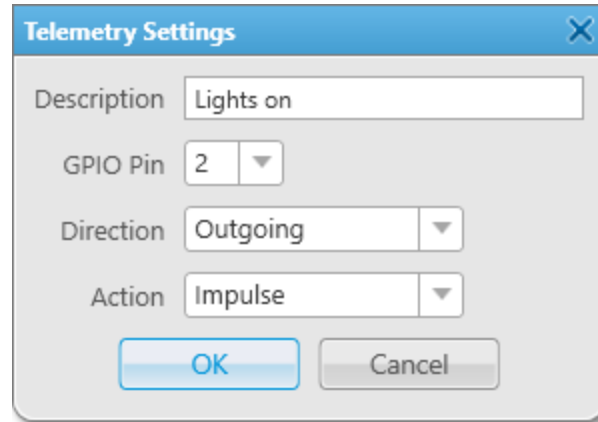
4. From the **GPIO Pin** list, select the number of the radio contact or VIO (Virtual Input/Output) to assign the telemetry action.

NOTE
Ensure the selected contact or VIO matches a physical GPIO (General-purpose Input/Output) line in the radio codeplug.

5. From the **Direction** list, select the desired telemetry event direction:

To configure an outgoing telemetry event,	select *Outgoing*
To configure an incoming telemetry event,	select *Incoming*.

6. From the **Action** list, select the desired telemetry action type:

To make a telemetry event happen when an impulse with configured length was sent,	select *Impulse*.
	Important The *Impulse* action can only be used in combination with the *Outgoing* direction.
	NOTE The length of an impulse can be configured in the radio codeplug.
To make a telemetry event happen when GPIO pin voltage level is high,	select *High Level*.
To make a telemetry event happen when GPIO pin voltage level is low,	select *Low Level*.
To make a telemetry event happen when GPIO pin voltage level is changed,	select *Toggle Level*.

7.   Click **OK** to save changes and close the window.

8.   Click **Finish** to close the **Telemetry Settings** window.

Postrequisites:

Assign the telemetry action to radios or talkgroups. For details, see Assigning Telemetry to Radios and Assigning Telemetry to Talkgroups.

2.12.2 Assigning Telemetry to Radios

Follow the procedure to assign telemetry actions to a radio.

Prerequisites:

- Configure telemetry actions in the **Telemetry Settings** window. For details, see Managing Telemetry Actions.

- Ensure the desired radio is registered in the radio system.

- Ensure the radioserver is online.

Procedure:

1.   On the **Radio Fleet** panel, right-click the desired radio.
      The **Radio Properties** window appears.
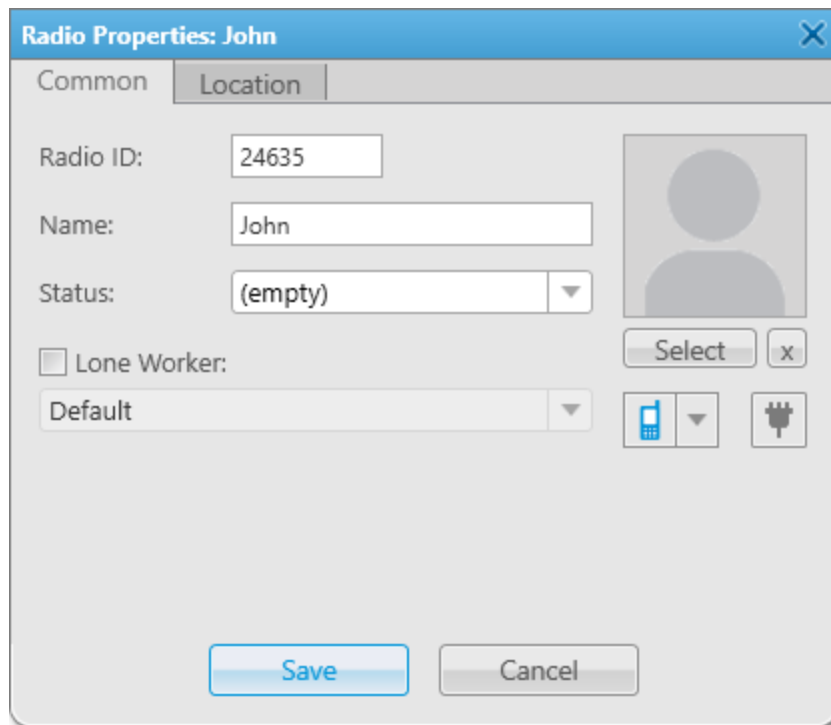
2.   Click **Telemetry ( )** to open the **Telemetry for - <radio name>** window where you can assign available telemetry actions to the radio.
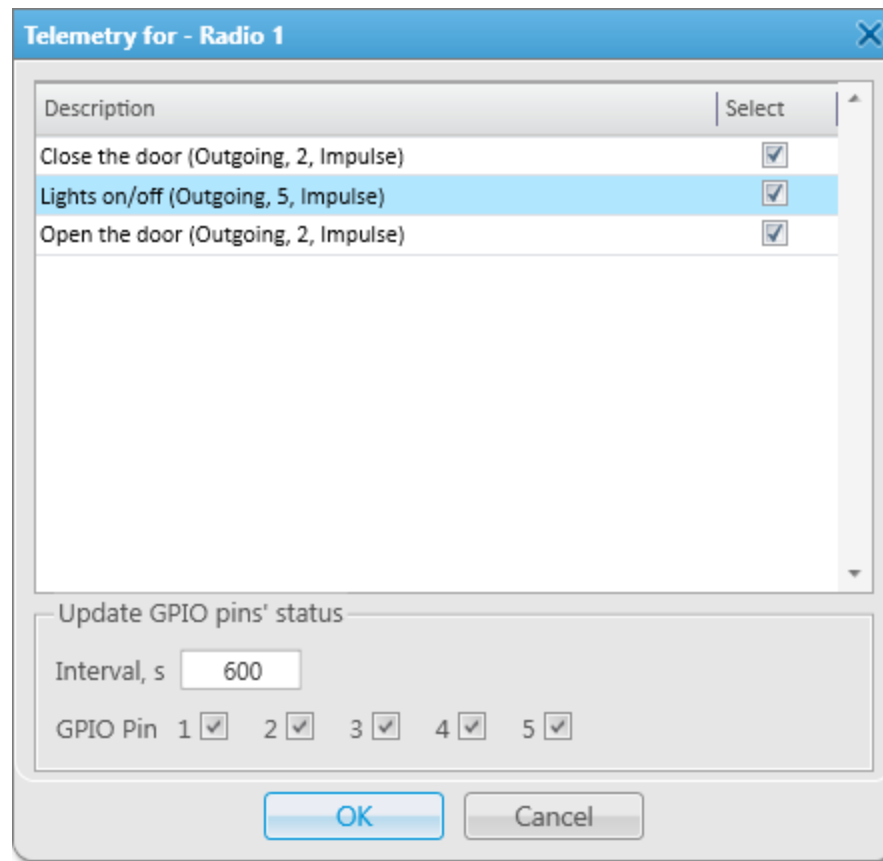
3. Select the desired actions to assign them to the radio.

4. *(Optional)* To set the automatic GPIO pins' status updates, in the **Update GPIO pins' status** area, perform the following actions:

   a. In the **Interval, s** field, specify the interval to update pin signal data in seconds.

   b. Select the desired **GPIO Pin** check boxes.

> **NOTE**
> The automatic GPIO pins' status update is applied only to incoming telemetry data.

5. Click **OK** to save changes and close the window.
   The corresponding telemetry messages will be displayed in the Event Log, the selected actions become available in custom consoles, and outgoing actions can be executed from the Call Window of the radio.

6. Click **Save** to close the **Radio Properties** window.

Postrequisites:

Execute an outgoing telemetry action from the radio Call Window. For details, see Executing Telemetry Actions from Radio Call Window.

2.12.3 Assigning Telemetry to Talkgroups

Follow the procedure to assign telemetry actions to a talkgroup.

Prerequisites:

- Configure telemetry actions in the **Telemetry Settings** window. For details, see Managing Telemetry Actions.

- Ensure the radioserver is online.

Procedure:

1.   On the **Radio Fleet** panel, right-click the desired talkgroup or select the **Properties** ( ) in the Actions ( ) menu of the talkgroup. The talkgroup properties window appears.
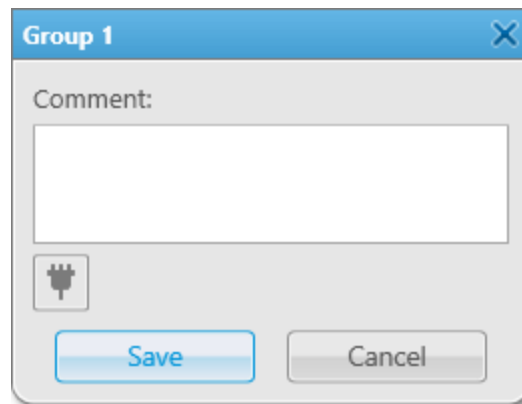
2.   Click **Telemetry** ( ) to open the **Telemetry for - <talkgroup name>** window where you can assign available telemetry actions to the talkgroup.
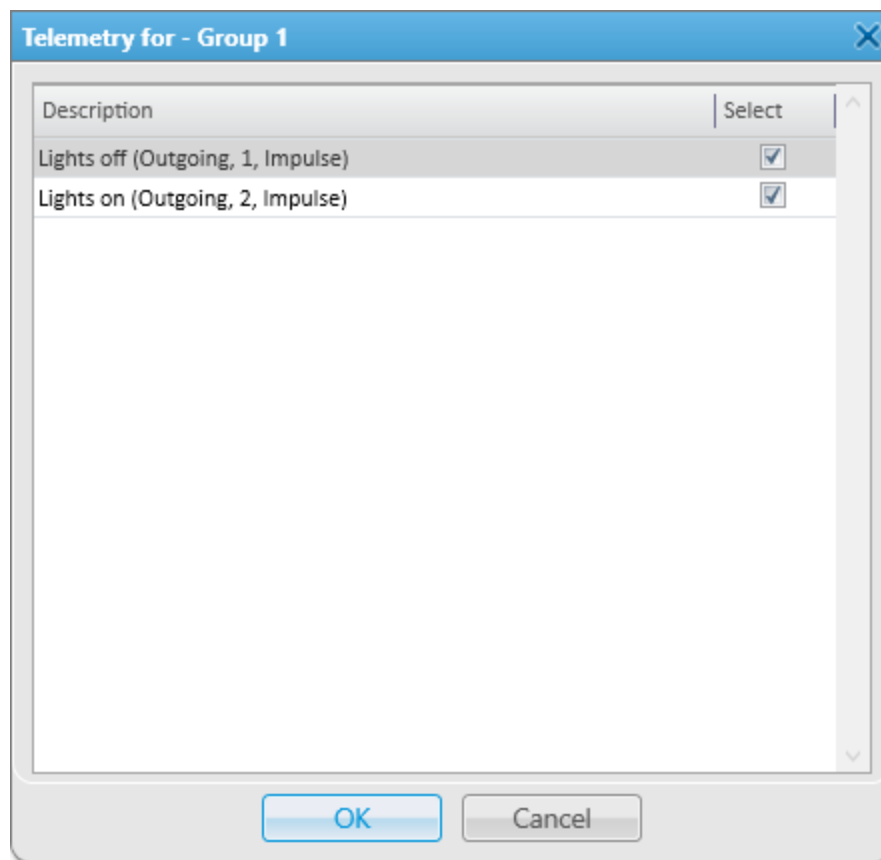
3.   Select the desired actions to assign them to radios in the talkgroup.

4.   Click **OK** to save changes and close the window.
     Outgoing actions become available in the talkgroup Call Window.

5.   Click **Save** to close the talkgroup properties window.

Postrequisites:

Execute an outgoing telemetry action from the talkgroup Call Window. For details, see Executing Telemetry Actions from Talkgroup Call Window.

2.13 Event Log Configuration

Events that are registered in SmartPTT Dispatcher, such as voice calls, TMS, emergency, etc., are logged into the SmartPTT Dispatcher Event Log. The SmartPTT Dispatcher Event Log is stored in the corresponding database. Its information is displayed on the **Event Log** panel. To display the SmartPTT Dispatcher Event Log information on the **Event Log** panel, you must activate and configure it.

For additional information on the SmartPTT Dispatcher Event Log and its use, see SmartPTT Dispatcher Event Log.

For information on the SmartPTT Radioserver Event Log and its use, see SmartPTT Radioserver Event Log.

2.13.1 Configuring Event Logging for SmartPTT Dispatcher

Follow the procedure to enable and configure event logging for SmartPTT Dispatcher.

Procedure:

1. On the menu bar, click **Event Log** →**Event Log Settings**.
   The **Event Log Settings** window appears.
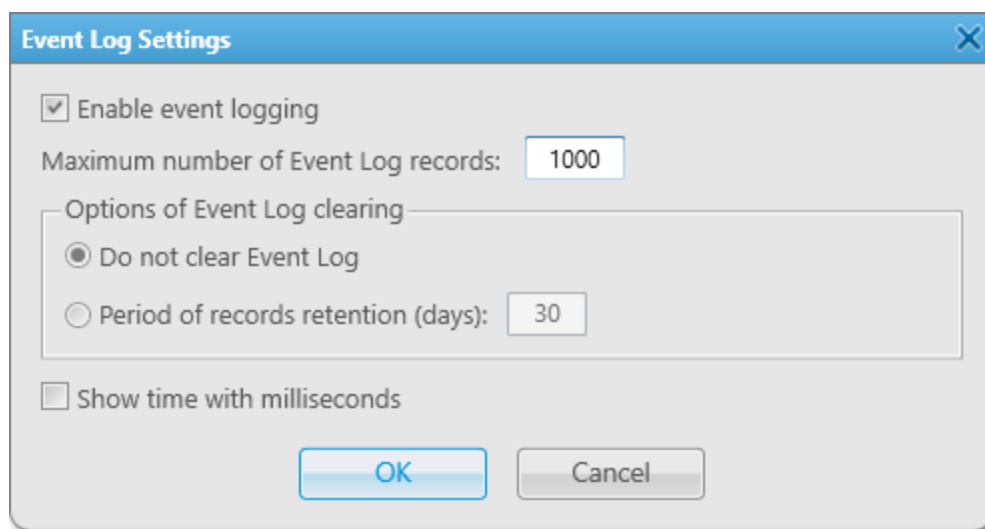
2. In the window that appears, select the **Enable event logging** check box to record events to the SmartPTT Dispatcher database.

3. *(Optional)* In the **Maximum number of Event Log records** field, type the desired value. The maximum value is *9999*.

4. In the **Options of Event Log clearing** area, perform one of the following actions:

To record new events in the database until the hard drive is full,	select **Do not clear Event Log**.
To delete records made a specified amount of days ago,	perform the following actions: 1. Select **Period of records retention (days)**. 2. Type the desired number of days to keep records. The maximum value is *999*. The default value is *30* days.

5. *(Optional)* Select the **Show time with milliseconds** check box to display milliseconds in the **Data/Time** column of the Event Log.

6. Click **OK** to apply changes and close the window.

2.14 Call Records Configuration

The SmartPTT Dispatcher Event Log provides the ability to play call records. To use the Call Records feature, it must be activated in SmartPTT Dispatcher.

For information on playing and downloading call records as well as opening their location, see Call Records.

2.14.1 Configuring Audio Recording

Follow the procedure to configure the audio recording settings in SmartPTT Dispatcher.

Procedure:

1. On the menu bar, click **Settings (⚙) →Information Storage →Records**.
   The **Audio Record Settings** window appears.
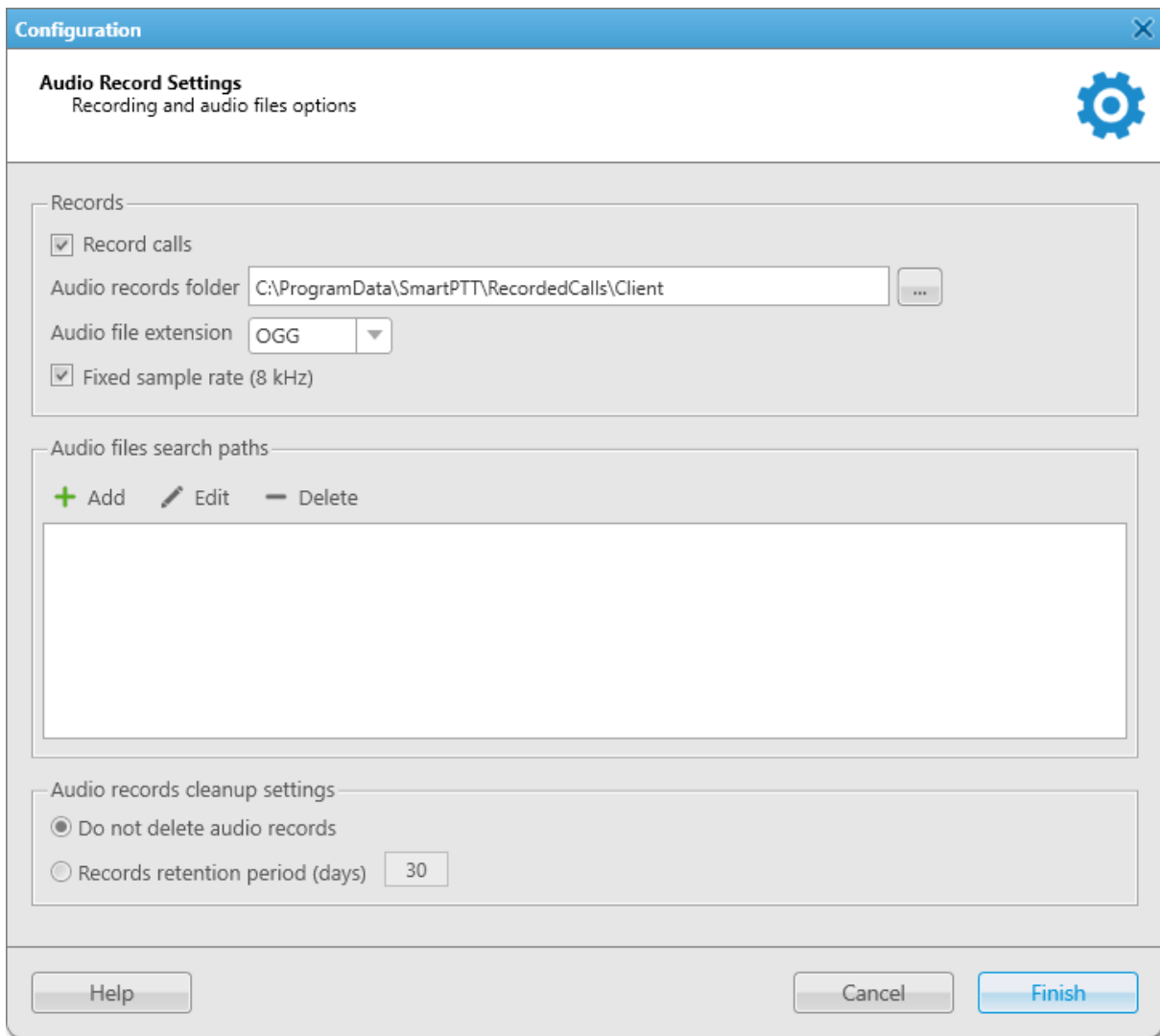
2. In the **Audio Record Settings** window, in the **Records** area, click **Record Calls**.

3. To the right of the **Audio records folder** field, click Browse (…), and then, in the window that appears, select a folder for storing call recordings.
   The path to the selected folder appears in the **Audio records folder** field.

4. In the **Audio file extension** field, select the desired audio file format from the list.

5. *(Optional)* Select or clear the **Fixed sample rate** check box to activate or deactivate application of the fixed sample rate (8 kHz) for all call recordings.

6. *(Optional)* Increase or decrease the call recordings sound volume by moving the **Recording volume of outgoing calls** slider to the left or right, respectively.

7. *(Optional)* In the **Audio files search paths** area, specify additional call recordings locations:

To add a new folder,	click **Add (+)**, and then, in the window that appears, select the folder in which call recordings are stored. The path to the selected folder appears in the table.
To edit a folder,	perform the following actions: 1. In the **Audio files search paths** table, click the desired path. 2. Click **Edit (✎)**, and then, in the window that appears, select the desired folder. The path to the selected folder changes in the table.
To delete a folder,	in the **Audio files search paths** table, click the desired path, and then click **Delete (—)**. The path to the selected folder disappears from the table.

8. In the **Audio records cleanup settings** area, select the desired cleanup option:

To keep call recordings for as long as there is available disk space,	select **Do not delete audio records**.
To keep call recordings for a specified period of time,	select **Records retention period**, and then, in the field to the right, specify the desired retention period in days.

9. Click **Finish** to save changes and close the window.

2.15 Telephone Interconnect Settings

The connection to telephone subscribers can be established in the client mode (SIP account) or in the gateway mode (SIP trunk).

For detailed information on the Telephone Interconnect feature, telephone subscriber list configuration, and calls, see Telephone Interconnect.

To provide correct functioning of the Telephone Interconnect feature, you need to configure parameters of connection between SmartPTT Dispatcher and telephone subscribers in the **Telephone Interconnect** window. You can configure the following parameters:

•   General telephone interconnect settings. For details, see Configuring General Telephone Interconnect Settings.

•   Audio codecs. For details, see Managing Audio Codecs.

•   SIP trunk authentication. For details, see Configuring SIP Trunk Authentication.

•   SIP accounts. For details, see Managing SIP Accounts.

SIP Trunk and SIP Account Differences

The SIP account service provides an end device with a registration to a call control server. The end device has a username and SIP server IP address. It registers on that server to make calls. The SIP account service usually restricts the number of simultaneous calls. In SmartPTT System, SIP account can only be used to connect SmartPTT Dispatcher to a telephone network.

For SmartPTT Radioserver and PBX connection, you only can use the SIP trunk service. It enables multiple simultaneous calls using SmartPTT Radioserver. SmartPTT Dispatcher can also be connected to a telephone network using SIP trunk though it can be less cost effective.

Establishing Connection via SIP Account

Connection via SIP account is established using accounts created on the PBX. SmartPTT Dispatcher sends its authentication data and current IP address at predetermined intervals to re-register on the PBX and update identification information.

To establish a connection using SIP account, the following conditions must be met:

- In the PBX settings, create a SIP account.

- Add the SIP account to SmartPTT Dispatcher. For details, see Managing SIP Accounts.

- Allow calls to telephone subscribers in SmartPTT Dispatcher (by selecting the corresponding check box). For details, see Configuring General Telephone Interconnect Settings.

Establishing Connection via SIP Trunk

If connection via SIP trunk is used, registration on the PBX is required only for the first session. SIP trunking provides security by means of password authentication for incoming and outgoing calls.

To establish a connection using SIP trunk, the following conditions must be met:

- In the PBX settings, create a SIP trunk connection for SmartPTT Dispatcher.

- Connect SmartPTT Dispatcher to the PBX.

- Allow calls to telephone subscribers in SmartPTT Dispatcher (by selecting the corresponding check box). For details, see Configuring General Telephone Interconnect Settings.

> **Important**
> If SIP trunk for SmartPTT Dispatcher is configured in the PBX settings, telephone calls will be established via SIP trunk by default, even if the SIP account mode is configured in SmartPTT Dispatcher.

2.15.1 Configuring General Telephone Interconnect Settings

Follow the procedure to configure general Telephone Interconnect settings.

> **Important**
> The SmartPTT Dispatcher settings must match the corresponding settings of the PBX.

Prerequisites:

- Determine the IP address and network ports of the SmartPTT Dispatcher computer used to connect to a PBX.

- From the PBX settings, obtain the following data:

    - Network protocol used for the SIP commands transmit.

    - Code used as a prefix for callbacks.

- For SIP trunk authentication, determine the number for calling SmartPTT Dispatcher.

- Obtain the VoIP gateway parameters (dial prefix for outgoing calls, IP address, and SIP port).

Procedure:

1. On the menu bar, click **Settings (⚙)** → **Telephone Interconnect** → **Telephone Interconnect**.
   The **Telephone Interconnect** window appears.

2. In the **Telephone Interconnect** window, open the **General Settings** tab.

3. In the **Dispatcher Settings** area, configure basic settings for connection between SmartPTT Dispatcher and a PBX:

   a. Select the **Allow Calls to Telephone Subscribers** check box.

   b. From the **Transport** list, select the desired protocol for the SIP commands transmit.

   c. From the **Interface** list, select the desired interface of the SmartPTT Dispatcher computer that must be used for connection to telephone subscribers:

To use any physical interface of the computer,	select *Automatically*.
To use a specific IP address of the computer,	select the desired IP address. **NOTE** Before selecting the interface manually, ensure that it is available to the VoIP gateway.

   d. In the **SIP Port** field, type the desired port number for the SIP data packets transmit.

NOTE
If SmartPTT Dispatcher and SmartPTT Radioserver are installed on the same computer, specify a SIP port number that is different from the one used by the radioserver.

   e. In the **RTP Ports** fields, specify the lower and upper boundaries of the port range to be used for connection to telephone subscribers.

   f. For SIP trunk authentication, in the **Phone Number** field, type the desired number used for calling SmartPTT Dispatcher.

   g. *(Optional)* To display a specific name on the screen of the device receiving a call from SmartPTT Dispatcher, in the **Displayed Subscriber Name** field, type the desired name.

4. In the **VoIP Gateway Default Settings** area, configure settings for connection to telephone subscribers via SIP trunk (for example, using the SIP trunk authentication or conference calls):

   a. In the **Dial Prefix for Outgoing Calls** field, type a numeric prefix to add to the subscriber's number for identifying the call initiator.

   b. *(Optional)* In the **Dial Prefix for Incoming Calls** field, type a numeric prefix to add to the SmartPTT Dispatcher number for the callback capability.

   c. In the **Default VoIP Gateway Address** field, type the VoIP gateway IP address.

   d. In the **SIP Port** field, type the VoIP gateway port number for the SIP data packets transmit.

5. *(Optional)* Configure a sound alert for telephone calls:

To play an alert sound when a telephone subscriber calls SmartPTT Dispatcher,	select **Play sound alert for incoming calls** check box.
To play an alert sound when SmartPTT Dispatcher calls a telephone subscriber,	select **Play sound alert for outgoing calls** check box.

6. Adjust the sound volume of calls received from telephone subscribers in SmartPTT Dispatcher by moving the **Sound Level** slider to the desired level.

7. Click **Finish** to apply changes and close the window.

Postrequisites:

- Configure codecs for the audio processing. For details, see Managing Audio Codecs.

- Configure the SIP trunk or SIP account authentication. For details, see Configuring SIP Trunk Authentication and Managing SIP Accounts.

2.15.2 Managing Audio Codecs

Follow the procedure to activate/deactivate an audio codec or change its priority level.

Procedure:

1. On the menu bar, click **Settings (⚙)** → **Telephone Interconnect** → **Telephone Interconnect**.
   The **Telephone Interconnect** window appears.

2. In the window that appears, open the **Codec Settings** tab.
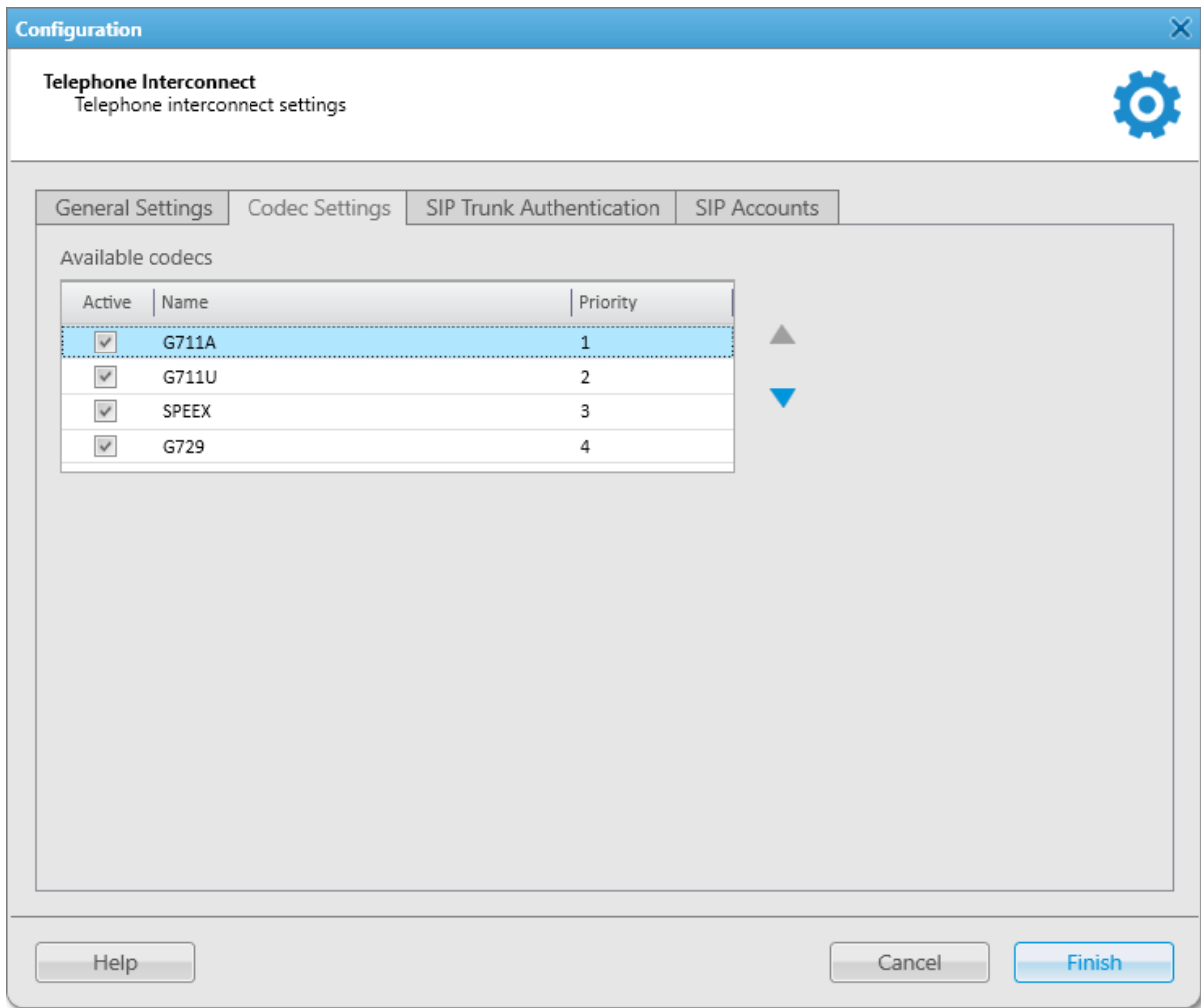
3. Perform the desired action:

To activate or deactivate the audio codec,	in the **Available codecs** table, in the **Active** column, select or clear the corresponding check box. **NOTE** You must select the codecs that are supported by the PBX.
To change the audio codec priority,	perform the following actions: 1. In the **Available codecs** table, click the desired audio codec. 2. To the right of the **Available codecs** table, click **Raise priority (▲)** or **Lower priority (▼)** to raise or lower the codec priority respectively.

> **NOTE**
> The order of codecs determines their priority that will be used to suggest codecs to connect to the PBX. For example, if the PBX does not support the first codec, it will try the second one and so on.

4. Click **Finish** to save changes and close the **Telephone Interconnect** window.

2.15.3 Configuring SIP Trunk Authentication
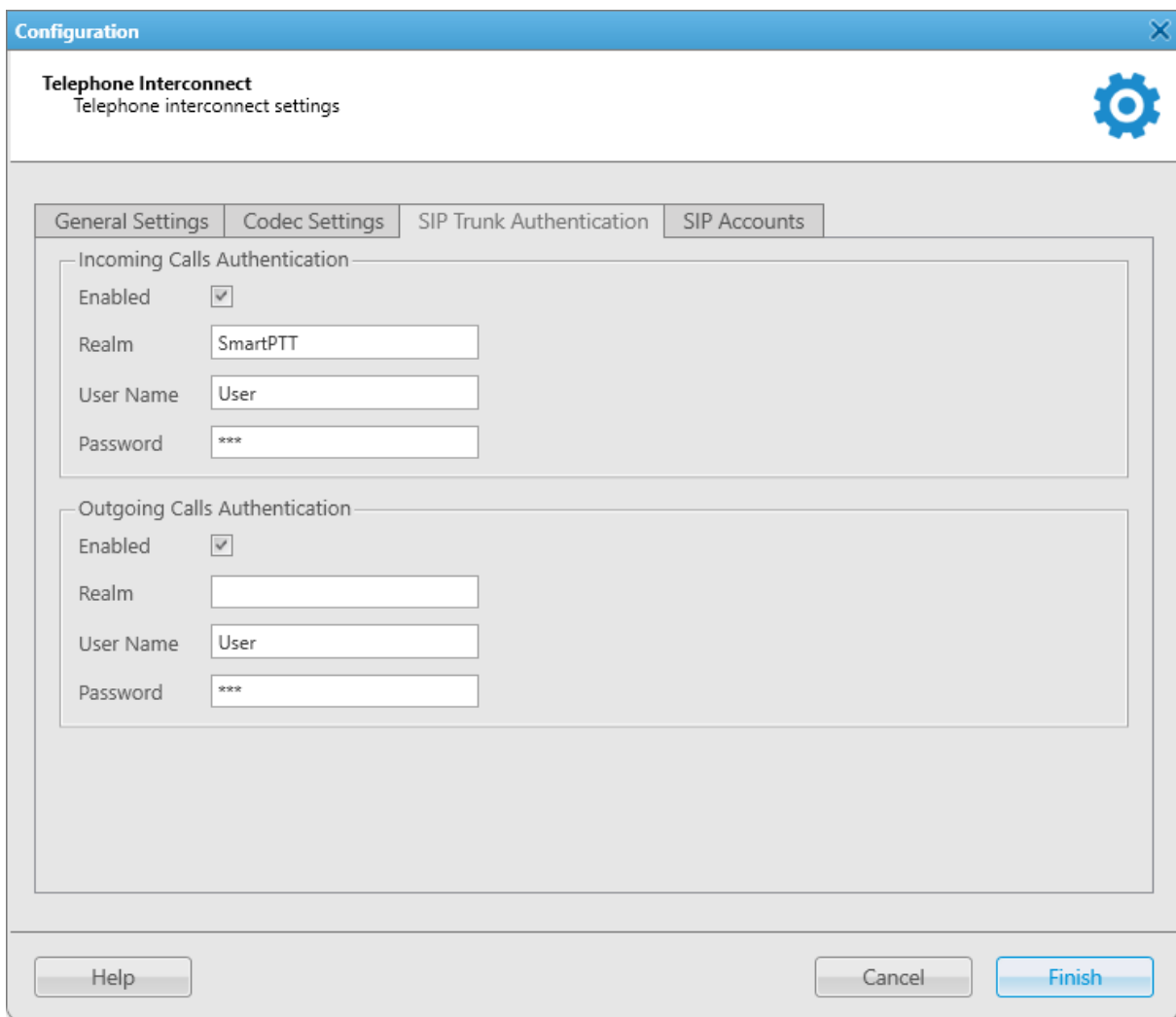
Follow the procedure to configure SIP trunk authentication for incoming and outgoing calls.

Prerequisites:

- Configure general Telephone Interconnect settings. For details, see Configuring General Telephone Interconnect Settings.

- From the PBX settings, obtain the credentials (username, password, and realm) to be used for authentication.

Procedure:

1. On the menu bar, click **Settings (⚙)** → **Telephone Interconnect** → **Telephone Interconnect**.
   The **Telephone Interconnect** window appears.

2. In the window that appears, open the **SIP Trunk Authentication** tab.

3. On the **SIP Trunk Authentication** tab, perform the desired actions:

To configure telephone subscriber authentication,	in the **Incoming Calls Authentication** area, perform the following actions:

in the **Incoming Calls Authentication** area, perform the following actions:

1. Select the **Enabled** check box.

2. *(Optional)* In the **Realm** field, type the user group name the telephone subscriber must belong to.

3. In the **User Name** field, type the name of the account to be used for authentication.

4. In the **Password** field, type the password of the account used for authentication. To view the entered password, click the eye icon (👁). For security reasons, the password will not be available for viewing in subsequent sessions.

To configure SmartPTT Dispatcher calls authentication,

in the **Outgoing Calls Authentication** area, perform the following actions:

1. Select the **Enabled** check box.

2. *(Optional)* In the **Realm** field, type the user group name the SmartPTT Dispatcher account belongs to.

3. In the **User Name** field, type the name of the SmartPTT Dispatcher account in the PBX.

4. In the **Password** field, type the password of the SmartPTT Dispatcher account in the PBX. To view the entered password, click the eye icon (👁). For security reasons, the password will not be available for viewing in subsequent sessions.

4. Click **Finish** to apply changes and close the window.

2.15.4 Managing SIP Accounts

Follow the procedure to add a new SIP account or activate/deactivate, edit, or delete an existing one.

Procedure:

1. On the menu bar, click **Settings (⚙)** → **Telephone Interconnect** → **Telephone Interconnect**.
   The **Telephone Interconnect** window appears.

2. In the window that appears, open the **SIP Accounts** tab.
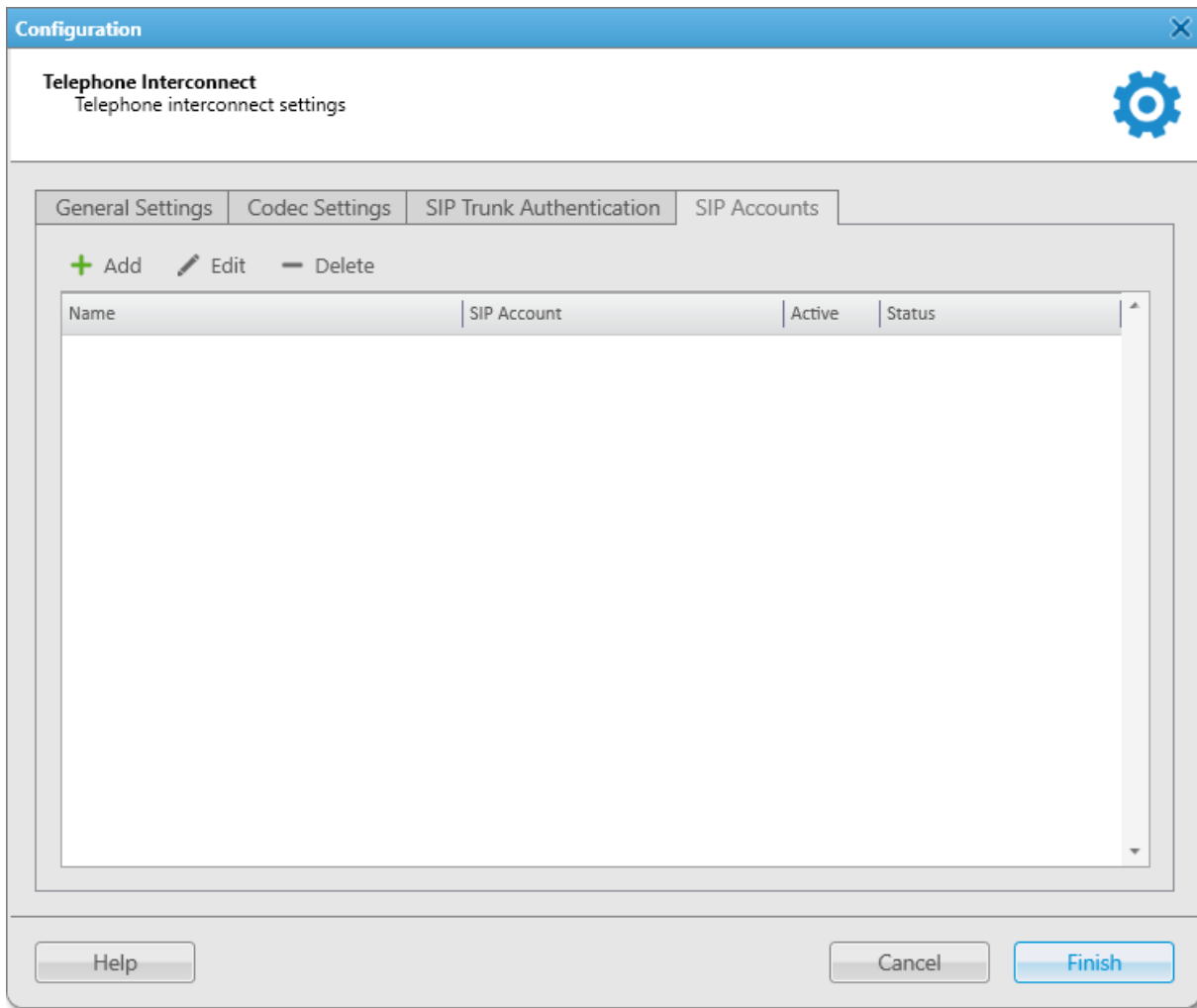
3. On the **SIP Accounts** tab, perform the desired action:

To add a new account,	perform the following actions:
	1. In the top part of the tab, click **Add (⚙)**. The **SIP Account** window appears.

2. In the **SIP Account** window, in the **Username** and **SIP Server** fields, type your username and the desired PBX IP address.

3. *(Optional)* Complete other fields with desired information.

4. Click **OK**.
   The new account appears in the table on the **SIP Accounts** tab.

To activate or deactivate an existing account,	in the table, select or clear the check box in the **Active** column.
To edit an existing account,	perform the following actions: 1. In the table, click the desired account, and then click **Edit (✎)**, or double-click the desired account. The **SIP Account** window appears. 2. In the **SIP Account** window, edit the desired information, and then click **OK**.
To delete an existing account,	perform the following actions: 1. In the table, click the desired account, and then click **Delete (━)**. The **Confirmation** window appears. 2. In the **Confirmation** window, click **OK**. The selected account is removed from the table.

4. Click **Finish** to save changes and close the **Telephone Interconnect** window.

2.16 Third-Party Solutions Configuration

SmartPTT Dispatcher provides the ability to integrate the following third-party solutions:

- Avigilon video monitoring system.
  For information on Avigilon video monitoring system configuration, see Avigilon Configuration.

- AdapTel devices for telemetry data collection and processing.
  For details, visit the AdapTel page of the SmartPTT website.

2.16.1 Avigilon Configuration

SmartPTT supports integration with the Avigilon video monitoring system. It helps dispatchers monitor what happens at various objects, for example, when a radio sends an alarm, providing the ability to control the situation at these objects.

The Avigilon video monitoring system provides the ability to watch camera translations directly in SmartPTT. To watch live video from cameras, perform the following actions:

- Install Avigilon Control Center Server 7 software. For details, see the Avigilon Control Center 7 Software web page on the Avigilon website.

- Add cameras to the Avigilon system.

- Instal the corresponding license. For information on licenses, see Licenses.

- Connect SmartPTT to the Avigilon system in SmartPTT Radioserver Configurator. For details, see "Configuring Avigilon Connection" in *SmartPTT Installation and Configuration Guide*.

- Add cameras on a map in SmartPTT Dispatcher. For details, see Adding Cameras.

Important
Cameras can be managed by the operators with the **Manage cameras** right. For details, see Operators.

NOTE
Video recording in the SmartPTT system is not available.

For information on watching real time video in the SmartPTT system, see Objects on Map.

2.16.2 Data Provider Configuration

In SmartPTT Dispatcher, you can integrate with data providers. After connection, data from sensors is displayed directly on the **Data provider** panel.

To connect to the data provider, you must perform the following actions:

- Create a client account and configure connection settings in SmartPTT Radioserver Configurator. For details, see "Data Providers" in *SmartPTT Installation and Configuration Guide*.

- Activate the data acquisition module and specify the data provider URL address. For details, see Activating Data Acquisition Module.

Important
To use the feature in SmartPTT Dispatcher, the corresponding license is required.
For information on licenses, see Licenses.

Data Acquisition Features in SmartPTT

Data acquisition module provides the following capabilities in SmartPTT:

- Real-time equipment monitoring.

- Collecting data from IoT sensors, automated control systems, access monitoring and control systems, etc.

- Remote equipment control.

- Alarm and warning notifications.

- Web access from different devices (HMI panels, workstations, tablets).

- Displaying reports.

> **NOTE**
> At the moment, you can download reports only from the web version of the data provider app.

- Recording parameter changes and equipment states.

- Logging of events, operator actions, alarms, and warning signals.

- Configuring rules for events registered in the data provider system.
  For information on rule configuration, see Custom Rules.

- Displaying data sources on a map. For details, see Objects on Map.

2.16.2.1 Activating Data Acquisition Module

Follow the procedure to activate the **Data Acquisition** module in SmartPTT Dispatcher.

> **Important**
> This procedure is available only to the Administrator.

Prerequisites:

- Ensure that the corresponding license is installed. For details, see Licenses.

- Obtain the URL address of the data source that will be accessed through the **Data Acquisition** module in SmartPTT Dispatcher.

Procedure:

1. On the menu bar, click **Settings (⚙)** →**Interface** →**Data provider**.
   The **Data provider** window appears.
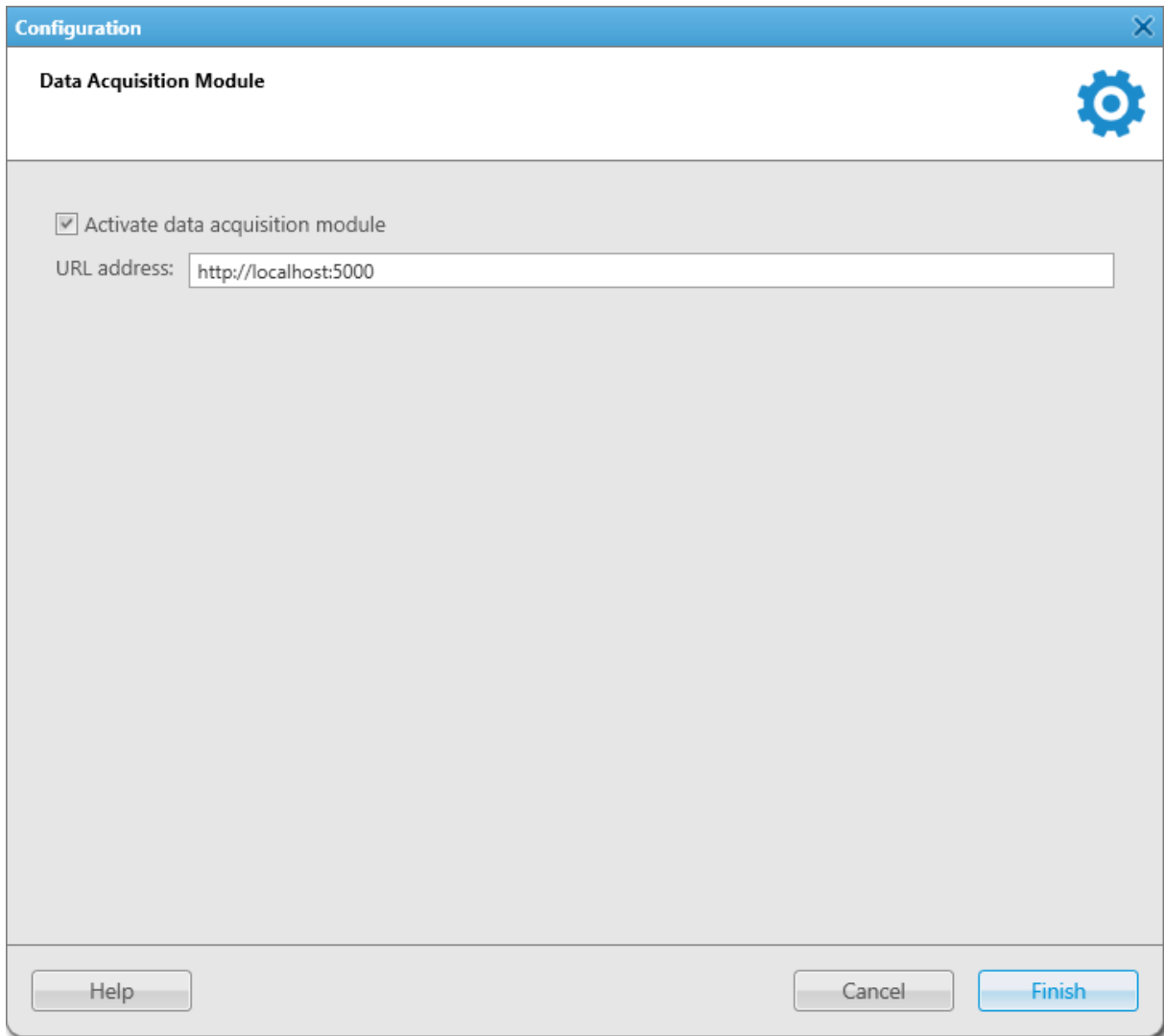
2. In the window that appears, select the **Activate data acquisition module** check box.
   The **URL address** field becomes available.

3. In the **URL address** field, type the URL address of the data provider.
   The URL address format is `http://<IP address or domain name of the data provider host>:5000`

4. Click **Finish** to save changes and close the window.

5. Restart SmartPTT Dispatcher to apply changes.
   The **Data provider** option appears in the **Tools** menu on the menu bar.

Postrequisites:

To open the **Data provider** panel, click **Tools** → **Data provider** on the menu bar.

2.17 Dispatcher List Configuration

SmartPTT Dispatcher provides the ability to communicate with other operators of the SmartPTT system. You can add other dispatchers and edit their settings in the **Dispatchers** window of the SmartPTT Dispatcher **Settings (⚙)** menu. The window is available only to the Administrator.

In the **Dispatchers** window, you can perform the following actions:

- Configure SmartPTT Dispatcher settings for communication with other dispatchers. For details, see <u>Configuring Dispatcher Settings</u>.

- Add contacts of other dispatchers. For details, see <u>Adding Dispatcher Contacts</u>.

- Manage added dispatchers contacts.

> **Important**
> To communicate with other dispatchers, an operator must have the **Connect with external dispatchers** right. If the operator does not have this permission, the **Dispatchers (👤)** button will be disabled in the SmartPTT Dispatcher menu bar. If no dispatchers are added to SmartPTT Dispatcher, this button will also be disabled.
> For information on user roles in SmartPTT Dispatcher, see <u>Operators</u>.

For additional information on initiating calls between dispatchers, see <u>Dispatchers</u>.

2.17.1 Configuring Dispatcher Settings

Follow the procedure to configure the SmartPTT Dispatcher settings for communicating with other dispatchers.

Prerequisites:

Obtain UDP and TCP ports of your SmartPTT Dispatcher computer.

Procedure:

1. On the menu bar, click **Settings (⚙) →Dispatchers**.
    The **Dispatchers** window appears.
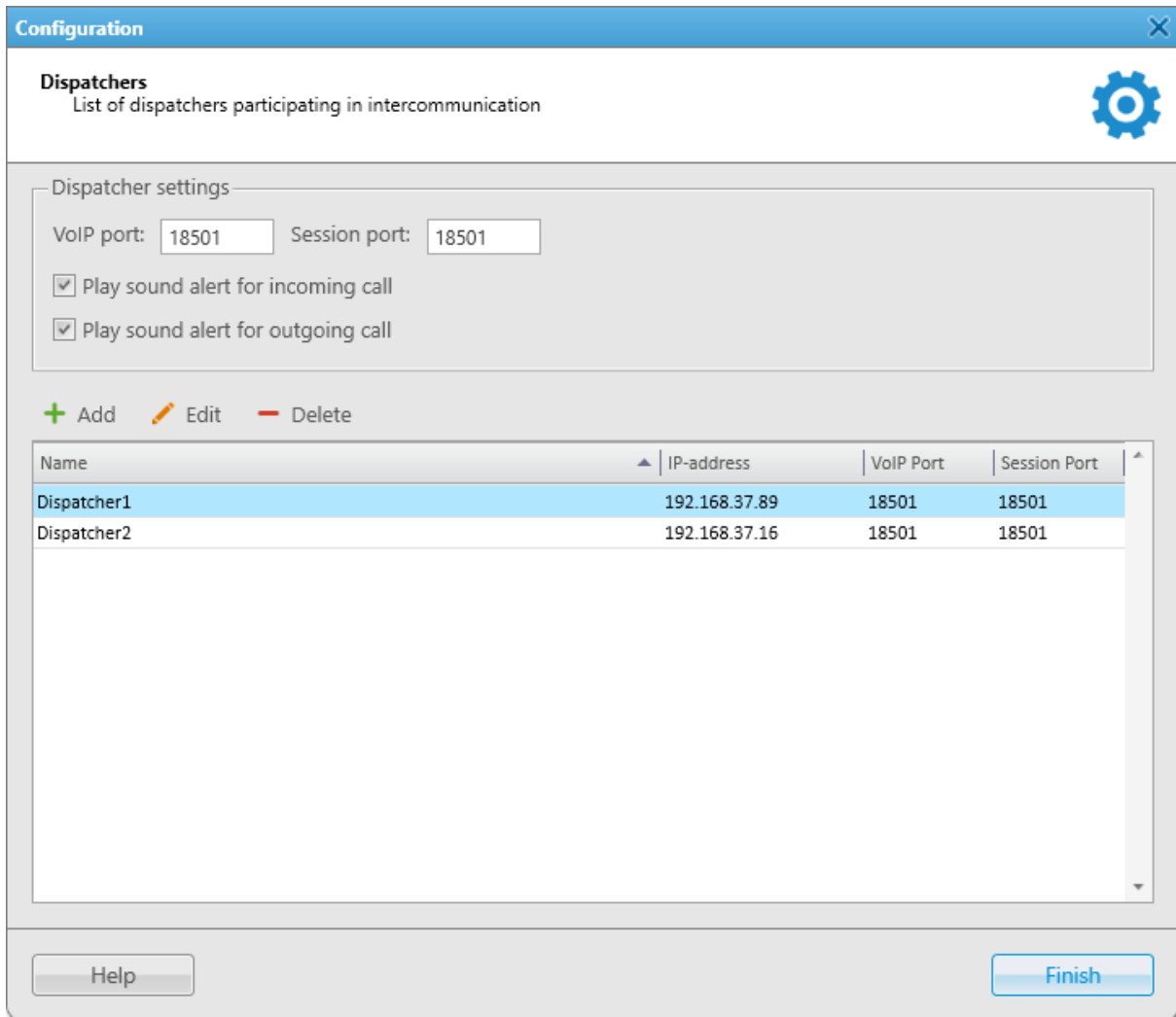
2. In the window that appears, in the **VoIP port** field, type the UDP port of the current dispatcher computer.

3. In the **Session port** field, type the TCP port of the current dispatcher computer.

4. *(Optional)* Select the **Play sound alert for incoming call** check box for playing a tone in case of incoming dispatcher calls.

5. *(Optional)* Select the **Play sound alert for outgoing call** check box for playing a tone in case of outgoing dispatcher calls.

6. Add contacts of the desired dispatchers. For details, see <u>Adding Dispatcher Contacts</u>.

7. Click **Finish** to close the window.

Postrequisites:

- To edit the desired dispatcher, select the entry in the Dispatchers table, and then click **Edit (✐)**.

- To delete the desired dispatcher, select the entry in the Dispatchers table, and then click **Delete (━)**.

2.17.2 Adding Dispatcher Contacts

Follow the procedure to add a new dispatcher contact.

Prerequisites:

Obtain another dispatcher IP address, UDP, and TCP ports.

Procedure:

1. On the menu bar, click **Settings (⚙) → Dispatchers**.
   The **Dispatchers** window appears.
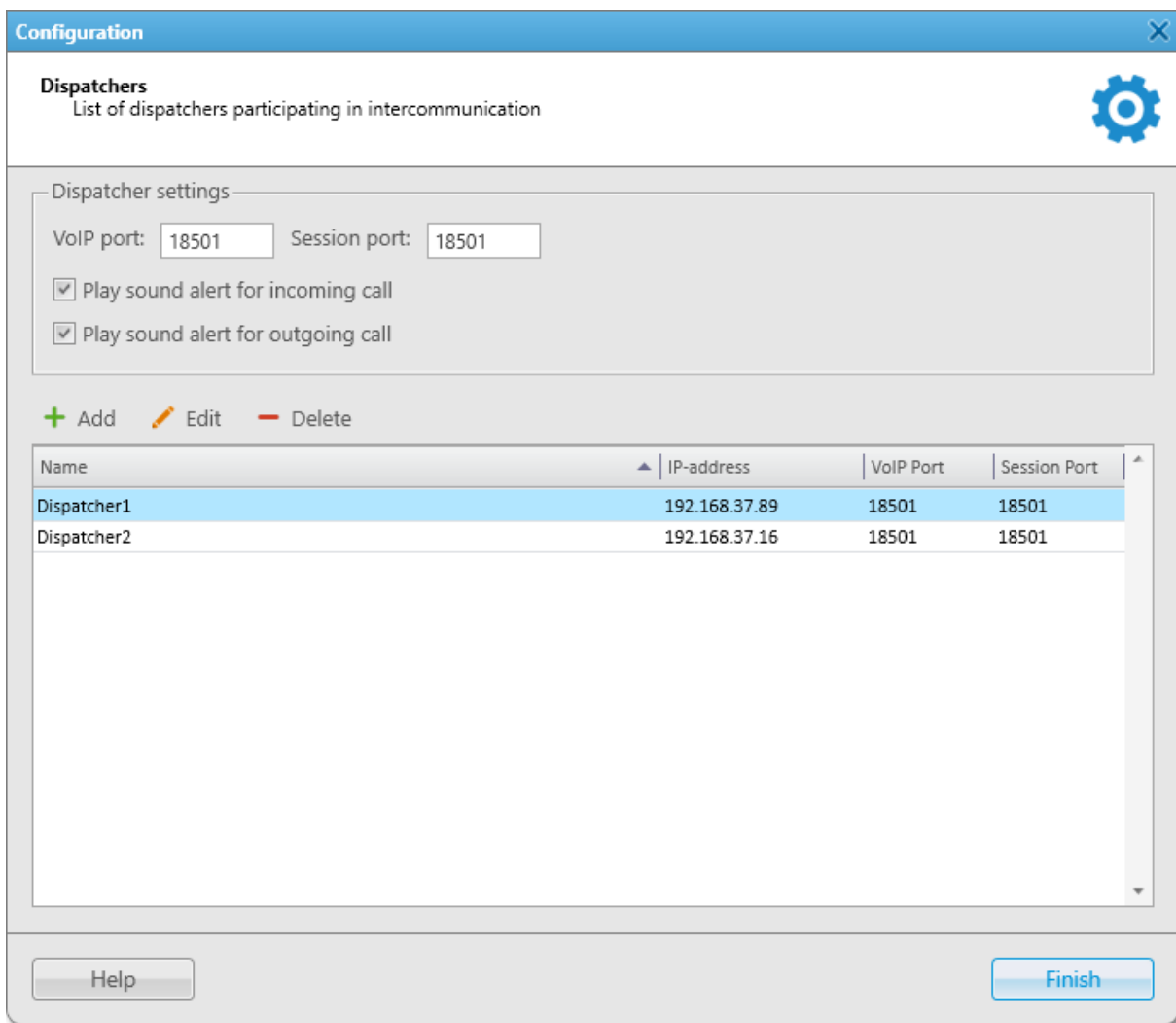
2. In the window that appears, click **Add (✚)**.
   The **Dispatcher** window appears.

3. In the window that appears, in the **Name** field, type the dispatcher name.

4. In the **Address** field, specify the dispatcher IP address.

5. In the **VoIP port** field, specify the UDP port of the dispatcher computer.

6. In the **Session port** field, specify the TCP port of the dispatcher computer.

7. *(Optional)* In the left part of the window, click **Select**, and then in the window that appears, select the avatar for the dispatcher.

8. *(Optional)* Click Browse ( ), and then in the window that appears, select a tone for incoming dispatcher calls.

9. Click **OK** to save the changes and close the window.
   The added dispatcher appears in the Dispatchers Table.

Postrequisites:

- To delete the dispatcher avatar, click **Clear the image of the dispatcher**.

- To set the default call alert, click **Use a system sound**.

2.18 Rules and Lone Worker Mode

SmartPTT Dispatcher provides the ability to configure rules. A rule is a combination of preconfigured conditions and actions. When the system has registered an event matching the specified rule, the rule triggers, and the system performs preconfigured actions.

> **Important**
> Rules configuration is available to the Administrator or to operators with the corresponding permission. For details, see Operators.

SmartPTT Dispatcher provides the following rules:

- Custom rules. For details, see Custom Rules.

- Positioning rules. For details, see Positioning Rules.

- Lone Worker rules. For details, see Lone Worker Rules.

When the specified conditions are met, SmartPTT Dispatcher can perform the following actions directed at DMR radios:

- Block a radio.

- Assign the Lone Worker profile.

- Enable the Man Down mode.

- Send a text message.

Furthermore, the following actions can be configured in SmartPTT Dispatcher:

- Play a special sound.

- Display the radio or point of interest location.

- Change a radio status.

- Send an alert.
For information on SmartPTT Dispatcher action configuration, see Rule Management.

To see the examples for custom, positioning and lone worker rules, see Examples.

Man Down

Rules provide the ability to enable or disable the Man Down mode if the specified event will happen. The Man Down feature receives radio position data from its sensor. If the radio is tilted, SmartPTT Dispatcher will display the Man Down capture on the radio element of the **Radio** panel or Custom Console. This feature can be useful, for example, if the radio user fell after some accident. For details, see Configuring Initiator Alerts.

Important
The rule for activating the Man Down option will only work on radios with the Generic Option Board (GOB) and only in the IP Site Connect radio network with a direct connection to repeaters. The rules for activating Man Down do not apply if data is transmitted via the NAI interface, as well as if you use radios with the integrated Man Down function.

If the radio has an optional GOB board, you can configure the Man Down option with the help of SmartPTT GOB Configurator.

If the radio does not have the optional GOB board, you can configure the Man Down option with the help of Radio Management (create a profile, enable Man Down and Emergency).

2.18.1 Custom Rules

Custom rules are used to automatically notify dispatchers, radios, and other recipients.

NOTE
Custom rules are not available for SmartPTT Mobile users.
For information on the mobile application, see "SmartPTT Mobile" in *SmartPTT Installation and Configuration Guide*.

Rules can also be configured in SmartPTT Radioserver Configurator. For information on rule configuring in the SmartPTT system, see "Rules" in *SmartPTT Installation and Configuration Guide*.

For information on configuring the custom rules, see the sections below.

2.18.1.1 Custom Rule Conditions

Rule conditions are set of logical expressions that consist of the following elements:

- Attribute (for example, *Event Type*). For details, see Condition Attributes.

- Operation (for example, *Equal to*). For details, see Condition Operations.

- Value (for example, *Call*).

Each rule can have several expressions. For example, one rule can consist of the "Incoming Call" and "Incoming Message" expressions. To trigger a rule, all attributes must match the event.

SmartPTT does not prevent users from invalid conditions configuration. For example, it does not prevent users from configuring the "Outgoing ARS" condition.

2.18.1.1.1 Condition Attributes

The following attributes are provided for conditions:

Attribute	Description
Direction	The event direction can be *Incoming* (events are addressed to SmartPTT Dispatcher) or *Outgoing* (events are initiated by SmartPTT Dispatcher). To select the desired direction, you need to set the *Equal to* value in the **Operation** column. The *No* value causes the attribute to be ignored.
Event type	The list of available event types. • *Registration* – radio registration or de-registration. • *Call* – group or private voice call (including emergency call) or voice notification or the Remote Monitor voice. • *Message* – text message. • *Telemetry* – telemetry information and/or remote control command. • *Alarm* – incoming emergency alarm. • Status – events related to the radio status change in the SmartPTT system. • *Block Radio* – Block Radio or Unblock Radio command. • *Job Ticket* – events concerning sending special assignments to radios or talkgroups. • *Lone Worker* – events related to the assignment of Lone Worker profiles to a radio. • *User Authorization* – radio user signs in or signs out from the radio. • *Radio Check* – events concerning sending the Radio Check command. • *Temporary Talkgroup* – events concerning temporary talkgroups in the SmartPTT system. • *Dynamic Group* – events concerning dynamic groups in the SmartPTT system. To select the desired event type, you need to set the *Equal to* value, or the *Not Equal to* value in the **Operation** column. The *No* value causes the attribute to be ignored.
Date/Time	The date interval, when the rule can be triggered. To select the desired date period, you need to set the *Between* value in the **Operation** column. If the dates are not selected, the rule will be triggered without reference to dates. The *No* value causes the attribute to be ignored. **Important** For the **Date/Time** attribute it is possible to select only date without time.

Attribute	Description
Additional information	You can type the information corresponding to the event type, or leave the box empty. For example: • *Alarm* — the date and time when the alarm was received and the operator name who received it. For data sources, the parameter that reported the alarm state. • *Call* — the identifiers of call initiators, or operator name. • *Dynamic Group* — information on operator actions related to a dynamic group. • *Job Ticket* — the job ticket number, name, and description. • *Lone Worker* — empty column at activating/deactivating lone worker profile. The column is filled when the profile changes. • *Message* — the message text. • *Radio Check* — empty column. • *Registration* — empty column. • *Status* — changing of the radio status. • *Telemetry* — the description of telemetry action set in telemetry settings. Additional information is displayed in the Event Log in the **Additional Information** column. To type information, you need to set the *Equal to* value, or the *Contains* value in the **Operation** column. The *No* value causes the attribute to be ignored.
Not read	The message status: *Read*, or *Not read* that triggered the rule. To select the desired message status, you need to set the *Equal to* value in the **Operation** column. The *No* value causes the attribute to be ignored.
Operator	The name of the operator who participates in the event. To select the desired name, you need to set the *Equal to* value, or the *Not Equal to* value in the **Operation** column. The *No* value causes the attribute to be ignored.
Radioserver	The radioserver name where the rule is triggered. To select the desired radioserver, you need to set the *Equal to* value, or the *Not equal to* value in the **Operation** column. The *No* value causes the attribute to be ignored.
Channel	The channel name where the rule is triggered. To select the desired channel, you need to set the *Equal to* value, or the *Not equal to* value in the **Operation** column. The *No* value causes the attribute to be ignored.
Radio	The name of the radio that participates in the event. To select the desired radio, you need to set the *Equal to* value, or the *Not equal to* value in the

Attribute	Description
	Operation column. The *No* value causes the attribute to be ignored.
Talkgroup	The name of the talkgroup that receives a voice or another transmission. To select the desired talkgroup, you need to set the *Equal to* value, or the *Not equal to* value in the **Operation** column. The *No* value causes the attribute to be ignored.
Status	The event status from the list of statuses. To select the desired status, you need to set the *Equal to* value, or the *Not equal to* value in the **Operation** column. The *No* value causes the attribute to be ignored.
Duration	The event duration in seconds. To type the desired duration, you need to set one of the values in the **Operation** column. The *No* value causes the attribute to be ignored.
Connection Type	The list of available connection types: • *DMR*: Over-the-air connection made via repeaters and control stations. • *IP*: Dispatcher-Dispatcher connection. • *PBX*: Telephone connection. To select the desired connection type, you need to set the *Equal to* value, or the *Not equal to* value in the **Operation** column. The *No* value causes the attribute to be ignored.
Destination	The name of the recipient that participates in the event. To select the desired connection type, you need to set the *Equal to* value, or the *Not equal to* value in the **Operation** column. The *No* value causes the attribute to be ignored.
Record	The call record availability: *Recorded*, or *Not recorded*. To select the desired value, you need to set the *Equal to* value in the **Operation** column. The *No* value causes the attribute to be ignored.
User	The name of the authorized radio user that participates in the event. To select the desired user, you need to set the *Equal to* value, or the *Not equal to* value in the **Operation** column. The *No* value causes the attribute to be ignored.
Data source	The data source from the list of data sources added to SmartPTT Dispatcher. To select the desired data source, you need to set the *Equal to* value in the **Operation** column. The *No* value causes the attribute to be ignored. **NOTE** If a data source is deleted from the SmartPTT Dispatcher list of data sources, or if it is currently unavailable, the rules that affect it are not deleted.

Attribute	Description
Data Source Alarm	The data source parameter capable of indicating alarm states.
	To select the desired alarm, you need to set the *Equal to* value in the **Operation** column.
	The *No* value causes the attribute to be ignored.
	NOTE
	This attribute is not set without selecting a data source.

2.18.1.1.2 Condition Operations

The following operations are available for attributes:

Attribute	Equal to	Not equal to	Between	Contains
Direction	YES			
Event Type	YES	YES		
Date/Time			YES	
Additional Information	YES			YES
Not read	YES			
Operator	YES	YES		
Radioserver	YES	YES		
Channel	YES	YES		
Talkgroup	YES			YES
Radio	YES	YES		
User	YES	YES		
Status	YES	YES		
Duration	YES	YES	YES	
Connection Type	YES	YES		
Destination	YES	YES		

The following operations are only available for the *Duration* attribute:

- *Greater than*

- *Greater than or equal to*

- *Less than*

- *Less than or equal to*

2.18.1.2 Adding and Editing Custom Rules

Follow the procedure to add a new custom rule or edit an existing one.

Prerequisites:

Ensure the operator has the **Manage Custom Rules** right.
For information on operator rights, see Operators.

Procedure:

1. On the menu bar, click **Settings (⚙) →Rules →Custom Rules**.
    The **Custom Rules** window appears.
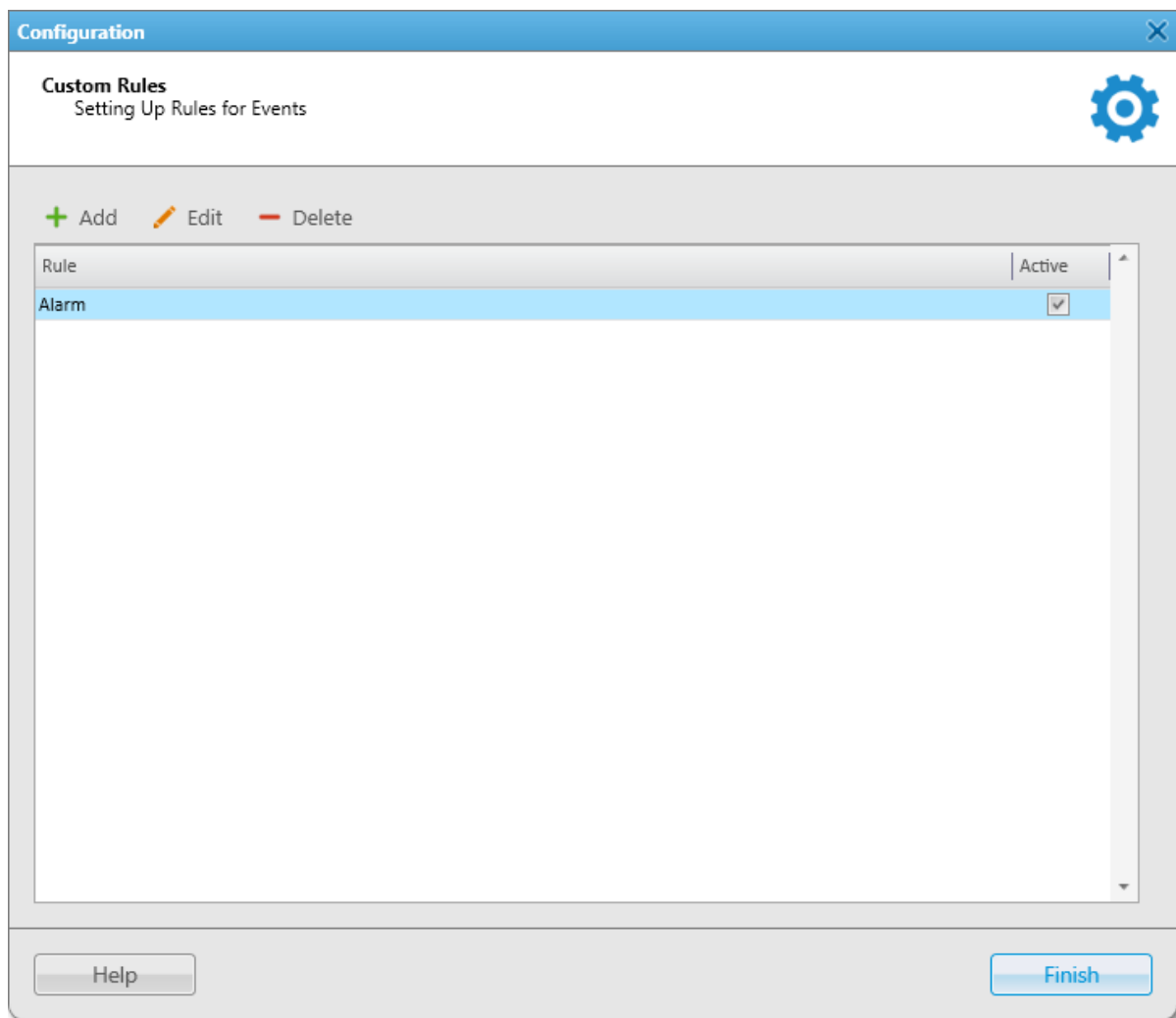
2. In the window that appears, perform one of the following actions:

To add a new custom rule,	in the top part of the window, click **Add (➕)**.
To edit an existing rule,	in the Custom Rules Table, select the desired rule, and then click **Edit (✎)**.

The **Rule Settings** window appears.

3. *(Optional)* In the window that appears, select or clear the **Active** check box for activating or deactivating an existing rule.

4. In the **Name** field, type the rule name.

5. In the **Conditions** table, set the desired rule conditions:

    a. In the **Attribute** column, select the desired attribute.

    b. In the **Operations** column, select the desired operation.

    c. In the **Value 1** column, set the desired value.

    d. If required, set the desired values in the **Value 2** and **Value 3** columns.

NOTE
Some fields in the **Value 2** and **Value 3** columns are impossible to fill.

6. In the **Actions** area, configure actions that will be performed when the rule is triggered:

To configure alerts addressed to the event initiator,	see Configuring Initiator Alerts.
To configure alerts addressed to the dispatcher,	see Configuring Dispatcher Alerts.
To configure sending messages to a list of recipients,	see Configuring Radio Alerts.
To configure sending messages using web, SMS, or E-mail services,	see Configuring Other Services.

7. Click **OK** to save changes and close the window.
   The configured rule appears in the **Custom Rules** window.

8. Click **Finish** to close the **Custom Rules** window.

Postrequisites:

For information on activating, deactivating, or deleting a rule, see Managing Custom Rules and Positioning Rules.

2.18.2 Positioning Rules

In SmartPTT Dispatcher, you can set rules for GPS and Indoor events registered in the SmartPTT system. These events include receiving (or not receiving for a specified period) GPS coordinates from the radio or positioning data from beacons.

A positioning rule is a combination of the following components:

- Type (for example, *No radio/mobile client movement*). For details, see Positioning Rule Types.

- Conditions (for example, *All Radios* and *Time period with no motion detected (min)*). For details, see Positioning Rule Conditions.

- Actions (for example, *Alert*). For details, see Rule Management.

2.18.2.1 Positioning Rule Types

The following types are available for positioning rules:

Type	Description
No radio/mobile client movement	The rule type triggers when the radio or SmartPTT Mobile user coordinates are not changed for a specified time.
Location data received	The rule type triggers if the radio sends its coordinates after a specified time without coordinates updates.
No location data	The rule type triggers when SmartPTT Dispatcher does not receive valid radio coordinates for a period longer than the specified one.
Zone/route entry	The rule type triggers when the radio enters the specified zone or route, i.e. the previous radio coordinates were outside this zone or route, and the current coordinates are within it.
Zone/route exit	The rule type triggers when the radio leaves the specified zone or route.
Speeding	The rule type triggers when the specified speed is exceeded based on the received GPS data. **NOTE** The rule type is only available for GPS rules. It is not applicable to SmartPTT Mobile users.
Number of radios/mobile clients in geofences / on routes	The rule type triggers when the number of radios or SmartPTT Mobile users in geofences / on routes meets the specified condition.

Type	Description
Proximity Alerts	The rule type triggers when any radio approaches the selected radios, users, categories, or mobile clients to the specified distance. For details, see Proximity Alerts Rule.

2.18.2.1.1 Proximity Alerts Rule

Heavy vehicles, such as haul trucks and loaders, have large blind spots that can prevent their drivers from noticing other vehicles or people. This can lead to collisions and fatal accidents.

In SmartPTT Dispatcher, the Proximity Alerts rule provides the ability to configure actions in case workers, machines, or vehicles are too close for safe operation. You can select radios that will be considered dangerous to approach (for example, radios inside haul trucks), specify a dangerous distance to them, and configure notifications for dispatchers, participants of the dangerous proximity event, and any other radios. You can also configure geofences to make the rule work only within the selected areas.

The radius of dangerous distance can be displayed on a map as a colored circle around the selected objects to provide the ability to monitor radios near dangerous objects in real time. You can configure several dangerous proximity rules with different dangerous distances for the same object. These distances will be displayed as circles of various radii around the dangerous object.

You can also configure different notifications and actions for each rule. For example, you can configure to send a warning sound when any radio is within 250 m from the dangerous object, and an alarm sound when it approaches the dangerous object to 150 m.

Example
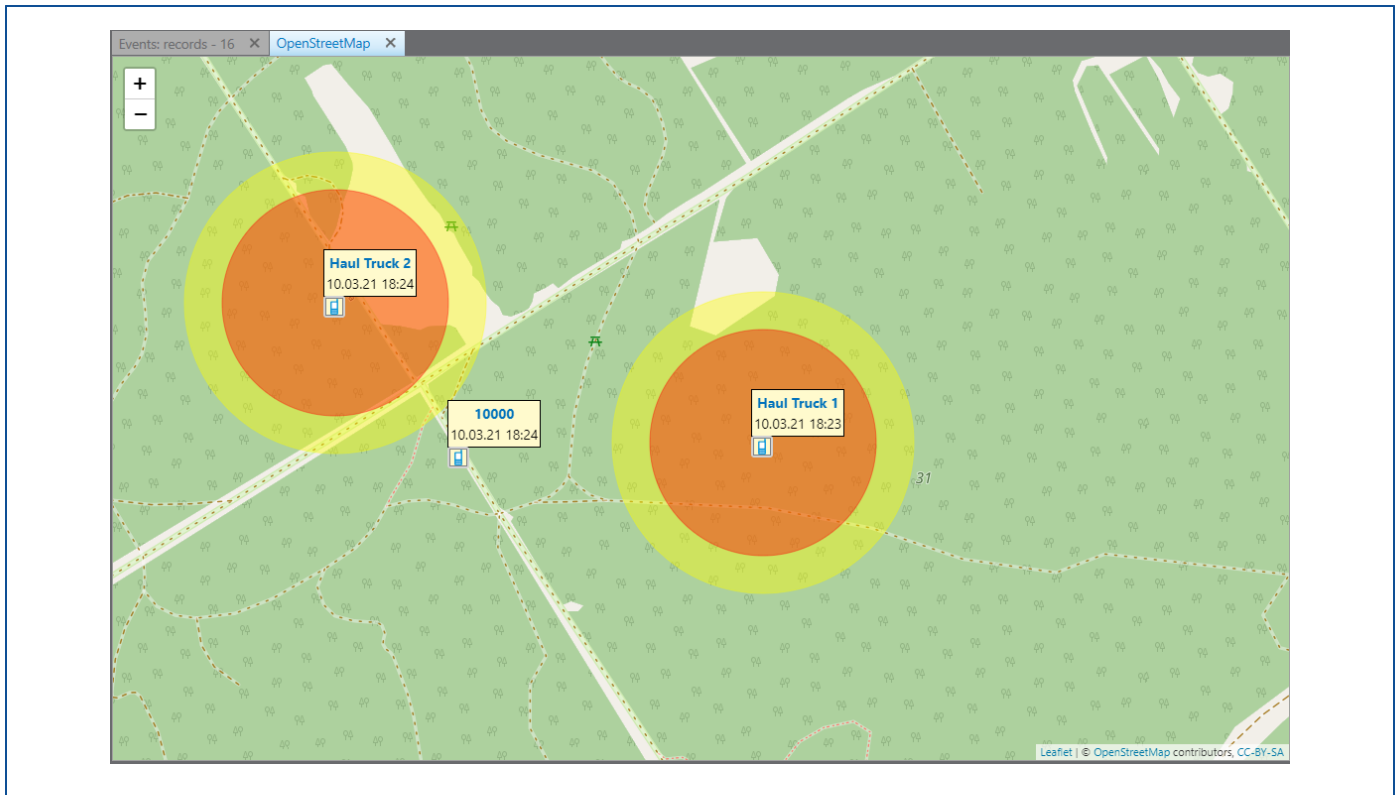
2.18.2.2 Positioning Rule Conditions

Conditions may vary depending on the selected rule type. The table contains descriptions of the conditions used for positioning rules:

Condition	Description
All Radios **Select Radios** **Select Users** **Select Categories** **Select Mobile Clients**	This condition provides the ability to select all radios, specific radios, authorized users, categories, or mobile clients to apply the rule. **NOTE** When selecting the **All Radios**, **Select Radios**, **Select Users**, **Select Categories** conditions, SmartPTT Mobile users are not taken into account. **NOTE** If the **Select Mobile Clients** condition is selected, the **Initiator Alert** and **Radio Alert** tabs are not available.
Time period with no motion detected (min)	The period during which a radio stays in one place (min).
Time period before receiving location data (min)	The period after which radio coordinates are received again (min).
Time period with no location data received (min)	The period when no radio coordinates are received (min).
Geofences **Routes**	This condition provides the ability to select geofences or routes.
Speeding	This condition provides the ability to specify maximum speed. The rule triggers when the speed is exceeded. It is possible to select such units as meters per second, kilometers per hour, and knots. **NOTE** If you select the **Select Area** check box and specify geofences or routes, the rule will only apply when the speed is exceeded in the specified geofences or on the routes.
Number of radios/mobile clients in geofences/on routes	This condition provides the ability to specify the number of radios or SmartPTT Mobile users in geofences or on routs and select a condition under which the rule will be triggered. The number of radios or SmartPTT Mobile users can be less than, less than or equal to, greater than, greater than or equal to a given value.
Notify constantly	When this check box is selected, the dispatcher will constantly receive notifications as long as the rule is triggered. If the check box is cleared, the dispatcher will be notified once.
Notify about new location	When this check box is selected, the dispatcher will be notified if the radio moves to a new location.

Condition	Description
Distance to object (m)	The distance to the selected dangerous objects. When any radio approaches to the specified distance or closer, the rule triggers.
Show on map	When this check box is selected, the area of dangerous proximity will be displayed on a map as a circle. You can select the color of the dangerous proximity area from the menu to the right of the check box.

2.18.2.3 Adding and Editing Positioning Rules

Follow the procedure to add a new positioning rule or edit an existing one.

Prerequisites:

Ensure the operator has the **Manage Positioning Rules** right. For information on operator rights, see Operators.

Procedure:

1. On the menu bar, click **Settings (⚙) →Rules →Positioning Rules**.
    The **Positioning Rules** window appears.

2. In the **Positioning Rules** window, perform one of the following actions:

To add a new positioning rule,	in the top part of the window, click **Add (➕)**.
To edit an existing positioning rule,	in the Positioning Rules Table, click the desired rule, and then click **Edit (✏)**.

    The **Positioning Rule** window appears.

3. *(Optional)* In the window that appears, select or clear the **Active** check box to activate or deactivate the rule.

4. In the **Name** field, type the rule name.

5. Select **GPS** or **Indoor** for using the corresponding data.

6. From the **Type** list, select the type of the rule.

7. In the **Conditions** area, set the desired rule conditions.

To configure conditions for the *No radio/mobile client movement* rule type,	perform the following actions: 1. Select **All radios** or specific radios, authorized users, SmartPTT Mobile users, or categories. 2. In the **Time period with no motion detected (min)** field, set a time period in minutes during which a radio stays in one place. 3. *(Optional)* Select the **Notify constantly** or **Notify about new location** check box to receive the corresponding notifications.
To configure conditions for the *Location data received* rule type,	perform the following actions: 1. Select **All radios** or specific radios, authorized users, SmartPTT Mobile users, or categories.

2. In the **Time period before receiving location data (min)** field, set a time period in minutes after which radio coordinates are received again.

To configure conditions for the *No location data* rule type,	perform the following actions: 1. Select **All radios** or specific radios, authorized users, SmartPTT Mobile users, or categories. 2. In the **Time period with no location data received (min)** field, set a time period in minutes when no coordinates are received. 3. *(Optional)* Select the **Notify constantly** or **Notify about new location** check box to receive the corresponding notifications.
To configure conditions for the *Zone/route entry* rule type,	perform the following actions: 1. Select **All radios** or specific radios, authorized users, SmartPTT Mobile users, or categories. 2. Select **Geofences** or **Routes**. 3. Click **Select geofences/routes (...)** and select objects. The rule triggers when the radio enters the specified zone or route.
To configure conditions for the *Zone/route exit* rule type,	perform the following actions: 1. Select **All radios** or specific radios, authorized users, SmartPTT Mobile users, or categories. 2. Select **Geofences** or **Routes**. 3. Click **Select geofences/routes (...)** and select objects. The rule triggers when the radio exits the specified zone or route.
To configure conditions for the *Speeding* rule type,	perform the following actions: 1. Select **All radios** or specific radios, authorized users, or categories. 2. In the **Speeding** field, set maximum speed. The rule triggers if the speed is exceeded. It is possible to select such units as meters per second, kilometers per hour, and knots. 3. *(Optional)* Select **Select Area** check box and specify geofences or routes where the rule triggers.
To configure conditions for the *Number of radios/mobile clients in geofences / on routes* rule type,	perform the following actions: 1. Select **All radios** or specific radios, authorized users, SmartPTT Mobile users, or categories. 2. For the **Number of radios/mobile clients in geofences/on routes** condition, set the number of radios in geofences / on routes and select a condition under which the rule will be triggered. 3. Select **Geofences** or **Routes**. 4. Click **Select geofences/routes (...)** and select the desired objects.

To configure conditions for the *Proximity alerts* rule type,	see Configuring Proximity Alerts Rule.

8. In the **Actions** area, configure actions that will be performed when the rule is triggered:

To configure alerts addressed to the event initiator,	see Configuring Initiator Alerts.
	NOTE This action is not available for SmartPTT Mobile users. For information on the mobile application, see "SmartPTT Mobile" in *SmartPTT Installation and Configuration Guide*.
To configure alerts addressed to the dispatcher,	see Configuring Dispatcher Alerts.
To configure sending messages to a list of recipients,	see Configuring Radio Alerts.
	NOTE This action is not available to SmartPTT Mobile users.
To configure sending messages using web, SMS, or e-mail services,	see Configuring Other Services.

9. Click **OK** to save changes and close the window.
The configured rule appears in the **Positioning Rules** window.

10. Click **Finish** to close the **Positioning Rules** window.

Postrequisites:

For information on subsequent activating, deactivating, or deleting a rule, see Managing Custom Rules and Positioning Rules.

2.18.2.3.1 Configuring Proximity Alerts Rule

Follow the procedure to configure the proximity alerts rule.

Prerequisites:

- Ensure the operator has the **Manage Positioning Rules** right. For information on operator rights, see Operators.

- *(Optional)* Configure the category for dangerous objects. For details, see Managing Categories.

- *(Optional)* Configure geofences. For details, see Geofences.

Procedure:

1. On the menu bar, click **Settings (⚙) → Rules → Positioning Rules**.
    The **Positioning Rules** window appears.
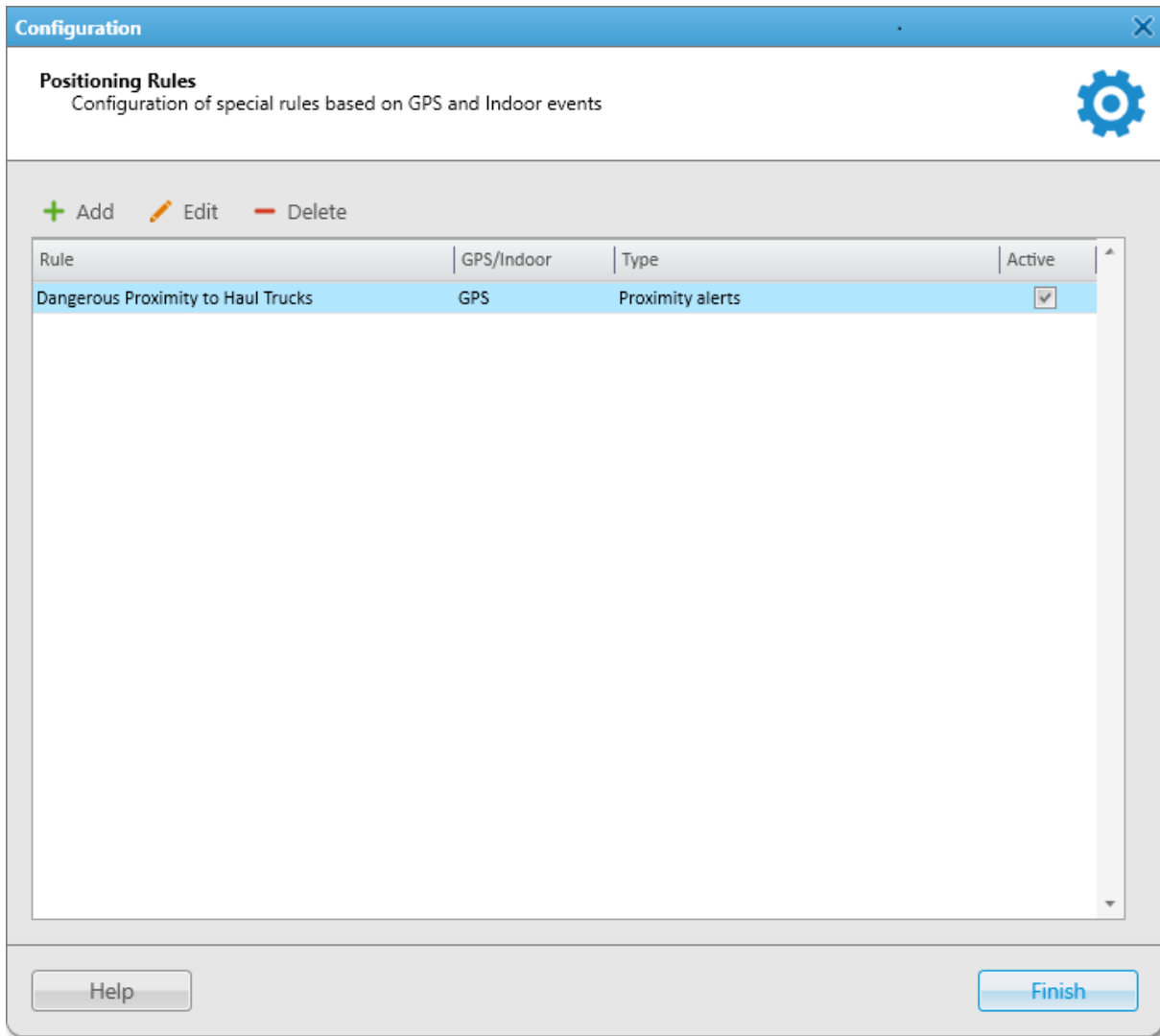
2. In the window that appears, at the top of the window, click **Add (+)**.
   The **Positioning Rule** window appears.

3. In the window that appears, select the **Active** check box to activate the rule.

4. In the **Name** field, type the rule name.

5. Select **GPS** to use geopositioning data.

6. From the **Type** list, select *Proximity alerts*.

7. Select specific radios, authorized users, SmartPTT Mobile users, or categories that are considered dangerous to approach.

8. In the **Distance to object (m)** field, type the distance value that will trigger the rule when any radio approaches within this distance to the dangerous object.

9. *(Optional)* To receive notifications constantly when the object is within the dangerous proximity area, select the **Notify constantly** check box.

10. *(Optional)* To display the dangerous proximity area as a circle around the dangerous object on a map, select the **Show on map** check box. You can select the color of the dangerous proximity area from the menu to the right of the check box.

11. *(Optional)* To make the rule trigger only within specific geofences, click **Select geofences (⋯)**, and then select the desired geofences.

12. In the **Actions** area, configure actions that will be performed when the rule is triggered:

To configure the initiator notification,	see [Configuring Initiator Alerts](#).
To configure the dispatcher notification,	see [Configuring Dispatcher Alerts](#).
To configure sending messages to a list of recipients,	see [Configuring Radio Alerts](#). **NOTE** This action is not available for SmartPTT Mobile users.
To configure sending messages using web, SMS, or e-mail services,	see [Configuring Other Services](#).

13. Click **OK** to save changes and close the window.
    The configured rule appears in the **Positioning Rules** window.

14. Click **Finish** to close the **Positioning Rules** window.

Postrequisites:

For information on subsequent activation, deactivation, or deleting a rule, see [Managing Custom Rules and Positioning Rules](#).

2.18.3 Lone Worker Rules

SmartPTT Dispatcher supports the Lone Worker mode for DMR radios. The Lone Worker profile is a set of rules that are applied when the specified conditions are met. SmartPTT supports multiple profile creation, so you can assign its own profile for each radio.

The Lone Worker mode provides the ability to automatically track the following conditions:

- Absence of calls from a radio during the specified period

- Absence of GPS coordinates from a radio during the specified period

- No change in location of a radio during the specified period

When one of the conditions triggers, SmartPTT Dispatcher sends alerts to the radio or performs configured actions. The following alerts are available for Lone Worker rules:

- Text messages

- Audio messages

- Call alerts

For information on the Lone Worker rules action configuration, see [Rule Management](#).

Lone Worker profiles are assigned to the desired radios in the **Radio Properties** window. For details, see [Configuring General Radio Parameters](#).

All radios with assigned Lone Worker profiles are displayed on the **Lone Workers** panel.

For information on configuring the Lone Worker profile, see the section below.

Tallysman

In the **Lone Worker** window, you can set the condition based on the Tallysman Sprite™ TW251 option board data.

If the **No heartbeat messages (s)** check box is selected in the window, the actions configured for the profile are executed when the radio built-in option board does not send information on the radio presence in the network during the specified period (in seconds).

> **NOTE**
> For the condition to be triggered, the radio must have the built-in Tallysman option board that is configured properly, and the Tallysman feature must be enabled in SmartPTT Radioserver Configurator. For details, see "Location with Option Boards" in *SmartPTT Installation and Configuration Guide*.

2.18.3.1 Managing Lone Worker Profiles

Follow the procedure to add a new Lone Worker profile or edit an existing one.

Prerequisites:

Ensure the operator has the **Manage lone worker rules** right.
For information on operator rights, see Operators.

Procedure:

1. On the menu bar, click **Settings (⚙) → Radios → Lone Worker Rules**.
   The **Lone Worker** window appears.
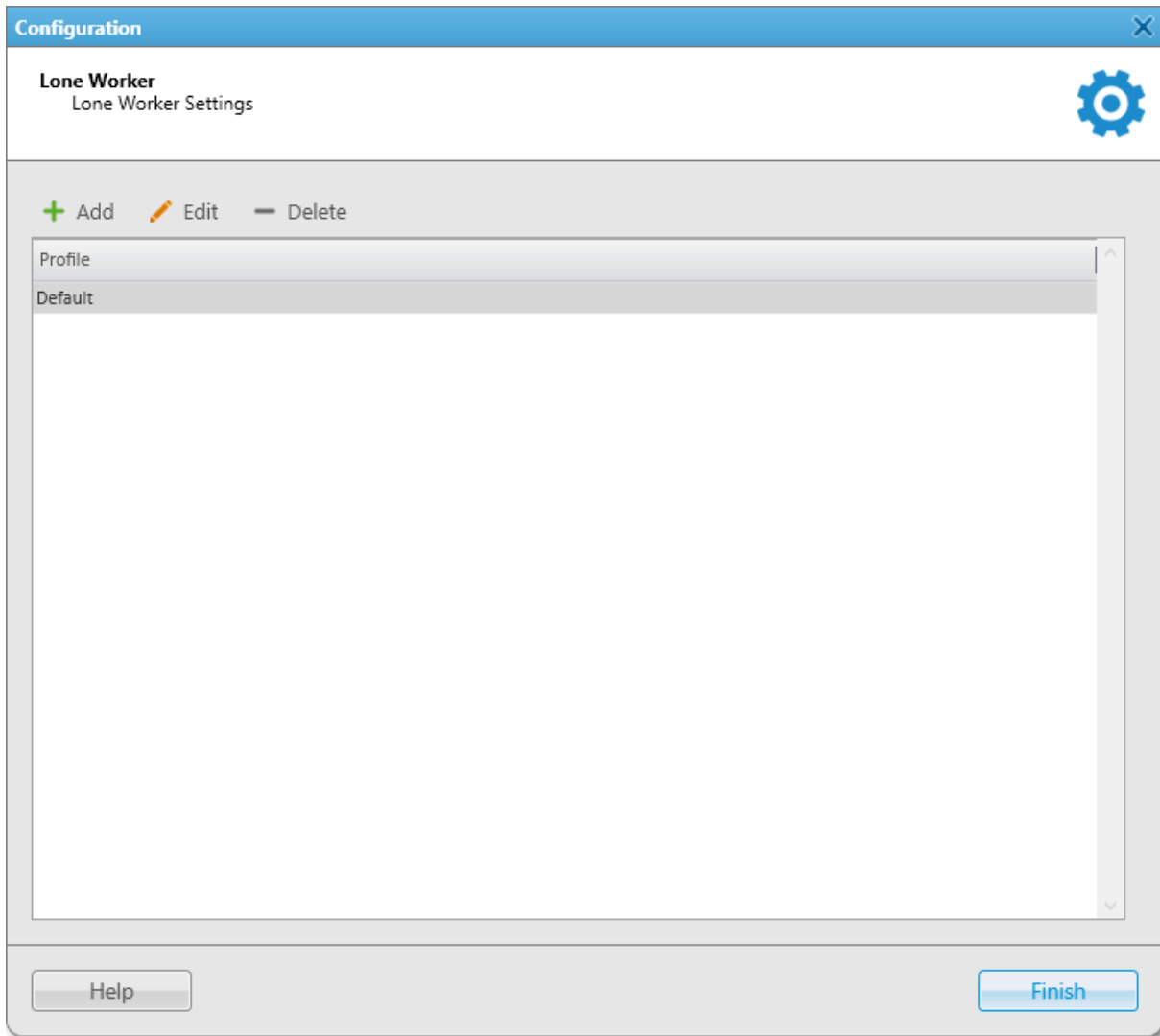
2. In the window that appears, perform one of the following actions:

To add a new profile,	in the top part of the window, click **Add** (+). The **Profile Settings** window appears.
To edit an existing profile,	in the Lone Worker Profiles Table, select the desired profile, and then click **Edit** (/). The **Profile Settings** window appears.
To delete an added profile,	perform the following actions: 1. In the table, select the desired profile, and then click **Delete** (—). **NOTE** The default profile cannot be deleted. 2. In the confirmation window, click **OK**. The profile is deleted from the table. 3. Proceed to the last step of the procedure.

3. In the **Profile Settings** window, in the **Name** field, type the profile name.

4. In the **Conditions** area, configure the desired conditions to perform actions:

To perform actions when SmartPTT Dispatcher does not receive any calls from the radio,	perform the following actions: 1. Select the **No calls (min)** check box. 2. In the field to the right of the check box, specify the desired time in minutes. If the radio does not make a call during this time, the profile actions will be performed.
To perform actions when SmartPTT Dispatcher does not receive any location data from the radio,	perform the following actions: 1. Select the **No location data received (min)** check box. 2. In the field to the right of the check box, specify the desired time in minutes. If the radio does not send its GPS or Indoor data during this time, the profile actions will be performed.
To perform actions when location data is not changed,	perform the following actions: 1. Select the **No change in location data (min)** check box.

2. In the field to the right of the check box, specify the desired time in minutes. If the radio does not change its GPS or Indoor data during this time, the profile actions will be performed.

> **NOTE**
> The **No change in location data** condition must be used together with the **No location data received** condition.

5. *(Optional)* Configure sending alerts to the radio:

    a. In the **Radio Alert** area, configure the alerts that will be sent to the radio after one of the conditions is met:

To send a text message to the radio,	perform the following actions:
	1. Select the **Text Message** check box.
	2. In the field to the right of the check box, type the message text.

To send an audio message to the radio,	perform the following actions:
	1. Select the **Audio Message** check box.
	2. Click **Record** and speak into the microphone.
	3. Click **Stop** after you finished speaking.
	4. *(Optional)* Click **Play** to listen to the recorded message.
	5. *(Optional)* Click **Delete** to delete the added message and record a new one.

To send the Call Alert command to the radio,	select the **Call Alert** check box.

    b. In the **Actions delay (min)** field, specify the time in minutes after sending an alert when actions will be performed if the radio is still inactive.

6. In the **Actions** area, configure actions that will be performed when one of the conditions is met:

To configure alerts addressed to the event initiator,	see Configuring Initiator Alerts.
To configure alerts addressed to the dispatcher,	see Configuring Dispatcher Alerts.
To configure sending messages to a list of recipients,	see Configuring Radio Alerts.
To configure sending messages using web, SMS, or e-mail services,	see Configuring Other Services.

7. Click **OK** to save changes and close the window.
    The configured profile appears in the **Lone Worker** window.

8. Click **Finish** to close the **Lone Worker** window.

Postrequisites:

Assign the profile to the desired radios. For details, see Configuring General Radio Parameters.

2.18.4 Rule Management

Managing rules includes the following actions:

- Configuring alerts addressed to the event initiator. For details, see Configuring Initiator Alerts.

- Configuring alerts addressed to the dispatcher. For details, see Configuring Dispatcher Alerts.

- Configuring sending messages to the desired recipients in SmartPTT. For details, see Configuring Radio Alerts.

- Configuring sending messages using web, SMS, or E-mail services. For details, see Configuring Other Services.

- Configuring the message format. For details, see Configuring Message Format.

- Activating, deactivating, and deleting the existing custom and positioning rules. For details, see Managing Custom Rules and Positioning Rules.

2.18.4.1 Configuring Initiator Alerts

Follow the procedure to configure alerts addressed to the event initiator and performed when the rule is triggered.

Prerequisites:

- Set the desired conditions that will trigger the rule.

- *(Optional)* Ensure that the Lone Worker profile is configured.
  For information on the Lone Worker mode, see Managing Lone Worker Profiles.

Procedure:

1. In the **Rules Settings** or **Positioning Rule** window, in the **Actions** area, open the **Initiator Alert** tab.
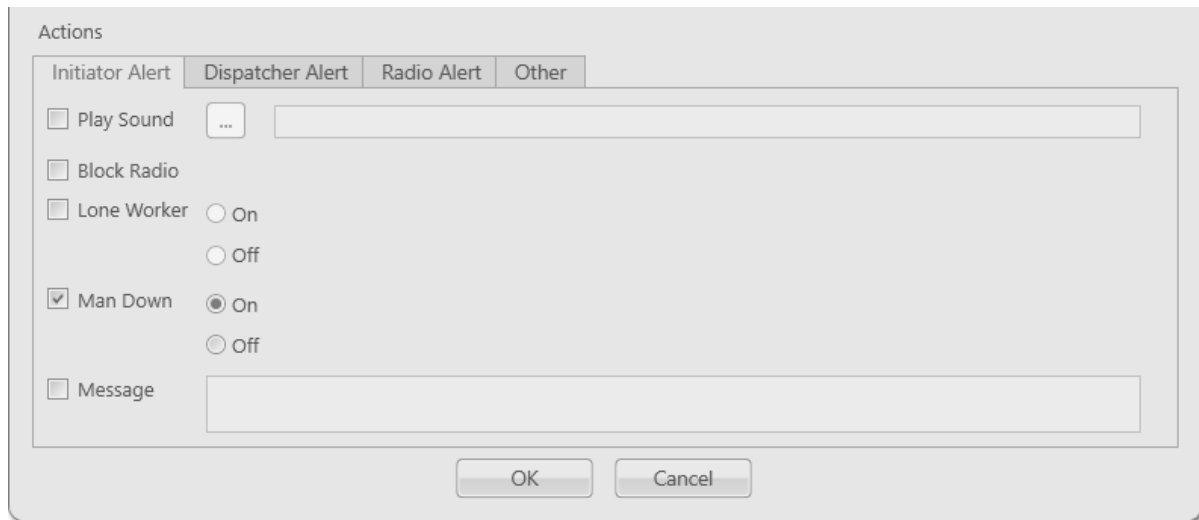
2. On the **Initiator Alert** tab, perform one of the following actions:

To select an audio file to play when the rule is triggered,	perform the following actions:
	1. Select the **Play Sound** check box.
	2. To the right of the check box, click **Select Sound File** (⬚). The **Sound File Selection** window appears.

	3. In the **Sound File Selection** window, select the desired audio file, and then click **Open**. The path to the audio file appears in the field to the right of the **Select Sound File (...)** button.
To block the radio when the rule is triggered,	select the **Block Radio** check box.
To activate/deactivate the Lone Worker mode for the radio when the rule is triggered,	perform the following actions: 1. Select the **Lone Worker** check box. 2. Select **On** or **Off** to activate or deactivate the mode. 3. If the **On** option is selected, select the desired Lone Worker profile from the list to the right of the option.
To activate/deactivate the Man Down mode for the radio when the rule is triggered,	perform the following actions: 1. Select the **Man Down** check box. 2. Select **On** or **Off** to activate or deactivate the mode.
To send a message to the event initiator when the rule is triggered,	perform the following actions: 1. Select the **Message** check box. 2. To the right of the check box, in the **Message** field, type a message text. 3. *(Optional)* Configure the message format on the **Message Format** tab. For details, see Message Format. **NOTE** The **Message Format** tab is only available in the **Rule Setting** window.

Postrequisites:

For information on configuring other actions in the **Actions** area, see <u>Configuring Dispatcher Alerts</u>, <u>Configuring Radio Alerts</u>, <u>Configuring Other Services</u>.

2.18.4.2 Configuring Dispatcher Alerts

Follow the procedure to configure alerts addressed to the dispatcher that will be performed when the rule is triggered.

Prerequisites:

- Set the desired conditions that will trigger the rule.

- *(Optional)* Depending on the desired settings, perform the following actions:

  - Ensure that the desired audio files are available on your PC.

  - Ensure that the desired points of interests are added to SmartPTT Dispatcher.

  - Ensure that the desired statuses are added to SmartPTT Dispatcher.

Procedure:

1. In the **Rule Settings** or **Positioning Rule** window, in the **Actions** area, open the **Dispatcher Alert** tab.

2. On the **Dispatcher Alert** tab, perform one of the following actions:

To select an audio file to play when the rule is triggered,	perform the following actions: 1. Select the **Play Sound** check box. 2. To the right of the check box, click **Select Sound File (...)**. The **Sound File Selection** window appears. 3. In the **Sound File Selection** window, select the desired audio file, and then click **Open**. The path to the audio file appears in the field to the right of the **Select Sound File (...)** button.

To show the event initiator on the currently open map when the rule is triggered,	perform the following actions:
	
	1. Select the **Show on Map** check box.
	
	2. Select one of the following options:
	
	    • Select **radio/mobile client** to show the radio or SmartPTT Mobile user on the map.
	
	    NOTE
	    Displaying a mobile client on the map can only be configured for positioning rules.
	
	    • Select **point of interest** to show the point of interest on the map.
	
	3. If the **point of interest** option is selected, select the desired point of interest from the list to the right of the option.
	
	    Important
	    The object will not be displayed on a map if the map is not open in SmartPTT Dispatcher.

To assign status to the event initiator when the rule is triggered,	perform the following actions:
	
	1. Select the **Set Radio/Mobile Client Status** check box.
	
	    NOTE
	    The mobile client status can only be configured for positioning rules.

	2.	To the right of the check box, select the desired status from the list of statuses.
To display the notification on the **Notifications** panel when the rule is triggered,	perform the following actions: 1. Select the **Alert** check box. 2. To the right of the check box, in the **Alert Caption** field, type an alert title. 3. To the right of the check box, in the **Alert Text** field, type an alert text.	

Postrequisites:

For information on configuring other actions in the **Actions** area, see Configuring Initiator Alerts, Configuring Radio Alerts, Configuring Other Services.

2.18.4.3 Configuring Radio Alerts

Follow the procedure to configure sending messages to a preconfigured list of recipients when the rule is triggered.

Prerequisites:

- Set the desired conditions that will trigger the rule.

- Ensure that the desired recipients are available in SmartPTT Dispatcher.

Procedure:

1. In the **Rule Settings** or **Positioning Rule** window, in the **Actions** area, open the **Radio Alert** tab.
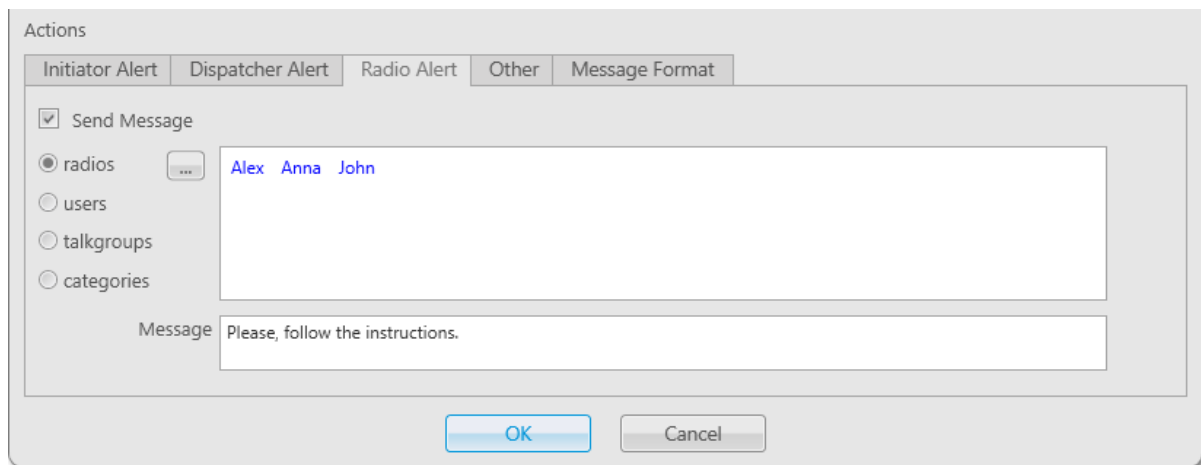
2. On the **Radio Alert** tab, select the **Send Message** check box.

3. Specify a list of desired recipients:

To send a message to radios when the rule is triggered,	perform the following actions:
	1. To the right of the **Radios** option, click **Open Radio List ( ).** The **Radios** window appears. 2. Select the desired radios from the list.

3. Click **OK** to save the changes and close the window.

To send a message to authorized users when the rule is triggered,	perform the following actions: 1. To the right of the **Users** option, click **Select From List (...)**. The **Users** window appears. 2. Select the desired users from the list. 3. Click **OK** to save the changes and close the window.
To send a message to talkgroups when the rule is triggered,	perform the following actions: 1. To the right of the **Talkgroups** option, click **Select From List (...)**. The **Talkgroups** window appears. 2. Select the desired talkgroups from the list. 3. Click **OK** to save the changes and close the window.
To send a message to radios that belong to the specified category when the rule is triggered,	perform the following actions: 1. To the right of the **Categories** option, click **View List of Categories (...)**. The **Categories** window appears. 2. Select the desired categories from the list. 3. Click **OK** to save the changes and close the window.

The selected recipients appear in the field to the right of the options.

4. In the **Message** field, type a message text.

5. *(Optional)* Configure the message format on the **Message Format** tab. For details, see Configuring Message Format.

> **NOTE**
> The **Message Format** tab is only available in the **Rule Setting** window for custom rule configuration.

Postrequisites:

For information on configuring other actions in the **Actions** area, see Configuring Initiator Alerts, Configuring Dispatcher Alerts, Configuring Other Services.

2.18.4.4 Configuring Other Services

Follow the procedure to configure sending messages using web, SMS, or E-mail services when the rule is triggered.

Prerequisites:

- Set the desired conditions that will trigger the rule.

- *(Optional)* Depending on the desired settings, perform the following actions:

  - Obtain the third-party server address to send HTTP request to.

  - Ensure that the desired statuses are added to SmartPTT Dispatcher.

  - Obtain the e-mail addresses or phone numbers to send a message to.

- Obtain the desired radioserver name.

Procedure:

1. In the **Rule Settings** or **Positioning Rule** window, in the **Actions** area, open the **Other** tab.

2. On the **Other** tab, perform one of the following actions:

To notify a third-party server about changing the radio status when the rule is triggered,	perform the following actions: 1. Select the **HTTP Request** check box. 2. In the field to the right of the check box, type the desired request.
To send an e-mail when the rule is triggered,	perform the following actions: 1. Select the **E-mail** check box. 2. To the right of the check box, from the **Radioserver** list, select the desired SmartPTT Radioserver. 3. In the **E-mail** field, type one or several electronic addresses for sending messages. Use semicolons to separate multiple e-mail addresses. 4. In the **Message** field, type a message text.
To send SMS when the rule is triggered,	perform the following actions: 1. Select the **SMS** check box. 2. To the right of the check box, from the **Radioserver** list, select the desired SmartPTT Radioserver. 3. In the **Phone Numbers** field, type one or several telephone numbers for sending SMS. Use semicolons to separate multiple phone numbers. 4. In the **Message** text field, type a message text.

3. *(Optional)* Configure the message format on the **Message Format** tab. For details, see Configuring Message Format.

NOTE
The **Message Format** tab is only available in the **Rule Setting** window for custom rule configuration.

Postrequisites:

For information on configuring other actions in the **Actions** area, see <u>Configuring Initiator Alerts</u>, <u>Configuring Dispatcher Alerts</u>, <u>Configuring Radio Alerts</u>.

2.18.4.5 Configuring Message Format

Follow the procedure to configure the message format (text message, SMS or e-mail) sent when the custom rule is triggered.

> **Important**
> The **Message Format** tab is available only when configuring a custom rule in the **Rule Settings** window. For details, see <u>Adding and Editing Custom Rules</u>.

Prerequisites:

- Configure the desired criteria for triggering a custom rule.

- Configure the list of recipients on the **Initiator Alert** tab, **Radio Alert** tab, or **Other** tab. For details, see <u>Configuring Initiator Alerts</u>, <u>Configuring Radio Alerts</u>, or <u>Configuring Other Services</u>.

Procedure:

1. In the **Rule Settings** or **Positioning Rule** window, in the **Actions** area, open the **Message Format** tab.

2. On the **Message Format** tab, perform one of the following actions:

To specify the type of event in messages,	select the **Event Type** check box.

To specify the date and/or time in messages,	perform the following actions:
	
	1. Select the **Date/Time** check box.
	
	2. From the list, select the desired value:
	
	   a. To specify the date and time, select *Date/Time*.
	
	   b. To specify time only, select *Time*.
	
	3. *(Optional)* To specify the time zone in messages, select the **Time Zone** check box.

To specify the last recorded coordinates of a radio in messages,	perform the following actions: 1. Select the **Coordinates** check box.

2. From the list, select the format for displaying the coordinates:

    a. To display degrees in a fractional format, select *Decimal Degrees*.

    b. To display degrees, minutes and seconds, select *Degrees, Minutes, Seconds*.

To specify the radio identifier in messages,	select the **Radio ID** check box.
To specify the name of a radio in messages,	select the **Radio Name** check box.

2.18.4.6 Managing Custom Rules and Positioning Rules

Follow the procedure to activate, deactivate, or delete an existing rule.

Prerequisites:

Ensure the operator has the **Manage Custom Rules** or **Manage Positioning Rules** right.
For information on operator rights, see Operators.

Procedure:

1. To open the desired rule configuration window, perform one of the following actions:

To open the **Custom Rules** window,	on the menu bar, click **Settings** (⚙) → **Rules** → **Custom Rules**.
To open the **Positioning Rules** window,	on the menu bar, click **Settings** (⚙) → **Rules** → **Positioning Rules**.

2. In the window that appears, perform one of the following actions:

To activate an existing rule,	perform the following actions: 1. In the table, select the desired rule. 2. Select the **Active** check box. **NOTE** You can also activate the desired rule by selecting the **Active** check box in the upper-left corner of the **Rule Settings** or **Positioning Rule** window.
To deactivate an existing positioning rule,	perform the following actions: 1. In the table, select the desired rule. 2. Clear the **Active** check box. **NOTE** You can also deactivate the desired rule by clearing the **Active** check box in the upper-left corner of the **Rule Settings** or **Positioning Rule** window.
To delete an existing positioning rule,	perform the following actions:

1. In the table, select the desired rule, and then click **Delete (** ➖ **)**.

2. In the confirmation window, click **OK**.
The rule is deleted from the table.

Postrequisites:

For information on adding a new rule or editing an existing one, see Adding and Editing Custom Rules and Adding and Editing Positioning Rules.
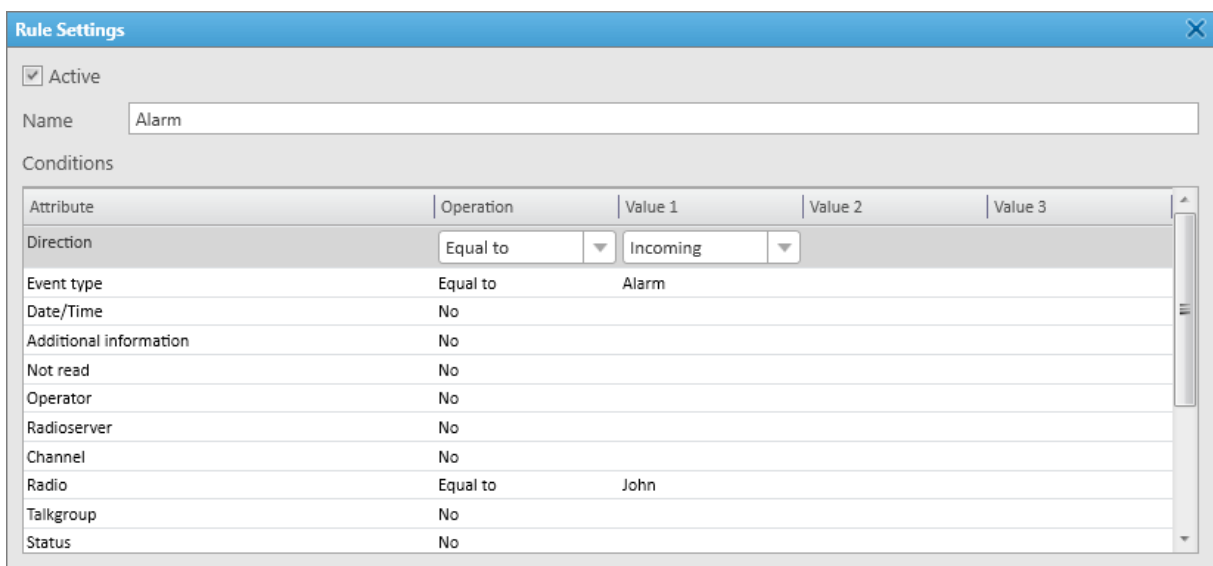
2.18.5 Examples

The examples of the SmartPTT Dispatcher rule configuration are presented below in the user guide:

- For information on custom rule configuration, see Custom Rule Example.

- For information on positioning rule configuration, see Positioning Rule Example.

- For information on Lone Worker rule configuration, see Lone Worker Rule Example.

2.18.5.1 Custom Rule Example

Assume that you need to configure a rule that is triggered by an incoming alarm from the radio named *John*. When the rule triggers, the radio must change its status, the alarm sound must be played, and the **Notifications** panel with a specified text must display.

Set the conditions in the following way:

Set the actions in the following way:

After clicking **OK** the changes will be saved, the *Alarm* rule will be configured and added to the Rule Table, where you can activate, deactivate, or delete it. The rule will be triggered when SmartPTT Dispatcher receives an incoming alarm signal from the radio named *John*. The alarm sound will be played, the radio status will change to *Alarm*, and the dispatcher will get the *Urgently contact the foreman!!!* message.

2.18.5.2 Positioning Rule Example

Assume that you need to configure a rule that triggers when data show that the radio named *John* has exceeded the specified speed limit in the selected geofence. When the rule triggers, the radio must change its status, the special sound must be played, and the radio must be displayed on a map.

Set the conditions in the following way:

Set the actions in the following way:

After clicking **OK** the changes will be saved, the rule *Speeding in a danger zone* will be configured and added to the Rule Table, where you can activate, deactivate, or delete it. The rule will be triggered when SmartPTT Dispatcher receives incoming data that show the specified speed limit was exceeded by the radio named *John*. The sound will be played, the radio status will change to *Alarm*, and the radio will be displayed on a map.

2.18.5.3 Lone Worker Rule Example

Assume that you need to configure the Lone Worker rule named *Security* that triggers under the following conditions: if the user has not called for 15 min, the *Call Dispatcher ASAP* message is sent. If after that message the user does not call in 5 min, the dispatcher will receive an alarm, and the radio will be displayed on the map.

Set the conditions in the following way:

Set the actions in the following way:

Click **OK** to finish the rule configuration.

The *Security* rule will be saved and added to the Rule Table. It also can be assigned to the radio in the **Radio Properties** window. The rule triggers if the user that has not called for 15 minutes does not call within 5 minutes after receiving the text message. In this case, an alarm sound will be played and the radio will be displayed on the map.

Chapter 3. SmartPTT Dispatcher Interface Configuration

This chapter describes SmartPTT Dispatcher interface configuration.

All settings described in this section, except for main area customization and managing layouts, are available only to the Administrator. For information on user roles in SmartPTT Dispatcher, see Operators.

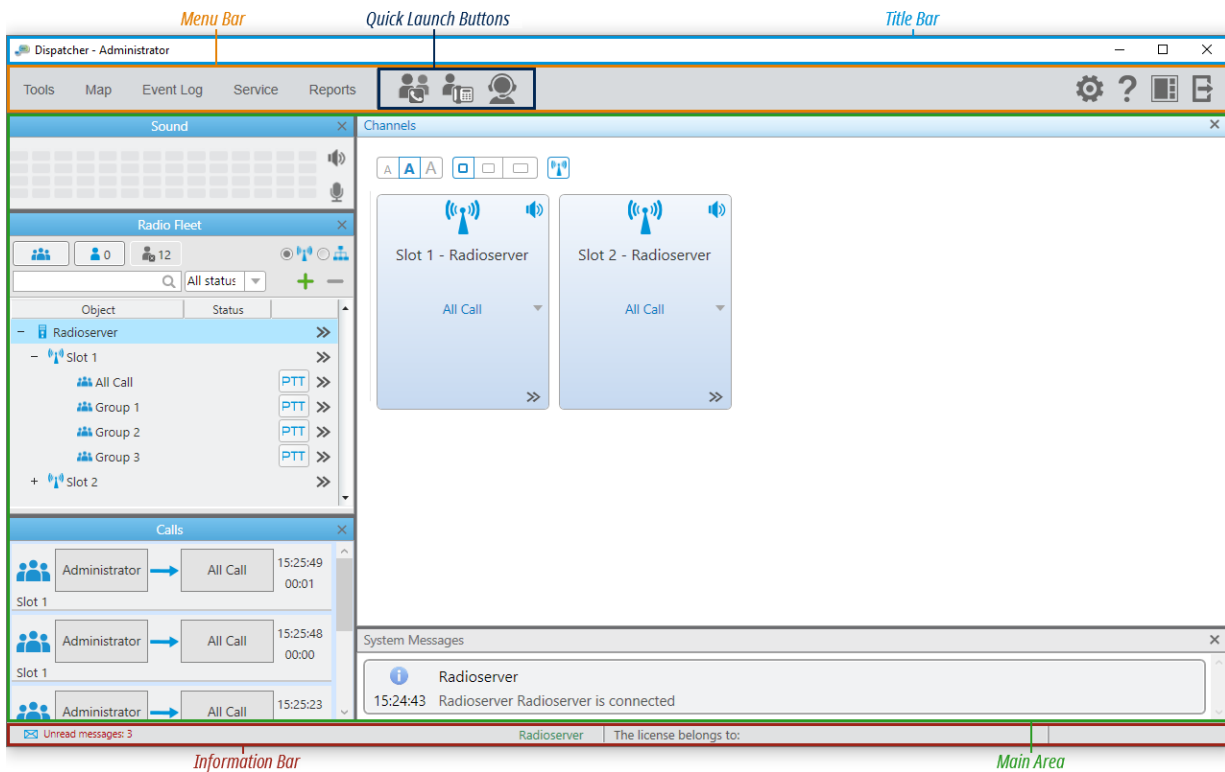The SmartPTT Dispatcher interface configuration includes the following actions:

- The SmartPTT Dispatcher main area configuration. For details, see SmartPTT Dispatcher Interface Configuration.

- Call Window settings configuration. For details, see Call Windows.

- Notification panel settings configuration. For details, see Notification Panel Configuration.

- Custom console creation. For details, see Custom Console Configuration.

- Adding web pages. For details, see Web Pages.

3.1 SmartPTT Dispatcher Interface Overview

SmartPTT Dispatcher interface includes various elements and controls that provide you with the necessary information and functionality.

> **NOTE**
> Some SmartPTT Dispatcher elements are unavailable if the operator does not have the corresponding rights.

SmartPTT Dispatcher interface is divided into the following sections:

- The title bar is located at the top of the SmartPTT Dispatcher window, contains the standard Windows Minimize (—), Maximize (▢), and Close (✕) buttons, as well as provides the ability to view the current operator name.

- The menu bar is located under the title bar and provides menus and quick launch buttons to perform most of the functions available in the application and configure SmartPTT Dispatcher.

- The information bar is located at the bottom of the SmartPTT Dispatcher window and provides the ability to view the number of unread messages, the name of the currently selected object, the licensee name and license expiration date, as well as the application version.

- The main area is the central part of SmartPTT Dispatcher where all open panels and windows appear.

Main Area Customization

SmartPTT Dispatcher provides the ability to customize its main area in the following ways:

- Move panels. For details, see Moving Panels.

- Tab panels. For details, see Tabbing Panels.

- Undock panels. For details, see Undocking Panels.

- Resize panels.

Main Area Layouts

The **UI Layout Settings (** 🖳 **)** menu provides the ability to save the current dispatch console layout.

In addition to manually added layouts, the dispatcher can use two default layouts: *Calls and Event log* and *Calls, Channels and Event log*.

For information on managing user interface layouts, see Managing Layouts.

For the Administrator, the **UI Layout Settings (** 🖳 **)** menu also provides the ability to lock the current layout.

When the layout is locked, the dispatcher cannot perform the following actions:

- Open and close panels

- Move and tab panels

- Switch between user interface layouts

- Resize open panels

For information on locking the user interface layout, see Locking Layout.

3.1.1 Moving Panels

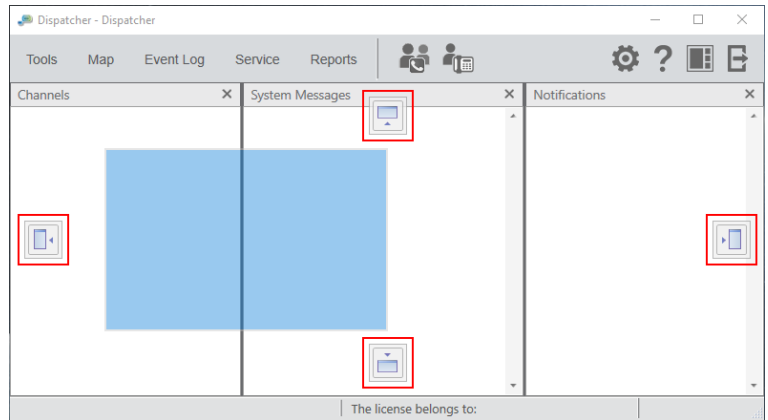Follow the procedure to move a panel inside the main area.

Prerequisites:

Ensure the current layout is not locked. For details, see Locking Layout.

Procedure:

1. Press and hold the title bar of the desired separate or tabbed panel, and then drag it.
   In the main area, the positioning controls appear.

2. Move the panel to the desired position:

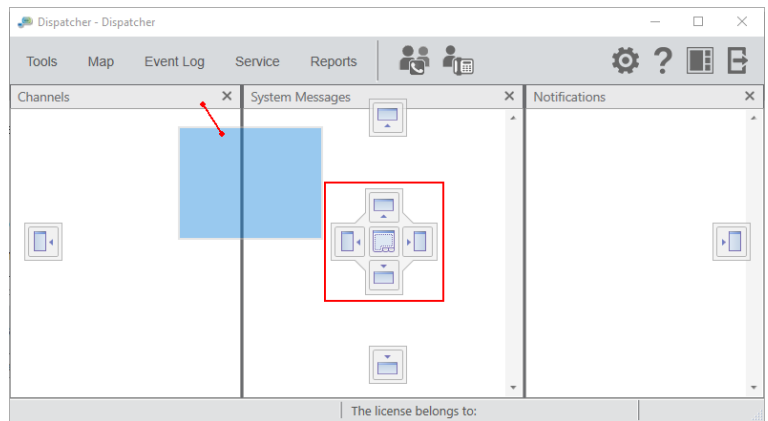| To move the panel and attach it to one of the main area sides,	drop it on the corresponding positioning control of the main area.
	The panel is moved and attached to the selected main area side. Other open panels move in the opposite direction.
To move the panel to the side of another panel,	drop it on the corresponding positioning control inside the other panel.
	The first panel is moved and attached to the selected side of the second panel. The second panel moves in the opposite direction.

NOTE
Do not drop the panel on the Tabbing (🔲) control unless you want to tab panels.
For information on tabbing panels, see Tabbing Panels.

3.1.2 Tabbing Panels

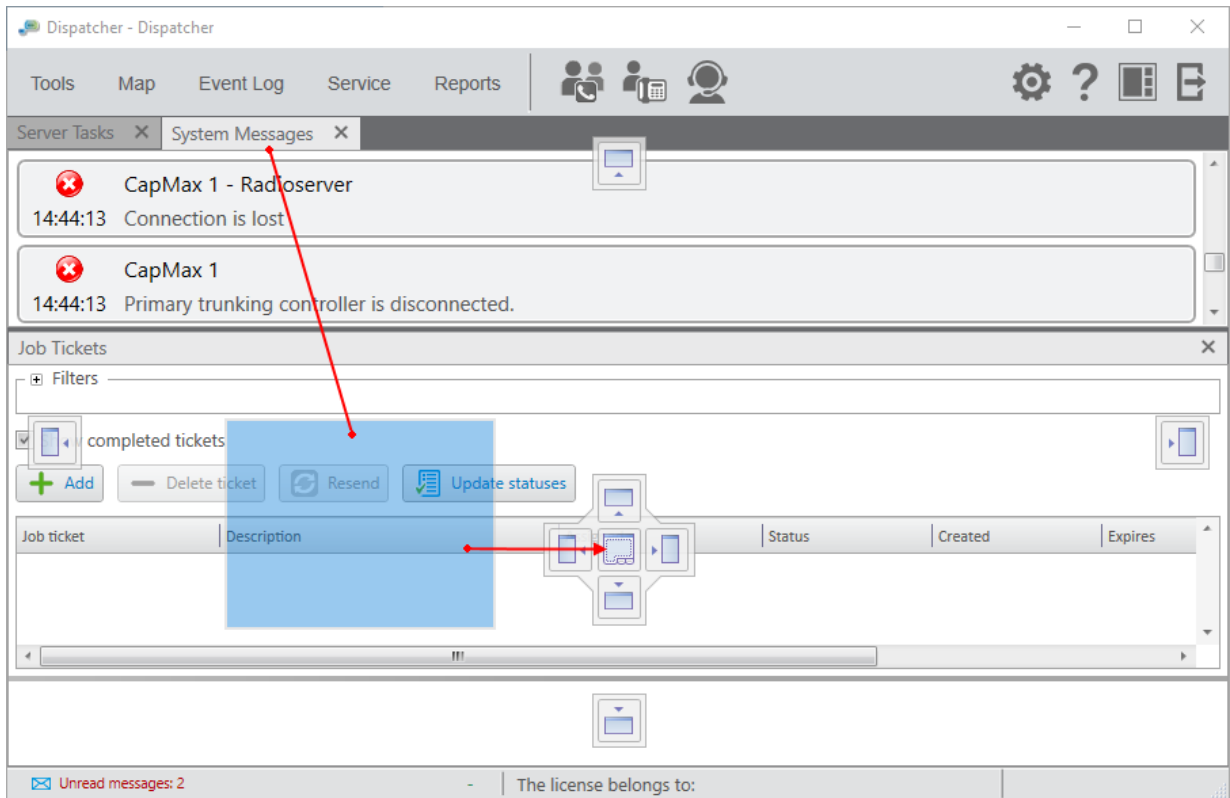Follow the procedure to tab panels.

NOTE
The **Calls**, **Sound**, **Cross Patches**, and **Radio Fleet** panels cannot be tabbed.

Prerequisites:

- Ensure the current layout is not locked. For details, see Locking Layout.

- Ensure at least two panels that can be tabbed are open in the main area.

Procedure:

1.   Press and hold the title bar of the desired panel, and then drag it over the second panel.
      On the second panel, the positioning controls appear.

2.   Drop the panel on the Tabbing (⊡) control.
      The panels will be tabbed.

3.1.3 Undocking Panels

Follow the procedure to undock a panel into a separate window.

Prerequisites:

Ensure the current layout is not locked. For details, see Locking Layout.

Procedure:

In the main area, press and hold the title bar of the desired panel, and then drag it to any place of the screen except the positioning controls.
The panel appears as a separate window.
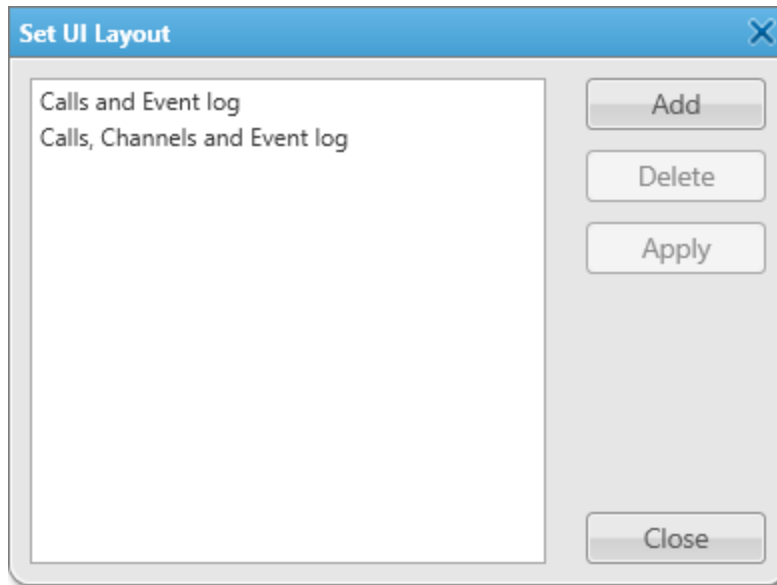
3.1.4 Managing Layouts

Follow the procedure to save, apply, or delete the layout.

Prerequisites:

Ensure the current layout is not locked. For details, see <u>Locking Layout</u>.

Procedure:

1. On the menu bar, click **UI Layout Settings (▤)** → **Set UI Layout**.
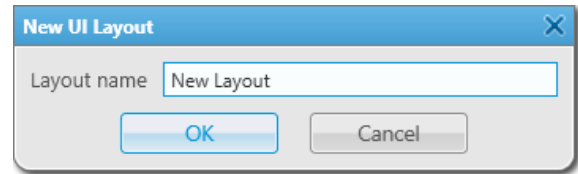   The **Set UI Layout** window appears.

2. In the window that appears, perform one of the following actions:

To save the current layout,	perform the following actions:
	1. Click **Add**. The **New UI Layout** window appears. 2. In the window that appears, in the **Layout name** field, type the layout name. 3. Click **OK** to apply changes and close the window. The saved layout appears in the list of layouts.
To apply an existing layout,	select the desired layout from the list, and then click **Apply**.
To delete the layout,	select the desired layout from the list, and then click **Delete**. **NOTE** The default layouts (*Calls and Event log* and *Calls, Channels and Event log*) cannot be deleted.

3. In the **Set UI Layout** window, click **Close** to close the window.

3.1.5 Locking Layout

Follow the procedure to lock the current layout.

Procedure:

On the menu bar, click **UI Layout Settings** (▣) → **Lock UI Layout**.
The check mark icon appears to the left of the **Lock UI Layout** option. The layout is locked.

> **NOTE**
> If the Event Log is open when the layout is locked, all features for the Event Log management are available to the dispatcher. If closed, the Event Log becomes unavailable.

Postrequisites:

To unlock the layout, click **Lock UI Layout** again.
The check mark icon disappears.

3.2 Call Windows

SmartPTT Dispatcher provides the ability to quickly respond to events related to radio system objects using Call Windows.
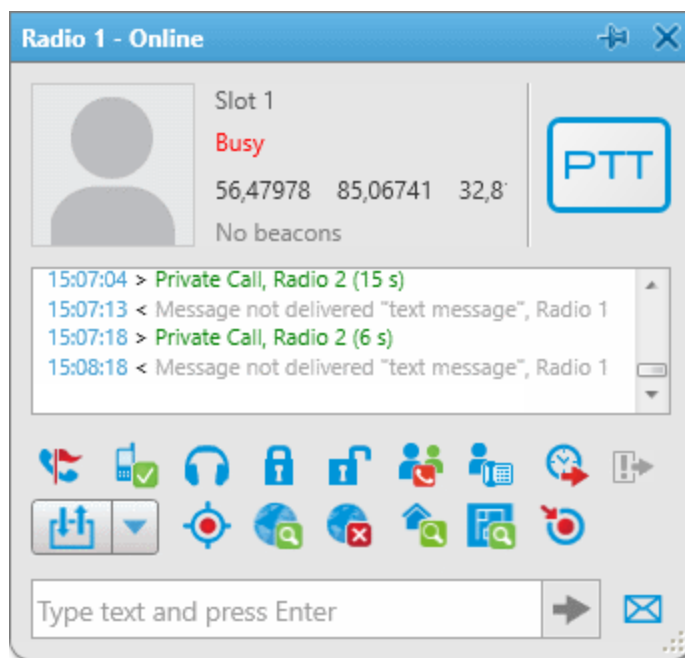
Call Windows are available for the following radio system objects:

- Radios (including mobile clients)

- Talkgroups

- Dynamic groups

- All Calls

The Call Window opens in one of the following ways:

- When registering an event whose type is configured to automatically open the Call Window. For details, see "Events Opening Call Windows" below.

- When double-clicking the desired object on the **Radio Fleet** panel.

You can also open the Call Window of a radio in one of the following ways:

- By right-clicking the desired radio element on the **Radios** panel or in the custom console.

- By double-clicking the desired radio icon on the map panel.

- By double-clicking the entry of an event initiated by the desired radio on the **Incoming Events** element of the custom console.

- By clicking the desired radio name on the **Recent Incoming Calls** panel.

- By clicking the desired radio name on the **Lone Workers** panel.

- By clicking **Show Address** ( ) in the Actions (≫) menu of the desired radio.

Events Opening Call Windows

In the **Call Window Settings** window, you can configure the types of events that trigger the automatic opening of Call Windows. For information on configuring Call Windows, see Configuring Call Windows.

Call Windows of different radio objects appear for the configured events according to the following table:

Event Type	Event	Radios	Mobile Clients	Talkgroups	All Calls, Dynamic Groups
Registration	Change of object availability in the radio system	YES	YES	N/A	N/A
Call	Call to the object	YES	YES	YES	YES
	Call to a dispatch console operator initiated by the object	YES	YES	N/A	N/A
	Successful Call Alert delivery to the object	NO	N/A	N/A	N/A
	Failed Call Alert delivery to the object	YES	N/A	N/A	N/A
	Remote object monitoring	YES	N/A	N/A	N/A
Message	Message sent by the object	YES	NO	N/A	N/A
	Message from an operator of another dispatch console received by the object	YES	NO	YES	N/A
Telemetry	Sending a telemetry signal to the object	YES	N/A	YES	N/A
	Receiving a telemetry signal from the object	YES	N/A	NO	N/A
Alarm	Emergency alarm from the object	YES	NO	N/A	N/A
Status	Object status change	YES	YES	N/A	N/A
Block radio	Blocking or unblocking the object	YES	N/A	N/A	N/A
Job ticket	Sending a job ticket to the object	NO	N/A	YES	N/A
	Delivery of a job ticket to the object	YES	N/A	NO	N/A
	Job ticket status update by the object	YES	N/A	NO	N/A
User Authorization	User registration or deregistration on the object	YES	N/A	N/A	N/A

Event Type	Event	Radios	Mobile Clients	Talkgroups	All Calls, Dynamic Groups
Radio Check	Sending the Radio Check command to the radio	YES	N/A	N/A	N/A

Call Window Features

The Call Window provides information on events related to the radio object and various controls for interacting with it.

Depending on the radio object, the following features are available in the Call Window:

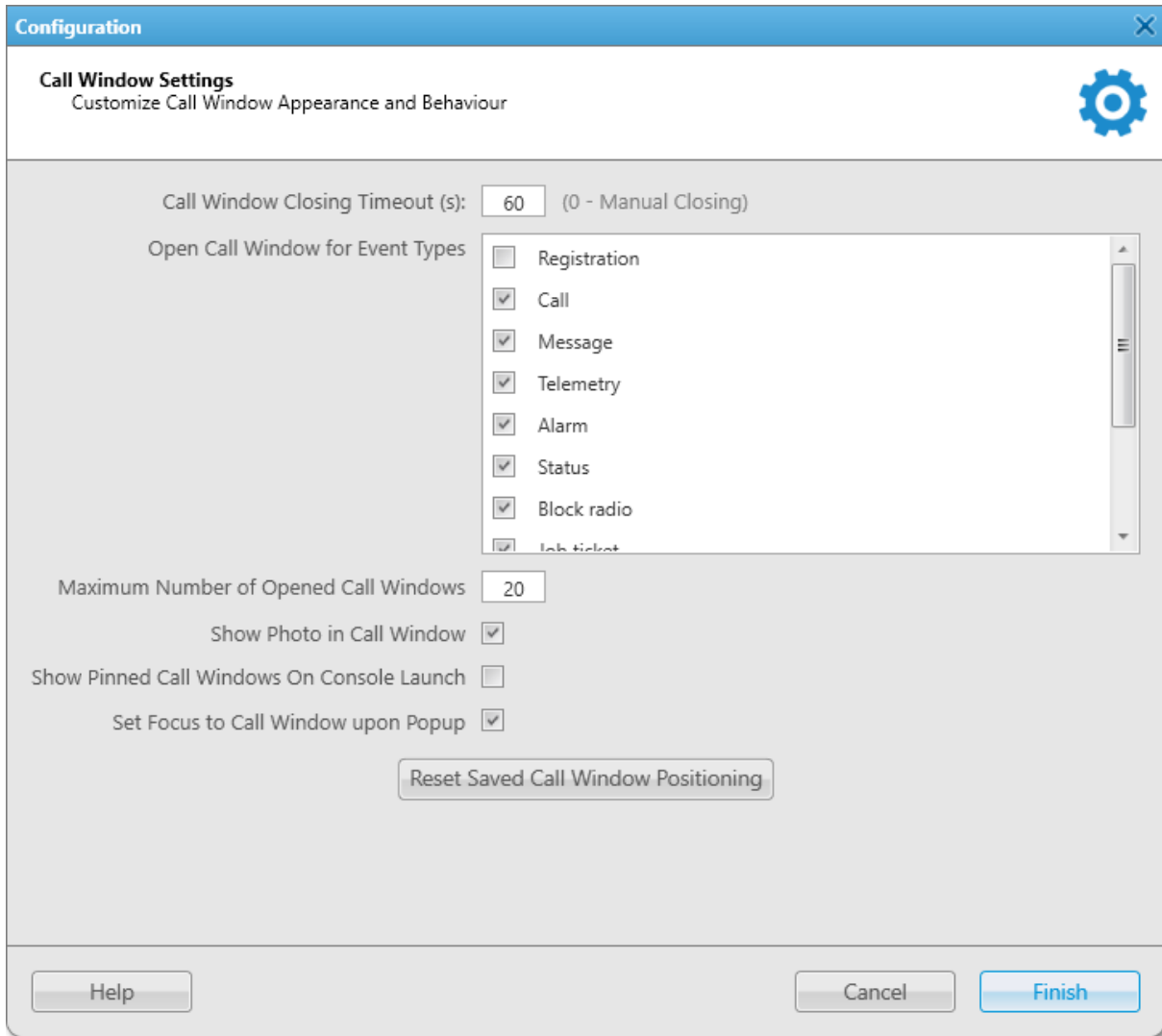| Feature	Radios	Mobile Clients	Talkgroups	All Calls, Dynamic Groups
Make a call to the object	YES	YES	YES	YES
Send a message to the object	YES	NO	YES	N/A
View events related to the object	YES	YES	YES	YES
View the object avatar image	YES	YES	YES (default avatar only)	YES (default avatar only)
View the object channel	YES	YES	YES	YES
View the current object status	YES	YES	N/A	N/A
View object coordinates and perform geolocation-related actions	YES	YES	N/A	N/A
View available beacons and find the object on a building plan	YES	N/A	N/A	N/A
Send signaling commands to the object	YES	N/A	N/A	N/A
Remotely monitor the object	YES	N/A	N/A	N/A
Start a conference call with the object	YES	N/A	YES	N/A
Establish connection between the object and a telephone subscriber	YES	N/A	YES	N/A

Feature	Radios	Mobile Clients	Talkgroups	All Calls, Dynamic Groups
Send a deferred action to the object	YES	NO	N/A	N/A
Exit Emergency Mode	YES	NO	YES	YES (for emergency All Calls only)
Send a telemetry signal to the object	YES	N/A	YES	N/A
Receive the current status of object telemetry contacts	YES	N/A	NO	N/A

3.2.1 Configuring Call Windows

Follow the procedure to configure Call Window appearance and behavior.

Procedure:

1. On the menu bar, click **Settings (⚙)** →**Interface** →**Call Windows**.
   The **Call Window Settings** window appears.

2. In the window that appears, perform the desired actions:

To automatically close Call Windows after a certain time period,	in the **Call Window Closing Timeout (s)** field, type the desired value in seconds.
	NOTE To disable automatic closing of Call Windows, type *0*.
To automatically open Call Windows when specific events occur in the system,	in the **Open Call Window for Event Types** area, select check boxes next to the desired event types.
To set the maximum number of Call Windows that can be opened automatically,	in the **Maximum Number of Opened Call Windows** field, type the desired value.

	NOTE To disable automatic opening of Call Windows, type *0*.
To display the object avatar in the Call Window,	select the **Show Photo in Call Window** check box.
To open pinned Call Windows when SmartPTT Dispatcher is launched,	select the **Show Pinned Call Windows On Console Launch** check box.
To make the last of the automatically opened Call Windows active,	select the **Set Focus to Call Window upon Popup** check box. **NOTE** If selected, already open Call Windows also become active when a relevant event occurs.
To reset the position of pinned Call Windows on the monitor screen,	click **Reset Saved Call Window Positioning**.

3. Click **Finish** to save changes and close the window.

3.3 Notification Panel Configuration

For some SmartPTT Dispatcher notification panels, you can configure additional settings for handling events or information display on the panel. You can configure the following panels:

- The Emergency panel. For details, see Configuring Emergency Processing.

- The System Messages panel. For details, see Configuring System Messages Processing.

- The Recent Incoming Calls panel. For details, see Configuring Recent Incoming Calls Display.

For detailed information on all notification panels available in SmartPTT Dispatcher, see Notification Panels.
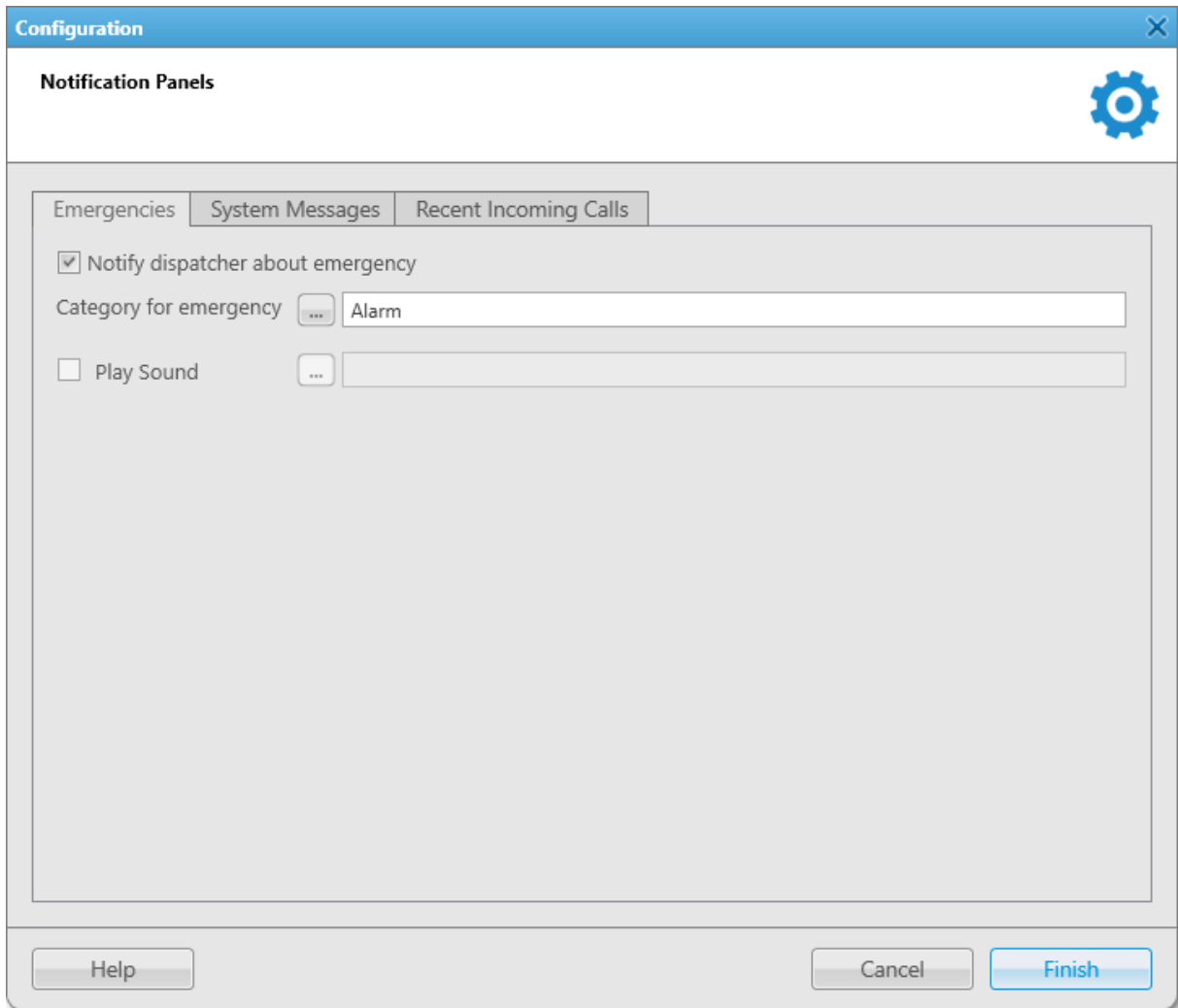
3.3.1 Configuring Emergency Processing

Follow the procedure to configure emergency processing.

Prerequisites:

- To select a category for emergency, first add at least one category. For details, see Managing Categories.

- *(Optional)* Ensure that a map is open to display the radios activated the emergency mode and the objects added to the category for emergency.

Procedure:

1. On the menu bar, click **Settings (⚙) → Interface → Notification Panels**.
   The **Notification Panels** window appears.

2.   Select the **Notify dispatcher about emergency** check box to enable emergency processing.

3.   *(Optional)* Configure additional settings for emergency processing:

To add the category of objects that will not be hidden on the map upon receiving an emergency alarm from a radio,	perform the following actions: 1. Next to the **Category for Emergencies** field, click Browse (⬚). 2. In the **Categories** window, select the corresponding category. 3. Click **OK**.
To activate playback of the default audio file upon receiving an emergency alarm from a radio,	select the **Play Sound** check box.
To configure a sound notification upon receiving an emergency alarm from a radio,	perform the following actions: 1. Select the **Play Sound** check box. 2. Click Browse (⬚) to specify the path to the desired audio file.

4.   Click **Finish** in the bottom part of the window to save changes and close the window.

3.3.2 Configuring System Messages Processing

Follow the procedure to configure the system messages processing.

Prerequisites:

(Optional) To process hardware events, ensure that Monitoring is activated.
For details, see "Configuring Monitoring Database Connection" in *SmartPTT Installation and Configuration Guide*.

Procedure:

1. On the menu bar, click **Settings (⚙) →Interface →Notification Panels**.
    The **Notification Panels** window appears.

2. In the window that appears, open the **System Messages** tab.
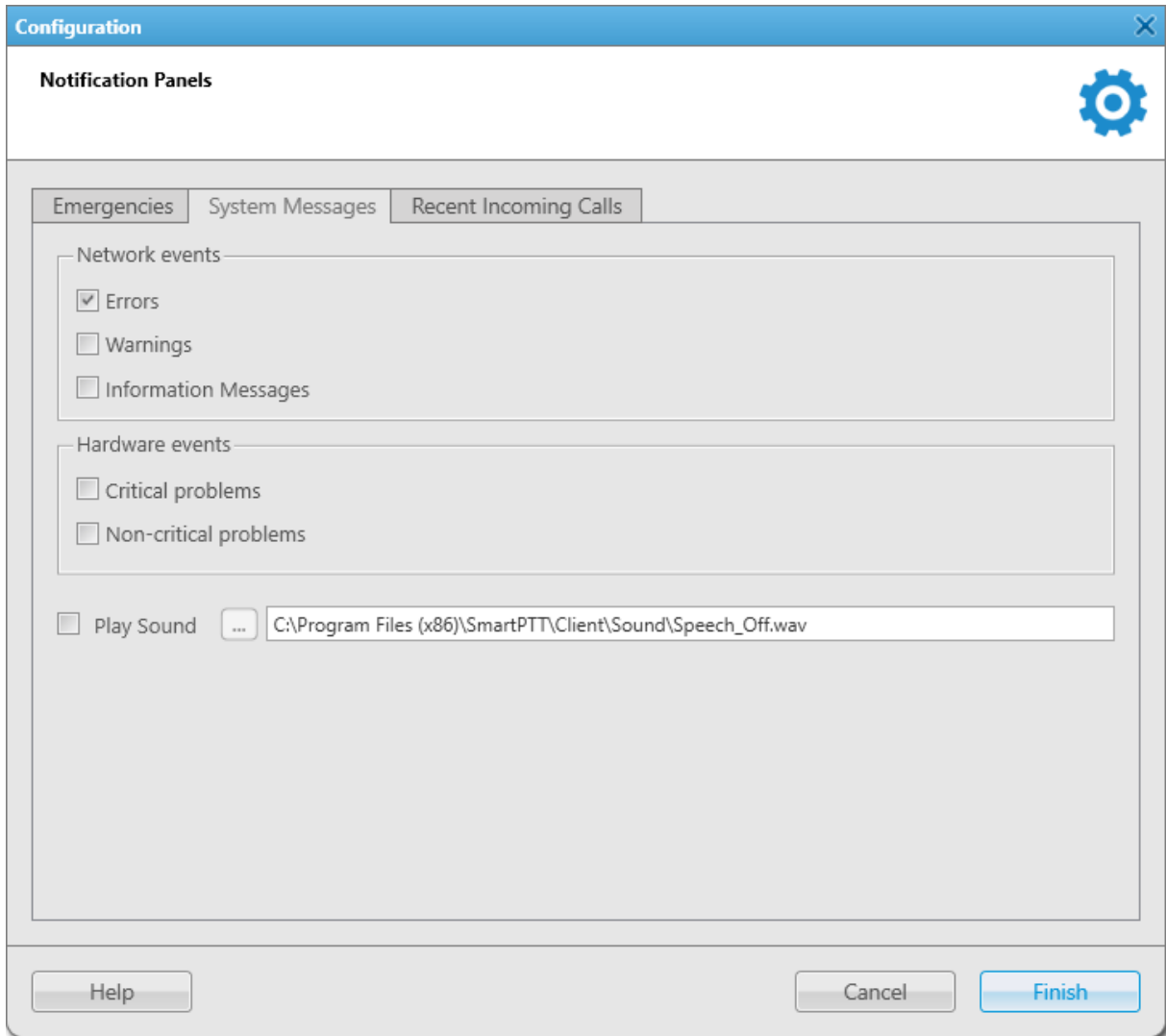
3. Configure the system status messages processing in the **Network events** area:

|	
To display error messages on the **System Messages** panel,	select the **Errors** check box.
To display error messages in separate windows,	clear the **Errors** check box.
To display warning messages,	select the **Warnings** check box.

To display information messages,	select the **Information Messages** check box.

4. Configure the radio network functionality messages processing in the **Hardware events** area:

To show messages about the loss of a significant part of the radio network functionality,	select the **Critical problems** check box.
To show messages about the loss of an insignificant part of the radio network functionality,	select the **Non-critical problems** check box.

5. Configure an emergency alarm:

To activate playback of the default audio file at the emergency situation,	select the **Play Sound** check box.
To configure a sound notification at the emergency situation,	perform the following actions: 1. Select the **Play Sound** check box. 2. Click Browse (⋯) to specify a path to the desired audio file.

6. Click **Finish** at the bottom of the window to save changes and close the window.

3.3.3 Configuring Recent Incoming Calls Display

Follow the procedure to configure the number of recent calls on the **Recent Incoming Calls** panel.

Procedure:

1. On the menu bar, click **Settings (⚙)** →**Interface** →**Notification Panels**.
   The **Notification Panels** window appears.

2. In the window that appears, select the **Recent Incoming Calls** tab.
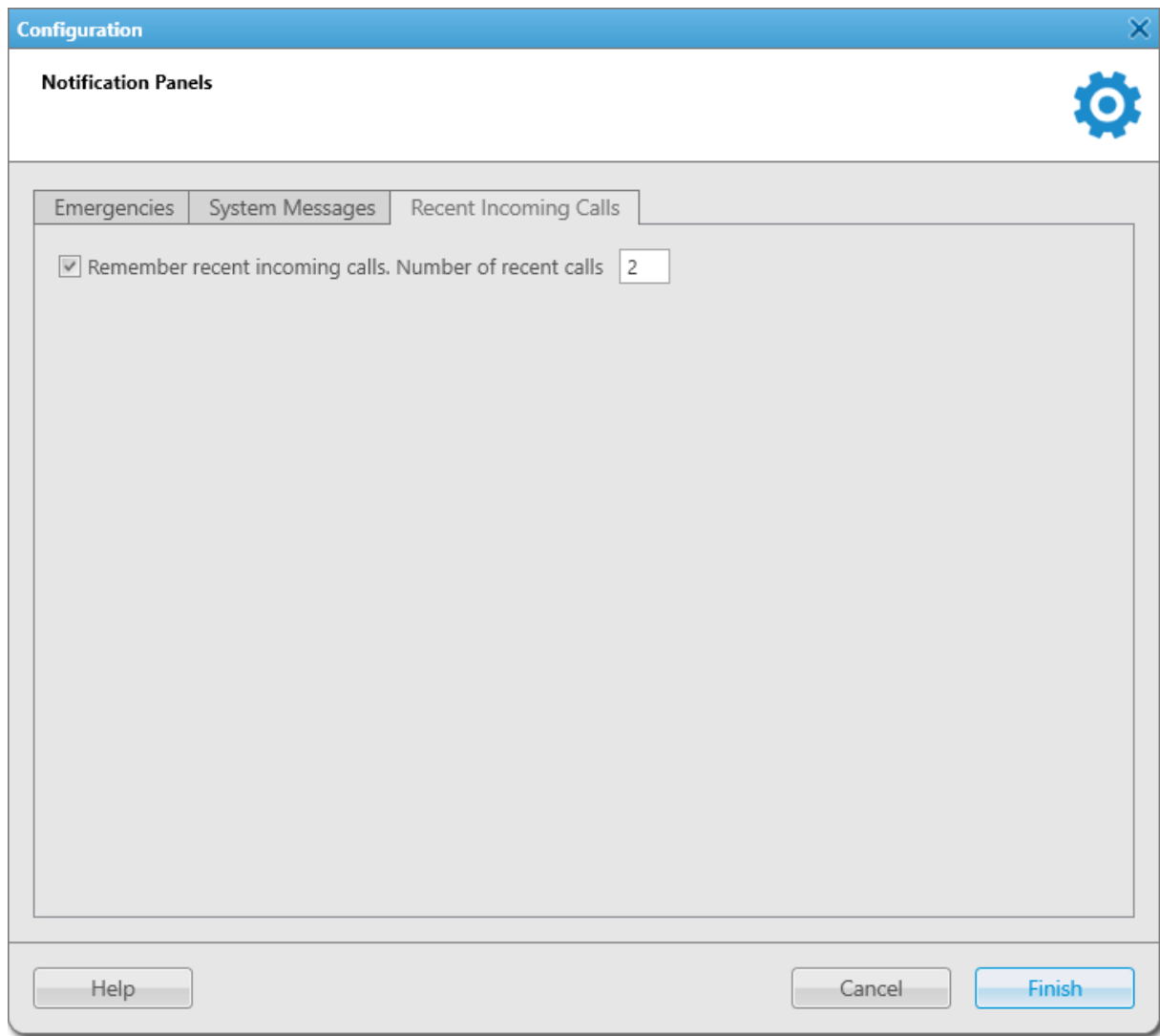
3. Select the **Remember recent incoming calls** check box.

4. In the **Number of recent calls** field, specify the number of calls that must be displayed on the **Recent Incoming Calls** panel.

5. Click **Finish** at the bottom of the window to save changes and close the window.

3.4 Custom Console Configuration

The Custom Console feature provides the ability to create one or several custom workspaces to meet the specific workflow demands.

To configure a Custom Console, you must perform the following actions::

- Add a Custom Console. For details, see Managing Custom Consoles.

- Add the desired elements to the Custom Console. For details, see Configuring Console Workspace.

- Configure Custom Console elements.
  For information on custom consoles, their elements, as well as custom console elements configuration and usage, see Custom Consoles.

NOTE
Access to some of the elements may require the corresponding operator permission and/or license. For details, see the description of the desired element in the Custom Console Elements Table. For details, see Custom Console Elements.
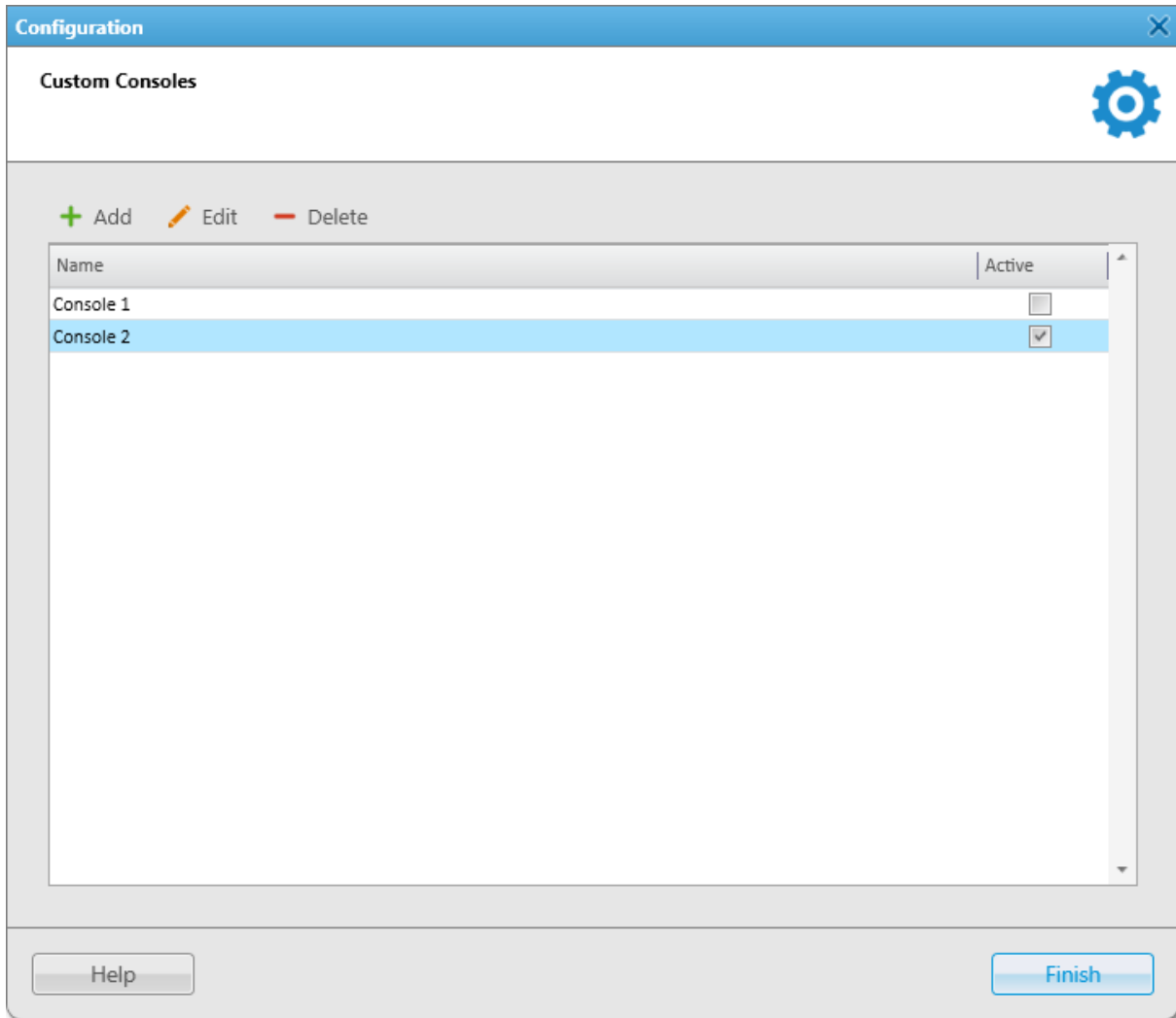
3.4.1 Managing Custom Consoles

Follow the procedure to add, edit, activate, deactivate, or delete a Custom Console.

> **Important**
> This procedure is available only to the Administrator.

Procedure:

1. On the menu bar, click **Settings (⚙)** → **Interface** → **Custom Consoles**.
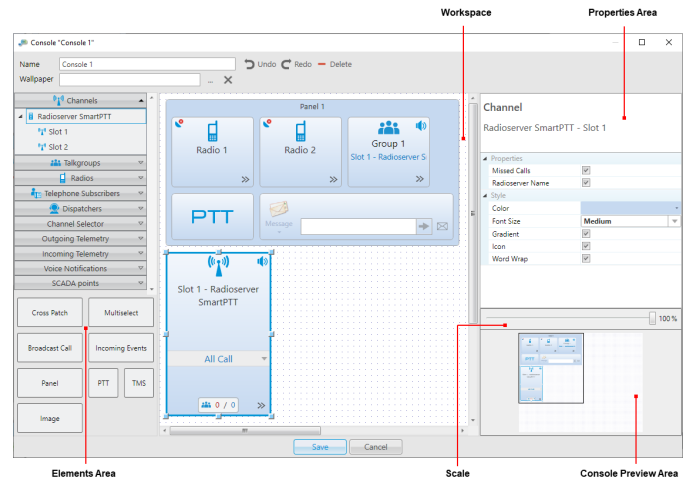   The **Custom Consoles** window appears.

2. In the window that appears, perform the desired action:

To add a new Custom Console,	perform the following actions:
	1. At the top of the window, click **Add (➕)**. The Console Configuration window appears.

2. In the window that appears, configure a new console as you desire. For details, see Configuring Console Workspace.

3. Click **Save** at the bottom of the Console Configuration window to save changes and close the window.
The configured console appears in the **Custom Consoles** window.

To edit an existing Custom Console, perform the following actions:

1. In the Custom Consoles Table, select the desired console, and then click **Edit (✎)** or double-click it.
The Console Configuration window for editing the console appears.

2. In the window that appears, edit the desired settings and/or elements. For details, see Configuring Console Workspace.

3. Click **Save** to save changes and close the window.

To activate/deactivate an existing Custom Console, in the Custom Consoles Table, select the desired Custom Console, and then select or clear the **Active** check box.
The console appears or disappears from the **Tools** menu.

To delete an existing Custom Console, perform the following actions:

1. In the Custom Consoles Table, select the desired Custom Console, and then click **Delete (▬)**.

2. In the window that appears, click **OK**.
The console is removed from the Custom Consoles Table.

3.4.2 Configuring Console Workspace

Follow the procedure to set the custom console name and background image as well as add, move, or resize the elements in the main area of the Custom Console.

> **Important**
> This procedure is available only to the Administrator.

Procedure:

1. If the **Custom Consoles** window is closed, open it by clicking **Settings (⚙)** → **Interface** → **Custom Consoles** on the menu bar.
   The **Custom Consoles** window appears.
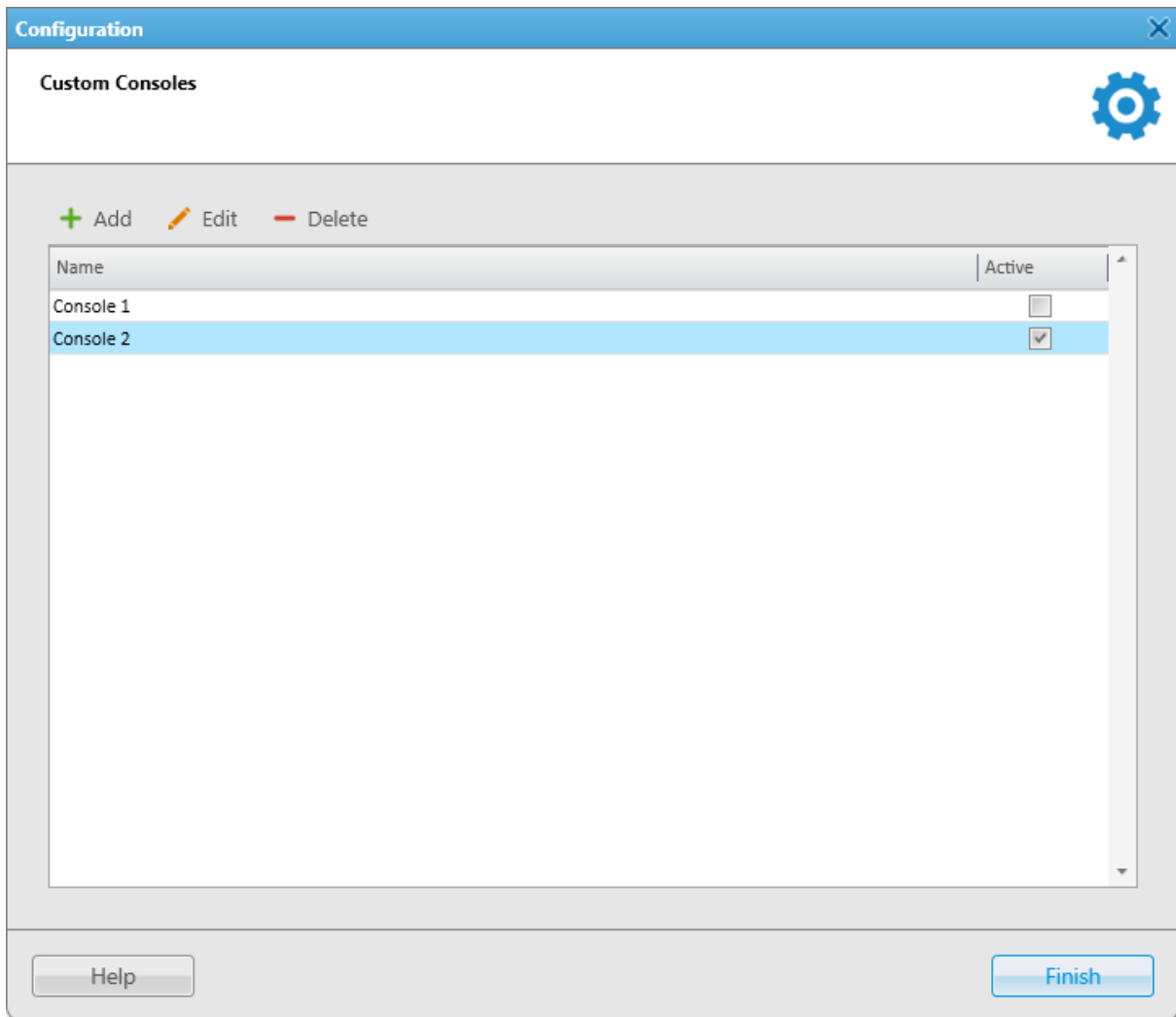
2. In the window that appears, in the Custom Consoles Table, double-click the desired console name or select it, and then click **Edit (✏)**.
   The Console Configuration window for editing the console appears.
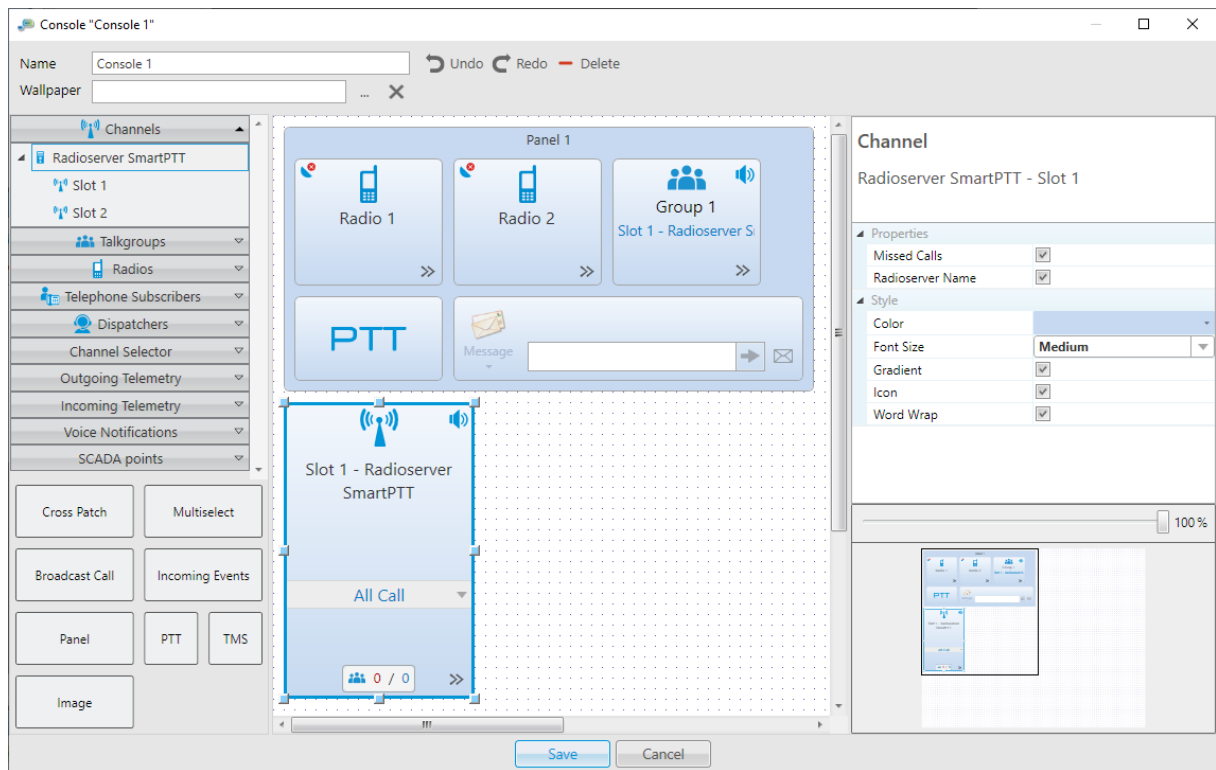
3.   *(Optional)* In the **Name** field at the top of the window, type the Custom Console name.
     New consoles have the *Console <number>* name by default.

4.   *(Optional)* To the right of the **Wallpaper** field, at the top of the window, click Browse (⌷), and then, in the window that appears, select the desired image.

5.   Add the desired elements to the main area of the Custom Console in one of the following ways:

|	
To add elements in the upper-left corner of the window,	expand the list of the corresponding element type, and then drag the desired element to the console workspace.
	NOTE Some of the radio system objects, such as Radios and Channels, can be located in expandable lists under the main objects.
To add elements in the lower-left corner of the window,	drag the desired element to the workspace.

6.   Select the element added to the console workspace, and then, in the Properties area, edit the desired element properties. For details, see Custom Console Elements.

7.   *(Optional)* Resize the element by dragging the resizing controls that appear when you select the element.

Postrequisites:

•   To remove the element added to the console workspace, select it, and then press the Delete key, or click **Delete (▬)** at the top of the window.

•   To remove the wallpaper, click **Delete (✕)** to the right of the **Wallpaper** field.

3.5 Web Pages

In SmartPTT Dispatcher, you can open web pages compatible with Internet Explorer 11. The desired web pages must be added in the **Web Pages** window. After adding a web page, the panel with this page becomes available in the **Tools** menu. The name of the panel corresponds to the specified web page name.

3.5.1 Adding Web Pages

Follow the procedure to add a new web page to SmartPTT Dispatcher.

> **Important**
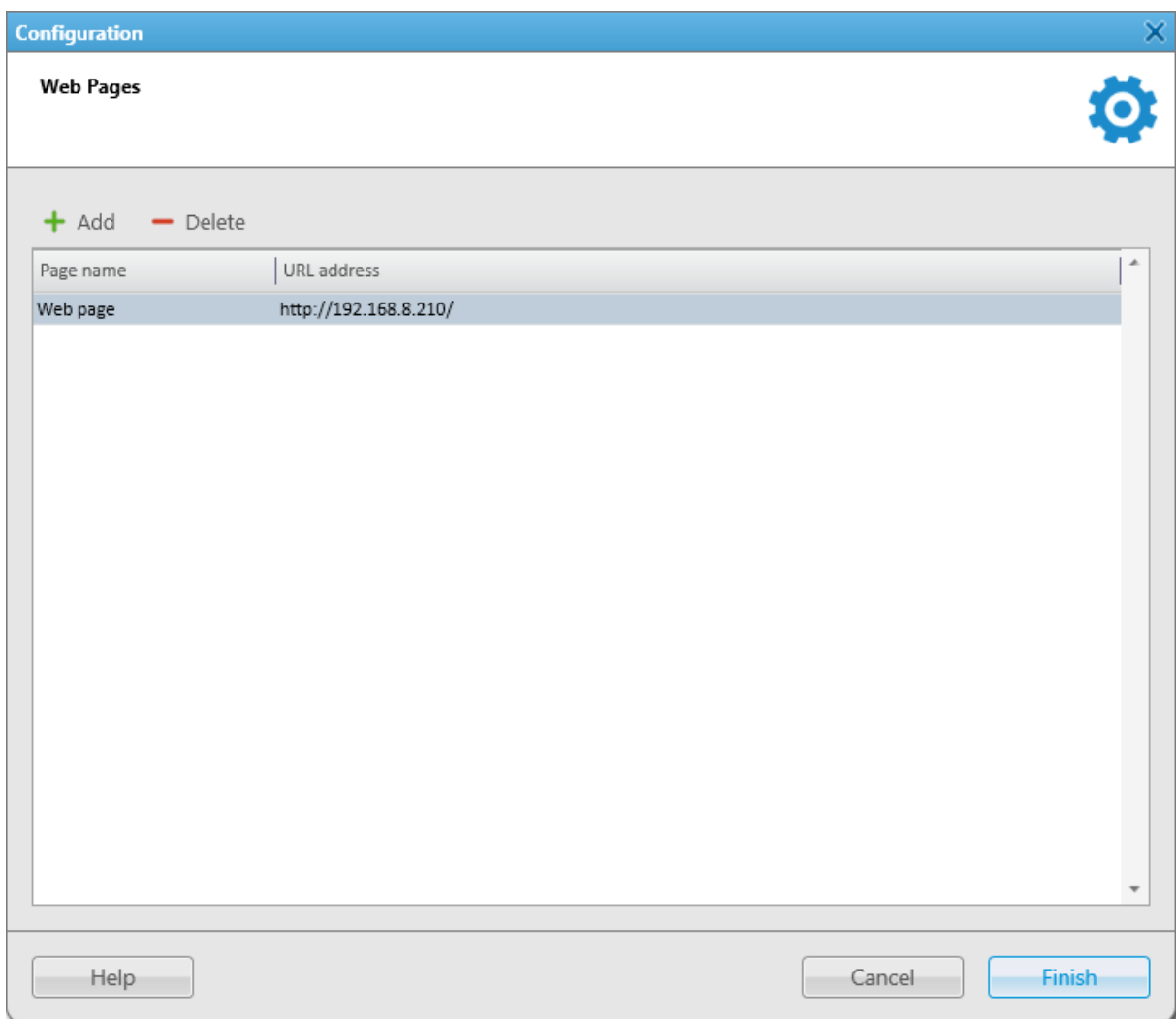> This procedure is available only to the Administrator.

> **NOTE**
> To ensure stable performance, it is not recommended to add web pages containing audio or video.

Prerequisites:

Obtain URL address of the desired web page.

Procedure:

1. On the menu bar, click **Settings (⚙) → Interface → Web Pages**.
   The **Web Pages** window appears.

2. In the window that appears, click **Add (+)**.
    A new entry in the table appears.

3. In the **Page name** column, type the desired page name.

4. In the **URL address** column, enter the URL address.

5. Click **Finish** to save changes and close the window.
    The added web page appears in the **Tools** menu.

Postrequisites:

• To edit the web page name or address, double-click the desired value and change it.

• To delete the web page, click the desired entry in the table, and then click **Delete (–)**.

Chapter 4. SmartPTT Dispatcher Operation

This chapter describes the SmartPTT Dispatcher operation. It includes sections regarding the following topics:

- Radio system object operation. For details, see Radio System Objects.

- Voice calls. For details, see Voice Calls.

- Emergency. For details, see Emergency.

- Signaling features, including call alerts, radio checks, remote monitoring, and radio disable. For details, see Signaling Features.

- Event Log operation as well as information about notification panels. For details, see Event Log and Notification Panels.

- Call records actions. For details, see Call Records.

- GPS and indoor map actions. For details, see Positioning.

- Cross patches. For details, see Cross Patches.

- Custom console elements description and actions with them. For details, see Custom Consoles.

- Bridging. For details, see Bridging.

- Text messages sending. For details, see Text Messages.

- Job ticket management. For details, see Job Tickets.

- Telephony and initiating calls. For details, see Telephone Interconnect.

- Conference calls. For details, see Conference Calls.

- Communication with other dispatchers. For details, see Dispatchers.

- Monitoring and topology features. For details, see Monitoring.

- Creating reports. For details, see Reports.

- Telemetry actions. For details, see Telemetry.

4.1 Radio System Objects

To use the SmartPTT radio system, configure and add radio system objects in SmartPTT Radioserver Configurator. After that, the objects appear in SmartPTT Dispatcher, and the operator will be able to make calls and perform actions with them. Radios, temporary talkgroups, and dynamic groups are added directly in SmartPTT Dispatcher.

SmartPTT Dispatcher provides the following radio system objects:

- SmartPTT Radioservers
  For details, see Radioservers.

- Radios, mobile clients.
  For details, see Radios.

- Talkgroups.
  For details, see Talkgroups.

- All Calls.
  For details, see All Calls.

- Dynamic groups.
  For details, see Dynamic Groups.

- Channels, including the following objects:

    - Control stations

    - Virtual control stations

    - System-wide and local channels of conventional radio systems

    - Single- and multisite trunked radio systems

   For details, see Channels and Systems.

Radio system objects are displayed on the **Radio Fleet** panel. The operator can use this panel to perform various actions related to the desired radio system objects and manage their parameters.

> **NOTE**
> The panel does not show non-radio objects, for example other SmartPTT dispatchers, phone users, SmartPTT Web Clients, and third-party dispatch applications.

The **Radio Fleet** panel is open by default. If the panel is closed, you can open it by clicking **Tools** →**Radio Fleet** on the menu bar.
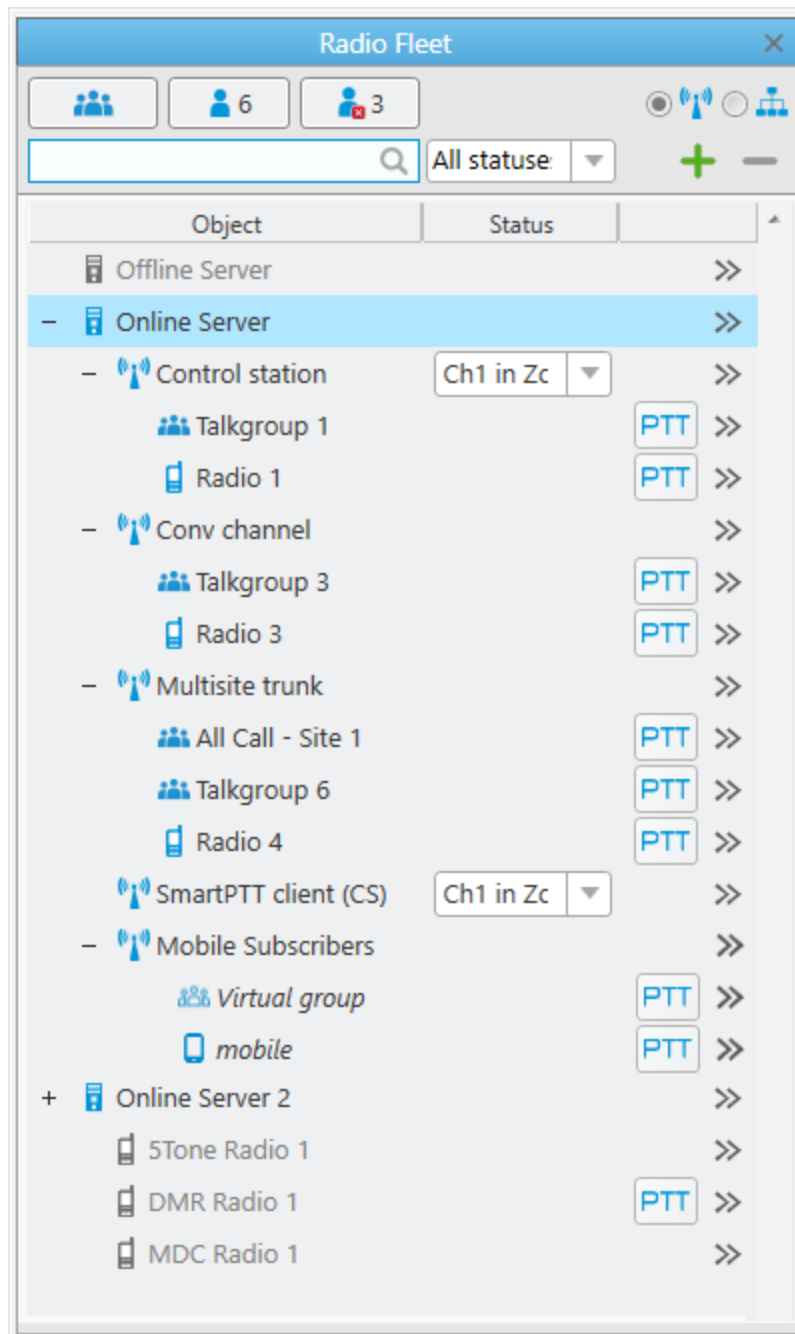
The **Radio Fleet** panel provides the ability to perform the following actions:

- Make calls.

- Add and delete radios. For details, see Adding Radios on Radio Fleet Panel.

- Use the Actions (≫) menu of radio fleet objects.

- Configure the display of objects on the panel:

    - Hide and show the desired objects.

    - Change a view of the Objects Table.

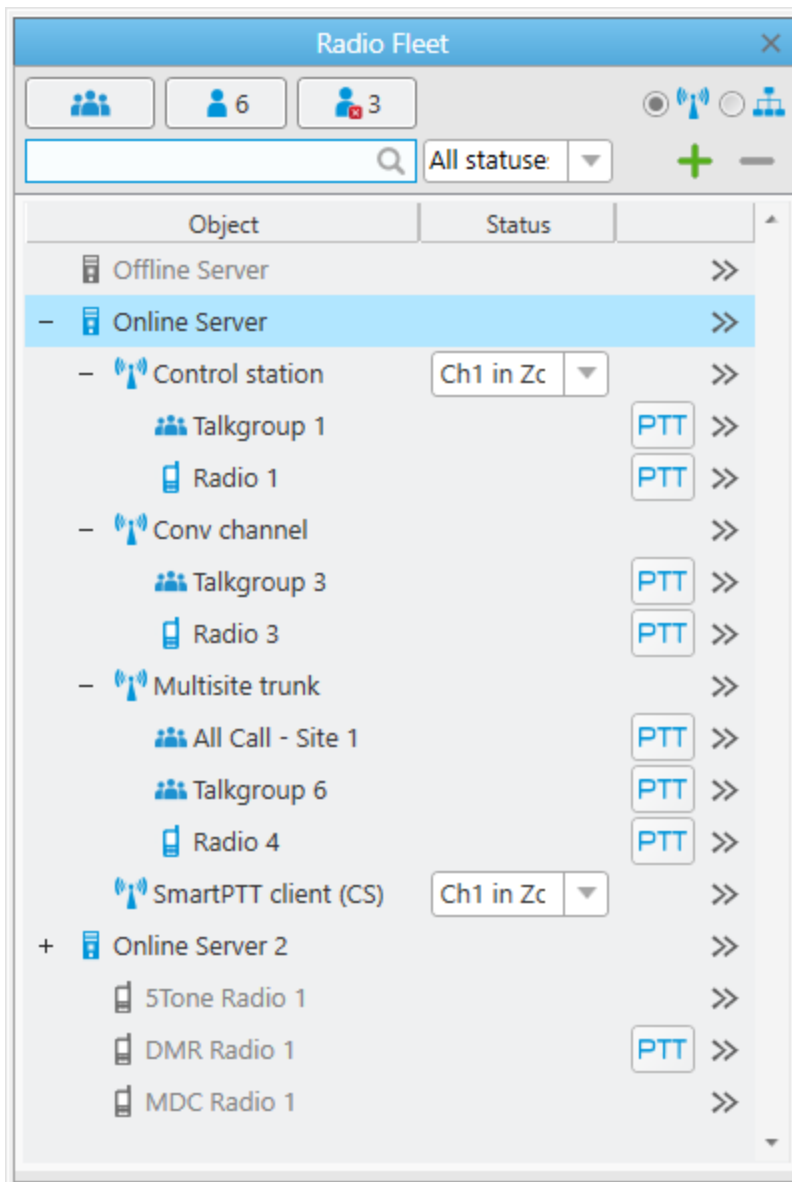   - Search radios using their names or IDs.

- Filter radios by status.
    For information on object display configuration, see Working with Objects Table.

4.1.1 Working with Objects Table

Follow the procedure to configure display of the objects on the **Radio Fleet** panel.

Procedure:

1. If the **Radio Fleet** panel is closed, open it by clicking **Tools** →**Radio Fleet** on the menu bar.

2. On the **Radio Fleet** panel, perform one of the following actions:

    - To hide or show radios, or talkgroups in the Objects Table, perform the following actions:

To hide or show all talkgroups,	click **Hide talkgroups** (👥) or **Show talkgroups** (👥).
To hide or show online radios,	click **Hide online radios** (👤) or **Show online radios** (👤).
To hide or show offline radios,	click **Hide offline radios** (👤) or **Show offline radios** (👤).

- To change the view of the Object Table, perform the following actions:

To activate the channel view,	select **Filter by channel** ( ).
To activate the category view,	select **Filter by category** ( ).

- To search the desired radio in the Objects Table by name or ID, in the search field, type the name or ID of the radio.

- To filter radios by status, from the **Filter radios by status** list, select the desired status.

4.1.2 Radio System Object Selection

In SmartPTT Dispatcher, you can select radio system objects, and then perform different actions with them.

Selected objects are objects that were clicked by an operator. They are highlighted on a panel or a Custom Console. The object whose Call Window is open and active is also considered selected.
For information on Call Windows, see Call Windows.

> **Important**
> In SmartPTT Dispatcher, you can set actions that will happen after you click an object. Depending on the settings, after clicking the object, it will be selected, or a call to the object will be initiated. For details, see Configuring Call Element Actions.

The name of the selected object is displayed as green on the SmartPTT Dispatcher information bar. The selected object is outlined with a blue frame. The Call Window of the selected object has a blue title bar, and its PTT button is outlined with a blue frame too.

> **NOTE**
> You can clear an object selection only by selecting another object.

In the Custom Console and on the **Radios** and **Channels** panels, you can select several objects by clicking them while holding down the Ctrl key.

On the **Radios** panel, you can select several radios in a row. For this, while holding down the Shift key, click the first and last desired objects in the row.

Due to the possibility to select multiple objects, SmartPTT Dispatcher provides the ability to initiate calls simultaneously to several selected radios and/or talkgroups, including an All Call. If several objects are selected, then the *Multiselect* caption appears on the SmartPTT Dispatcher information bar.

Actions with Selected Object

Depending on the selected object location (SmartPTT Dispatcher panels or the Custom Console), you can perform the following actions with the selected objects:

- Delete the selected radio using the **Delete radio (** **)** button (the **Radio Fleet** panel).

> **NOTE**
> You can delete a dynamic group in its Actions ( ) menu by clicking **Delete (** **)**. Other radio system objects can be deleted only in SmartPTT Radioserver Configurator. For details, see *SmartPTT Installation and Configuration Guide*.

- Open the Actions ( ) menu of the selected object (the **Radio Fleet** panel, the **Radios** and **Channels** panels, the Custom Console).

- Initiate a call to the selected object by pressing the assigned hotkey. The default hotkey for initiating a call is Space. You can also assign other hotkey actions, and then use hotkeys to perform the desired actions with the selected object (the **Radio Fleet** panel, the **Radios** and **Channels** panels, the Custom Console). For details, see Assigning Hotkeys.

- Configure the sound volume separately for selected objects. Sound volume is configured on the **Sound** panel (all panels and Custom Consoles).

> **NOTE**
> Configuring the sound volume separately for **un**selected objects is also available on the **Sound** panel. When changing the sound volume on the **Sound** panel, the volume is changed simultaneously on all panels and consoles with selected or unselected objects.

- Listen to the call sound for the selected object using the desired audio output device (all panels and Custom Consoles).

> **NOTE**
> You can also listen to the call sound for the **un**selected object using a desired audio output device. SmartPTT Dispatcher provides the ability to separate the incoming sound. For example, headphones can play sound from the selected object, and speakers can play sound from the unselected object. You can configure sound settings on the **Audio Output Devices** tab of the **Sound Settings** window. For details, see Assigning Audio Output Devices.

4.1.3 Radioservers

To work with radio system objects, you need to connect to SmartPTT Radioserver.
For information on managing radioservers in SmartPTT Dispatcher, see Managing Radioservers.

> **Important**
> Before adding a radioserver to SmartPTT Dispatcher, desktop clients connection must be configured in SmartPTT Radioserver Configurator. For details, see "Configuring Desktop Clients Connection" in *SmartPTT Installation and Configuration Guide*.

Available radioservers are displayed on the **Radio Fleet** panel as nodes. The Actions (≫) menu provides the ability to perform various actions related to radioservers.

You can open the Actions menu by clicking the Actions (≫) button to the right of the radioserver name on the **Radio Fleet** panel.

In the Actions menu of the radioserver, you can perform the following actions:

- Display the radioserver Event Log for the selected period.
  For information on the radioserver Event Log, see Displaying SmartPTT Radioserver Event Log.

> **NOTE**
> The action is available if the radioserver Event Log is activated in SmartPTT Radioserver Configurator. For details, see "Configuring Event Log Database Connection" in *SmartPTT Installation and Configuration Guide*.

- Open the **Bridging Configuration** window where you can configure the bridging service.
  For information on bridging, see Adding Route Groups.

> **NOTE**
> The action is available if bridging is activated in SmartPTT Radioserver Configurator. For details, see "Managing Bridging" in *SmartPTT Installation and Configuration Guide*.

- Select audio output device to play voice transmissions from the radioserver.
  For information on configuring and assigning audio output devices, see Configuring Audio Output Devices and Assigning Audio Output Devices.

- Open the radioserver properties window, where you can see the current version of the radioserver and type a note for other SmartPTT Dispatcher users.

The radioserver nodes are displayed only when the **Filter by channel ( )** view is active.

The radioserver icon displays the state of the radioserver:

- Blue color ( ) indicates that the server is online.

- Gray color ( ) indicates that the server is offline.

The radioserver node can be expanded or collapsed to show or hide the channels and subscribers configured on this radioserver.
If the radioserver has no configured objects or they are hidden, the element is unavailable.

Redundant Radioservers

SmartPTT Dispatcher supports operation with redundant radioservers.
For information on redundancy, see "Alternation (Redundancy)" in *SmartPTT Installation and Configuration Guide*.

If a redundant radioserver is used in the system, you must add both primary and redundant radioservers to SmartPTT Dispatcher.

When a redundant radioserver is added, it is displayed in the **Radio Fleet** panel as active with no objects belonging to it. When the connection to a primary server is lost, all objects from the primary radioserver appear under the redundant one.

> **NOTE**
> A primary radioserver can have only one redundant radioserver.

4.1.4 Radios

Radios are the most important objects of the whole dispatch system.

In SmartPTT Dispatcher, the operator can work with radios registered in digital and analog radio systems, mobile clients.

Mobile clients are SmartPTT Mobile application users authorized on SmartPTT Radioserver.
For information on mobile clients, see "SmartPTT Mobile" in *SmartPTT Installation and Configuration Guide*.

> **NOTE**
> In this guide, the term "radios" also includes mobile clients, unless specified otherwise.

SmartPTT Dispatcher provides the following features to work with radios:

- Configuring parameters. For details, see Radio Configuration.

- Making and receiving voice calls, viewing the activity of ongoing calls. For details, see Voice Calls.

- Performing actions. For details, see Radio Actions.

Radios available in the radio system are automatically displayed in SmartPTT Dispatcher. To register the desired radio in SmartPTT Dispatcher, click **Save** in its **Radio Properties** window.

Information about registered radios is stored in the SmartPTT Dispatcher database providing the operator the ability to perform actions related to radios when they are offline. You can export current properties and settings of the radios from the database to a separate file, as well as import a list of radios to SmartPTT Dispatcher. For details, see Radio List Export and Import.

Unregistered radios are not displayed in SmartPTT Dispatcher when they are offline. An operator can perform the same actions with unregistered radios as with registered ones, but can not add them to categories and select as a condition for triggering a positioning rule.

> **Important**
> Managing radios that are not saved in SmartPTT Dispatcher is available only to the Administrator and operators with the **Manage unregistered radios** right. For operators who are not granted this permission, SmartPTT Dispatcher does not display unregistered radios, but provides the ability to monitor voice calls involving unregistered radios.
> For information on operator rights, see Operators.

You can also add a new radio to the dispatch system manually on the **Radio Fleet** panel or using the list of radios. For details, see Adding Radios.

> **NOTE**
> Radios with the ID in the MDC-1200 or 5 Tone format always appear offline since they do not provide registration information.

Radios as objects of the radio system are displayed in SmartPTT Dispatcher as follows:

- Entries on the **Radio Fleet** panel. For details, see Radio System Objects.

- Elements on the **Radios** panel. For details, see Radios Panel.

- Elements on the custom console.

Radio Management

The main tool for managing radios in SmartPTT Dispatcher is the **Radios** panel. For information on the panel, see Radios Panel.

You can also add radio elements to a custom console for managing individual objects.

SmartPTT Dispatcher provides various actions for interacting with radios. The actions can be performed from the Actions (≫) menu of the corresponding radio. For details, see Radio Actions.

Deferred actions created from the radio Actions menu are available for editing and deleting using the **Service** menu. For information on the Deferred Actions feature, see Deferred Actions.

4.1.4.1 Radios Panel

The **Radios** panel provides controls for monitoring and interacting with radios registered in SmartPTT Dispatcher. The panel provides the ability to perform the following actions with radios:

- Open the radio Actions menu by clicking the Actions (≫) button in the lower-right corner of the element. For details, see Radio Actions.

- Open the radio Call Window by right-clicking the element. For details, see Call Windows.

- Initiate a private voice call to the radio. For details, see Initiating Private Voice Calls.

- Initiate a multicall to multiple radios.

You can open the **Radios** panel by clicking **Tools** →**Radios** on the menu bar.
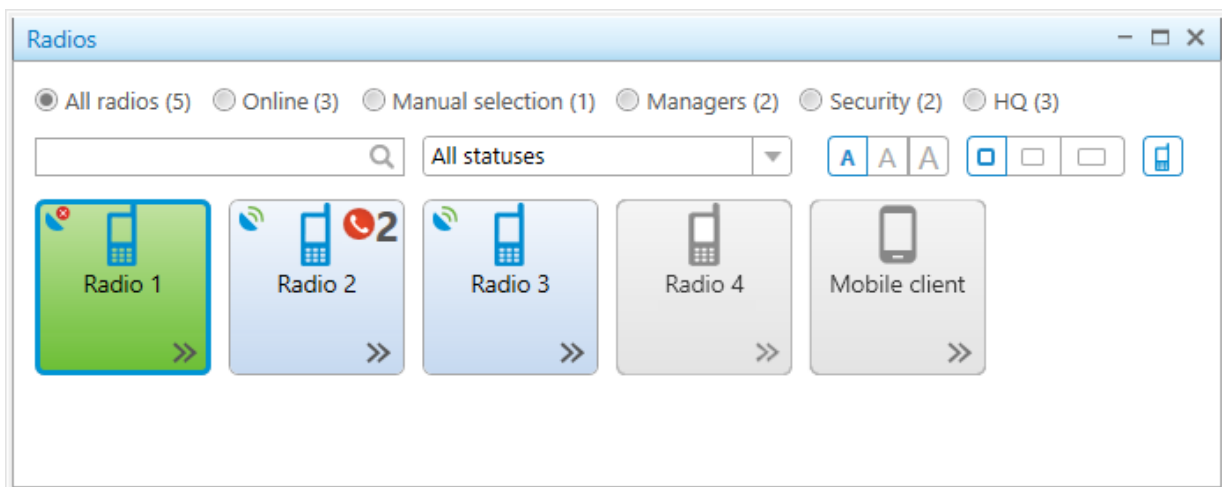
You can configure the font size for radio names on the panel elements, width of elements, and display of radio icons on elements. For details, see Configuring Radios Panel.

SmartPTT Dispatcher provides various parameters for filtering objects on the **Radios** panel: by online presence, by assigned status, by category.
The dispatcher can add radios to the panel manually by dragging them from the **Radio Fleet** panel, and then display these radios by selecting **Manual selection**.
The **Radios** panel also provides the ability to search for objects by characters contained in their names or IDs.
For information on filter configuration, see Filtering Radios.

Indication on Radio Element

The radio elements on the **Radios** panel, as well as on the custom console, have different color indication depending on the voice call status.
For information on color indication of voice calls to and from the radio, see Color Indication of Voice Calls.

The following indication is also used on the radio elements:

- The color of the element indicates the current status of a radio (blue means that a radio is online, gray means that a radio is offline).

- The Missed Call ( ) icon indicates that there are missed calls from the radio. Next to the icon, the number of missed calls is displayed.

- The Valid Coordinates ( ) or Outdated Coordinates ( ) icon indicates that the radio GPS coordinates are valid or outdated/missing. The icon appears only if the GPS service is activated and the coordinates update parameters are specified in the radio location settings. For details, see Configuring Radio GPS Settings.

- The **Man Down** caption indicates that the radio is currently in the Man Down mode.

- The **Emergency** caption indicates that the radio activated the emergency mode. You can manage the reported emergency from the **Emergencies** panel or using the **Exit Emergency Mode** option of the radio Actions menu. For details, see and Radio Actions.

> **NOTE**
> The Man Down mode is unavailable to SmartPTT Mobile users

- A notification about the reason why a call cannot be initiated can appear when you point at the element. After that the call attempts are continued.

4.1.4.1.1 Configuring Radios Panel

Follow the procedure to configure display of radios on the **Radios** panel.

Procedure:

1. On the menu bar, select **Tools → Radios**.
   The **Radios** panel appears.
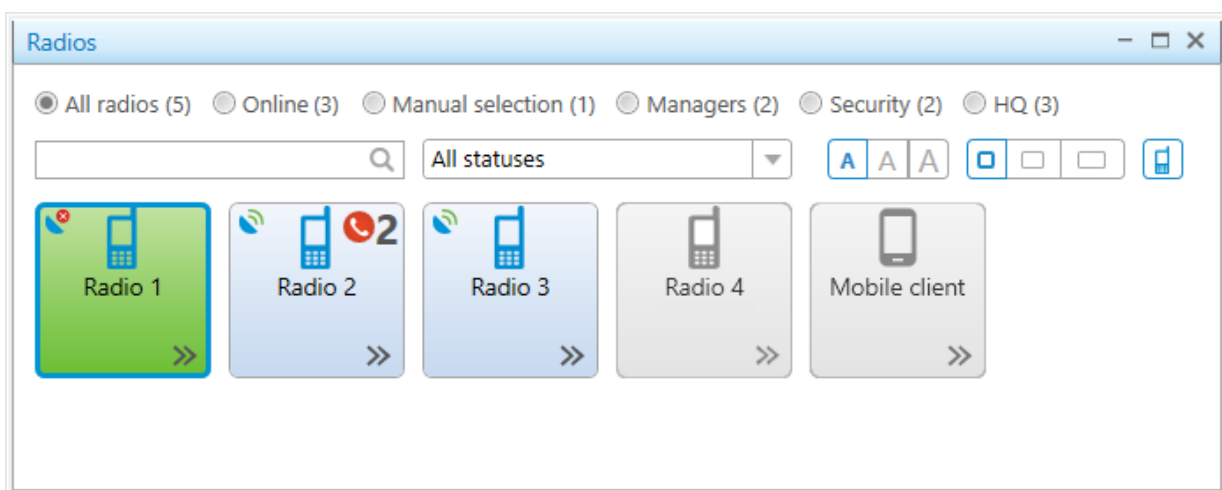
2. On the **Radios** panel, customize the display of elements:

To change the font size for radio names on all elements of the panel,	click the icon ( ) corresponding to the desired font size (small, medium or large).

To change the width of all elements on the panel,	click the icon ([▣▢▢]) corresponding to the desired element width (narrow, medium, or wide).
To display or hide the radio icon for all elements of the panel,	click Show Icon (📱). The radio icon disappears or appears on radio elements.

Postrequisites:

(Optional) Configure filtering on the **Radios** panel. For details, see Filtering Radios.

4.1.4.1.2 Filtering Radios

Follow the procedure to filter radios on the **Radios** panel.

Prerequisites:

- To filter radios by category, ensure the desired radio categories are created in SmartPTT Dispatcher. For details, see Managing Categories.

- To filter radios by statuses, ensure the desired statuses are created in SmartPTT Dispatcher. For details, see Managing Statuses.

Procedure:

1. On the menu bar, select **Tools → Radios**.
   The **Radios** panel appears.
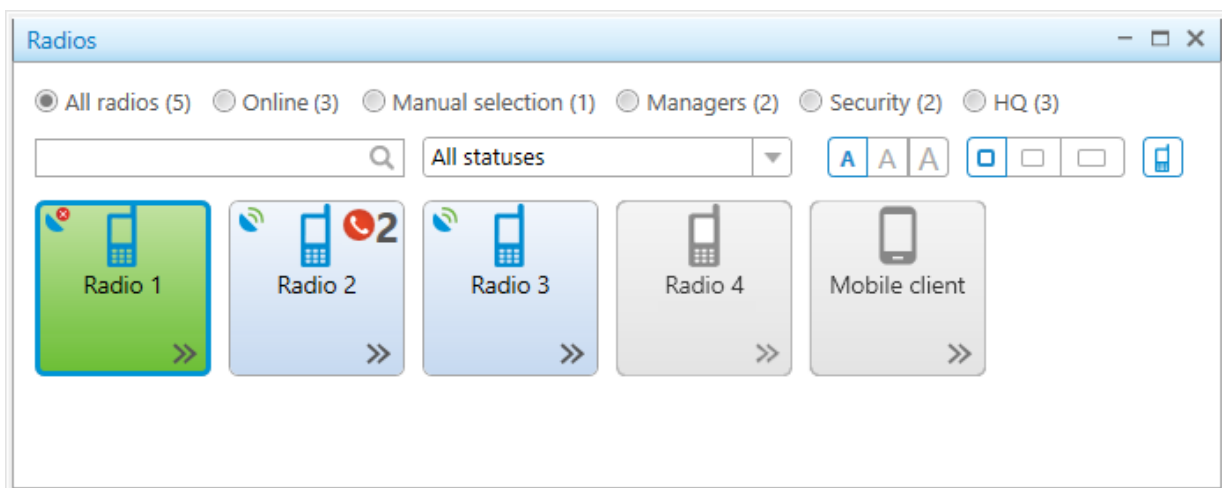
2. *(Optional)* To select radios manually, perform the following actions:

   a. Select **Manual selection**.

   b. Drag and drop the desired radios from the **Radio Fleet** panel to the **Radios** panel.
      Added radios appear when filtering using manual selection.

   c. *(Optional)* To delete a manually added radio from the panel, select the desired radio, and then press the Delete key.

3. Configure filtration:

|	
To display all radios registered in SmartPTT Dispatcher, regardless of their presence in the network at the moment,	select **All Radios**. **NOTE** With this option selected, unregistered radios that are currently online are also displayed.

To display radios that are currently online,	select **Online**.
To display radios added manually from the **Radio Fleet** panel,	select **Manual selection**.
To display all radios that belong to a category created in SmartPTT Dispatcher,	select the option with the name of the desired category.
To display the radios that are assigned a certain status,	from the status list, select the desired status.
To display radios that are not assigned any status,	from the status list, select *(empty)*.
To display specific radios,	perform the following actions: 1. In the search field (🔍), type the characters contained in the name or ID of the desired radios. **NOTE** The search is performed only among the radios that are currently displayed on the panel after applying all other filter parameters. 2. *(Optional)* To clear the search field and remove filtration, in the right part of the search field, click Clear (✕).

Postrequisites:

(Optional) Configure the display of radio elements on the **Radios** panel. For details, see Configuring Radios Panel.

4.1.4.2 Radio Actions

The radio Action menu provides the ability to perform various actions for interacting with a radio.

You can open the Actions menu in one of the following ways:

- By clicking the Actions (≫) button to the right of the radio name on the **Radio Fleet** panel.

- By clicking the Actions (≫) button on the desired radio element on the **Radios** or custom console panel.

- By right-clicking the radio on a map.

NOTE
You can also perform the desired actions in the radio Call Window.
For information on Call Windows, see Call Windows.

Hotkeys can be assigned to all actions related to radios. For details, see Assigning Hotkeys.

In the Actions menu of the radio, the following actions can be available:

Action	Description	Restrictions
Send Message (✉)	Opens the **Send Message** window in which you can type and send messages or manage message templates.	Available to DMR radios only. Unavailable if the operator does not have the **Send text messages** right. For information on the operator rights, see Operators.

Action	Description	Restrictions
Call Alert ( )	Sends the Call Alert command to the desired radio.	Available to DMR radios only.
Radio Check ( )	Sends the Radio Check command to the desired radio.	Available to DMR radios only.
Monitoring ( )	Initiates remote monitoring of the desired radio during which you can listen to the radio without notifying it. While the remote monitoring is active, the radio cannot initiate calls.	Available to DMR radios only. Unavailable if the operator does not have the **Remote monitor** right. Unavailable if desktop client authentication on SmartPTT Radioserver is enabled and the profile assigned to the client prohibits the **Monitoring** action. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.
Set Location ( )	Provides the ability to set the location of the radio on a map manually. If no map panel is open in the main area, the action opens the **Select Map** window from which you can select the map to set the radio location. For information on setting radio location, see <u>Setting Radio Location</u>.	Unavailable if the operator does not have the **Request radio location** right.
Show Track ( )	Shows the track of the radio for a specific period of time. You can select the following periods to show the track: • *For the last hour* • *For today* • *Specify a time range* (a custom period) If no map is open in the main area, the action opens the **Select Map** window, from which you can select the map to show the track. If *Specify a time range* is selected, you should manually set the **Start date** and **End date** in the open **Track** panel of the map control panel, and then click **Show**. For information on showing tracks showing, see <u>Displaying Tracks</u>.	Unavailable if the operator does not have the **Manage tracks** right.
Find on Map ( )	Shows the radio on a map.	Unavailable if the operator does not have the **Request radio location** right. Unavailable if desktop client authentication on SmartPTT

Action	Description	Restrictions
		Radioserver is enabled and the profile assigned to the client prohibits the **Radio location request** action.
Show Address (🏠)	Shows the radio address in the log of the open radio Call Window. Opens the window if it is closed. The radio address is based on the current GPS coordinates. If the address is unavailable, the *No Coordinates* entry appears in the log. If you reopen the Call Window, the address disappears from the log. **Important** The action is available only when the service of address data provider is active in SmartPTT Dispatcher. For details, see <u>Configuring Positioning Settings</u>.	Unavailable if the operator does not have the **Request radio location** right.
Remove from Map (📍)	Hides the radio on a map.	Unavailable if the operator does not have the **Request radio location** right.
Find on Indoor Map (🗺)	Shows the radio on the open building map. If the building map is closed, the action opens the **Select building plan** window in which you can specify a path to the desired map. **NOTE** The action is available only if the **Indoor tracking** check box is selected in the radio properties. For details, see <u>Configuring Indoor Radio Tracking</u>.	Unavailable for SmartPTT Mobile users. Unavailable if the operator does not have the **Request radio location** right. Unavailable if desktop client authentication on SmartPTT Radioserver is enabled and the profile assigned to the client prohibits the **Radio location request** action.
Block Radio (🔒)	Depending on SmartPTT Radioserver settings, the action denies access to a trunked system, or remotely switches the radio off. For information on blocking settings, see "Configuring Radioserver" in *SmartPTT Installation and Configuration Guide*.	Available to DMR radios only. Unavailable if the operator does not have the **Block/Unblock radios** right. Unavailable if desktop client authentication on SmartPTT Radioserver is enabled and the profile assigned to the client prohibits the **Block/Unblock radios** action.
Unblock Radio (🔓)	Sends the command to the radio which is opposite to the **Block Radio (🔒)** command.	
Make Conference Call (👥)	Opens the **Conference Calls** window from which the conference call can be initiated. For information on conference calls, see <u>Conference Calls</u>.	Available to DMR radios only. Unavailable if the operator does not have the **Make conference calls** right.

Action	Description	Restrictions
Call Telephone Subscriber ( )	Opens the **Telephone Subscribers** window, from which a call between the selected radio and a telephone subscriber can be initiated. **Important** The call is possible if the required settings are configured on SmartPTT Radioserver. For details, see "Connecting to SIP Server" in *SmartPTT Installation and Configuration Guide.*	Available to DMR radios only. Unavailable if the operator does not have the **Make telephone calls** right.
Create Point of Interest ( )	Opens the **Point of interest** window in which you can set the parameters of a point of interest and create it. By default the last radio coordinates are used. **NOTE** The action is unavailable if SmartPTT cannot request coordinates from a radio. For details, see Configuring Radio GPS Settings.	Unavailable if the operator does not have the **Manage points of interest** right.
Create Deferred Action ( )	Opens the **Create Deferred Action** window in which you can create a deferred action. For details, see Creating Deferred Messages.	Available to DMR radios only. Unavailable if the operator does not have the **Create deferred actions** right.
Properties ( )	Opens the **Radio Properties** window.	
Exit Emergency Mode ( )	Acknowledges an incoming emergency alarm. It turns off the emergency tone and the emergency indication. **NOTE** The action is available when a radio sends an emergency alarm.	Available to DMR radios only.

4.1.4.3 Deferred Actions

The Deferred Actions feature provides the ability to create and deliver various messages to offline and online radios. Offline radios receive the sent messages after becoming online, and online radios receive them right after sending.

In SmartPTT Dispatcher, the following types of deferred actions are possible:

- Actions with voice messages

- Actions with text messages

- Actions with combined messages (both voice and text)

Important
The Deferred Actions feature is available only to the Administrator and operators with the **Create deferred actions** permission. For details, see Operators.

After the radio receives the deferred message, the corresponding entry appears in the SmartPTT Dispatcher Event Log and SmartPTT Radioserver Event Log. If only a text message is sent, its entry also appears in the log of the radio Call Window.

You can use the Deferred Actions feature to perform the following actions:

- Create audio, text and combined deferred messages. For details, see Creating Deferred Messages.

- Edit and delete deferred actions. For details, see Managing Deferred Actions.

4.1.4.3.1 Creating Deferred Messages

Follow the procedure to create a deferred message.

Prerequisites:

- If you want to record an audio message, ensure the recording device is connected to the computer and is active.

- Ensure the operator has the **Create deferred actions** right. For details, see Operators.

Procedure:

1. Open the **Create Deferred Action** window in one of the following ways:

To open the window from the **Radio Fleet** panel,	click the Actions (≫) button next to the desired radio, and then click **Create Deferred Action** (🔄).
To open the window from the **Radios** panel,	click the Actions (≫) button on the desired radio element, and then click **Create Deferred Action** (🔄).
To open the window from the map panel,	on the map or on the expandable **Radios** panel, right-click the desired radio, and then click **Create Deferred Action** (🔄).
To open the window from the radio Call Window,	in the Call Window of the desired radio, click **Create Deferred Action** (🔄).

2. In the window that appears, from the **Radioserver** list, select the desired radioserver.

3. Create the desired deferred message:

To create an audio message,	perform the following actions: 1. Clear the **Send Text Message** check box. The field for typing message becomes unavailable. 2. Select the **Send Audio Message** check box. The **Record** button becomes available. 3. Click **Record**. The button changes to **Stop**; other elements become unavailable. 4. Speak into the microphone. 5. Click **Stop** after you have finished speaking. The button changes to **Record**; the **Play** button becomes available. 6. *(Optional)* Click **Play** to listen to the recorded message.

To create a text message,	perform the following actions:
	1. Clear the **Send Audio Message** check box. The **Record** button becomes unavailable.
	2. Select the **Send Text Message** check box. The field for typing message below becomes available.
	3. Type the desired message in the field.

To create a combined message that includes both audio and text messages,	perform the following actions:
	1. Select the **Send Audio Message** and **Send Text Message** check boxes.
	2. Record the audio message and type the text message according to the instructions above.

4. Click **Save**.
   If the action creating is successful, the *The action was successfully saved* message appears.

Postrequisites:

- To re-record the deferred audio message, repeat the corresponding actions of the step 3.
  If the re-recording is successful, when clicking **Save**, the *Changes were successfully saved* message appears.

- To change the text message, delete the text from the corresponding field, type a new text, and then click **Save**.

4.1.4.3.2 Managing Deferred Actions

Follow the procedure to edit or delete an existing deferred action.

Prerequisites:

- Ensure the radioserver whose deferred actions you want to manage is online.

- Ensure the operator has the **Create deferred actions** right. For details, see Operators.

Procedure:

1. Open the **Deferred Actions** window in one of the following ways:

To open the window from the **Create Deferred Action** window,	click the **View Deferred Actions** button.
To open the window from the menu bar,	click **Service → Deferred Actions**.

2. In the window that appears, from the **Current Radioserver** list, select the desired radioserver or *All radioservers*.

3. Click **Load Action List**.
   Existing deferred actions appear in the Deferred Actions Table below.

4. In the Deferred Actions Table, select the desired deferred action.

5. Perform the desired operation:

To edit the deferred action,	perform the following actions:
	1. Click **Edit (✏)**. The **Create Deferred Action** window appears.

2.   In the window that appears, perform the desired changes.

3.   Click **Save**.
      If the action changing is successful, the *Changes were
      successfully saved* message appears.

To delete the deferred action,	click **Delete (➖)**. The selected deferred action disappears from the Deferred Actions Table.

NOTE
If connection to the radioserver to which the selected deferred action belongs is lost after loading the action list, when clicking **Edit (🖊)** or **Delete (➖)**, the *Radioserver is unavailable* message appears.

4.1.5 Talkgroups

Talkgroups provide the ability to group several radios into a single group to transmit voice and other data to all group radios simultaneously. Dispatchers can perform various actions regarding radios in talkgroups, for example, receive and initiate calls, receive and send text messages, and assign tickets. To use talkgroups in SmartPTT Dispatcher, they must be configured in SmartPTT Radioserver Configurator. For details, see *SmartPTT Installation and Configuration Guide*.

Available talkgroups are displayed on the **Radio Fleet** panel as nodes. The Actions (≫) menu provides the ability to perform various actions with talkgroups. For details, see Talkgroup Actions.

You can use categories to group talkgroups. For details, see Categories.

The talkgroup icon (👥) is displayed next to talkgroup nodes. If the talkgroup is muted, the Mute (👥) icon is displayed.
The same icon is used for All Calls.
For information on All Calls, see All Calls.

The Talkgroup element is available for Custom Consoles. It provides the ability to interact with talkgroups and make All Calls.

Depending on the settings, the Call Window appears automatically when events connected with the talkgroup occur. You can also open this window by double-clicking the desired talkgroup on the **Radio Fleet** pane. For details, see Call Windows.

4.1.5.1 Talkgroup Actions

The talkgroup Actions menu provides the ability to perform various actions related to the talkgroups.

You can open the Actions menu by clicking the Actions (≫) button to the right of the talkgroup name on the **Radio Fleet** panel.

In the Actions menu of the talkgroup, you can perform the following actions:

Action	Description
Send Message (✉)	Opens the **Send Message** window where you can type and send messages or manage message templates. For details, see Sending Messages from the Send Message Window. The action is unavailable if the operator does not have the **Send text messages** right. For information on the operator rights, see Operators.
Make Conference Call (👥)	Opens the **Conference Calls** window where you can initiate a conference call. For information on the window, see Initiating Conference Calls from the Conference Calls Window.

Action	Description
	The action is unavailable if the operator does not have the **Make conference calls** right.
Call Telephone Subscriber ( )	Opens the **Telephone Subscribers** window where you can call a telephone subscriber.
	Important The call is possible if the required settings are configured on SmartPTT Radioserver. For details, see "Connecting to SIP Server" in *SmartPTT Installation and Configuration Guide*.
Mute ( ) / Unmute ( )	Mutes or unmutes the talkgroup.
	NOTE Some SmartPTT Dispatcher settings may prevent complete sound muting. For information on the sound settings, see Configuring Additional Sound Settings.
Selection of Audio Output Device ( )	Provides a list of audio output devices used to play the sound of the talkgroup. By default, *<No>* and *Main device* values are available. For information on configuring and assigning audio output devices, see Configuring Audio Output Devices and Assigning Audio Output Devices.
Exit Emergency Mode ( )	Confirms an incoming alarm, and then stops the alarm sound and emergency indication.
	NOTE The action is available when a radio sends an emergency alarm.
Properties ( )	Opens the talkgroup properties window, where you can assign telemetry actions and type a note for other SmartPTT Dispatcher users.

4.1.6 Dynamic Groups

SmartPTT Dispatcher provides the ability to display virtual groups created in the SmartPTT Mobile application. In SmartPTT Dispatcher, virtual groups that consist only of SmartPTT Mobile users are called dynamic groups.

To manage dynamic groups, you can perform the following actions:

- Create new and edit existing dynamic groups. For details, see Adding and Editing Dynamic Groups.

- Add members to a dynamic group and remove members from it. For details, see Adding and Editing Dynamic Groups.

- Mute and unmute dynamic groups.

NOTE
Dynamic group management is unavailable if desktop client authentication on SmartPTT Radioserver is enabled and the profile assigned to the client prohibits managing dynamic groups. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

You can use categories to group dynamic groups. For details, see Categories.

Virtual groups consisting of talkgroups and SmartPTT Mobile users appear in SmartPTT Dispatcher as cross patches between talkgroups and dynamic groups and are called multigroups. For details, see Cross Patches.

Dynamic groups can also be created in SmartPTT Dispatcher. The group must have at least two SmartPTT Mobile users. The dispatcher can add only registered users of the SmartPTT Mobile application (active or not) to the group.

NOTE
When creating a dynamic group in SmartPTT Dispatcher, a virtual group with the same members is created in the SmartPTT Mobile application.

The dispatcher can also edit the name or participants of dynamic groups, as well as delete them. The dispatcher can edit and delete dynamic groups both created in SmartPTT Dispatcher and created in the SmartPTT Mobile application.

NOTE
SmartPTT Mobile users cannot edit or delete dynamic groups created in SmartPTT Dispatcher.

The dynamic groups available in SmartPTT Dispatcher are displayed under the SmartPTT Mobile node on the **Radio Fleet** panel.

Dynamic Group Icon ( ) displays a dynamic group and its state:

- The blue color ( ) indicates that the group is active. If the group sound is muted, the Mute ( ) icon is displayed.

- The gray color ( ) indicates that the group is inactive. If the group sound was muted, the Mute ( ) icon is displayed.

Depending on the settings, the Call Window appears automatically when events connected with the dynamic group occur. You can also open this window by double-clicking the desired dynamic group on the **Radio Fleet** pane. For details, see Call Windows.

4.1.6.1 Adding and Editing Dynamic Groups

Follow the procedure to add a new or edit the existing dynamic group on the **Radio Fleet** panel.

Prerequisites:

Ensure the **Mobile Subscribers** virtual control station is added on the **Radio Fleet** panel.

Procedure:

1. On the **Radio Fleet** panel, perform one of the following actions:

To add a new dynamic group,	open the Actions ( ) menu of the **Mobile Subscribers** virtual control station, and then select **Create dynamic group** ( ).
To edit an existing dynamic group,	open the Actions ( ) menu of the desired group, and then select **Properties** ( ).

The **Dynamic group** window appears.
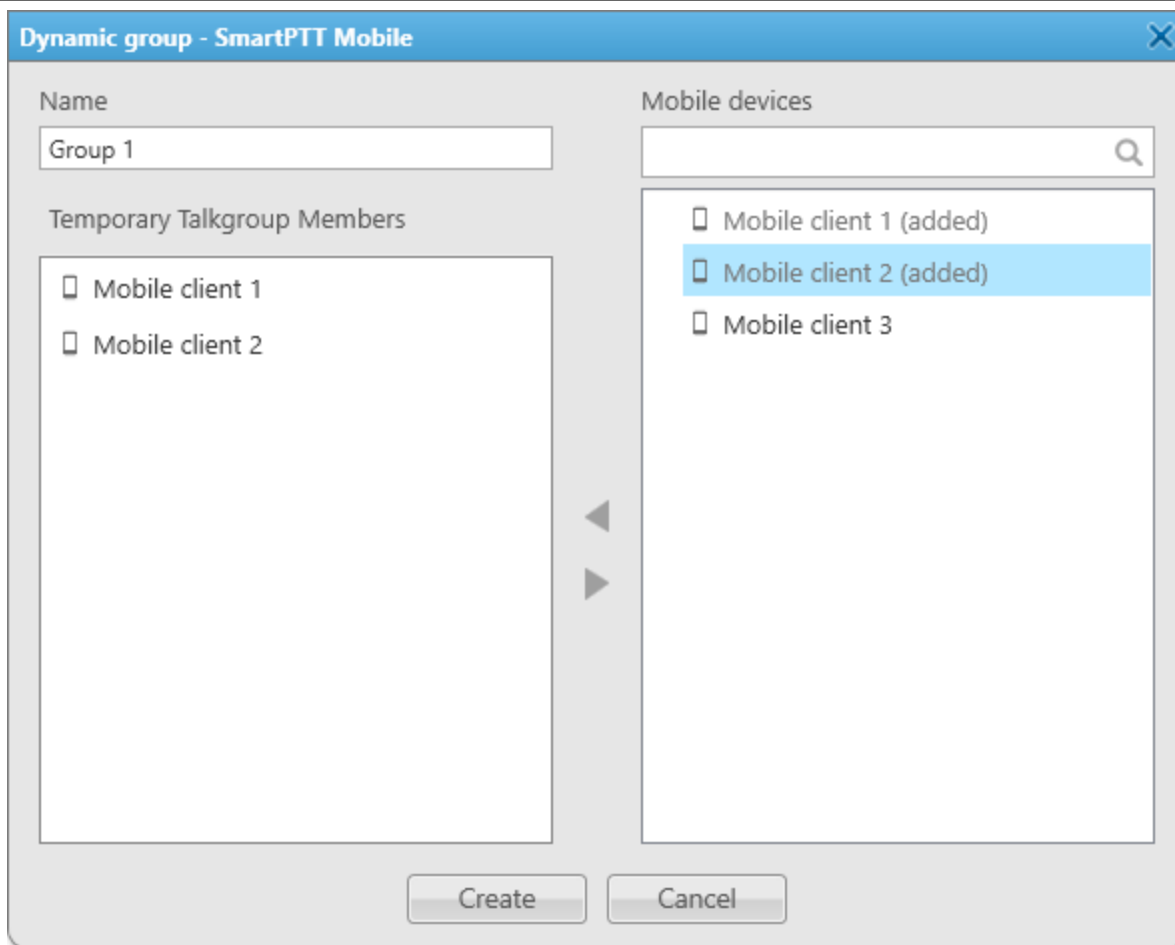
2. *(Optional)* In the window that appears, in the **Name** field, type the dynamic group name.

3. Edit the dynamic group member list:

To add the SmartPTT Mobile user to the dynamic group,	select the desired mobile client in the **Mobile devices** area, and then click the Add (◀) button. The selected mobile client appears in the **Temporary Talkgroup Members** area.
To remove the SmartPTT Mobile user from the dynamic group,	select the desired mobile client in the **Temporary Talkgroup Members** area, and then click the Remove (▶) button. The selected mobile client disappears from the **Temporary Talkgroup Members** area.

NOTE
You can also add or remove the SmartPTT Mobile users by double-clicking or dragging them to the desired area.

4. To complete configuration, click **Create/OK**.

Postrequisites:

To delete a dynamic group, in the Actions (≫) menu of the desired group, click **Delete (━)**, and then, in the **Confirmation** window, click **OK**. After a dynamic group is deleted, its members will receive a notification about it.

NOTE
If a dynamic group is participating in a cross patch or voice call, after you click **Delete**, a warning window appears with the indication that the group cannot be deleted.

4.1.7 Channels and Systems

Channels and systems represent control stations or virtual control stations, system-wide and local channels of conventional radio systems, and trunked radio systems.

Available radio systems and channels are displayed on the **Radio Fleet** panel as nodes. These nodes group radios, talkgroups, dynamic groups, and All Calls.

The channel icon displays the state of the channel:

- The blue color ( ) indicates that the channel is active. If the channel is muted, the Mute ( ) icon is displayed.

- The gray color ( ) indicates that the channel is inactive (the device is turned off or it is out of the network coverage). If the channel is muted, the Mute ( ) icon is displayed.

The channel node can be expanded or collapsed to show or hide the radios, talkgroups, dynamic groups, and All Calls. If the connection to the system is lost, the control disappears and all sub-entries are hidden.

You can select channels directly on the **Radio Fleet** panel. The selector appears in the **Status** column of the Object Table.

> **Important**
> To switch between the control station channels, an operator needs to have the **Change channel on control station** right. For information on the operator rights, see Operators.

> **NOTE**
> If no statuses are added in SmartPTT Dispatcher, the **Status** column disappears from the Object Table, and the channel selection control will be available only in the custom console.

The Actions ( ) menu provides the ability to perform various actions related to channels.

The Custom Console feature provides the Channel element to work with control stations and IP Site Connect available in the radio system. Using the Channel Selector element on the Custom Console, you can switch to the control station channel represented by the element.

The **Channels** panel provides the ability to manage channels and radio systems. For details, see Channels Panel.

4.1.7.1 Channel and System Actions

The channel Actions menu provides the ability to perform various actions related to channels.

You can open the Actions menu in one of the following ways:

- By clicking the Actions ( ) button to the right of the channel name on the **Radio Fleet** panel

- By clicking the Actions ( ) button of the desired channel on the **Channels** panel or in the Custom Console

In the Actions menu of the channel, you can perform the following actions:

Action	Description
Radio Dekey ( )	Interrupts all calls that are being made on the channel of the control station. Available to MOTOTRBO control stations only.
Reset Control Station ( )	Resets a control station. Available to MOTOTRBO control stations only. The action is unavailable if the operator does not have the **Reboot control station** right. For information on the operator rights, see Operators.

Action	Description
Mute (🔇) / Unmute (🔊)	Mutes or unmutes the channel. **NOTE** Some SmartPTT Dispatcher settings may prevent complete sound muting. For information on the sound settings, see Configuring Additional Sound Settings.
Mute Others ( )	Mutes all objects except for the desired channel.
Create dynamic group ( )	Opens the **Dynamic group** window where you can add a new dynamic group. For information on dynamic groups, see Dynamic Groups. Available to the SmartPTT Mobile virtual control station only.
Selection of Audio Output Device ( )	Provides a list of audio output devices used to play the sound of the channel objects. By default, *<No>* and *Main device* values are available. For information on configuring and assigning audio output devices, see Configuring Audio Output Devices and Assigning Audio Output Devices.
Properties ( )	Opens the channel properties window.
Exit Emergency Mode ( )	Confirms an incoming alarm, and then stops the alarm sound and emergency indication. **NOTE** The action is available when a radio sends an emergency alarm. Available to control stations only.

4.1.7.2 Channels Panel

The **Channels** panel displays information and provides controls for working with the control stations and IP Site Connect channels available in the radio system.

You can perform the following actions in the **Channels** panel:

- Initiate All Call on the desired channel. For details, see Initiating Group Voice Calls.

- Initiate a group call on the desired channel. For details, see Initiating Group Voice Calls.

- Open the control station or IP Site Connect channels Actions menu by clicking the Actions (≫) button on the channel element. For details, see Channel and System Actions.

- Mute or unmute the channel sound.

You can open the **Channels** panel by clicking **Tools** → **Channels** on the menu bar.

The font size for radio names on the panel elements, width of elements, and display of radio icons on elements can be configured. For details, see Configuring Channel Panel.

The **Channels** panel provides the ability to select groups and control station channels directly on channel elements. For details, see Configuring Channel Panel.

Important
To switch between the control station channels, an operator needs to have the **Change channel on control station** right. For information on the operator rights, see Operators.

On the **Channels** panel, you can see the name of the current call initiator and the call target. The call target is the list of available All Call and group call options on the channel. During an incoming group call, the selected group name changes to the group name to which the call is initiated.

The element color indicates the current state of the call on the channel. For information on call statuses and their color indication, see Color Indication of Voice Calls.

If there are no active calls on the channel, the color of its element indicates its current state:

- The blue color indicates that the channel is currently active but there are no active transmissions on it.

- The gray color indicates that the channel is currently inactive (the device is turned off or out of the network coverage).

4.1.7.2.1 Configuring Channel Panel

Follow the procedure to configure display of channels on the **Channels** panel.

Procedure:

1. On the menu bar, select **Tools → Channels**.
   The **Channels** panel appears.
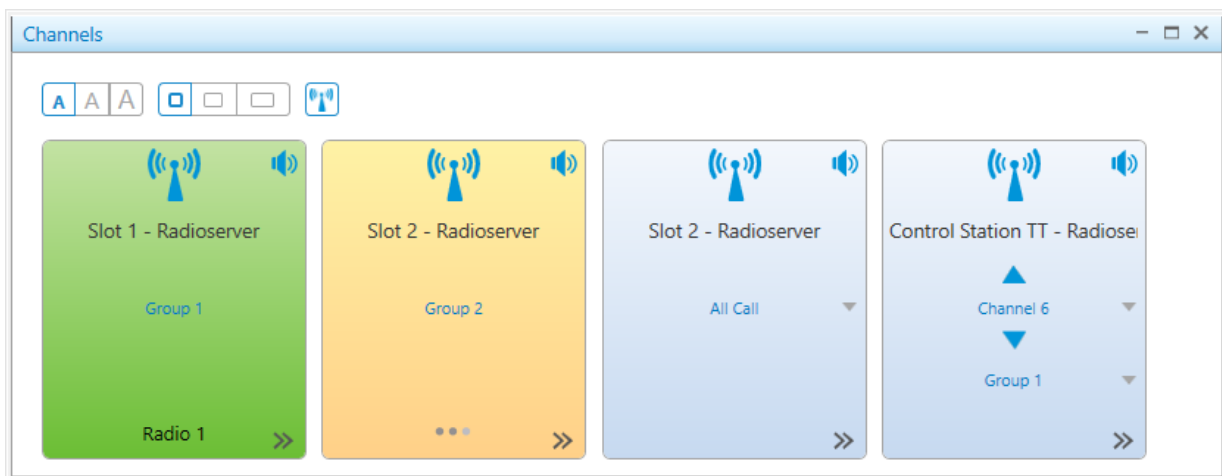
2. On the **Channels** panel, perform one of the following actions:

To change the font size for channel names on all elements of the panel,	click the icon (A A A) corresponding to the desired font size (small, medium, or large).
To change the width of all elements on the panel,	click the icon (□ □ □) corresponding to the desired element width (narrow, medium, or wide).
To display or hide the channel icon for all elements of the panel,	click Show Icon ( ). The channel icon disappears or appears on channel elements.
To mute or unmute a channel,	click **Mute ( )** or **Unmute ( )**.
To select a channel,	click Channel Selector buttons (▲ / ▼). **NOTE** The Channel Selector is available to control stations only.
To select a group,	perform the following actions: 1. Click the down arrow (▼) to open the group list.

2.   Select the desired group.

4.1.8 All Calls

The All Call feature provides the ability to initiate calls to all radios registered on a channel or in a system.

To use All Calls in SmartPTT Dispatcher, they must be configured in SmartPTT Radioserver Configurator. For details, see *SmartPTT Installation and Configuration Guide*.

The All Call Actions (≫) menu provides the ability to perform various actions related to All Calls.

You can open the Actions menu by clicking the Actions (≫) button to the right of the All Call entry on the **Radio Fleet** panel.

The Actions menu provides the following actions:

- Muting and unmuting All Calls.

> **NOTE**
> Some SmartPTT Dispatcher settings may prevent complete sound muting. For information on the sound settings, see Configuring Additional Sound Settings.

- Selecting audio output device to play the sound of All Call.
  For information on audio output devices configuring and assigning procedures, see Configuring Audio Output Devices and Assigning Audio Output Devices.

- Opening the All Call properties window, where you can type a note for other SmartPTT Dispatcher users.

The All Call nodes are displayed only when the **Filter by channel ( )** view is active.

The All Call icon ( ) is displayed next to All Call nodes. If All Call is muted, the Mute ( ) icon is displayed.
The same icon is used for talkgroups.
For information on talkgroups, see Talkgroups.

Depending on the settings, the Call Window appears automatically when events connected with All Call occur. You can also open this window by double-clicking the desired All Call entry on the **Radio Fleet** pane. For details, see Call Windows.

4.2 Voice Calls

SmartPTT Dispatcher provides the ability to initiate and receive voice calls.

> **Important**
> For voice calls to be available, the installed license must include voice transmission for the corresponding radio system. For details, see Licenses.
> Making voice calls to the radio network and receiving calls from radios in SmartPTT Dispatcher are available only to the Administrator and operators with the **Make voice calls** right. For details, see Operators.

A dispatcher can monitor calls initiated by radios and telephone calls transmitted within the radio network, as well as transmissions from other dispatchers in the system.
For information on muting other dispatchers, see Configuring Additional Sound Settings.

SmartPTT Dispatcher supports the ability to turn sound on and off and select an audio output device for specific talkgroups, channels, and systems. For details, see Sound Management.

An operator can send voice notifications to talkgroups. For this, voice notifications must be configured on SmartPTT Radioserver: the sound file to be played and the list of channels where it will be played must be specified. Voice notifications are sent to radio networks as voice transmissions. They cannot be sent in radio networks where voice calls are not licensed or configured. For details, see Voice Notifications.

> **Important**
> Initiating and receiving voice calls, monitoring private calls, as well as voice actions applicable to individual radio system objects (configuring sound, calling telephone subscribers, making conference calls, sending voice notifications) are unavailable if desktop client authentication on SmartPTT radioserver is enabled and the profile assigned to the client prohibits actions with voice calls. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

The main tool for monitoring ongoing calls and viewing call history in SmartPTT Dispatcher is the **Calls** panel.
For information on the panel, see Calls Panel.

All voice calls in SmartPTT Dispatcher have various color indication depending on their status.
For information on color indication of voice calls, see Color Indication of Voice Calls.

The Administrator can select the desired call mode (single click/tap or hold a call element) in the settings of pointing devices. For details, see Control Devices.

Private and Group Calls

SmartPTT Dispatcher provides the ability to make private calls to radios and group calls which include calls to talkgroups and All Calls.

A dispatcher can initiate private and group calls in one of the following ways:

- Using a PTT button on the **Radio Fleet** panel. For details, see Radio System Objects.

- Using the PTT button in the corresponding Call Window. For details, see Call Windows.

- Using the corresponding custom console element. For details, see Custom Consoles.

- Using a finished call entry on the **Calls** panel.

- Using hotkeys. For details, see Assigning Hotkeys.

Private calls can also be initiated using radio elements on the **Radios** panel. For details, see Radios Panel.
Group calls in IP Site Connect networks and over control stations can be initiated using channel elements on the **Channels** panel. For details, see Channels Panel.

For information on initiating a voice call from SmartPTT Dispatcher panels or a Call Window, see Initiating Private Voice Calls and Initiating Group Voice Calls.
For information on initiating voice calls using a finished call entry, see Initiating Voice Calls on Calls Panel.

Dispatchers can receive private calls from any radio that appears in the list of radios available in SmartPTT Dispatcher. They also receive group calls targeted to any talkgroup (or All Call) they see in the user interface.

Multicalls

For operator convenience, SmartPTT Dispatcher provides the ability to initiate calls to several selected radios and/or talkgroups, including All Call, simultaneously.

Multicalls can be initiated in the following ways:

- On the **Radios** panel

- On the **Channels** panel

- On the custom console panel

To initiate a multicall, it is necessary to select the desired radio object elements while holding the Ctrl or Shift key. The blue frame appears on the object elements.

> **NOTE**
> The same action must be performed to deselect the radio object elements.

A call to the selected objects is initiated using a hotkey for the PTT button (the Space key by default). When the call is initiated, the radio objects become yellow (◼).

Multicalls can also be initiated using the PTT element on the Panel element of a custom console if multiple radios and/or talkgroups are added to the Panel element, and using the Multiselect element. For details, see Custom Consoles.

Other Calls

SmartPTT also supports the following types of voice calls:

- The broadcast call is a group call or an All Call on all available channels of the dispatched radio system at the same time made using the Broadcast Call element of a custom console. For details, see Custom Consoles.

- Phone calls:

  - Voice call from a radio to a telephone subscriber

  - Voice call from a talkgroup to a telephone subscriber

  - Voice call from a telephone subscriber to a talkgroup or the All Call ID

  - Voice call from a telephone subscriber to a radio

  - Voice call from SmartPTT Dispatcher to a telephone subscriber

  - Voice call from a telephone subscriber to SmartPTT Dispatcher

  For information on phone calls, see Telephone Interconnect Settings and Telephone Interconnect. Also, see "SIP Telephony" in *SmartPTT Installation and Configuration Guide*.

  Important
  Access to full functionality of the telephony features requires installing the corresponding license.

  An operator can also call telephone subscribers for the desired radios or talkgroups. For details, see Connecting Radios with Telephone Subscribers.

  Important
  Communicating with telephone subscribers is available only to the Administrator and operators with the **Make telephone calls** right.

- Voice calls between dispatchers. For details, see Dispatchers.

  Important
  Communicating with external dispatchers is available only to the Administrator and operators with the **Connect with external dispatchers** right.

- Conference calls with radios, talkgroups, dispatchers, and telephone subscribers. For details, see Conference Calls.

  Important
  Conference calls are available only to the Administrator and operators with the **Make conference calls** right.

4.2.1 Color Indication of Voice Calls

For operator convenience, all voice calls in SmartPTT Dispatcher have color indication that depends on the voice call status. This indication informs the operator about the current voice call status, thus allowing to work faster with the main functionality of the dispatch system.

In SmartPTT Dispatcher, the following colors of radio object elements are used during voice calls:

Color	Indication	Call Status
Light yellow		Establishing connection via the radio channel. Refers to outgoing calls made by the dispatcher.
Yellow		Sending a voice transmission to a radio. Refers to outgoing calls made by the dispatcher.
Green		Sending a voice transmission from a radio to SmartPTT Dispatcher, including the (remote) monitoring mode. Refers to incoming calls received by the dispatcher.
Blue		Channel hold mode (none of the parties are transmitting the voice call). Clicking the PTT button before the hold time expires resumes the call. Clicking it after initiates a new call. **NOTE** The duration of hangtime can be different for different radio objects.

During voice calls, color indication is displayed on the following SmartPTT Dispatcher controls:

- Ongoing call entries on the **Calls** panel. For details, see Calls Panel.

- PTT buttons of the **Radio Fleet** panel. For details, see Radio System Objects.

- The **Radios** panel elements. For details, see Radios Panel.

- The **Channel** panel elements. For details, see Channels Panel.

- The custom consoles elements. For details, see Custom Consoles.

- The PTT button in a Call Window. For details, see Call Windows.

- PTT buttons of the **Cross Patches** panel. For details, see Cross Patches.

- The PTT button of an emergency notification on the **Emergencies** panel. For details, see Emergency.

- The PTT button of an alert notification on the **Notifications** panel. For details, see Notification Panels.

Color indication of radio objects elements during voice calls is accompanied by additional information (for example, the names of the voice call initiator and recipient).

In addition, the color of radio objects elements can be changed in the following cases:

- During the radio object status change (online or offline)

- When changing the radio object element color in the Custom Console

4.2.2 Initiating Private Voice Calls

Follow the procedure to initiate a private call.

> **NOTE**
> A call can also be initiated using hotkeys.
> For information on hotkeys, see Control Devices.

Prerequisites:

- Check the current settings of pointing devices. For details, see Control Devices.

- Ensure one of the following panels or windows is open:

    - The **Radio Fleet** panel. For details, see Radio System Objects.

    - The **Radios** panels. For details, see Radios Panel.

    - The radio Call Window. For details, see Call Windows.

    - The Custom Console panel. For details, see Custom Consoles.

- Ensure the operator has the **Make voice calls** right.
  For information on the operator rights, see Operators.

- If desktop client authentication on SmartPTT Radioserver is enabled, ensure that the profile assigned to the client allows voice calls. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

Procedure:

1. Initiate a private call in one of the following ways:

To initiate a private call using the PTT button,	press and hold, or click the PTT button of the desired radio. For information on configuring the way to initiate a voice call, see Configuring Call Element Actions.
To initiate a private call using the Radio element on the **Radios** panel,	press and hold, or click the Radio element of the desired radio. For information on configuring the way to initiate a voice call, see Configuring Call Element Actions.

   The PTT button or the Radio element becomes light yellow (▢), and three dots appear on it.

2. After the color indication appears, perform the following actions:

If the PTT button or the Radio element becomes yellow (▢), and three dots appear on it,	perform the following actions: 1. Speak in your microphone. 2. Release or click again the PTT button or the Radio element to end the radio transmission.
If the PTT button or the Radio element becomes light-green (▢),	perform the following actions: 1. When the PTT button or Radio element becomes green (▢), listen to the radio transmission. The PTT button or the Radio element becomes blue (▢), when the radio ends the transmission. 2. Click the PTT button or the Radio element again.

3. When the PTT button or the Radio element becomes yellow (■), speak in your microphone.

4. To end the radio transmission, release or click again the PTT button or the Radio element.

When the radio transmission is over, the PTT button or the Radio element becomes blue (■).

3. When the blue color indication (■) appears, perform one of the following actions:

To transmit again,	repeat step 1.
To listen to the radio transmission,	wait until the PTT button or the Radio element becomes green (■), and you hear the other participant's voice from your speakers or headset.
To end the call,	wait until the blue indication (■) disappears.

4.2.3 Initiating Group Voice Calls

Follow the procedure to initiate a call into a talkgroup, or an All Call.

> **NOTE**
> A call can also be initiated using hotkeys.
> For information on hotkeys, see Control Devices.

Prerequisites:

- Check the current settings of pointing devices. For details, see Control Devices.

- Ensure one of the following panels or windows is open:

  - The **Radio Fleet** panel. For details, see Radio System Objects.

  - The **Channels** panel with a talkgroup or an All Call selected on the desired channel element. For details, see Channels Panel.

  - The desired Call Window. For details, see Call Windows.

  - The Custom Console panel. For details, see Custom Consoles.

- Ensure the operator has the **Make voice calls** right.
  For information on the operator rights, see Operators.

- If desktop client authentication on SmartPTT radioserver is enabled, ensure that the profile assigned to the client allows voice calls. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

Procedure:

1. Initiate a group call or All Call in one of the following ways:

To initiate a call using the PTT button,	press and hold, or click the PTT button of the desired talkgroup or All Call.
To initiate a call using the Radio element,	press and hold, or click the Group Call or All Call element.

The PTT button or the call element becomes light yellow (■), and three dots appear on it.

2. When the PTT button or the call element becomes yellow (■), speak in your microphone.

3. To end the transmission, release or click again the PTT button or the call element.
    The PTT button or the element becomes blue (■).

4. When the blue color indication (■) appears, perform one of the following actions:

To transmit again,	repeat step 1.
To listen to the radio transmission,	wait until the PTT button or the call element becomes green (■), and you hear the other participant's voice from your speakers or headset.
To end the call,	wait until the blue indication (■) disappears.

4.2.4 Calls Panel

The **Calls** panel provides the list of entries with information on ongoing and finished calls. These entries provide the ability to perform the following actions:

- Make a call to the recipient radio or into the recipient talkgroup by clicking the call entry

- Answer the incoming call for the dispatcher by clicking the call entry

- Track the ongoing call state

- See the history of all calls in the radio network, time of a call, and its duration (during the current session only)

- Initiate a call by clicking the button with the initiator or recipient name

The panel displays only calls that occur in the radio system.

The first time you install SmartPTT Dispatcher, the **Calls** panel opens automatically. The panel can also be opened or closed manually. You can open the **Calls** panel by clicking **Tools → Calls** on the menu bar.

> **Important**
> To initiate voice calls, an operator must have the **Make voice calls** right.
> For information on the user roles, see Operators.

> **Important**
> If desktop client authentication on SmartPTT Radioserver is enabled and the profile assigned to the client prohibits actions with voice calls, you will not be able to initiate and receive voice calls. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

A call entry on the **Calls** panel can be of two types:

- Ongoing call entry

- Finished call entry

An ongoing call entry displays the current transmission or hang time. It provides dispatchers with the ability to answer an incoming call or make a call to the recipient radio or to the recipient talkgroup by clicking anywhere on the call entry.
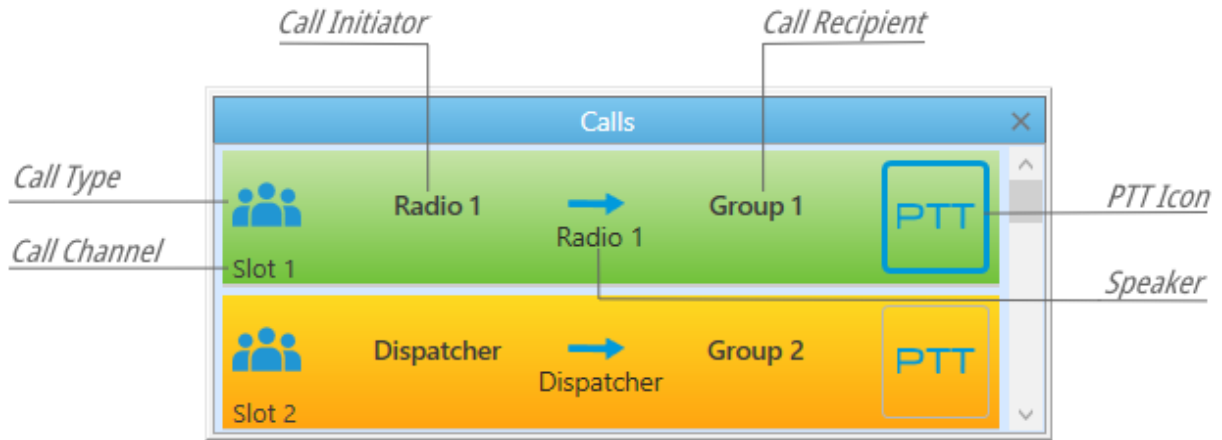
A call status is determined by the color of the call entry.

For information on the color indication of voice calls, see Color Indication of Voice Calls.

NOTE
During remote monitoring, the monitored radio is displayed as Call Initiator and Speaker.

NOTE
If the user authorization service is activated, the name of the currently authorized user is displayed next to the radio name in parentheses.

If a call cannot be initiated but call attempts continue, the reason why call is not initiated can be displayed on the call entry instead of the speaker name.
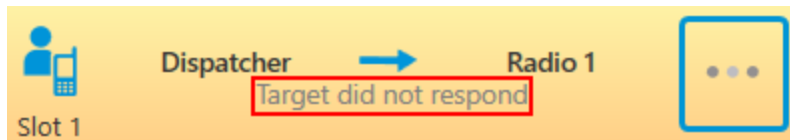
Entries of finished calls provide the ability to see information about the registered call and to initiate a call by clicking the Call Initiator or the Call Recipient name.
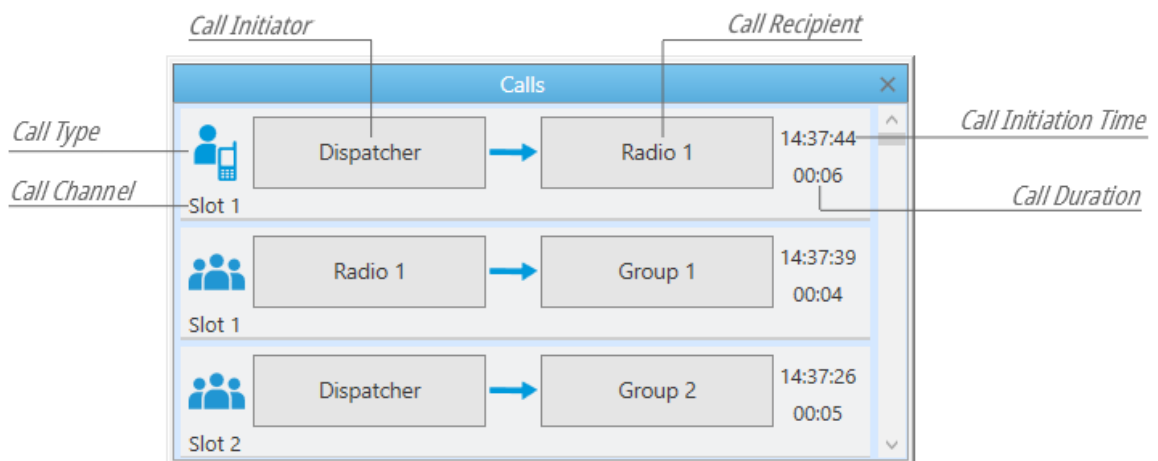
For information on initiating voice calls on the **Calls** panel, see Initiating Voice Calls on Calls Panel.

4.2.4.1 Initiating Voice Calls on Calls Panel

Follow the procedure to initiate a private or a group call using the finished call entry on the **Calls** panel.

> **NOTE**
> A call can also be initiated using hotkeys.
> For information on hotkeys, see Assigning Hotkeys.

Prerequisites:

- Check the current settings of pointing devices. For details, see Configuring Call Element Actions.

- Ensure the **Calls** panel is open.

Procedure:

1. Initiate a call by clicking the Call Initiator or the Call Recipient name.
   A new ongoing call entry appears at the top of the **Calls** panel. The call entry becomes light yellow (▪), and the button with three dots appears on it.

2. When the call entry becomes yellow (▪), start speaking in your microphone.
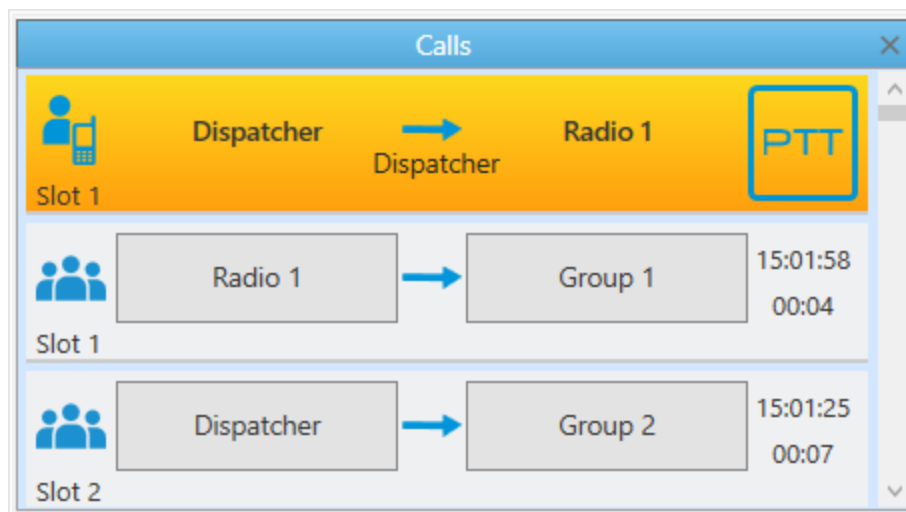
3. To end the transmission, click the ongoing call entry.
   The call entry becomes blue (▪).

4. When the blue color indication (▪) appears, perform one of the following actions:

To start the transmission again,	click the ongoing call entry.
To listen to the transmission of another participant of the call,	wait until the ongoing call entry becomes green (▪), and you hear the another participant's voice from your speakers or headset.
To end the call,	wait until the blue indication (▪) disappears.

4.2.5 Sound Management

SmartPTT Dispatcher provides advanced sound management features for various objects and events in the radio system:

- Audio output device selection.
  To assign a personal audio output other than the main device, the desired audio output device must be added and configured by the Administrator in the **Sound Settings** window. For details, see Configuring Audio Output Devices.

- Muting and unmuting.

> **NOTE**
> Some SmartPTT Dispatcher settings may prevent complete sound muting. For details, see Audio System.

- Adjusting volume.

The main tool for managing volume of selected/unselected objects and system sounds in SmartPTT Dispatcher is the **Sound** panel.

Selected objects are objects that were selected by the user. These objects are highlighted with a blue frame. The objects with an open and active Call Window are also considered selected.

> **NOTE**
> The name of the selected object is displayed on the SmartPTT Dispatcher information bar in green. For details, see SmartPTT Dispatcher Interface Configuration.
> If several objects are selected, the *Multiselect* caption appears.

System sounds include the following sounds:

- Alert sound for a triggered rule

- Sound of a transmission initiating

- Notifications of dispatcher and telephone subscriber incoming calls

- Ringing sound when calling a telephone subscriber or dispatcher

- Sound of call records played from the SmartPTT Dispatcher or SmartPTT Radioserver Event Log

- Sound of system messages

- Call Alert tone

The **Sound** panel also provides the ability to adjust the microphone volume and contains the audio visualizer that displays the volume of incoming and outgoing sound (voice, audio, tones) on audio frequencies supported by the codec.

> **NOTE**
> In addition to the **Sound** panel, muting/unmuting the dispatcher's microphone is available in the **Dispatchers** (when communicating with another dispatcher) and **Conference Calls** windows.

For information on adjusting volume on the **Sound** panel, see Adjusting Volume of Objects and System Sounds and Adjusting Microphone Volume.

Sound management features are available in SmartPTT Dispatcher according to the following table:

Objects or Events	Selection of Audio Output Device	Muting/Unmuting	Adjusting Volume
Selected Objects **Unselected Objects** **System Sounds**	In the **Sound Settings** window **Important** The window is available only to the Administrator.	On the **Sound** panel	On the **Sound** panel

Objects or Events	Selection of Audio Output Device	Muting/Unmuting	Adjusting Volume
Call Records	In the **Sound Settings** window (System sounds)	On the **Sound** panel (System sounds)	• On the **Sound** panel (System sounds) • In the **Play Records** window
Call Alert	In the **Sound Settings** window (System sounds)	On the **Sound** panel (System sounds)	• On the **Sound** panel (System sounds) • In the **General Settings** window **Important** The window is available only to the Administrator.
Emergency Alarms	In the **Sound Settings** window (Alarm)	On the **Emergencies** panel	N/A
Emergency Calls	In the **Sound Settings** window (Alarm)	• In the Actions menu of the corresponding channel • On the corresponding channel element of the **Channels** panel • On the corresponding channel element of a Custom Console	In the **Control Station** window of the corresponding channel
Radioservers	• In the **Sound Settings** window • In the Actions menu	N/A	N/A
Channels and Systems	• In the **Sound Settings** window • In the Actions menu	• In the Actions menu • On the element of the **Channels** panel • On the element of a Custom Console	In the **Control Station** window
Talkgroups	• In the **Sound Settings** window • In the Actions menu	• In the Actions menu • On the element of a Custom Console	N/A
All Calls	In the Actions menu	• In the Actions menu • On the element of a Custom Console	N/A
Dynamic Groups	N/A	In the Actions menu	N/A
Cross Patches Multiselect Groups	N/A	• In the Actions menu	N/A

Objects or Events	Selection of Audio Output Device	Muting/Unmuting	Adjusting Volume
		• On the element of a Custom Console	
Phone Calls	N/A	N/A	In the **Telephone Interconnect** window
			Important The window is available only to the Administrator.
Conference Calls	N/A	In the **Conference Calls** window	N/A

SmartPTT Dispatcher also provides the ability to mute all objects except for the desired channel using the Actions menu of that channel.

4.2.5.1 Adjusting Volume of Objects and System Sounds

Follow the procedure to adjust the volume of selected/unselected objects or system sounds.

Procedure:

1. If the **Sound** panel is closed, on the menu bar, click **Tools → Sound**.
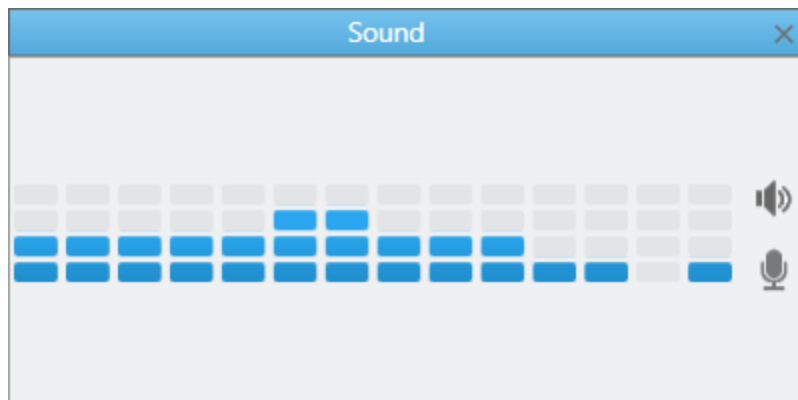
2. On the **Sound** panel, click **Speakers ( )**.
    The volume sliders appear.
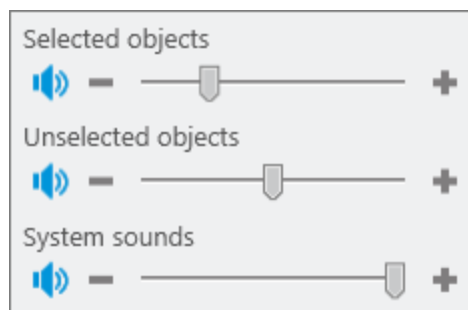
3. Adjust the volume of selected/unselected objects or system sounds:

To increase the volume,	move the desired volume slider to the right, or click the Increase Volume (+) button.

To decrease the volume,	move the desired volume slider to the left, or click the Decrease Volume (➖) button.
To mute the sound,	click **Mute** (🔊) next to the desired slider. The button changes to **Unmute** (🔇).
To unmute the sound,	click **Unmute** (🔇).

4.2.5.2 Adjusting Microphone Volume

Follow the procedure to adjust the microphone volume.

Procedure:

1. If the **Sound** panel is closed, on the menu bar, click **Tools** → **Sound**.
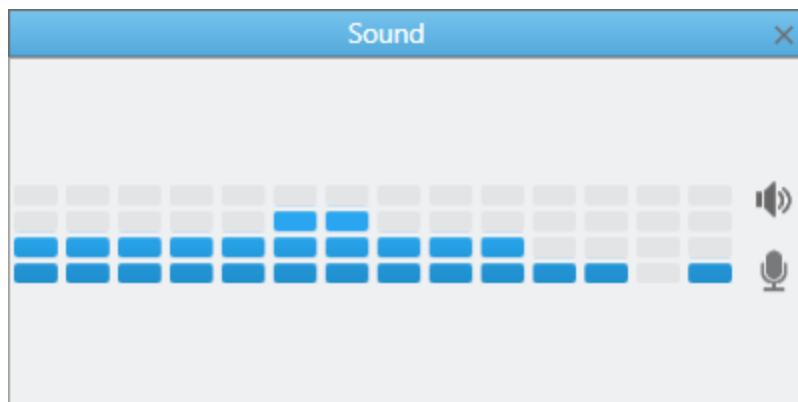
2. On the **Sound** panel, click **Microphone** (🎤).
    The volume slider appears.

3. Adjust the volume of the microphone:

To increase the volume,	move the volume slider to the right, or click the Increase Volume (➕) button.
To decrease the volume,	move the volume slider to the left, or click the Decrease Volume (➖) button.
To mute the microphone,	click **Mute** (🎤) next to the slider. The button changes to **Unmute** (🎤).
To unmute the microphone,	click **Unmute** (🎤).

4.2.6 Voice Notifications

A voice notification is a preconfigured audio file that can be sent to a talkgroup or during All Call as a voice transmission.

The Voice Notification feature provides the ability to play pre-recorded messages for the selected talkgroups and All Calls to inform users about emergencies or deliver other important information in audio format.

Voice notifications are created and configured in SmartPTT Radioserver Configurator. For details, see "Voice Notifications" in *SmartPTT Installation and Configuration Guide*.

Voice notifications are visible only to operators whose profiles have the corresponding permissions and can only be managed by them.

If all recipients are busy, voice notifications will be put in queue and transmitted when their recipients become available.

A voice notification can interrupt an ongoing transmission. The voice notification priority depends on the system settings. For information on voice notifications priority in the dispatched radio systems, contact your system administrator.

All voice notifications are logged in the SmartPTT Dispatcher and SmartPTT Radioserver event logs as a separate type of events. The notification icon color in the SmartPTT Dispatcher Event Log determines if the iteration was successful (blue icon) or played with errors/not all recipients were reached (red icon).

During voice notification transmissions, SmartPTT Dispatcher provides amount of successful and failed transmissions as well as how many iterations left. Operator is notified when a voice notification was queued or not delivered.

> **NOTE**
> SmartPTT Dispatcher does not provide details on voice notifications. To obtain information about the selected audio file, channels for which the notification is assigned, and playback parameters, contact your system administrator.

Voice notifications can be played in one of the following ways:

- From the **Voice Notifications** window. For details, see Playing Voice Notifications.

- Using the Voice Notification element in custom consoles. For details, see Custom Console Elements.

- Automatically, when triggered by a rule configured in SmartPTT Radioserver Configurator. For details, see "Rules" in *SmartPTT Installation and Configuration Guide*.

The **Voice Notifications** window displays the notification playback details even if the notification is played from a custom console or triggered by an event configured in the rule in SmartPTT Radioserver Configurator.

The voice notification playback status is indicated by the color of its entry in the **Channels** table of the **Voice Notifications** window:

- Yellow (▮) indicates that the voice notification is currently playing. The lighter yellow shade means that the notification is in queue.

- Green (▮) indicates that the voice notification has been successfully played.

- Red (▮) indicates that the voice notification was not played due to connection, audio file, or hardware problems.

If the same notification is available for several operators, all operators will see its playback status change.

Conflict Resolution

If multiple voice notifications are started simultaneously, it can lead to situations where two or more notifications must be played for the same recipient. Such situations are resolved automatically by SmartPTT based on the current state of the system.

Only one time slot of a conventional radiosystem can be used to transmit a notification at a given moment. SmartPTT Radioserver Configurator does not allow to select more than one talkgroup for each conventional channel to prevent collisions. Trunking networks do not have such limit, so the system is able to send notifications to as many talkgroups as there are free channels. If the number of available channels is not enough, only the first talkgroups in the list will be notified.

If a voice notification is configured to be played to a specific list of recipients, no matter who starts it, it will be sent to all those recipients, even if the profile of the current initiator of the voice notification limits access to some of them.

If some of the recipients are busy or unavailable, the voice notification will be played only for the currently available recipients. The system will notify the operator that the voice notification was not properly played for all recipients.

If all recipients are currently busy, the voice notification will be put in queue until any recipient become available. Once the recipient is available, voice notification will start playing. The system notifies the operator about queued voice notifications.

If all recipients are unavailable (radio system is disconnected from the radioserver), the voice notification will be canceled, and the operator will be notified about it.

If multiple notifications are to be transmitted to the same recipient, there are two possible ways to resolve it:

- If none of the notifications is set to interrupt other notifications, they will use queueing to be played one after another.

- If one of the notifications is allowed to interrupt other notifications, it will clear the channel and start the transmission.

Voice notifications can not interrupt the following types of calls:

- Ongoing phone call

- Ongoing analog call on an analog control station

- All Call in NAI CPSS and NAI CMSS systems

- All Call or Emergency call in the Capacity Max system

Access Control

A voice notification configuration contains a set of talkgroups. If any of these talkgroups are available to the operator, the voice notification will be available to that operator. Voice notification will be unavailable to operator only if all talkgroups in voice notification are unavailable to them.

Unavailable voice notifications will be hidden from the **Voice Notifications** window. If any voice notifications were used as elements of custom console, the elements will be grayed out and there will be no information about voice notification content, recipients and/or its state.

4.2.6.1 Playing Voice Notifications

Follow the procedure to send a voice notification from the **Voice Notification** window.

Prerequisites:

Ensure the voice notifications are activated and configured in SmartPTT Radioserver Configurator. For details, see "Managing Voice Notifications" in *SmartPTT Installation and Configuration Guide*.

Procedure:

1. On the menu bar, click **Service →Voice Notifications**.
   The **Voice Notifications** window appears.
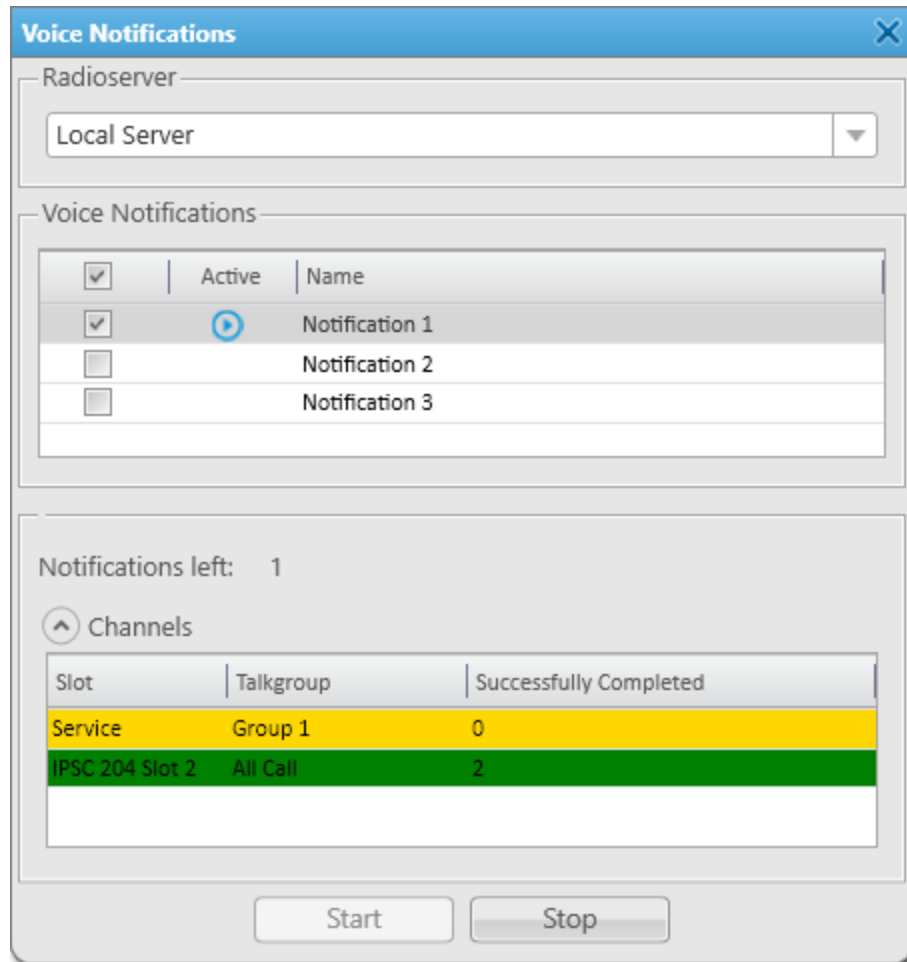
2. In the **Radioserver** area, select the desired server from the list.

   NOTE
   Only servers that are currently active and registered in SmartPTT Dispatcher are displayed in the **Radioserver** list.

3. In the **Voice Notifications** area, in the table, select the desired voice notification to send.

4. At the bottom of the window, click **Start** to start the voice notification playback.
   The information on the playback appears in the **Channels** table.

Postrequisites:

To stop the voice notification playback, click **Stop**.

   NOTE
   If you click the **Stop** button, you will not be able to resume the current voice notification playback.

4.2.7 Interrupt/Remote Dekey

SmartPTT Dispatcher provides the ability to interrupt voice calls for higher priority information transmission. This option depends on the type of call (its priority) and the radio network settings.

Feature Glossary

Voice call interrupt – polite termination of a voice call from another radio performed by a dispatcher. Voice call interrupt clears the corresponding channel in compliance with the interrupt protocol. It provides the ability to clear the channel for a higher priority call and can also be useful when the channel is busy due to some technical problem with the radio..
For information on the protocols, see the "Configuring SmartPTT Identification" section in SmartPTT *Installation and Configuration Guide*.

Remote Dekey – polite termination of a voice call from another radio performed by a dispatcher with the subsequent occupation of the channel and initiation of a new voice call on the free channel. Remote dekey clears the corresponding channel in compliance with the interrupt protocol. The Remote Dekey feature provides the ability to initiate a call immediately on the channel where the interrupted call was made. Interruption can be initiated by a radio network object that has the right to interrupt a voice call.

Feature Description

In some networks, such as IP Site Connect, the dispatcher can interrupt voice calls from radios, and conversely, radios can interrupt voice calls of the dispatcher if the appropriate settings are configured. The interrupt and Remote Dekey settings are configured on SmartPTT Radioserver. For details, see "MOTOTRBO Radio Systems" in *SmartPTT Installation and Configuration Guide* or the SmartPTT Radioserver Configurator embedded help.

To apply these settings, the permission to interrupt in both ways must be configured in the radio codeplug.

> **Important**
> Regardless of the specified settings, emergency calls from radios cannot be interrupted. They always have a higher priority than all other voice calls.
> For information on emergency calls and emergency signal, see Emergency.
> All Calls also cannot be interrupted.
> For information on All Calls, see All Calls.

When you interrupt/dekey a voice call that is transmitted on several channels, the voice call stops only on the channel where the voice call interrupt/Remote Dekey was initiated.
If the corresponding settings are specified, then radio calls can be interrupted as the result of the following actions:

- Sending sound notifications to the radio network.

- Performing a deferred action with sending sound to the radio network.

- Performing a server rule related to sending sound to the radio network.

- Sending a voice message to a lone worker.

- Initiating a voice call to a cross patch or any other type of a voice call.

4.3 Emergency

Emergency in the SmartPTT system is used to draw attention to a critical situation that must be resolved immediately. Radio users can send emergency signals and initiate emergency calls to attract the attention of the dispatcher and other radio users. To use this feature, the following conditions must be met:

- One of the following modes must be assigned to the alarm button on the radio:

    - Emergency Alarm.
      An emergency signal is sent from a radio.

    - Emergency Alarm w/Call.
      After sending an emergency signal from a radio, a radio user can press the PTT button and initiate an emergency call following the emergency signal.

    - Emergency Alarm w/Voice To Follow.
      After sending an emergency signal from a radio, an emergency call is automatically initiated.

NOTE
The emergency calls from radios cannot be interrupted. They always have higher priority than all other voice calls.

- Emergency notifications must be configured in the **Notification Panels** window.

Emergencies Panel Configuration

The **Emergencies** panel is configured in the **Notification Panels** window. Its configuration is available only to the Administrator. For information on user roles in SmartPTT Dispatcher, see Operators.

The following parameters can be configured in the **Notification Panels** window:

- Enabling and disabling emergency notification. If the emergency notification is not enabled, a corresponding entry will appear in the Event Log when emergency occurs. No other emergency indication appears.

- The category of radios that will not be hidden on a map when an emergency is received.
  For information on categories, see Categories.

- Sound that will be played in SmartPTT Dispatcher when emergency occurs.

For information on configuring emergency notification in the **Notification Panels** window, see Configuring Emergency Processing.

Emergencies Panel

The emergency signals and emergency calls trigger an alarm in SmartPTT Dispatcher. It can be indicated by a sound notification or the **Emergencies** panel appearance.

This panel appears upon receiving an alarm signal from a radio. You cannot open it manually. When the **Emergencies** panel appears, the alarm notification flashes for a time that depends on the value set in a radio. After the emergency mode is turned off on the radio, the notification stops flashing and changes its background color to gray. The panel includes buttons for muting and resolving an emergency, as well as the PTT button for initiating a call to a talkgroup to which the radio belongs.

If the **Emergencies** panel displays only one notification, clicking the **Resolve emergency (![icon])** button closes the panel.

For information on other notification panels, see Notification Panels.

Dispatcher Actions

In case of receiving an alarm signal, a dispatcher must respond to the situation immediately (initiate a call to a radio or talkgroup, send a rescue team to the radio user, monitor the situation using Avigilon video monitoring system), and then confirm the emergency situation resolution on the **Emergencies** panel or in the radio actions menu using the **Resolve emergency (** ⬛ **)** button.

> **NOTE**
> Clicking the **Resolve emergency** button on SmartPTT Dispatcher will also resolve the emergency on SmartPTT Mobile.

Emergency Indication

SmartPTT Dispatcher provides visual indication for emergency that is displayed on the following controls:

- On the **Emergencies** panel.
  The panel appears when an alarm is received and flashes red for a while.

- On the **Radios** panel.
  The *Alarm* message and the corresponding icon (⬛) appear on the element of the radio that sent the alarm.

- On the Custom Console.
  The *Alarm* message and the corresponding icon (⬛) appear on the element of the radio that sent the alarm.

- On the **Map** panel or on a building plan.
  When the alarm is registered, the radio that sent the alarm will be centered on a map or a building plan, and a red frame will appear around it. The radios in the emergency state and radios added to the category for emergency (for example, a rescue team) will be displayed on a map or building plan too. Other radios will be hidden. After resolving the emergency situation, the hidden radios will not be automatically displayed, but only after selecting them on the **Radios On Plan (** ⬛ **)** tab of the indoor map panel or on the **Radios** tab of the outdoor map panel.

- In the Event Log.
  An alarm entry is marked with the corresponding icon(⬛) and highlighted in red.

- On the **Radio Fleet** panel.
  The name of the radio that sent an alarm is displayed in red.
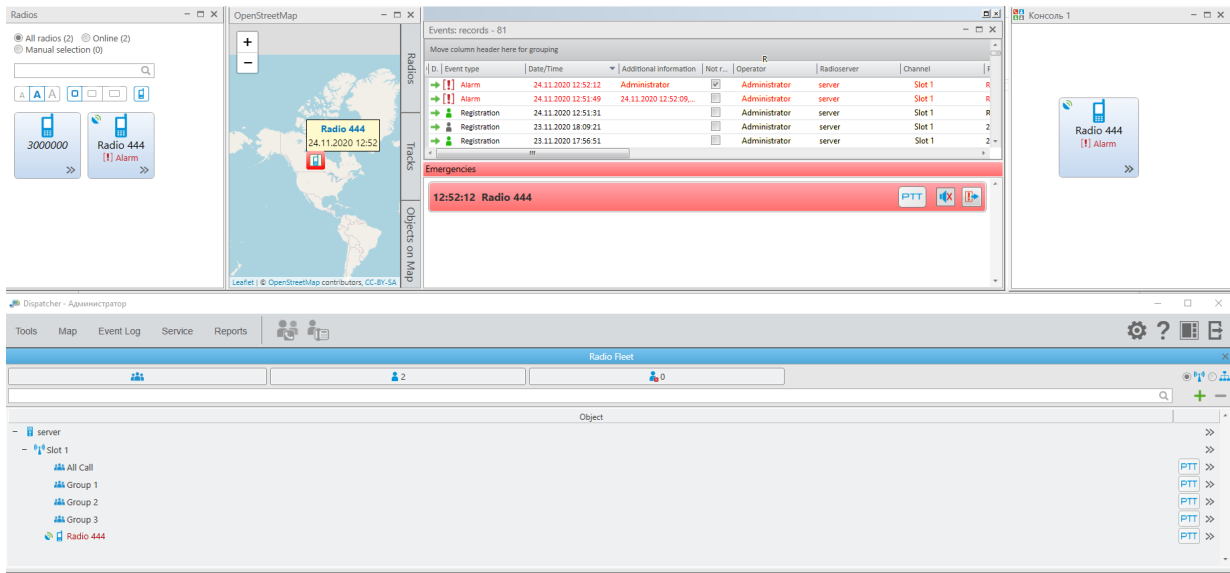
> **NOTE**
> If the **Alarm** check box is selected for the **Open Call Windows for Event Types** parameter in the radio call window settings, then, when an alarm is received from a radio, its Call Window will open. If the **Call** check box is selected, then, when you receive an emergency call from a radio, its Call Window will open as well.

Emergency visual indication stops after a dispatcher confirms the resolution of the alarm situation.

The audible alarm stops when a dispatcher turns off the sound notification or confirms the resolution of all alarm situations.

> **NOTE**
> SmartPTT Dispatcher can read radio position data from the Man Down option board. If the radio is tilted for longer than the specified period, SmartPTT Dispatcher will generate an alarm.
> For information on the Man Down mode, see Rules and Lone Worker Mode.

4.4 Signaling Features

SmartPTT Dispatcher provides the operator with the Digital Signaling features used to send various commands to DMR radios.

The commands include:

- Call Alert

- Radio Check

- Remote Monitor

- Radio Disable or Radio Inhibit

> **Important**
> Signaling commands are only available in radio systems for which the voice transmission license is installed. For details, see Licenses.

The command result is displayed in the **Status** column of the Event Log and in the log of the target radio Call Window. For details, see SmartPTT Dispatcher Event Log and Call Windows.

Digital Signaling also provides radios with the ability to send emergency alarms. For details, see Emergency.

Call Alert

Sending the Call Alert command activates a preconfigured signal on the target radio to attract the user's attention. This signal notifies the radio user that the dispatcher wants to start a transmission.

You can send the Call Alert command to a radio using the controls provided by SmartPTT Dispatcher panels. For details, see Sending Commands from Dispatcher Panels.

Radios can also send Call Alerts to SmartPTT Dispatcher and trigger the corresponding tone for the operator.
An audio file with a call alert tone, its duration and volume are set in the **General Settings** window. For details, see Configuring SmartPTT Dispatcher General Settings.

Sending the Call Alert command can be set as a radio alert when configuring a Lone Worker profile. For details, see Managing Lone Worker Profiles.

Radio Check

Sending the Radio Check command provides the ability to check whether a radio is currently available in the radio system. This feature can be useful in several cases:

- If the radio does not respond for some reason, for example, it is participating in a call or is offline.

- If you want to check radio availability manually before the radio inactivity timeout expires.
  For information on inactivity timeout, see "Configuring ARS" in *SmartPTT Installation and Configuration Guide*.

When the radio receives a Radio Check command, it automatically sends the acknowledgment, no user involvement is required. The only indication available to the user of the checked radio is the Busy LED on it.

The following statuses are available to the checked radios:

- The *Radio is available* status means that the checked radio is available and it is online.

- The *Radio is unavailable* status means that the checked radio is busy at the moment (for example, participates in a call) or is offline.

> **NOTE**
> If the checked radio is offline, and its inactivity timeout has not yet expired, the radio is displayed as online in SmartPTT Dispatcher until inactivity timeout expiration, regardless of the sent Radio Check commands.

You can send the Radio Check command in one of the following ways:

- Using the controls provided by SmartPTT Dispatcher panels or the radio Call Window. For details, see Sending Commands from Dispatcher Panels.

- Using the ID of the target radio. For details, see Sending Radio Check Using Radio ID.
  This method is recommended in the following cases:

  - If the target radio is not displayed in SmartPTT Dispatcher.

  - If each radio in the dispatched radio system has a unique ID.

> **NOTE**
> If more than one radio with the same radio ID operate in the dispatched radio system, it is recommended to use the controls provided by SmartPTT Dispatcher panels or the radio Call Window for sending the Radio Check command.

Remote Monitor

Sending the Remote Monitor command provides the dispatcher with the ability to remotely turn on the microphone of the target radio without notifying the user and listen to the environment. While remote monitoring is active, the radio cannot initiate calls.

> **Important**
> Remote monitoring is available to operators with the **Remote monitor** right. For information on user roles in SmartPTT Dispatcher, see Operators.
> Remote monitoring is unavailable if desktop client authentication on SmartPTT Radioserver is enabled and the profile assigned to the client prohibits the **Remote Monitor** action. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

You can remotely monitor a radio using the controls provided by SmartPTT Dispatcher panels. For details, see Sending Commands from Dispatcher Panels.

When the dispatcher initiates the remote monitoring, a call entry with the corresponding icon ( ) appears on the **Calls** panel. The monitored radio is displayed on the entry as the call initiator and talker. For details, see Calls Panel.

Block and Unblock Radio

Depending on SmartPTT Radioserver settings, performing the **Block Radio ( )** action may result in sending one of the following commands:

- The Radio Disable command making a radio inoperable.

- The Radio Inhibit command prohibiting a radio from starting and receiving transmissions on the channel it is registered on.

For information on blocking settings, see "Configuring Radioserver" in *SmartPTT Installation and Configuration Guide*.

Performing the **Unblock Radio ( )** action sends a command that is the opposite of the command corresponding to the **Block Radio** action.
The **Unblock Radio** action also provides the ability to unblock radios configured in SmartPTT Radioserver Configurator for automatic blocking after registration in the network. For details, see "White and Black Lists" in *SmartPTT Installation and Configuration Guide*.

> **Important**
> Blocking and unblocking radios are available only to the Administrator and operators with the **Block/Unblock radios** right.
> Blocking and unblocking are unavailable if desktop client authentication on SmartPTT Radioserver is enabled and the profile assigned to the client prohibits the **Block/Unblock radios** action.

You can block or unblock radios using the controls provided by SmartPTT Dispatcher panels. For details, see Sending Commands from Dispatcher Panels.

4.4.1 Sending Commands from Dispatcher Panels

Follow the procedure to send the Call Alert or Radio Check command, remotely monitor, block or unblock the radio displayed in one of the SmartPTT Dispatcher panels.

Procedure:

Send a command in one of the following ways:

To send a command from the **Radio Fleet** panel,	click the Actions ( ) button next to the desired radio, and then select the option corresponding to the desired command. For information on the Actions menu, see Radio Actions.
To send a command from the **Radios** or custom console panel,	click the Actions ( ) button on the desired radio element, and then select the option corresponding to the desired command.
To send a command from the map panel,	on the map or on the expandable **Radios** panel, right-click the desired radio, and then, from the Actions menu, select the option corresponding to the desired command.

	To send a command from the radio Call Window,	in the Call Window of the desired radio, click the button corresponding to the desired command. For information on Call Windows, see Call Windows.

The command result is displayed in the **Status** column of the Event Log and in the log of the target radio Call Window. For information on the Event Log, see SmartPTT Dispatcher Event Log.

4.4.2 Sending Radio Check Using Radio ID

Follow the procedure to send the Radio Check command using the target radio ID.

Prerequisites:

- Obtain the ID of the desired radio.

- Ensure the radio registration service is activated and configured in SmartPTT Radioserver Configurator. For details, see "Configuring ARS" in *SmartPTT Installation and Configuration Guide*.

Procedure:

1. On the menu bar, click **Service → Radio Check**.
    The **Radio Check** window appears.
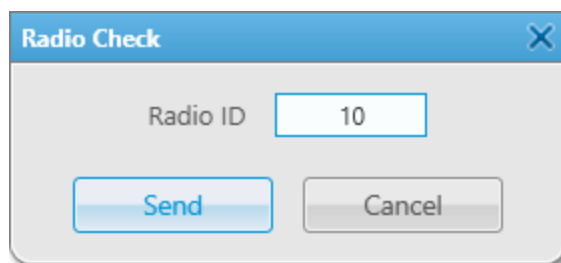
2. In the **Radio ID** field, type the radio ID.

3. Click **Send** to send the Radio Check command to the radio.
    The radio status appears in the **Status** column of the Event Log and in the Call Window of the target radio. Call Windows.

> **NOTE**
> If the target radio is not displayed in SmartPTT Dispatcher, its status appears only in the Event Log. In this case, the Call Window does not appear.

4.5 Event Log and Notification Panels

SmartPTT Dispatcher provides various tools to inform operators about radio network events (voice calls, messages, alarms, etc.). This information is recorded into the Event Log as well as it displays on notification panels.

The Event Log that is stored in the corresponding database. The Event Log information is displayed on the **Event Log** panel. SmartPTT Dispatcher provides two types of the Event Log:

- The SmartPTT Dispatcher Event Log. For details, see SmartPTT Dispatcher Event Log.

- The SmartPTT Radioserver Event Log. For details, see SmartPTT Radioserver Event Log.

Event Log Actions

SmartPTT Dispatcher provides the ability to perform the following actions with the Event Log:

- Enable and configure the Event Log. For details, see Configuring Event Logging for SmartPTT Dispatcher.

- Display the SmartPTT Radioserver Event Log. For details, see Displaying SmartPTT Radioserver Event Log.

- View unread messages. For details, see Viewing Unread Messages.

- Manage event entries. For details, see Managing Event Log Entries.

- Record incoming and outgoing calls, and then listen to them and download using the **Event Log** panel. For details, see Call Records.

Notification

To track events in real time, SmartPTT Dispatcher provides notification panels. They display the event notifications and provide the ability to manage radios and other system elements. The following notification panels are available:

- Lone Workers

- Recent Incoming Calls

- Notifications

- Emergencies

- System Messages

- Server Tasks

For information on notification panels, see Notification Panels.

4.5.1 SmartPTT Dispatcher Event Log

The SmartPTT Dispatcher Event Log provides information on all events registered in the application. The Event Log data are stored in the SmartPTT Dispatcher database.
For information on the SmartPTT Dispatcher database, see Database.

To display events in the Event Log, you must activate it.
For information on activating the Event Log, see Configuring Event Logging for SmartPTT Dispatcher.

You can open the Event Log panel by clicking **Event Log** →**All Events** on the menu bar. The panel consists of the Event Table, the informational area with a brief event description, and the Note field.

The Event Table contains information on all events registered in the system, including calls, messages, job tickets, registrations, status changes, radio checks, radio blocks, alarms, etc.

> **NOTE**
> Alerts and events initiated in the emergency mode are displayed in the Event Log in red.
> For information on this table, see the SmartPTT Dispatcher embedded help.

The Brief Event Description area provides short information on the selected event.

In the Note field, you can add notes to the Event Log entries. The text from this field is displayed in the **Note** column of the Event Table.

The Event Log entries can be selected in the following ways:

- Clicking a single entry selects only one entry.

- Clicking multiple entries with the Ctrl or Shift keys selects multiple entries.

The *Call* type records can be downloaded or played on the Event Log panel and in the **Play Records** window. You can also open their location from this panel. To perform these actions, activate recording of incoming and outgoing calls in SmartPTT Dispatcher. For details, see Configuring Audio Recording.
For information on call records, see Call Records.

> **Important**
> Playing, downloading, and opening location of the call records is unavailable for calls made before activating the incoming and outgoing calls recording features.

4.5.1.1 Managing Event Log Entries

Follow the procedure to manage the SmartPTT Dispatcher Event Log entries.

Procedure:

Perform one of the following actions:

To display the SmartPTT Dispatcher Event Log panel with all events,	on the menu bar, click **Event Log** →**All Events**.
To display events of SmartPTT Dispatcher for a certain period,	perform the following actions: 1. On the menu bar, click **Event Log** →**Events for Period**. The **Period** window appears. 2. In the window that appears, set the period to show events: • To display events starting from the specified date only, select the **Start Date** check box. • To display events before the specified date only, select the **End Date** check box. • To display events for a certain period of time only, select the **Start Date** and the **End Date** check boxes. • To display all events from the SmartPTT Dispatcher database, clear the **Start Date** and the **End Date** check boxes. 3. Click the Calendar ( ) button, and select the desired start and end dates, or enter the dates manually. 4. *(Optional)* In the date fields, type the start and end time. 5. Click **OK** to apply changes, and display the SmartPTT Radioserver Event Log. If events for the specified period exist in the database, they
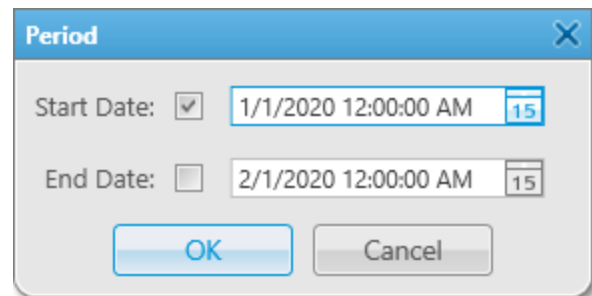
will be displayed in the SmartPTT Radioserver Event Log that appears.

To remove all Event Log entries added in the SmartPTT Dispatcher Event Log before the specific date,	perform the following actions: 1. On the menu bar, click **Event Log** →**Clear Event Log**. The **Clear Event Log** window appears. 2. In the window that appears, set the desired date manually, or click the Calendar (15) button.
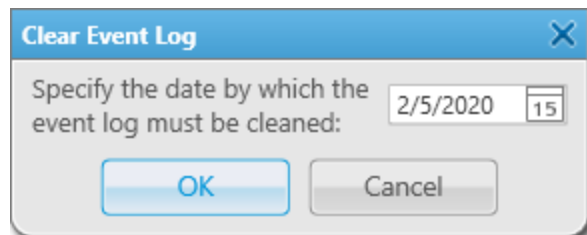
3. Click **OK** to remove Event Log entries.
   All Event Log entries added before the set date disappear from the Event Log.

4.5.1.2 Viewing Unread Messages

Follow the procedure to view unread messages in the SmartPTT Dispatcher Event Log.

Procedure:

View unread messages in one of the following ways:

To open the unread messages from the menu bar,	click **Event Log** →**Unread Messages**.
To open the unread messages from the notification,	click **Unread messages: <number>** if it is displayed in the lower-left corner of SmartPTT Dispatcher.

The **Event Log: messages not read** panel appears.

4.5.2 SmartPTT Radioserver Event Log

The SmartPTT Radioserver Event Log provides information on the events from all client applications connected to SmartPTT Radioserver.

The SmartPTT Radioserver Event Log is activated and configured in SmartPTT Radioserver Configurator.
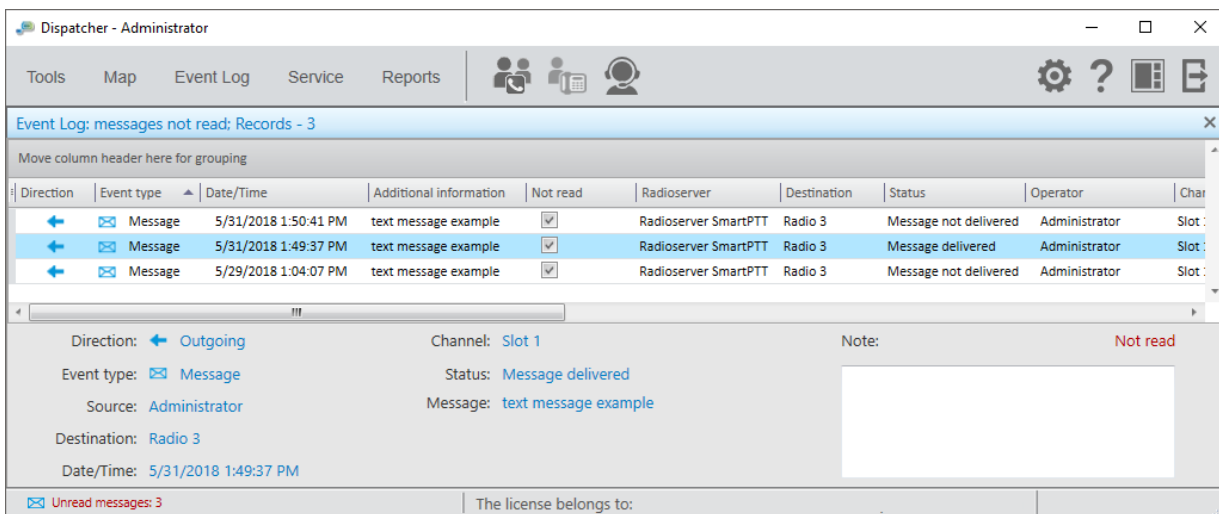For information on configuring the Event Log, see "Configuring Event Log Database Connection" in *SmartPTT Installation and Configuration Guide*.

> **Important**
> The SmartPTT Radioserver Event Log is available to operators with the **View radioserver event log** right.
> For information on user roles in SmartPTT Dispatcher, see Operators.

> **Important**
> The SmartPTT Radioserver Event Log is unavailable if desktop client authentication on SmartPTT Radioserver is enabled and the profile assigned to the client prohibits access to the SmartPTT Radioserver Event Log. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

For information on opening the SmartPTT Radioserver Event Log, see Displaying SmartPTT Radioserver Event Log.

The SmartPTT Radioserver Event Log panel consists of the Event Table, the informational area with a brief event description, and the Note field.

The Event Log table contains information on the events registered in all client applications connected to SmartPTT Radioserver, including calls, messages, job tickets, registrations, status changes, radio checks, radio blocks, alarms, etc.

> **NOTE**
> Alerts and events initiated in the emergency mode are displayed in the Event Log in red.
> For information on this table, see the SmartPTT Dispatcher embedded help.

The Brief Event Description area provides short information on the selected event.

In the Note field, you can add notes to the SmartPTT Radioserver Event Log entries. The text from this field is displayed in the **Note** column of the Event Table.

The Event Log entries can be selected in the following ways:

- Clicking a single entry selects only one entry.

- Clicking multiple entries with the Ctrl or Shift keys selects multiple entries.

The *Call* type records can be downloaded or played on the Event Log panel and in the **Play Records** window. To perform these actions, activate recording of incoming and outgoing calls in SmartPTT Radioserver Configurator. For details, see "Configuring Centralized Voice Logging" in *SmartPTT Installation and Configuration Guide*.
For information on call records, see Call Records.

4.5.2.1 Displaying SmartPTT Radioserver Event Log

Follow the procedure to open the SmartPTT Radioserver Event Log panel.

Prerequisites:

- Ensure theSmartPTT Radioserver Event Log is activated in SmartPTT Radioserver Configurator. For details, see "Configuring Event Log Database Connection" in *SmartPTT Installation and Configuration Guide*.

- Ensure the operator has the **View radioserver event log** right. For details, see Operators.

• If desktop client authentication on SmartPTT Radioserver is enabled, ensure that the profile assigned to the client allows access to the SmartPTT Radioserver Event Log. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

Procedure:

1. On the **Radio Fleet** panel, in the right part of the radioserver entry, click the Actions (≫) button, and then select **Show Radioserver Event Log** ( ).
   The **Period** window appears.
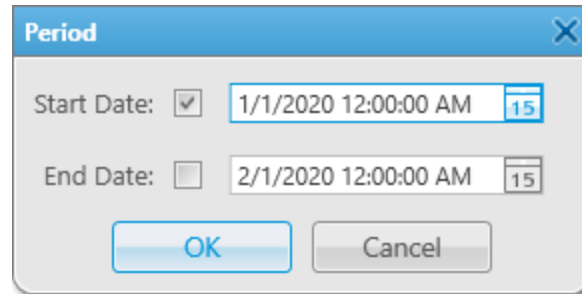
2. In the window that appears, set the period of events to be shown in the SmartPTT Radioserver Event Log:

To display events starting from the specified date only,	select the **Start Date** check box.
To display events before the specified date only,	select the **End Date** check box.
To display events for a certain period of time only,	select the **Start Date** and the **End Date** check boxes.
To display all events from the SmartPTT Radioserver database,	clear the **Start Date** and the **End Date** check boxes.

3. Click the Calendar ( ) button, and select the desired start and end dates, or enter the dates manually.

4. *(Optional)* In the fields with the dates, type the start and end time.

5. Click **OK** to apply changes, and display the Event Log.
   If events for the specified period exist in the database, they will be displayed in the SmartPTT Radioserver Event Log that appears.

4.5.3 Managing Event Log Elements

Follow the procedure to configure the Event Log display settings.

> **NOTE**
> The procedure below is applicable both to the SmartPTT Dispatcher and SmartPTT Radioserver Event Log.

Procedure:

On the Event Log panel, perform one of the following actions:

To sort the entries in ascending order,	click the column header until the Up (▲) icon appears.
To sort the entries in descending order,	click the column header until the Down (▼) icon appears.
To group log entries by columns,	perform the following actions:

1. Drag the column header to the **Move column header here for grouping** area.
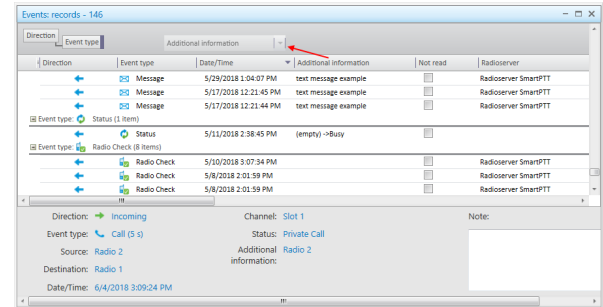
2. *(Optional)* Repeat step 1 to group entries by values in several columns.

To cancel grouping by columns,	drag the header from the **Move column header here for grouping** area, and drop it when the cross icon (✕) appears.
To filter column contents by specific values,	perform the following actions: 1. Point to the desired column header, and then click the icon (▼) that appears. 2. From the list, select the check boxes next to the desired values, or click the **Select All** button. Next to the filtered column header the filter icon (▼) appears.
To cancel filtering by specific values,	click the filter icon, and then click the **Clear Filter** button.

To hide or show columns,	right-click any column header, and select the desired titles from the list.

✓ Event Type
✓ Date/Time
✓ Additional Information
✓ Not read
✓ Operator
✓ Radioserver
✓ Channel
✓ Radio
✓ Source
✓ Talkgroup
✓ Status
✓ Duration
✓ Connection Type
✓ Repeater IP
✓ Destination
✓ Record
✓ Lone Worker
✓ Note
✓ User

NOTE
By default, all the columns are displayed in the Event Log.

To change the order of columns,	drag the desired column header to the left or right of any other column.
To keep the desired columns position independently of scrolling,	in the column headers, drag the element (⫴) to the right of the columns that must be kept in place and drop it. All columns to the left of the element will be fixed.

4.5.4 Notification Panels

The SmartPTT Dispatcher notification panels inform about the SmartPTT system events in real time. They provide the ability to track various data, for example, the status of radios in the Lone Worker mode.

SmartPTT Dispatcher provides the following notification panels:

• Lone Workers

• Recent Incoming Calls

• Notifications

• Emergencies

• System Messages

• Server Tasks

For information on notification panels, see descriptions below.

All panels, except for **Emergencies**, can be opened from the **Tools** menu. The selected panels will be displayed in the main area of SmartPTT Dispatcher. When one of the events occurs, the information about it will be displayed on the corresponding panel.

> **NOTE**
> The **Emergencies** panel appears in SmartPTT Dispatcher only when a radio sends an emergency signal.

Lone Workers

The **Lone Workers** panel displays radios in the Lone Worker mode highlighted with specific colors. The color indicates the status of the Lone Worker mode showing if the radio meets the conditions of the Lone Worker profile assigned to a radio:

- The light gray color shows that the radio has not triggered the rule.

- The yellow color shows that the radio has triggered the rule and the timer set in the **Actions delay (min)** field has not expired.

- The red color shows that the radio has triggered the rule and the timer set in the **Actions delay (min)** field has expired.

For information on configuring rules for lone workers, see Managing Lone Worker Profiles.

> **NOTE**
> Only DMR radios are displayed on the **Lone Workers** panel.

You can open the **Lone Workers** panel by clicking **Tools →Lone Workers** on the menu bar.
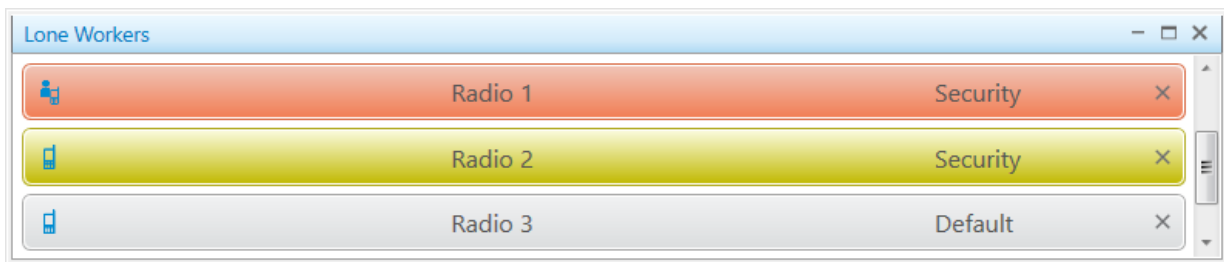
By clicking the radio name, you can open the radio Call Window.

> **NOTE**
> If the user authorization service is activated, the name of the currently authorized user is displayed next to the radio name in parentheses.

To the right of the radio name, you can see the name of the Lone Worker profile that was assigned to a radio. To the left of the radio name, you can see the radio icon that was set in the **Radio Properties** window. For details, see Configuring General Radio Parameters. When you point to an entry, the date and time when the Lone Worker status was changed is displayed. If you click the Delete (×) button, the color indication will be removed from the entry and the default Lone Worker status will be assigned to a radio.

Recent Incoming Calls

The **Recent Incoming Calls** panel displays the latest radios that made a call in the radio network. It also provides quick access to the Call Windows of the radios.

You can open the **Recent Incoming Calls** panel by clicking **Tools** → **Recent Incoming Calls** on the menu bar.

The number of radios on this panel can be configured on the **Recent Incoming Calls** tab of the **Notification Panels** window. For details, see Configuring Recent Incoming Calls Display.

By clicking the radio name, you can open the radio Call Window.

> **NOTE**
> If the user authorization service is activated, the name of the currently authorized user is displayed next to the radio name in parentheses.

To the left of the radio name, you can see the radio icon that was set in the **Radio Properties** window. For details, see Configuring General Radio Parameters.

When you pointing to an entry, the date and time of the incoming call is displayed. The radio that made the most recent call is displayed first. If you click the Delete (✕) button, the call notification will be deleted from the panel.

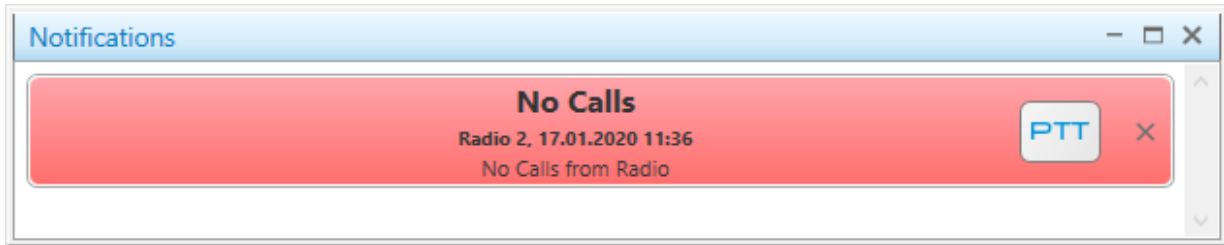## Notifications

The **Notifications** panel displays alerts configured for the following rules:

- Custom rules. For details, see Custom Rules.

- Positioning rules. For details, see Positioning Rules.

- Lone Worker rules. For details, see Lone Worker Rules.

For information on alert configuration, see Configuring Dispatcher Alerts.

The **Notifications** panel appears when the rule with the configured alert triggers, or you can open the panel by clicking **Tools →**
Notifications on the menu bar.

When an alert notification appears, it flashes red for a while. After you click the message or the PTT button, the notification stops
flashing and changes its color to gray.

The alert displays the caption and text that were specified on the **Dispatcher Alert** tab. For details, see Configuring Dispatcher Alerts. In
addition, it displays the radio name as well as the date and time when the alert was received.

NOTE
If the user authorization service is activated, the name of the currently authorized user is displayed next to the radio name in
parentheses.

By clicking the PTT button, you initiate a call to the radio that triggered the rule. If you click the Delete (✕) button, the alert will be
deleted from the panel.

Emergencies

The **Emergencies** panel appears in SmartPTT Dispatcher when a radio sends an emergency signal.

To make the **Emergencies** panel appear automatically upon receiving an alarm signal from a radio, enable the emergency situation
processing. For details, see Configuring Emergency Processing.

When an emergency notification appears, it flashes red for a while. After the emergency mode is turned off on the radio, the notification
stops flashing and changes its color to gray. The emergency notification provides the time when emergency notification was received
and the radio name. The PTT button provides the ability to call the radio talkgroup. By clicking the **Turn off sound alert (🔇)** button, you
mute an emergency alarm.

NOTE
The **Turn off sound alert** button is inactive, if a sound notification at the emergency situation is not activated. For details, see
Configuring Emergency Processing.

By clicking the **Resolve emergency ( )** button, you confirm the emergency situation resolution and close the notification. If the **Emergencies** panel displays only one notification, clicking the button closes the panel.

For information on the **Emergencies** panel, see Emergency.

System Messages

The **System Messages** panel displays the event messages related to the radio network functionality. The messages provide information on the status of radio network and its components, status of connection to the server, and database status.

You can open the **System Messages** panel by clicking **Tools →Notifications** on the menu bar or it appears when events selected on the **System Messages** tab in the **Notifications Panels** window occur.
For information on the **System Messages** tab configuration, see Configuring System Messages Processing.
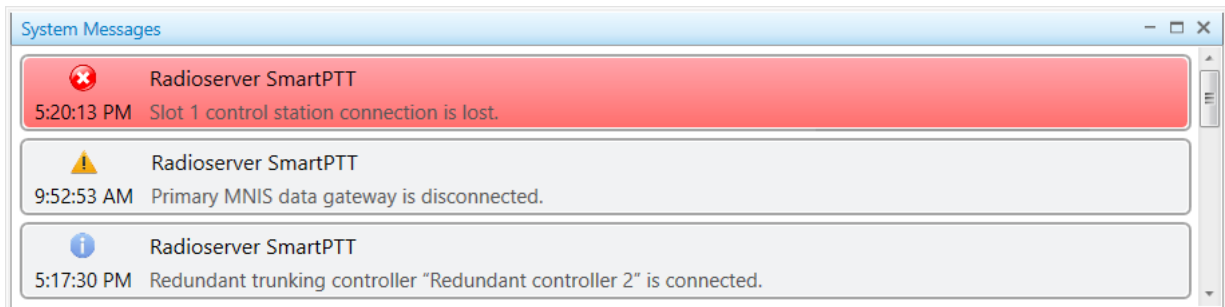
You can see three types of system messages:

- Error messages ( ) indicate major failures that may lead to system inoperability.

  NOTE
  When an error message appears, it flashes red for a while. After you click the message, it stops flashing and changes its color to gray.

- Warning messages ( ) indicate minor failures that are not critical for system operation.

- Information messages ( ) indicate activation or restoration of system functionality.

System messages provide the time when the event was registered, the description of the event, and the name or type of the event source (server, database, radio system, or its components).
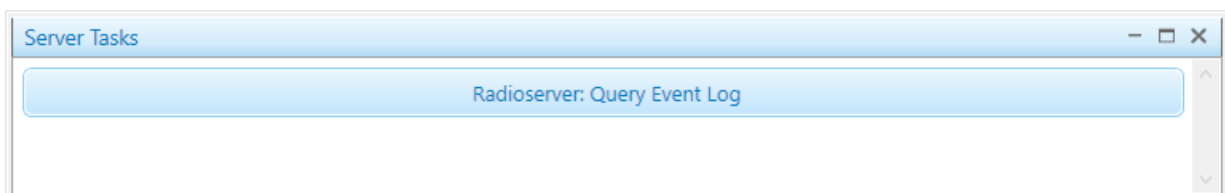
  NOTE
  When you point to the message, the date and time of the event registration are displayed.

Server Tasks

The **Server Tasks** panel displays the SmartPTT Radioserver Event Log queries from SmartPTT Dispatcher to the radioserver that are being processed at the moment.

You can open the **Server Tasks** panel by clicking **Tools →Server Tasks** on the menu bar.

4.6 Call Records

SmartPTT provides the ability to record incoming and outgoing calls and listen to these records. The call record feature is available for the SmartPTT Dispatcher Event Log and the SmartPTT Radioserver Event Log.

To record calls for the SmartPTT Dispatcher Event Log, you must activate the feature and configure it in the application. For details, see Configuring Audio Recording.

To record calls for the SmartPTT Radioserver Event Log, you must activate the feature and configure it in SmartPTT Radioserver Configurator. For details, see "Configuring Centralized Voice Logging" in *SmartPTT Installation and Configuration Guide*.

You can perform the following actions with recorded calls:

- Play call records.
  For information on playing call records, see Playing Call Records.

- Open call records location.
  For information on opening call records location, see Opening Call Records Location.

> **NOTE**
> You can open the call record folder only for the SmartPTT Dispatcher Event Log entries.

- Download call records to a folder. If a single call record is downloaded, you can also change the name of the downloaded audio file.
  For information on downloading call records, see Downloading Call Records.

> **NOTE**
> By default, the records are downloaded in the OGG format. To change the format of downloaded audio files, see Configuring Audio Recording.

These actions can be performed from the shortcut menu that appears when you right-click one or multiple selected call entries in the Event Log table.

> **Important**
> Playing, downloading and opening location of the call records is unavailable to the calls made before activating the incoming and outgoing calls recording functionality.

4.6.1 Playing Call Records

Follow the procedure to play call records from the SmartPTT Dispatcher or SmartPTT Radioserver Event Log.

Prerequisites:

- Configure the audio recording settings in SmartPTT Dispatcher. For details, see Configuring Audio Recording.

- Configure the audio recording settings in SmartPTT Radioserver Configurator. For details, see «Configuring Centralized Voice Logging» in *SmartPTT Installation and Configuration Guide*.

Procedure:

1. Depending on the amount of the desired records, play them in one of the following ways:

To play a single call record,	right-click the desired call record, and then click **Play audio file**.

To play multiple call records,	perform the following actions:
	1. Select the desired records.
	2. Right-click any of the selected records, and then click **Play selected records**.

The **Play Records** window appears and the playback of the selected records starts.
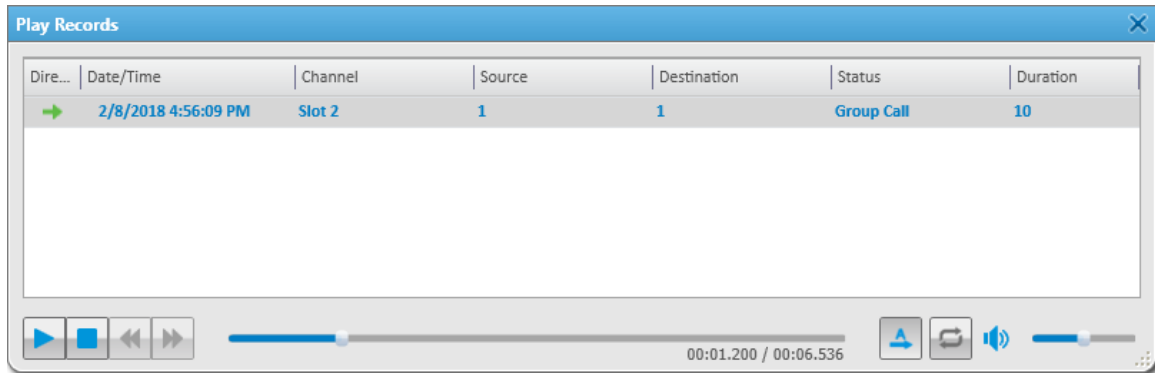
2. *(Optional)* In the **Play Records** window, perform one of the following actions:

To play all selected records one by one,	click **Play all records (⤒)**.
To activate the call records replay,	click **Replay (⟳)**.

Postrequisites:

- To put the playback on pause, click **Pause Playback (❙❙)**.

- To stop the playback, click **Stop Playback (■)**.

4.6.2 Opening Call Records Location

Follow the procedure to open the call records location from the SmartPTT Dispatcher Event Log.

NOTE
This function is unavailable to the SmartPTT Radioserver Event Log.

Procedure:

Depending on the amount of desired records, open their location in one of the following ways:

To open the location of a single call record,	right-click the desired call record, and then click **Open in File Explorer**. The folder containing the selected call record opens in a new window.
To open the location of multiple call records,	perform the following actions: 1. Select the desired records. 2. Right-click any of the selected records, and then click **Open in File Explorer**. The folder or folders containing the selected records open in a new window.

4.6.3 Downloading Call Records

Follow the procedure to download call records from the SmartPTT Dispatcher or SmartPTT Radioserver Event Log, or from the **Play Records** window.

Procedure:

Depending on the amount of the desired records, download them in one of the following ways:

To download a single call record,	perform the following actions: 1. Right-click the desired call record, and then click **Download audio file**. 2. In the window that appears, specify the folder for saving the audio file and the file name, and then click **Save**. The **Downloading audio file** window appears to display information on the download progress.
To download multiple call records,	perform the following actions: 1. Select the desired records. 2. Right-click any of the selected records, and then click **Download audio files**. 3. In the window that appears, specify the existing folder or create a new one for saving the audio files, and then click **Save**. The **Downloading audio files** window appears to display information on the download progress. **NOTE** When multiple call records are downloaded and the destination folder contains audio files with the same names as the downloaded call records, the corresponding error occurs. The **Cancel** button changes to the **Replace** and **Skip** buttons. Using these buttons, you can replace the audio file or skip it and resume download.

Postrequisites:

To open the folder with the downloaded call records, click **Open in File Explorer**.

4.7 Positioning

SmartPTT supports outdoor and indoor positioning services that provide the ability to receive location data from radios and track their movement in real time or view the history of movement.

Outdoor positioning in SmartPTT includes:

- Working with maps. SmartPTT supports various types of maps. They are as follows:

  - Maps that are available over HTTP.

  - Maps that are available in file storage.

  - Maps that are available in the database.
    For details, see Maps.

- Working with objects on a map that become available after configuring a map in SmartPTT Dispatcher. For details, see Map Actions.

Indoor positioning in SmartPTT includes:

- Working with plans of multi-story buildings. For details, see Building Plan.

- Working with objects on a plan that become available after adding a plan to SmartPTT Dispatcher. For details, see Indoor Map Actions.

The positioning settings are configured by the Administrator in the **Settings (⚙)** menu.
For information on configuring positioning settings, see Configuring Positioning Settings.
For information on user roles in SmartPTT Dispatcher, see Operators.

4.7.1 GPS

SmartPTT supports radio positioning using outdoor GPS coordinates. Radios can be displayed on any map that can be open directly in SmartPTT Dispatcher. The system supports various map formats (OSM, SPMAP, MP, etc.), as well as online maps. You can add objects on maps, such as cameras, data sources, points of interest, geofences, routes, and interact with these objects. You can also display radio tracks on a map.

SmartPTT also supports the Upload to KML feature that provides the ability to export radio coordinates from SmartPTT Dispatcher to a separate KML file. The KML format is an XML notation and visualization within two-dimensional maps and three-dimensional Earth browsers. KML was developed for use with Google Earth. For details, see Upload to KML.

To use the GPS features in SmartPTT Dispatcher, you must perform the following actions:

- Enable the GPS feature in SmartPTT Radioserver Configurator. For details, see "Configuring GPS" in *SmartPTT Installation and Configuration Guide*.

- Enable the GPS feature for the radio. For details, see Configuring Radio GPS Settings.

- Display the desired maps. For details, see Maps.

- Display radios, tracks, or other objects on a map and perform the desired actions with them. For details, see Map Actions.

> **Important**
> To use GPS features, you must have the license that supports GPS. For details, see Licenses.

> **Important**
> GPS features configuration and usage are available to operators with the **Manage radio location settings** and **Request radio location** rights. For details, see Operators.

4.7.1.1 Maps

SmartPTT supports various types of maps: OpenStreetMap, Google, Baidu, raster maps, maps in polish format, and vector maps.

You can open the desired map from the **Map** menu on the SmartPTT Dispatcher menu bar. The types of maps that are displayed in the menu must be configured in the **Map Settings** window. For details, see Configuring Maps in Use.

Together with many useful features, such as displaying and animating tracks, maps provide the dispatcher with a better control over radios. By double-clicking the radio displayed on the map, you can also open the Call Window, or open the Actions menu by right-clicking the radio.

> **Important**
> To use maps, you must have the license that supports GPS. For details, see Licenses.

Maps provide the ability to set camera markers and data source coordinates, display them on a map, and monitor data source alarms in real time.

> **NOTE**
> To interact with cameras and data sources, you must install the corresponding licenses. For details, see Licenses.
> To use data sources, the data acquisition module in SmartPTT Dispatcher settings must be activated.

Google Maps

Google Maps are received from the Google server. They require an Internet connection. To use these maps, you also need an API key. To obtain the key, contact your system administrator.

> **Important**
> The Google Maps API key is provided under a paid subscription.

For information on Google Maps configuration, see Configuring Maps in Use.

OpenStreetMap

The OpenStreetMap maps are provided free by an OpenStreetMap server. They require an Internet connection. You can also download OpenStreetMap maps on a local server to use them without an Internet connection. To use these maps, you must enter the server address. The default server address is *http://b.tile.openstreetmap.org/*. If necessary, you can set additional attributes in the *? <attribute 1>=<value 1>&<attribute 2>=<value 2>* format in the server address field.

> **Important**
> SmartPTT does not support HTTP basic authentication, therefore, it must be disabled on a server.

> **NOTE**
> You can restore the default address by clearing the **Address** field, and then clicking **OK**.

For information on the OpenStreetMap maps configuration, see Configuring Maps in Use.

OpenStreetMap (file)

On the OpenStreetMap web site, you can export the map of the desired area to your computer, and then upload it to SmartPTT Dispatcher. You can export the OpenStreetMap maps in the OSM or TILESURL format.

Baidu Maps

Baidu Maps are received from the Baidu server. They require an Internet connection. To use these maps, you also need an API key. To obtain the key, contact your system administrator.

Baidu Maps support only Chinese language.

For information on Baidu Maps configuration, see Configuring Maps in Use.

Maps in Polish Format

SmartPTT Dispatcher provides the ability to upload MP format (polish format) maps from the local drive. Polish format maps are text files that can be edited and converted into other formats. When you upload the Polish Format map, SmartPTT Dispatcher converts it into a vector map and displays it in the main area.

MapInfo

SmartPTT Dispatcher provides the ability to use maps created in MapInfo software.

To use a MapInfo map, you must create or obtain the map file in the TTKGP or SPMAP format. A map in the SPMAP format can be configured directly in SmartPTT Dispatcher by adding layers in the TAB format on the uploaded map. Before adding the layers, you also must create or obtain the layer files. The map is stored on the local drive of the SmartPTT Dispatcher host.

> **NOTE**
> You can create a map in the TTKGP format using the free TatukGIS Viewer software.

For information on MapInfo maps configuration, see Configuring MapInfo Map.

Raster Maps

SmartPTT Dispatcher provides the ability to create a map using any raster image in the BMP, JPEG, or PNG format. Maps created from raster images are saved in the MAP format.

For information on raster map configuration, see Adding and Creating Raster Maps.

Maps from Database

SmartPTT Dispatcher provides the ability to work with large offline maps whose size is bigger than 5000 x 5000 pixels. This functionality is used to display SmartPTT system objects located far from each other. This is achieved by dividing the original raster image into pieces and storing them in the database.

To create a raster map database, send a request to SmartPTT Technical Support Center and attach the raster map image in the JPEG format with the list of coordinates on the map, for example, in the TXT or MAP format.

Geographical positions are necessary to anchor image points to the geographical coordinates. You need to provide the coordinates of four points at the corners of the map. After your request, our technical support specialist will provide you with the database backup of the map in the BAK format.

> **NOTE**
> If the attachment size exceeds the limit of 50 MB, split the file into several small files using an archiver or file manager, or upload it to a file hosting service and include the link to the file in your query message.

Then, restore the database from the received backup. For details, see Managing Databases.

For information on database map configuration, see Managing Maps from Database.

Coverage Map

Coverage maps display information on the received signal strength (RSSI) of radios in a specific area.

> **Important**
> The coverage map feature is available to operators with the **View coverage map** right. For details, see Operators.

> **Important**
> To use the coverage map feature, the corresponding license must be installed. For details, see Licenses.

To build a coverage map for a radio, ensure that it the GPS feature is enabled, and its GPS data are in the database. For details, see Configuring Radio GPS Settings.

> **Important**
> A radio that uses the LIP protocol to transmit location data on the current channel cannot be used as a source of information about RSSI when building a coverage map.
> For information on protocol types, see "Location" in *SmartPTT Installation and Configuration Guide*.

For information on coverage map configuration, see Configuring Coverage Map.

4.7.1.2 Map Actions

After you configure the desired map in SmartPTT Dispatcher, it can be used to track radios, provide additional management features for the system, and control the state of some objects.
For information on maps configuration, see Map Creation and Configuration.

SmartPTT Dispatcher provides the ability to perform actions with the following objects on a map:

- Radios. For details, see Radios.

- Tracks. For details, see Tracks.

- Other objects. For details, see Objects on Map.

Some actions can be performed directly on a map. For example, using a map, you can open the Call Window or the Actions menu of the radio. Other actions can require to use the map control panel.

Map Control Panel

The control panel is available on any map in the right part of the screen. The panel provides features to manage display of radios and other objects on maps. On the panel, you can perform the following actions:

- Display radios on a map

- Display records of radio movements within a specified period as tracks

- Animate radio tracks

- Mark important objects on a map as points of interest

- Display location of data sources and monitor their state

- Display location of cameras and watch live videos

- Configure radio geofences

- Configure radio routes

- Edit objects

- Delete objects

By default, the expanded control panel is not pinned, and it automatically collapses after clicking on a map. The Pin ( ) button pins the expanded panel, and in this state you can collapse it only by clicking the **Radios**, **Tracks**, or **Objects on Map** buttons.

4.7.1.2.1 Radios

Radio locations can be displayed on any SmartPTT Dispatcher map.

> **NOTE**
> To display radios on a map, you must configure the location service in the **Radio Properties** window. For details, see Configuring Radio GPS Settings.

Radios are displayed on a map as markers. Markers consist of the following elements:

- Radio icon — icon image that is set in the radio settings. For details, see Configuring General Radio Parameters.

> **NOTE**
> If a status is assigned to a radio, a frame appears around the radio icon. The color of the frame corresponds to the status color.
> For information on radio statuses, see Statuses.

- Radio label — label that contains radio name and/or time when coordinates were received. Radio labels with valid coordinates are colored yellow on a map. Radio labels with outdated coordinates are colored gray. Radio label can be hidden.

On the SmartPTT Dispatcher maps, you can perform the following actions with radios:

- Display radios. For details, see Displaying Radios.

- Display radios by categories. For details, see Displaying Radio Categories.

- Display radios in the defined area. For details, see Displaying Radios in Area.

- Set the radio location manually. For details, see Setting Radio Location.

You can open the radio Call Window directly from a map by double-clicking the desired radio icon. You can also open the Actions menu by right-clicking the desired radio icon.

Radios Panel

The **Radios** panel displays the list of mobile devices and radios that provide coordinates to the SmartPTT system. The specific user of the dispatch console can have access to a limited amount of radios.

You can open the panel by clicking **Radios** in the right part of the map. The panel is divided into two tabs:

- The **Radios** tab provides a list of all radios. To find the desired radio using its name or ID, you can use the Search ( ) field.

- The **Categories** tab provides the list of categories configured in SmartPTT Dispatcher. For details, see Categories.

The panel provides various data on the radio state. Online radios are displayed in blue ( ), and offline radios are gray ( ). To the right of the radio name, you can see the icon that indicates the validity of the radio GPS coordinates ( ). If coordinates are outdated or missing, the corresponding icon ( ) appears.

> **NOTE**
> The validity period of GPS coordinates is determined by the **Validity of GPS coordinates** parameter in the **Positioning Systems** window. For details, see Configuring Positioning Settings.

Indicators define how the radio is displayed on a map and provide the ability to change the state of its display. Depending on the element that placed next to them, indicators define how radios will be displayed. The indicators are placed next to the radio name, category name (on the **Categories** tab), and the **All Radios** element. Radios can be fixed on a map ( ) or hidden from a map ( ). They also can be displayed ( ) or not be displayed on a map ( ). The **Mixed state** ( ) indicator can appear next to categories and the **All Radios** element.

Category Actions

On the **Categories** tab, you can open the category Actions menu by right-clicking the desired category. The category Actions menu provides the ability to perform various actions with all radios of the selected category. The following actions are available in the menu:

Action	Description
Send Message ( )	Opens the **Send Message** window where you can type and send messages or manage message templates. For details, see Sending Messages from the Send Message Window. The action is unavailable if the operator does not have the **Send text messages** right. For information on the operator rights, see Operators.
Find on Map ( )	Shows members of the category on a map. The action is unavailable if the operator does not have the **Request radio location** right.

| Action	Description
Remove from Map (🖼)	Hides members of the category from a map. The action is unavailable if the operator does not have the **Request radio location** right.
View Properties (🖼)	Opens the **Category** window for editing the category.

Displaying Radios

Follow the procedure to configure displaying radios on a map.

Prerequisites:

Determine the radios to display or hide on a map.

Procedure:

1. In the right part of the open map, click **Radios**.
   The **Radios** panel appears.
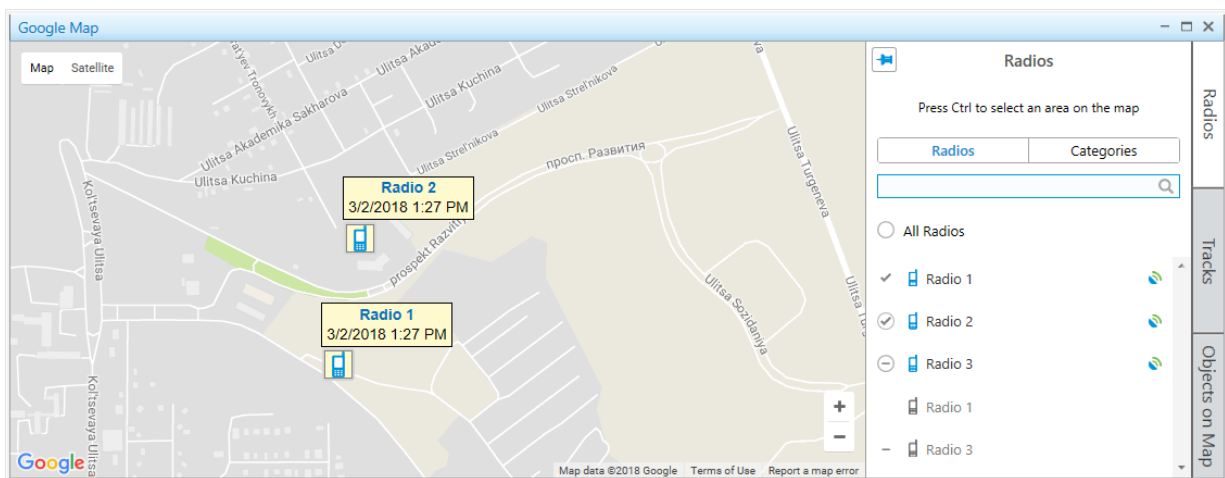
2. *(Optional)* Click Pin (🖼) to pin the panel.

3. On the **Radios** panel, select the **Radios** tab.

4. Configure radios displaying on a map:

To fix all radios on a map or hide them,	click the indicator next to **All Radios**, until the desired state appears.
To fix a single radio on a map or hide it,	click the indicator next to the radio name, until the desired state appears.
To unfix the radio,	right-click the indicator next to the radio name.
To reset display settings of all radios,	right-click the indicator next to **All Radios**. The indicator changes to **Mixed State (◯)**.

> **NOTE**
> Radios are hidden or displayed on a map depending on the map settings. For details, see Configuring Radios on Map Settings.
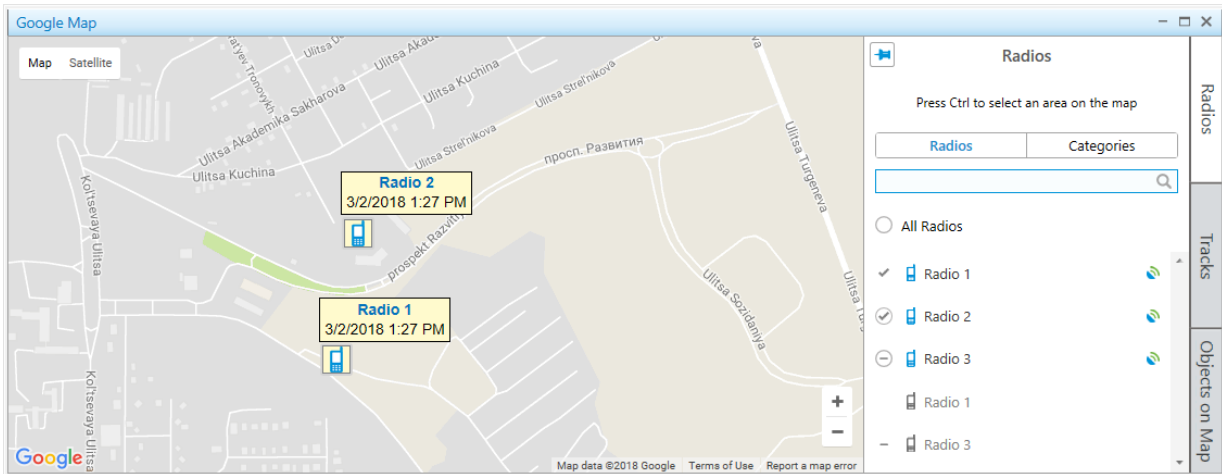
Displaying Radio Categories

Follow the procedure to configure displaying radio categories on a map.

Prerequisites:

Determine the radio categories to display or hide on a map.

Procedure:

1. In the right part of the open map, click **Radios**.
   The **Radios** panel appears.

2. *(Optional)* Click Pin (![pin]( )) to pin the panel.

3. On the **Radios** panel, select the **Categories** tab.

4. Configure radio categories displaying on a map:

|	
To fix all radios from all categories on a map or hide them,	click the indicator next to **All Radios**, until the desired state appears.
To fix radios from the desired category on a map or hide them,	click the indicator next to the category name, until the desired state appears.
To fix a single radio from the desired category on a map or hide it,	select the desired category, and then click the indicator next to the radio name, until the desired state appears.
To unfix the radio,	right-click the indicator next to the radio name.
To revert the applied earlier actions,	right-click the indicator next to **All Radios**. The indicator changes to **Mixed State (◯)**.

> **NOTE**
> Radios are hidden or displayed on a map depending on the map settings. For details, see [Configuring Radios on Map Settings](#).

Displaying Radios in Area

Follow the procedure to display the list of radios located in the selected area of a map.

Prerequisites:

Determine the desired area on a map, where you want to see radios.

Procedure:

Press and hold the Ctrl key, and then select the desired area with the left button of a mouse.
On the **Radios** panel, the list of radios that are in the selected area appears.

Postrequisites:

To cancel the selection and display all radios in the list, click the **Cancel selection** button.

Setting Radio Location

Follow the procedure to set the radio location on a map manually.

Prerequisites:

Determine the radio for which you want to set the location.

Procedure:

1. Open the **Set Location** panel in one of the following ways:

To open the panel when the map is open and radios are displayed on it,	right-click the desired radio, and then select **Set Location**.
To open the panel when the map is closed,	in the Actions Menu (≫) or Call Window of the radio, click **Set Locations** and select the desired map in the **Select Map** window.

    The **Set Location** panel appears.

2. Set the radio location in one of the following ways:

To indicate the radio location with a mouse,	click the desired place on a map.
To indicate the radio location in the other way,	on the **Set Location** panel, in the **Latitude** and **Longitude** fields, type the desired coordinates.

3. Click **Save** to save changes.
    The radio appears on a map with the specified coordinates.

Postrequisites:

To remove the radio from a map, in the Actions Menu (≫) or Call Window of a radio, click **Remove from Map**.

4.7.1.2.2 Tracks

Tracks provide the ability to view the radio movement history or track the radio movement in real time on any map in SmartPTT Dispatcher.

> **Important**
> Tracks are available to operators with the **Manage tracks** right. For details, see Operators.

Tracks are built using databases of SmartPTT Dispatcher or one of the available radioservers as the data source.

> **Important**
> If the SmartPTT Radioserver Event Log is not activated in SmartPTT Radioserver Configurator or SmartPTT Radioserver is not running, the radioserver will not be available as the data source.

Tracks Panel

The **Tracks** panel provides the list of tracks displayed on the current map and their control elements. You can configure various settings to display tracks, including a period to use, color of the line, and its thickness.

The **Tracks** panel provides the ability to perform the following actions:

- Display a track on a map. For details, see Displaying Tracks.

- Play radio motion animation. For details, see Animating Tracks.

You can open the panel by clicking **Tracks** in the right part of the map.

The **Add Track (+)** button opens the **Track** panel where you can configure track display settings. The added track appears on the map, and its entry appears on the **Tracks** panel.

The track entry provides various information about the track, such as the radio name, date and time used to build the track, color and thickness of its line.

The **Track Details ( )** button opens the **Track Details** panel to play radio motion animation.

On the **Tracks** panel, you can edit ( ) or delete ( ) a track. You also can delete all tracks from the map using the **Clear Tracks ( )** button.

> **NOTE**
> If you select the *30 minutes*, *1 hour*, or *Today* period for a track, and later decide to edit this track, when you save it, the track will be rebuilt for the set period beginning from the moment the editing was finished.

Displaying Tracks

Follow the procedure to display a radio track on a map.

> **NOTE**
> Track can be shown on a map when the radio has at least one coordinate.

Prerequisites:

- Ensure that saving GPS locations in databases is enabled in the positioning settings. For details, see Configuring Positioning Settings.

- If SmartPTT Radioserver is used as the data source, ensure that the desired radioserver is running, otherwise the track cannot be built.

- Ensure the operator has the **Manage tracks** right. For details, see Operators.

- If SmartPTT Radioserver is selected as a data source, ensure that the SmartPTT Radioserver Event Log is activated in SmartPTT Radioserver Configurator, otherwise the track cannot be built. For details, see "Configuring Event Log Database Connection" in *SmartPTT Installation and Configuration Guide.*
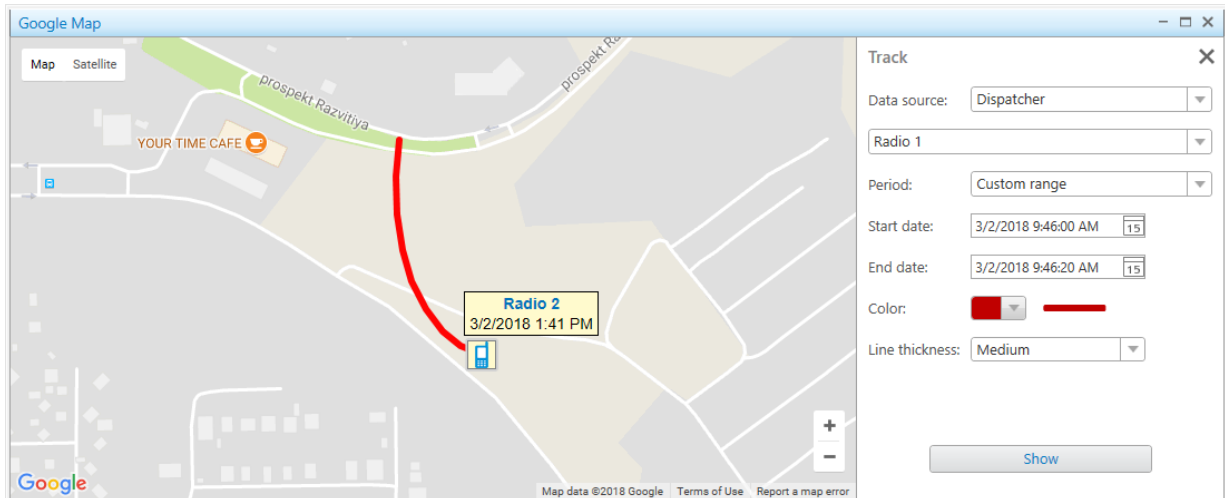
Procedure:

1. In the right part of the open map, click **Tracks**.
   The **Tracks** panel appears.
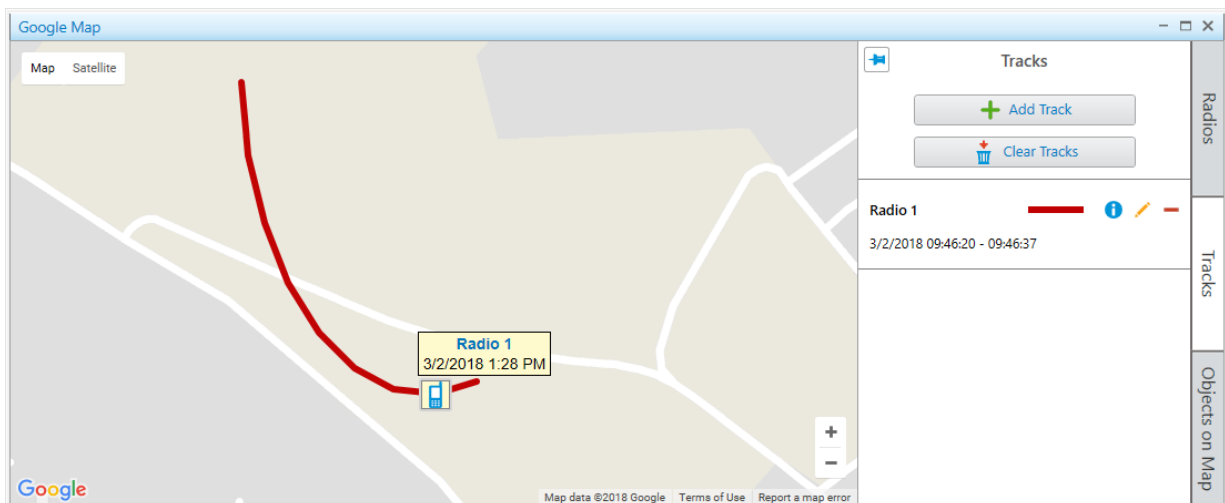
2. *(Optional)* Click Pin (📌) to pin the panel.

3. On the **Tracks** panel, click **Add Track (+)**.
The **Track** panel appears.

4. From the **Data Source** list, on the **Track** panel, select the database which is used to create the track.

5. From the **Radios** list, select the radio whose track to be displayed.

6. From the **Period** list, select the time period of the track.

To set the time period of the radio track as 30 minutes, 1 hour, or today,	from the **Period** list select the corresponding values.
To set the time period of the radio track as several hours,	perform the following actions: 1. From the **Period** list select the *Several hours* value. 2. In the **Hours** field, enter the desired amount of hours.
To set the other time period of the radio track,	perform the following actions: 1. From the **Period** list select the *Custom range* value. 2. In the **Start Date** and **End Date** fields, set the desired date and time.

7. From the **Color** palette, select the color of the track line on a map.

8. From the **Line Thickness** list, select the desired thickness of the track line.

9. Click **Show** to display the track on a map.
The track appears on the map, and the track entry appears on the **Tracks** panel.

Postrequisites:

- To edit the track, on the **Tracks** panel, select the desired track from the list, and click **Edit (✏)**.

- To remove a track, on the **Tracks** panel, select the desired track from the list, and click **Delete (➖)**.

- To delete all tracks on the current map, on the **Tracks** panel, click **Clear Tracks (🗑)**.
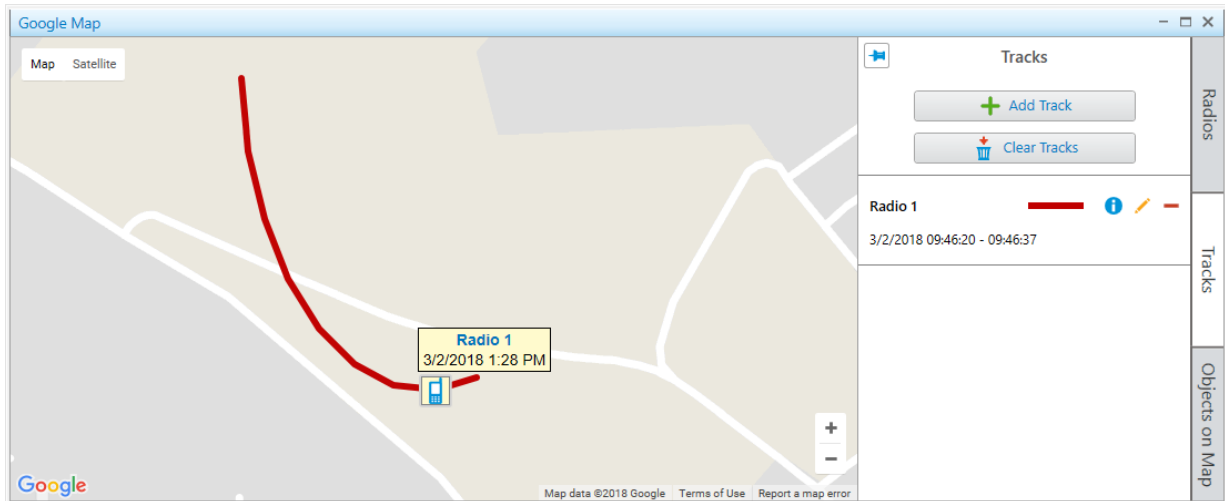
Animating Tracks

Follow the procedure to animate a radio track on a map.

Prerequisites:

- Ensure the desired radio track is in the list of tracks.

- Ensure the operator has the **Manage tracks** right. For details, see Operators.

Procedure:

1. In the right part of the open map, click **Tracks**.
   The **Tracks** panel appears.

2. *(Optional)* Click Pin ( ) to pin the panel.

3. Select from the track list the desired track, and then click **Track Details** ( ).
   The **Track Details** panel appears.
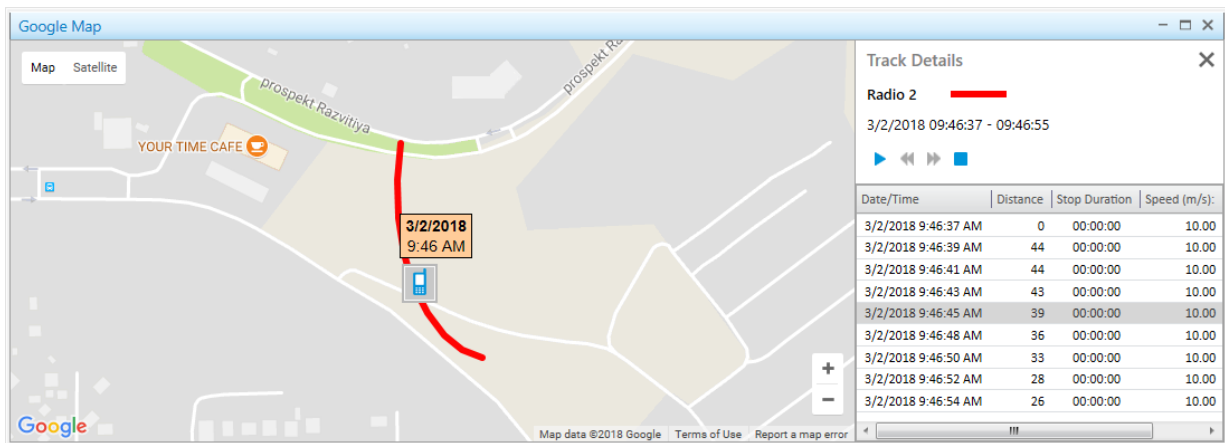
4. On the **Track Details** panel, perform the desired actions:

To start animation of a track,	click **Start Playback** ( ). The track starts animating on a map. The button **Start Playback** ( ) changes to **Pause Playback** ( ).
To pause animation of a track,	click **Pause Playback** ( ).

To change the animation speed of a track,	click **Decrease speed (** ◀◀ **) or Increase speed (** ▶▶ **).**
To stop animation of a track,	click **Stop Playback (** ■ **).**

5. *(Optional)* To display the radio position at a certain time, double-click the desired entry in the Track Details table.

4.7.1.2.3 Objects on Map

SmartPTT Dispatcher provides the ability to display such objects as cameras, data sources, points of interest, geofences, and routes on maps. Added objects provide additional information on the area with a radio and can be used to control some elements of the system. You can display the radio route, add points of interest, and create geofences. Maps can be used to display cameras and data source state in real time. You can perform the following actions on a map:

- Add camera markers. For details, see Adding Cameras.

- Add points of interest. For details, see Adding Points of Interest.

- Add geofences. For details, see Adding Geofences.

- Add routes. For details, see Adding Routes.

- Add data sources. For details, see Adding Data Sources.

- Edit objects. For details, see Editing Objects on Map.

- Delete objects. For details, see Deleting Objects.f

Objects on Map Panel

The **Objects on Map** panel provides the ability to add the following elements on a map:

- Points of interest that indicate important objects on a map

- Geofences that define specific areas on a map

- Routes that connect key points of the area

- Cameras that provide the ability to see the area at any moment from any place

- Data sources that indicate objects created in data provider and monitor their state

> **NOTE**
> To interact with cameras and data sources, you must instal the corresponding licenses. For details, see Licenses.
> For data sources, the data acquisition module in SmartPTT Dispatcher settings must be activated. For details, see Activating Data Acquisition Module.

You can open the panel by clicking **Objects on Map** in the right part of the map.

At the top of the **Objects on Map** panel, you can see the Add (➕) button that opens the corresponding object configuration panel for adding an object. You can edit (✎) or delete (➖) any added object.

Cameras

SmartPTT Dispatcher provides the ability to add new or edit existing camera markers on the **Cameras** tab. You can watch live video directly on a map.

> **Important**
> To manage camera markers on a map, an operator must have the **Manage cameras** right.
> For information on the operator rights, see Operators.

To add a camera marker on a map, it must first be added and configured in the Avigilon video monitoring system. For details, see Avigilon Configuration.

The **Cameras** tab displays information about cameras, including their names and statuses. If camera was deleted in the Avigilon system, the status *Camera removed* appears. If you cannot connect to cameras, the corresponding text appears next to the camera entry. The *No connection* text can be displayed in the following cases:

- No connection between SmartPTT Dispatcher and SmartPTT Radioserver

- No connection between SmartPTT Radioserver and the Avigilon server

- No connection between the Avigilon server and the camera

> **Important**
> If connection is established, no status appears.

> **NOTE**
> After removing a camera from the Avigilon system, its name becomes pale gray in SmartPTT. The edit button becomes unavailable.

When you add or edit a camera marker, the **Camera** panel appears. It provides a list to select a camera that will be displayed on a map. The list of cameras is duplicated from the Avigilon video monitoring system server. Cameras in the list are displayed in the same order as in the Avigilon system.

> **NOTE**
> If SmartPTT is connected to two SmartPTT Radioservers, each of which is connected to its own Avigilon system, cameras in this list are displayed in the following order: cameras of the first system, then cameras of the second system. If connection is not established, the list with cameras will be empty.

Watching Live Video

SmartPTT with the integrated Avigilon video monitoring system provides operators the ability to monitor what happens on the object at any time.

Live video from a camera opens in a separate window that appears when you click the marker of the desired camera on a map.
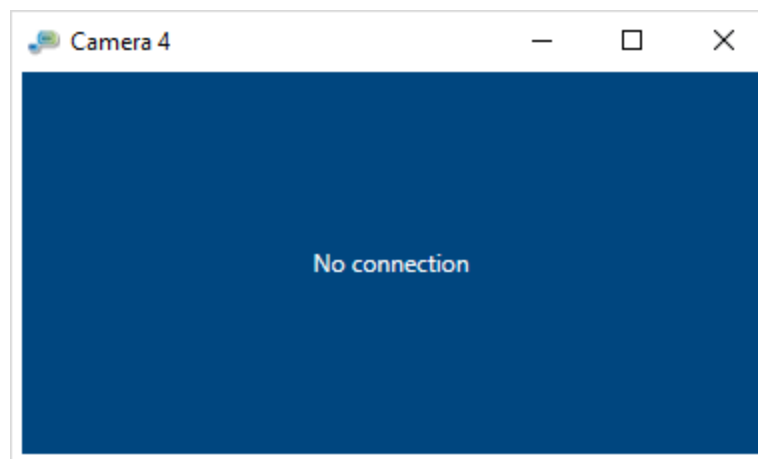
Only one window with live video can be opened at a time. If you have already opened the window and try to open another one, then a previously opened window will automatically be closed.

If SmartPTT Dispatcher is minimized when a live video is open, when SmartPTT Dispatcher will be opened again, the window with live video will restore its previous position on the operator's screen. If SmartPTT Dispatcher is closed with a live video, the next time SmartPTT Dispatcher opens, the window with live video will not be restored.

Points of Interest

SmartPTT Dispatcher provides the ability to manage existing points of interest and adding new points on the **Points of Interest** tab. Using points of interest, you can mark important objects on a map.

> **Important**
> To manage points of interest, an operator must have the **Manage points of interest** right. For details, see Operators.

When you add or edit a point of interest, the **Point of Interest** panel appears. The panel provides the ability to configure parameters of a point of interest. You can add a point of interest either by clicking the desired place on a map or by entering its coordinates.

You can select one of the available images as point of interest marker or upload a custom one. The maximum size of a custom image is 5 MB.

Geofences

SmartPTT Dispatcher provides the ability to create geofences on a map and edit existing geofences on the **Geofences** tab. Geofences are used in positioning rules to track radios in the area. For example, you can configure a positioning rule that will notify the dispatcher in case of speeding in the area where speed limits are set. For details, see Positioning Rules.

> **Important**
> To manage geofences, an operator needs to have the **Manage geofences** right. For details, see Operators.

When you add or edit a geofence, the **Geofence** panel appears. The order of the geofence points in the table defines the sequence of points on a map.

Routes

SmartPTT Dispatcher provides the ability to create routes on a map and edit existing routes on the **Routes** tab. Routes are used in positioning rules to track radios in the area. For example, you can configure a positioning rule that will notify the dispatcher if the radio exits the route. For details, see Positioning Rules.

> **Important**
> To manage routes, an operator needs to have the **Manage routes** right. For details, see Operators.

When you add or edit a route, the **Route** panel appears. The order of the route points in the table defines the sequence of points on a map. You can select the **Key point** check box and specify a name for any point. Key points are used for creating Radio Location reports. For details, see Creating Radio Location Report.

> **NOTE**
> A key point appears on a route as a circle after clicking the **Save** button. At hovering the mouse cursor over the point on a map, the key point name set in the **Name** column appears.

Data sources

SmartPTT Dispatcher provides the ability to add new or edit existing data sources on the **Data souces** tab.

> **Important**
> The **Data sources** tab is only available if the data acquisition module was activated in SmartPTT Dispatcher. For details, see Data Provider Configuration.

To add a data source on a map, the data source must be created and configured in the data provider system. For details, see the data provider embedded help.

When you add or edit a data source, the **Data source** panel appears. The panel provides the ability to configure parameters of a data source. The changes in data source settings are applied to it in all SmartPTT system.

When you point to the object entry on the data source tab, the tooltip with information on all parameters of the data source appears. Alternatively, all parameters of the point can be viewed on its dashboard, on the **Data provider** panel. For details, see the dat provider embedded help.

When you click the name or marker of the point on the **Data sources** tab, the map automatically centers on it even if it is not displayed on a map.

> **NOTE**
> The name of the data source is displayed on a map if the **Name** check box is selected on the **Data source** panel.

> **NOTE**
> The marker of the data source is displayed on a map if the **Show on Map** check box is selected on the **Data source** panel.

By clicking the **Open** ( ) button on the **Data sources** tab, you can open a data source in the data acquisition module where all its parameters are available.
For information on data source dashboards, see the data provider embedded help.

> **NOTE**
> If a data source is deleted from the data provider system, it is not automatically deleted from SmartPTT Dispatcher. The name of the deleted data source is displayed in gray. The settings that affect the data source are not deleted, and remain editable.

If one of the data source parameters reports an alarm, this data source is displayed on the **Map** panel with the corresponding indication.

Data Source Indication

To notify operators about emergencies on data sources, SmartPTT Dispatcher provides a number of indication options, including color indication and animation.

When one of the data sources reports an alarm, SmartPTT Dispatcher attracts the operator's attention in the following ways:

- If the **Map** panel is opened, the map automatically centers on the data source that reported the alarm.

- If the data source was hidden, it appears on the map with the marker indicating the alarm.

- If the side panel is collapsed, it opens on the **Data sources** tab.

- If the side panel is expanded but another tab is active, the panel switches to the **Data sources** tab.

- The data source list scrolls down to the point that reported the alarm.

- If the **Map** panel is opened but another panel is active, the tab of the **Map** panel starts flashing red.

Depending on the parameter values and the operator actions regarding the emergency, data sources can be in several states. The following table provides information on the data source states and their indication on the **Map** panel.

State	Description	Indication
Operating	All the data source parameters are within the normal range, or the emergency was acknowledged and eliminated (became outdated).	Standard colors, no animation.
Alarm	One or several parameters reported the alarm.	The point background flashes red.
Acknowledged	One of the SmartPTT Dispatcher operators acknowledged the alarm and is taking action to eliminate it.	The red background that indicates alarm stops flashing but does not disappear.

State	Description	Indication
Outdated unacknowledged	The emergency on the data source was eliminated before any operator acknowledged it in SmartPTT Dispatcher.	Red frame around the point. The red background that indicates alarm disappears.
No connection	The connection to the data source was lost, the data source was deleted from the data provider system, or the data acquisition module was deactivated in SmartPTT Dispatcher.	The point icon and name are gray. If the data source was deleted from the data provider system, on the deleted point entry in the list of data sources, the *The Point was deleted* message appears.

Adding Cameras

Follow the procedure to add a camera marker on a map.

Prerequisites:

- Ensure the desired camera was added and configured in the Avigilon system.

- Ensure an operator has the **Manage cameras** right.
  For information on the operator rights, see [Operators](#).

Procedure:

1. In the right part of the desired map, click **Objects on Map**.
   The **Objects on Map** panel appears.

2. *(Optional)* Click Pin (🚩) to pin the panel.

3. On the **Objects on Map** panel, click the **Cameras** tab.

4. On the **Cameras** tab, click **Add Camera (➕)**.
   The **Camera** panel appears.
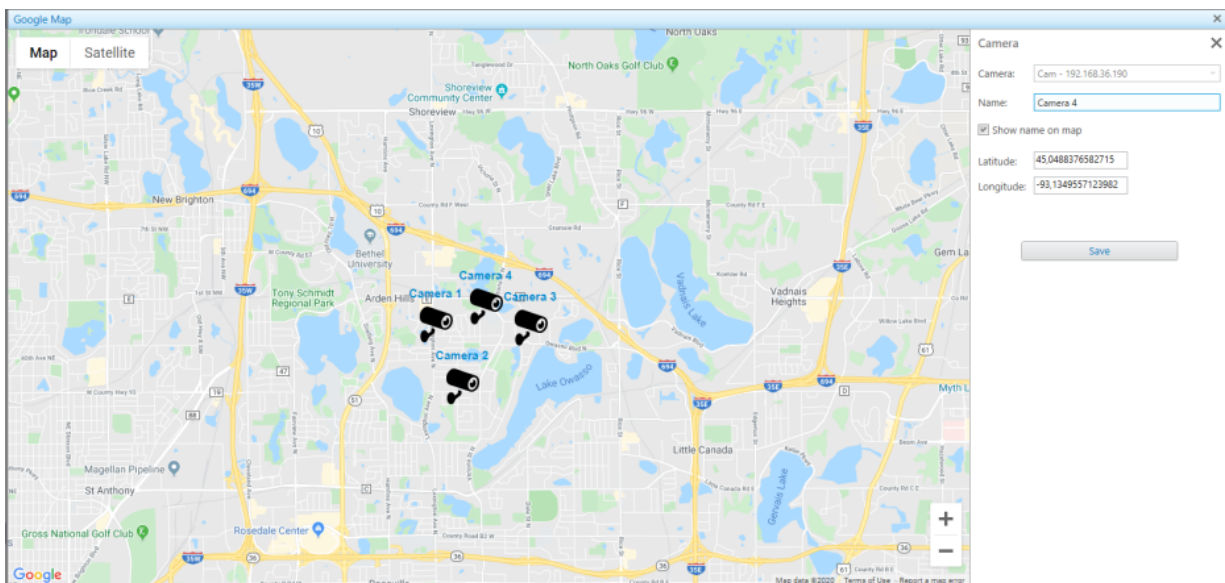
5. From the **Camera** list, select the desired camera.

6. In the **Name** field, type the desired camera name.

7. *(Optional)* To show the name of the camera marker on a map, select the **Show name on map** check box.

8. Specify the camera marker location on a map in one of the following ways:

To specify the camera marker location on a map with a mouse,	click the desired location on a map. The camera marker appears in the specified location on a map.
To specify the camera marker location in the other way,	in the **Latitude** and **Longitude** fields, type the desired coordinates. The camera marker appears in the specified location on a map.

9. Click **Save** to save the camera marker.
    The added camera marker appears in the list of the **Cameras** tab of the **Object on Map** panel.

Postrequisites:

*   To edit the camera marker, see Editing Objects on Map.

*   To delete the camera marker, see Deleting Objects.

Adding Points of Interest

Follow the procedure to add a point of interest on a map.

Prerequisites:

Ensure the operator has the **Manage points of interest** right. For details, see Operators.

Procedure:

1. In the right part of the open map, click **Objects on Map**.
    The **Objects on Map** panel appears.

2. *(Optional)* Click Pin (![pin icon]) to pin the panel.

3. On the **Objects on Map** panel, open the **Points of Interest** tab.

4. On the **Points of Interest** tab, click **Add Point of Interest** (![plus icon]).
    The **Point of Interest** panel appears.
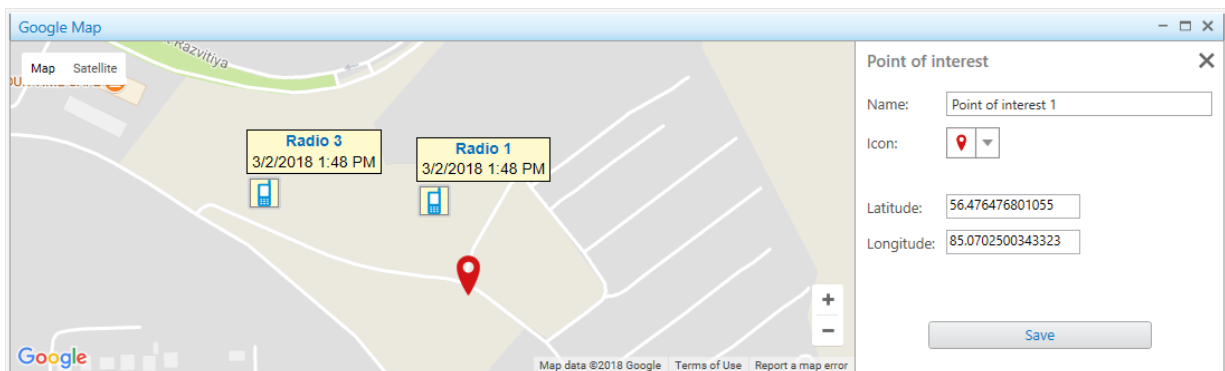
5. In the **Name** field of the **Point of Interest** panel, type the name of the point of interest.

6. *(Optional)* From the **Icon** list, select an image for the point of interest on a map.

> **NOTE**
> You can download the image by clicking the Browse (![browse icon]) button. Images of large size are cropped to 48×48.

7.   Set the point of interest location on the map in one of the following ways:

To set the point of interest location with a mouse,	click the desired location on a map. The point of interest appears at the specified location on a map.
To set the point of interest location in the other way,	in the **Latitude** and **Longitude** fields, type the desired coordinates. The point of interest appears at the specified location on a map.

8.   Click **Save** to save the point of interest.
     The added point appears on a map, and in the list of the **Points of Interest** tab of the **Object on Map** panel.

Postrequisites:

- To display or hide the point of interest on a map, on the **Points of Interest** tab, select or clear the **Show on Map** check box next to the desired point of interest.

- To edit the point of interest, see <u>Editing Objects on Map</u>.

- To remove the point of interest, see <u>Deleting Objects</u>.

Adding Geofences

Follow the procedure to add a geofence on a map.

Prerequisites:

Ensure the operator has the **Manage geofences** right. For details, see <u>Operators</u>.

Procedure:

1.   In the right part of the open map, click **Objects on Map**.
     The **Objects on Map** panel appears.

2.   *(Optional)* Click Pin (⚑) to pin the panel.

3.   On the **Objects on Map** panel, open the **Geofences** tab.

4. On the **Geofences** tab, click **Add Geofence (+)**.
   The **Geofence** panel appears.
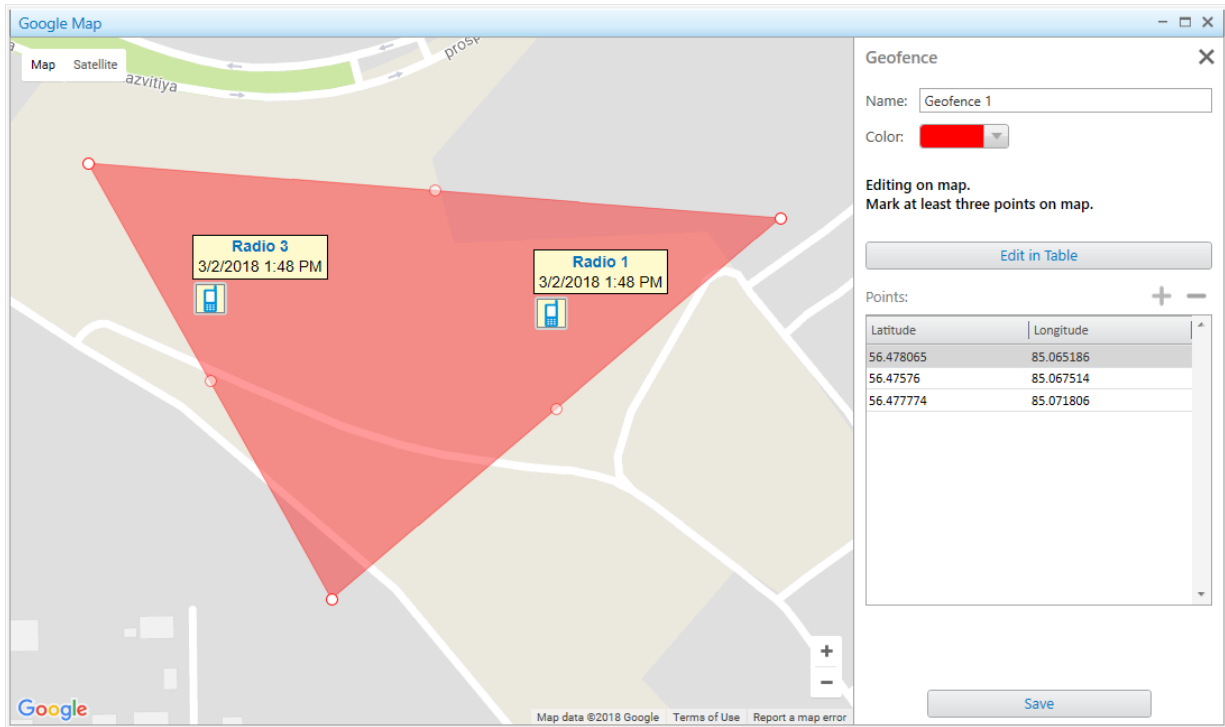
5. In the **Name** field of the **Geofence** panel, type the name of the geofence.

6. From the **Color** palette, select the color for the geofence on a map.

7. Add a geofence on the map in one of the following ways:

To add a geofence using the map,	perform the following actions:
	1. Set the geofence location on a map by clicking at least three desired points on a map. Double-click the last point to finish drawing.
	2. Click **Save** to save the geofence. The added geofence appears on a map, and in the list of the **Geofences** tab of the **Objects on Map** panel.
To add a geofence using the table,	perform the following actions:
	1. Click the **Edit in Table** button. The **Points** table becomes active.
	2. Add at least three points by clicking the **Add coordinate (+)** button. The entries for adding coordinates appear in the table.

	3. In the table, perform the following actions:
	   a. In the **Latitude** column, type the desired latitude of points.
	   b. In the **Longitude** column, type the desired longitude of points.

	4. Click the **Save** button. The current panel changes to the **Objects on Map** panel.

Postrequisites:

- To delete a point from the **Points** table, select the desired row, and then click **Delete coordinate (➖)**.

- To display or hide the geofence, on the **Geofences** tab, select or clear the **Show on map** check box next to the desired geofence.

- To edit the geofence, see Editing Objects on Map.

- To remove the geofence, see Deleting Objects.

Adding Routes

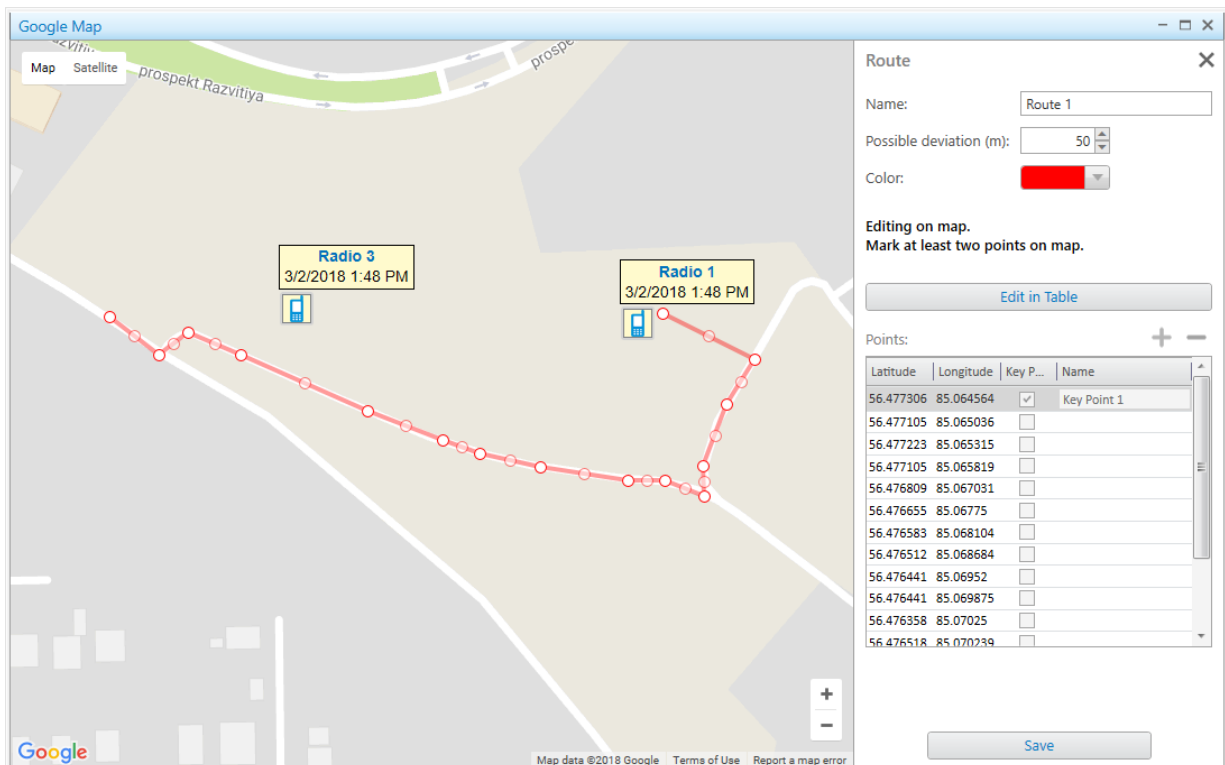Follow the procedure to add a route on a map.

Prerequisites:

Ensure the operator has the **Manage routes** right. For details, see Operators.

Procedure:

1. In the right part of the open map, click **Objects on Map**.
   The **Objects on Map** panel appears.

2. *(Optional)* Click Pin (📌) to pin the panel.

3. On the **Objects on Map** panel, open the **Routes** tab.

4. On the **Routes** tab, click **Add Route (➕)**.
   The **Route** panel appears.

5. In the **Name** field of the **Route** panel, type the name of the route.

6. In the **Possible deviation (m)** field, enter the possible deviation from the route.

7. From the **Color** palette, select the color for the route on a map.

8. Add a route on the map in one of the following ways:

To add a route using the map,	perform the following actions:
	1. Set the route location on a map by clicking at least two desired points on a map. Double-click the last point to finish drawing.
	2. Click **Save** to save the route. The current panel changes to the **Objects on Map** panel.

To add a route using the table,	perform the following actions:
	1. Click the **Edit in Table** button. The **Points** table becomes active.
	2. Add at least two points by clicking the **Add coordinate (+)** button. The lines for adding coordinates appear in the table.
	3. In the table, perform the following actions:

        a.   In the **Latitude** column, type the desired latitude of points.

        b.   In the **Longitude** column, type the desired longitude of points.

        c.   *(Optional)* In the **Key point** column, select the check box.

> **NOTE**
> Key points can be displayed in the Radio Locations report. For details, see Creating Radio Location Report.

        d.   *(Optional)* In the **Name** column, in the desired entry, type the key point name.

4. Click the **Save** button.
The current panel changes to the **Objects on Map** panel.

Postrequisites:

- To display or hide a route, on the **Routes** tab, select or clear the **Show on map** check box next to the desired route.

- To edit a route, see Editing Objects on Map.

- To remove a route, see Deleting Objects.

Adding Data Sources

Follow the procedure to add a data source on a map.

Prerequisites:

Ensure the desired data source is created and configured in the data provider system.
For information on data source configuration, see the data provider embedded help.

Procedure:

1. In the right part of the desired map, click **Objects on Map**.
The **Objects on Map** panel appears.

2. *(Optional)* Click Pin ( ) to pin the panel.

3. On the **Objects on Map** panel, click the **Data sources** tab.

4. On the **Data sources** tab, click **Add data source (✚)**.
    The **Data source** panel appears.
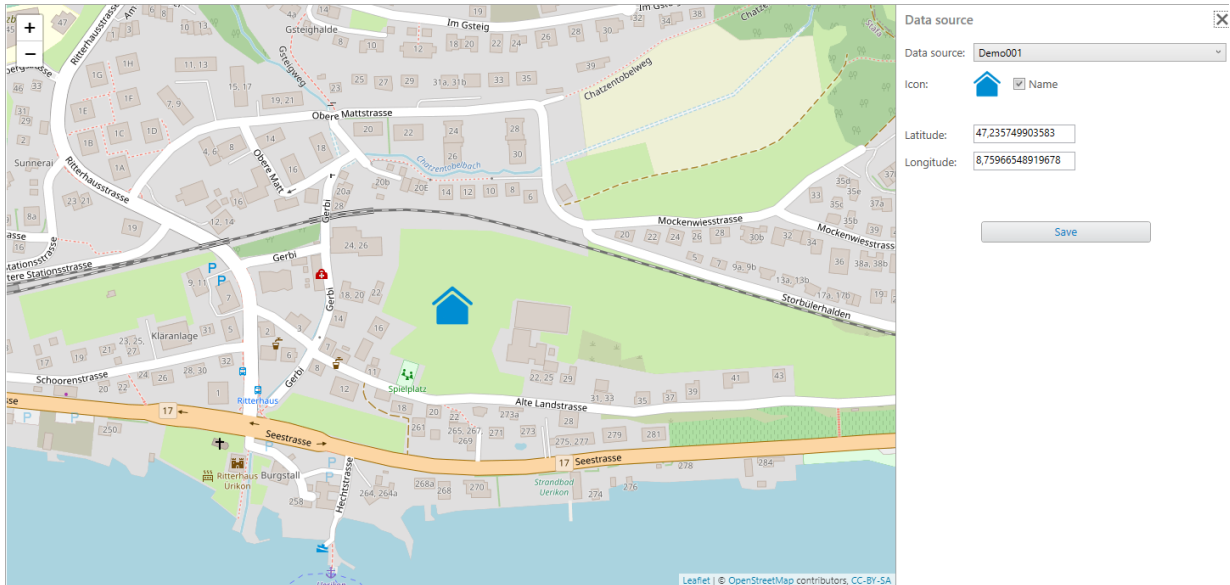
5. From the **Data source** list, select the desired data source.
    The marker of the selected data source appears below.

6. *(Optional)* To show the name of the data source on a map, select the **Name** check box.

7. Specify the data source location on a map in one of the following ways:

To specify the data source location with a mouse,	click the desired location on a map. The data source icon appears in the specified location on a map.
To enter the data source coordinates manually,	in the **Latitude** and **Longitude** fields, type the desired coordinates. The data source icon appears in the specified location on a map.

8. Click **Save** to save the data source.
    The added data source appears in the list of the **Data sources** tab of the **Object on Map** panel.

Postrequisites:

•   To display or hide the data source on a map, on the **Data sources** tab, select or clear the **Show on Map** check box.

•   To edit the data source, see Editing Objects on Map.

•   To delete the data source, see Deleting Objects.

Editing Objects on Map

Follow the procedure to edit a point of interest, geofence, route, camera marker or data source.

Prerequisites:

Ensure at least one desired object is added on a map.

Procedure:

1. In the right part of the open map, click **Objects on Map**.
    The **Objects on Map** panel appears.

2. *(Optional)* Click Pin (🖈) to pin the panel.

3.   On the **Objects on Map** panel, select the desired tab.

4.   On the selected tab, in the desired object entry, click **Edit (✐)**.
      The panel with the object parameters appears.

5.   Perform the desired actions:

To edit a point of interest, camera marker or a data source directly on a map,	click the desired place on a map.
To edit a geofence or a route directly on a map,	drag the object points to the desired position.
To edit an object using the panel,	on the panel that appears, perform the desired changes.
To cancel changes,	perform one of the following actions: • *For Google maps:* To cancel the last change made to a geofence or route on a map, click (⬑). • To cancel changes and close the panel, in the upper-right corner of the panel, click (✕). The panel changes to the **Objects on Map** panel.

6.   If the **Camera**, **Point of interest**, **Geofence**, **Route**, or **Data source** panel is open, click **Save**.
      The panel changes to the **Objects on Map** panel.

Deleting Objects

Follow the procedure to remove a point of interest, geofence, route, camera marker or data source on the **Objects on Map** panel.

Prerequisites:

Ensure that at least one desired object is added in the list.

Procedure:

1.   In the right part of the open map, click **Objects on Map**.
      The **Objects on Map** panel appears.

2.   *(Optional)* Click Pin (⚐) to pin the panel.

3.   On the **Objects on Map** panel, select the desired tab.

4.   On the selected tab, in the desired object entry, click **Delete (▬)**.
      The object disappears from the map and from the selected tab.

4.7.1.3 Upload to KML

The Upload to KML feature provides the ability to export radio coordinates from SmartPTT Dispatcher to a separate KML file.

The exported KML file contains location information only for those radios that are currently displayed on a map in SmartPTT Dispatcher. For information on location tracking configuration, see Configuring Radio GPS Settings and Configuring Positioning Settings.

You can export the location data in one of the following ways:

•   To a local file. For details, see Exporting Coordinates to Local KML File.

•   To a file on the FTP server. For details, see Exporting Coordinates to KML File on FTP Server.

Depending on the settings, the location information in the exported file may be fixed or updated regularly.
If the corresponding check box is selected in the export settings, the exported file will be updated at a defined interval to reflect the location changes in the dispatched radio system.

Exported files can be viewed in a web browser or in compatible desktop applications. The KML file format is used in Google Maps, Google Earth, and other services based on Google Maps.

For information on exporting location data to a local KML file or to a KML file on the FTP server, see the sections below.

4.7.1.3.1 Exporting Coordinates to Local KML File

Follow the procedure to export radio coordinates to a local KML file.

Prerequisites:

- Ensure that the desired radios are displayed on a map in SmartPTT Dispatcher.

- Ensure that you have access to the desired export destination folder.

Procedure:

1. On the menu bar, click **Service → Upload to KML**.
   The **Export to KML** window appears.

2. At the top of the window, select **Local File**.
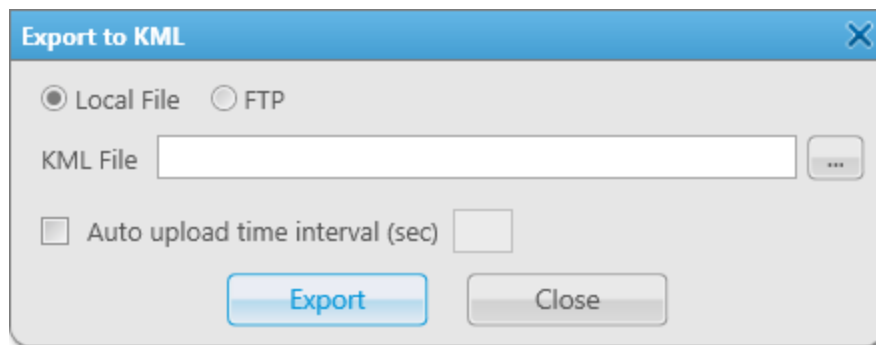
3. *(Optional)* Configure automatic update of the location data in the exported file:

   a. Select the **Auto upload time interval (sec)** check box.

   b. In the field to the right of the check box, specify the interval in seconds for the exported file to be updated.

   NOTE
   If you leave the **Auto upload time interval (sec)** field empty or move the exported file to another directory, the location data in the file will not be updated.

4. To the right of the **KML File** field, click Browse (...).

5. In the **Select KML File** window, specify the path to the desired folder, and then perform one of the following actions:

To export radio coordinates to a new file,	perform the following actions:
	1. In the **File name** field, type the name for the exported file, and then click **Save**. In the **KML File** field, the path to the file and its name appears.
	2. Click **Export**.

To export radio coordinates to an existing file,   perform the following actions:

1. Select the file that you want to replace, and then click **Save**.
   In the **KML File** field, the path to the file and its name appears.

2. Click **Export**.

3. In the **Confirmation** window, click **OK**.

6. In the window indicating successful export, click **OK**.

Postrequisites:

To cancel the coordinates export and save current export settings, in the **Export to KML** window, click **Cancel**.

4.7.1.3.2 Exporting Coordinates to KML File on FTP Server

Follow the procedure to export radio coordinates to a KML file on the FTP server.

Prerequisites:

- Ensure that the desired radios are displayed on the map in SmartPTT Dispatcher.

- Ensure that you have access to the desired export destination folder.

- *(Optional)* Obtain the user login and password for access to the desired FTP server.

Procedure:

1. On the menu bar, click **Service →Upload to KML**.
   The **Export to KML** window appears.

2. At the top of the window, select **FTP**.
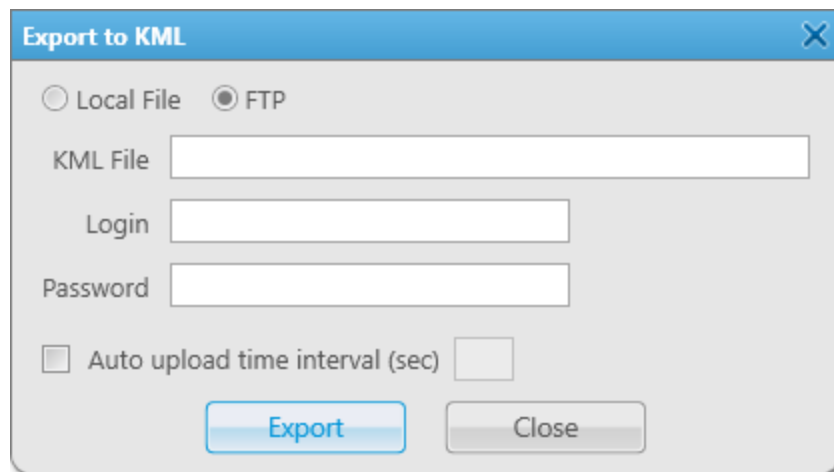
3. In the **KML File** field, specify the path and the name for saving the exported file. For example,
   ftp://myserver/smartptt/Radios_smartptt.kml.

4. *(Optional)* If the target FTP server requires user authentication, perform the following actions:

   a. In the **Login** field, type the login of the FTP server user.

   b. In the **Password** field, type the user password for access to the FTP server. To view the entered password, click the eye icon (👁).

5. *(Optional)* Configure automatic update of the location data in the exported file:

   a. Select the **Auto upload time interval (sec)** check box.

   b. In the field to the right of the check box, specify the interval in seconds for the location data in the exported file to be automatically updated.

> **NOTE**
> If you leave the **Auto upload time interval (sec)** field empty or move the exported file to another directory, the location data in the file will not be updated.

6. At the bottom of the **Export to KML** window, click **Export**.

7. In the window indicating successful export, click **OK**.

Postrequisites:

To cancel the coordinates export and save current export settings, in the **Export to KML** window, click **Cancel**.

4.7.2 Indoor Tracking

SmartPTT supports the ability to display and control location of radios inside buildings. The SmartPTT system provides the Indoor Tracking feature that is used to receive data from special beacons and transmit them to SmartPTT Dispatcher. The Indoor Tracking feature tracks radio movements near beacons placed at key points in a building and display them on a building plan in SmartPTT Dispatcher.
For information on indoor system operation, see "Beacon-Based Location (Indoor)" in *SmartPTT Installation and Configuration Guide*.

> **Important**
> To use Indoor Tracking, you need the corresponding license. For details, see Licenses.

> **Important**
> Indoor Tracking is available to operators with the **Manage radio location settings** right. For details, see Operators.

The SmartPTT system supports the following Indoor Tracking technologies and equipment manufacturers:

- iBeacon technology that uses MOTOTRBO radios with firmware version 2.6 or later, as well as beacons that support iBeacon technology.

- BluFi Wireless that uses the Connect-RTLS RF800 option boards and beacons.

- Kilchherr Elektronik AG that uses the K-TERM 44 option boards and K-TERM 70 IC beacon transmitters.

To use indoor features in SmartPTT, you must perform the following actions:

- Configure indoor parameters in SmartPTT Radioserver Configurator. For details, see "Configuring Beacons in SmartPTT" in *SmartPTT Installation and Configuration Guide*.

- Configure indoor support for a radio in SmartPTT Dispatcher. For details, see Configuring Indoor Radio Tracking.

> **NOTE**
> To enable Indoor Tracking using the Motorola platform (iBeacon technology), you must also select the **Update interval (sec)** check box and set the desired interval value.

- Create or edit a building plan. For details, see Creating and Editing Building Plan.

- Configure the display parameters of objects and perform the desired actions with them. For details, see Indoor Map Actions.

4.7.2.1 Building Plan

SmartPTT Dispatcher provides the ability to use the Indoor Tracking feature to track the location of the radio on a multi-story building plan.

To open the panel with the configured building plan, click **Map** →**Indoor Tracking** →**Open Indoor Map** on the menu bar, and then select the desired file in the window that appears. To create a new building plan, click **Map** →**Indoor Tracking** →**New Building Map**.

> **NOTE**
> To control more than one building in SmartPTT Dispatcher at the same time, you can open several indoor map panels.

The indoor map consists of a building plan and the Map Control Panel. The Map Control Panel is divided into three tabs: **Floor Plan (⊞)**, **Radios On Plan ( )**, and **Radio Tracks**. You can collapse it or expand. For DWG maps, you can select 2D or 3D display and configure resolution on the panel. The indoor map can also include the **Track Details** panel that is displayed when clicking **Track Details (ⓘ)** on the **Radio Tracks** tab of the Control Panel.

You can use a building plan in the DWG, SPLAN, SPLANX, or any raster format. You can also upload a separate plan file for each floor to create a building plan. You must use a separate DWG file or raster image (such as JPG or PNG) for each floor.

> **NOTE**
> DWG is a binary file format used for 2D and 3D design data and metadata. It is the native format for several CAD applications.

To use a building plan, perform the following actions:

- Create and edit a building plan. For details, see <u>Creating and Editing Building Plan</u>.

- Configure the building plan display. For details, see <u>Configuring Building Plan Display</u>.

- Add configured beacons and other elements to display radio locations. For details, see <u>Indoor Map Actions</u>.

When you make changes to a building plan in SmartPTT Dispatcher, the changed file will be saved as the SPLAN file or zipped SPLANX file.

The plan can display buttons for switching the floors of the building, the Coordinate Axes (⤢) icon that provides the ability to specify the position of 3D objects relative to coordinate axes, and buttons that provide the ability to control the building plan display. You can zoom in the area selected on the plan ( ), zoom in or zoom out the plan ( ), move the plan ( ), and fit the scale of the building plan to the size of the panel ( ). In the upper right corner, you can also see the View Cube ( ) that provides the ability to change views of the displayed building.

> **NOTE**
> The View Cube is only available for 3D building plans.

4.7.2.1.1 Configuring Building Plan Display

Follow the procedure to configure the display of the building plan in SmartPTT Dispatcher.

Prerequisites:

- Ensure you have the Indoor license. For details, see <u>Licenses</u>.

- Create or obtain a file with a plan of the desired building. For details, see <u>Creating and Editing Building Plan</u>.

Procedure:

1. On the menu bar, click **Map** →**Indoor Tracking** →**Open Indoor Map**.

2. In the window that appears, select the desired file and click **Open**.
   The indoor map panel appears in the SmartPTT Dispatcher main area.
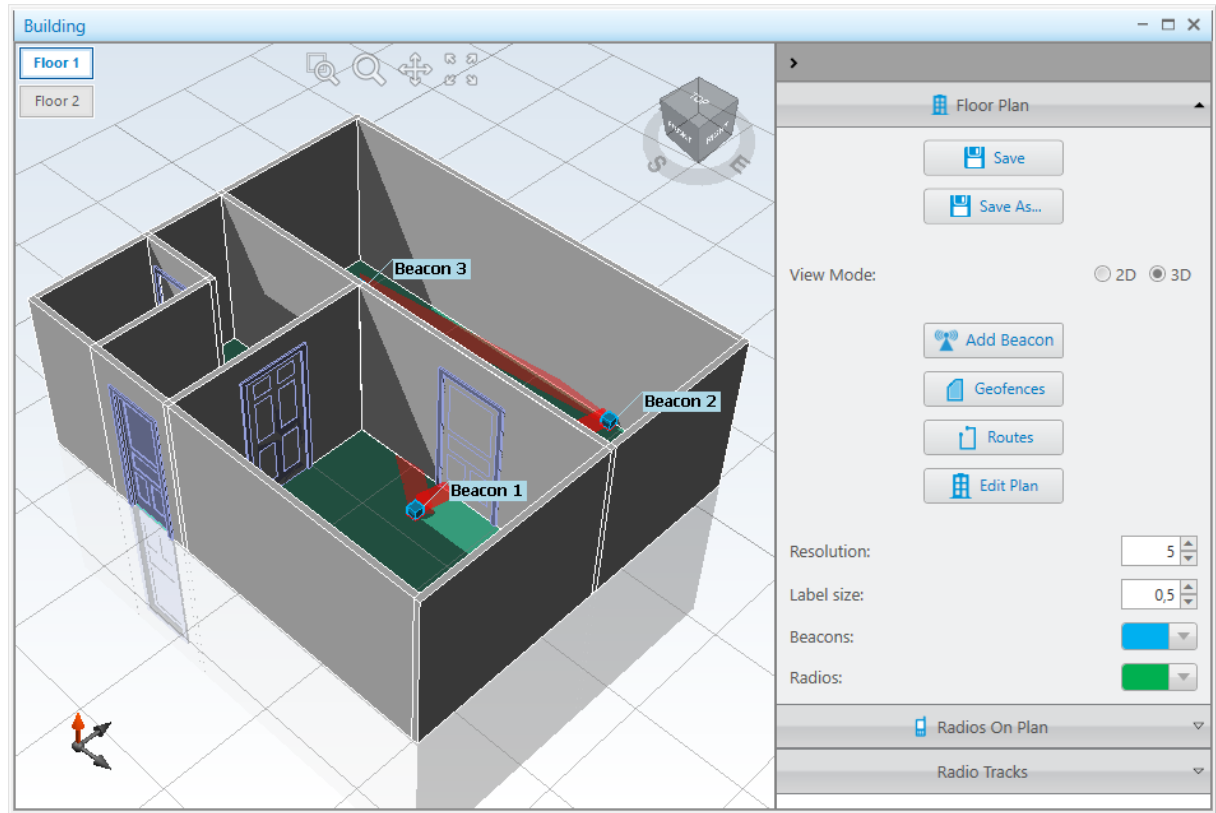
3. Perform the desired actions:

|	
To enlarge a specific area on the building plan,	perform the following actions: 1. Click **Zoom Window** ( ). 2. Select the desired area on the plan.
To increase or decrease the size of the building plan,	perform one of the following actions: • Click **Zoom** ( ), and then click anywhere on the plan and, while holding the left mouse button, move the cursor up to zoom in or down to zoom out. • Use the scroll wheel.
To move the building plan on the screen,	perform the following actions: 1. Click **Pan** ( ). 2. Click anywhere on the plan and, while holding the left mouse button, drag the building plan to the desired location on the screen.
To fit the scale of the building plan to the size of the indoor map panel,	click **Zoom Fit** ( ).
To change the angle of the displayed building plan,	perform one of the following actions:

- Click the View Cube ( ) and, holding the left mouse button, spin it to reach the desired angle.

- Click the circle of the View Cube ( ) and, holding the left mouse button, drag it to reach the desired angle.

- Select the desired side of the View Cube ( ).

- On the circle of the View Cube ( ), select the desired cardinal direction icon.

NOTE
These actions are only available for 3D building plans.

4.7.2.2 Indoor Map Actions

SmartPTT Dispatcher provides the ability to interact with objects on the building plan using the Indoor Map Control Panel. The Control Panel buttons provide the ability to add beacons ( ), geofences ( ), routes ( ), and edit the plan ( ). You can configure the size and color of the added beacon and radio labels.

For information on configuring the display of objects on the building plan, see Configuring Display of Objects on Building Plan.

Beacons

To display radios, you must place beacons on the plan considering their position inside the real building. The beacon numbers on the plan must match the beacon numbers inside the real building. You can also specify the name for each beacon.

If you use the Motorola platform (iBeacon technology), the beacon number in this field must be typed in the *Major.Minor* format, where the *Major* value is separated from the *Minor* value by a dot. *Major* stands for the number of the group of beacons and *Minor* stands for the individual number of the beacon in the group. If you use the BluFi or Kilchherr platform, the beacon ID in this field must be the same as in the beacon settings.

For information on adding, editing, and deleting beacons, see Managing Beacons.

Geofences

SmartPTT Dispatcher provides the ability to connect beacons to create geofences on the indoor map. Geofences can be used in positioning rules to track the location of a radio.
For information on positioning rules, see Positioning Rules.

Beacons inside the specific geofence are highlighted with the color that was selected in settings.

For information on adding, editing, and deleting a geofence, see Managing Geofences.

Routes

SmartPTT Dispatcher provides the ability to connect beacons to create routes on the indoor map. Routes can be used in positioning rules to track the location of a radio.
For information on positioning rules, see Positioning Rules.

Beacons are connected to create a route according to the order that was used to add them. The color of the route line can be configured in settings. You can use the same beacon several times in one route.

For information on adding, editing, and deleting a route, see Managing Routes.

Radios On Plan

The **Radios On Plan ( )** tab contains a list of radios that support Indoor Tracking. To make the desired radio appear in the list, you must enable the Indoor Tracking support in its **Radio Properties** window. For details, see Configuring Indoor Radio Tracking.
To make a radio label appear on the building plan, select the check box next to the desired radio.

> **Important**
> When the alarm is registered, the radio that sent the alarm will be centered on the building plan, and a red frame will appear around it (if Indoor Tracking support is enabled). Other radios in the emergency state and radios added to the category for emergency (for example, a rescue team) will be displayed on the plan too. All other radios will be hidden. After resolving the emergency situation, the hidden radios will not be automatically displayed, but only after selecting them on the **Radios On Plan ( )** tab.
> For information on emergency categories, see Configuring Emergency Processing.

Radio Tracks

The **Radio Tracks** tab provides the ability to view the radio movement history in the building or track the radio movement in real time in SmartPTT Dispatcher. You can animate the track for the desired period or activate the radio movement display in real time.

The radioserver databases are used as data sources to draw a track.

> **Important**
> If the radioserver Event Log is not activated in SmartPTT Radioserver Configurator or the radioserver is not running, the radioserver will not be available as the data source.

The tracks can be built both for separate radios and users. The list of radios or users is received from the connected database.

> **Important**
> If the user authorization service is not activated and at least one user is not added in SmartPTT Radioserver Configurator, the list of users is not displayed, and the *Unavailable for this source* message appears.

In SmartPTT Dispatcher, you can perform the following actions with radio tracks:

- Display all radio tracks. For details, see Displaying All Tracks.

- Display the specific radio track. For details, see Displaying Track.

- Animate the track on the building plan. For details, see Animating Track.

The **Track Details** panel provides the Tracks Details Table with additional information about the radio movements. The information displays the location of the radio on the building plan. The panel appears when clicking **Track details ( )** on the **Radio Tracks** tab of the indoor map Control Panel. The Tracks Details Table provides the date and time when the track passed through the point, the floor, and beacons that were used to identify the track point.

4.7.2.2.1 Configuring Display of Objects on Building Plan

Follow the procedure to configure the display of objects on the building plan.

Prerequisites:

- Create or obtain a file with a plan of the desired building. For details, see Creating and Editing Building Plan.

- Ensure the Indoor Tracking support is activated for the desired radios. For details, see Configuring Indoor Radio Tracking.

- Ensure you have the Indoor license. For details, see Licenses.

- Ensure the beacon-based location service is configured in SmartPTT Radioserver Configurator. For details, see "Configuring Beacons in SmartPTT" in *SmartPTT Installation and Configuration Guide*.

Procedure:

1. On the menu bar, click **Map →Indoor Tracking →Open Indoor Map**.

2. In the window that appears, select the desired file and click **Open**.
    The indoor map panel appears in the SmartPTT Dispatcher main area.
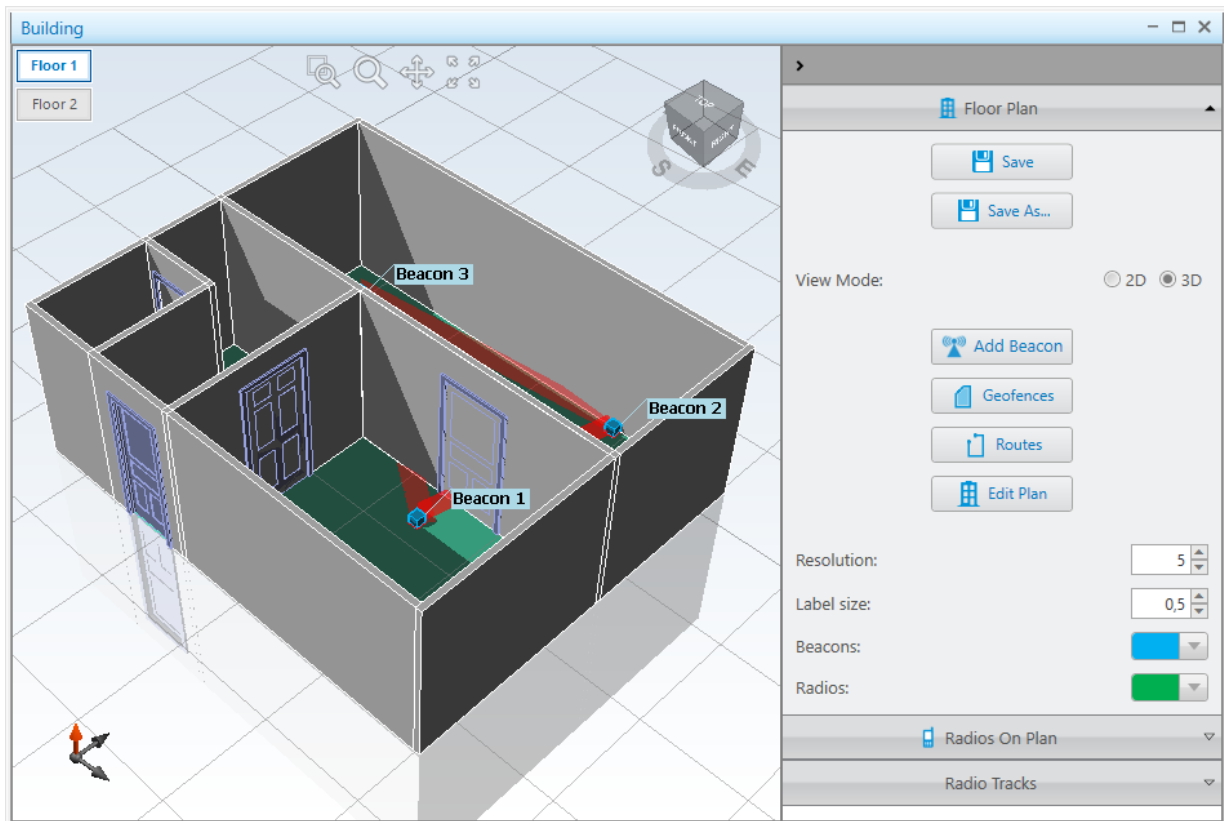
3. On the indoor map, click **Expand the Control Panel (❮)** to expand the Control Panel.

4. On the Control Panel, expand the **Floor Plan ( ) ** tab.

5. For the **View Mode** parameter, select the desired option:

To display the plan in 2D,	select **2D**.
To display the plan in 3D,	select **3D**.

> **NOTE**
> The **View Mode** parameter is only available for building plans in DWG format.

6. In the **Resolution** field, enter the desired value to change the grid size of the building plan.

> **NOTE**
> The **Resolution** field is only available for building plans in DWG format.

7. In the **Label size** field, enter the desired value to resize the radio and beacon labels displayed on the building plan.

8. From the expandable **Beacons** palette, select the desired color for beacon labels.

9. From the expandable **Radios** palette, select the desired color for radio labels.

10. Perform the desired actions:

To add a beacon to the building plan,	click **Add Beacon ( )**. For details, see Managing Beacons.

To create a geofence,	click **Geofences** (▢). For details, see Managing Geofences.
To create a route,	click **Routes** (▢). For details, see Managing Routes.
To change the building or floor name, floor order, or floor plan file,	click **Edit Plan** (▦). For details, see Creating and Editing Building Plan.
To display radios on the building plan,	perform the following actions: 1. Expand the **Radios On Plan** (▢) tab. 2. Select the check boxes next to the desired radios.

Postrequisites:

- To save the changes to the building plan in a SPLAN file or SPLANX archive, click **Save** (💾).

- To save a copy of the building plan in a SPLAN file or SPLANX archive with a different name, click **Save As** (💾).

4.7.2.2.2 Managing Beacons

Follow the procedure to add a new beacon to the building plan, edit the properties of a previously added beacon, or remove a beacon from the building plan.

Prerequisites:

- Obtain the numbers of the desired beacons.

- Obtain accurate beacon locations in the building.

Procedure:

Perform one of the following actions:

To add a new beacon to the building plan,	perform the following actions:
	1. On the indoor map, click **Expand the Control Panel** (‹) to expand the Control Panel.
	2. On the Control Panel, expand the **Floor Plan** (▦) tab.
	3. Click **Add Beacon** (((📡))). The **Beacon Properties** window appears.
	4. In the window that appears, in the **Beacon Number** field, type the beacon number.
	5. *(Optional)* In the **Beacon Name** field, type the desired beacon name.

6. Click **OK**.

    Instead of the mouse cursor, a beacon (![icon]) icon appears.

7. Perform one of the following actions:

    •   To add a beacon to the building plan, move the icon to the place on the building plan where the beacon is installed, and then left-click.
        The beacon label appears in the desired place on the plan.

    •   To cancel adding a beacon to the building plan, click **Add Beacon** (![icon]) once again.

To edit the properties of an earlier added beacon,	perform the following actions:

1. Double-click the label of the desired beacon on the building plan. The **Beacon Properties** window appears.

2. In the window that appears, perform the desired changes.

3. Click **OK** to apply changes.

To remove the beacon from the building plan,	perform the following actions:

1. Double-click the label of the desired beacon on the building plan. The **Beacon Properties** window appears.

2. In the window that appears, click **Delete**.
    The beacon label is deleted from the building plan.

4.7.2.2.3 Managing Geofences

Follow the procedure to create, edit, or delete a building plan geofence.

Prerequisites:

•   Ensure multiple beacons are located on the building plan to be united into a geofence. For details, see Managing Beacons.

•   Ensure the operator has the **Manage geofences** right. For details, see Operators.

Procedure:

1. On the indoor map, click **Expand the Control Panel (‹)** to expand the Control Panel.

2. On the Control Panel, expand the **Floor Plan (![icon])** tab.

3. Click **Geofences (▢)**.
   The **Geofences** window appears.
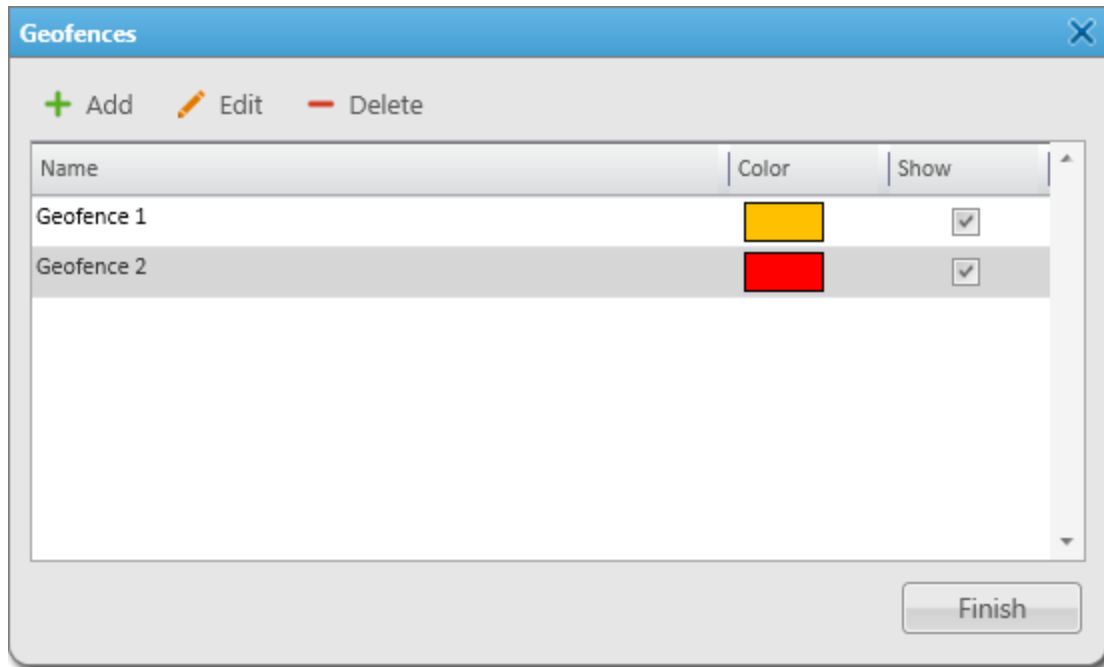
4. In the window that appears, perform one of the following actions:

To add a new geofence,	click **Add (＋)**. The **Geofence** window appears.
To edit an existing geofence,	perform the following actions: 1. In the Geofence table, select the desired geofence. 2. Click **Edit (✎)**. The **Geofence** window appears.
To delete the geofence,	perform the following actions: 1. In the Geofence table, select the desired geofence. 2. Click **Delete (▬)**. The selected geofence is deleted from the table. 3. Proceed to the last step of the procedure.
To highlight the beacons including in the geofence on the building plan,	perform the following actions: 1. For the desired entry of the Geofence Table, in the **Show** column, select the check box. 2. Proceed to the last step of the procedure.

5. In the **Geofence** window, in the **Name** field, type the desired name of the geofence.
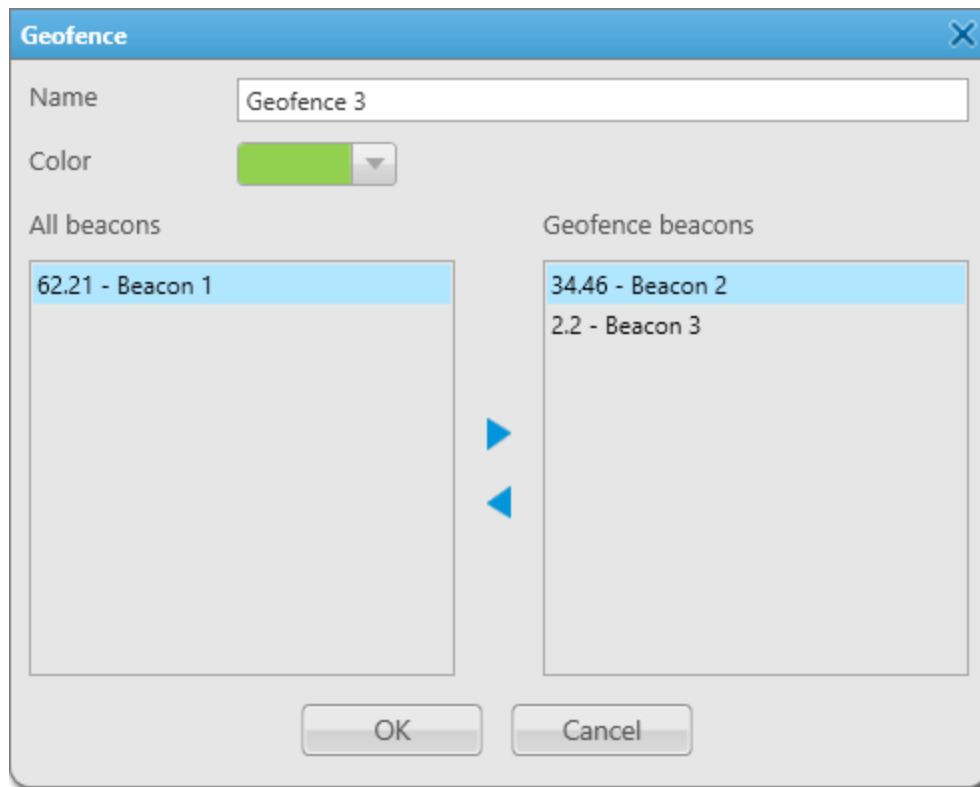
6. From the expandable **Color** palette, select the desired color to highlight the beacons included in the geofence.

7. Perform the desired action:

To add a new beacon to the geofence,	perform one of the following actions: • Select the desired beacon in the **All beacons** area, and then click the Add (▶) button. • Double-click the desired beacon in the **All beacons** area. • Drag the desired beacon from the **All beacons** area to the **Geofence beacons** area. The selected beacon appears in the **Geofence beacons** area.
To remove a beacon from the geofence,	perform one of the following actions: • Select the desired beacon in the **Geofence beacons** area, and then click the Remove (◀) button. • Double-click the desired beacon in the **Geofence beacons** area. • Drag the desired beacon from the **Geofence beacons** area to the **All beacons** area. The selected beacon disappears from the **Geofence beacons** area.

8. Click **OK**.

9. In the **Geofences** window, click **Finish**.

4.7.2.2.4 Managing Routes

Follow the procedure to create, edit, or delete a building plan route.

Prerequisites:

- Ensure multiple beacons are located on the building plan to add them to the route. For details, see Managing Beacons.

- Ensure the operator has the **Manage routes** right. For details, see Operators.

Procedure:

1. On the indoor map, click **Expand the Control Panel (‹)** to expand the Control Panel.

2. On the Control Panel, expand the **Floor Plan (▦)** tab.

3. Click **Routes (⬒)**.
   The **Routes** window appears.
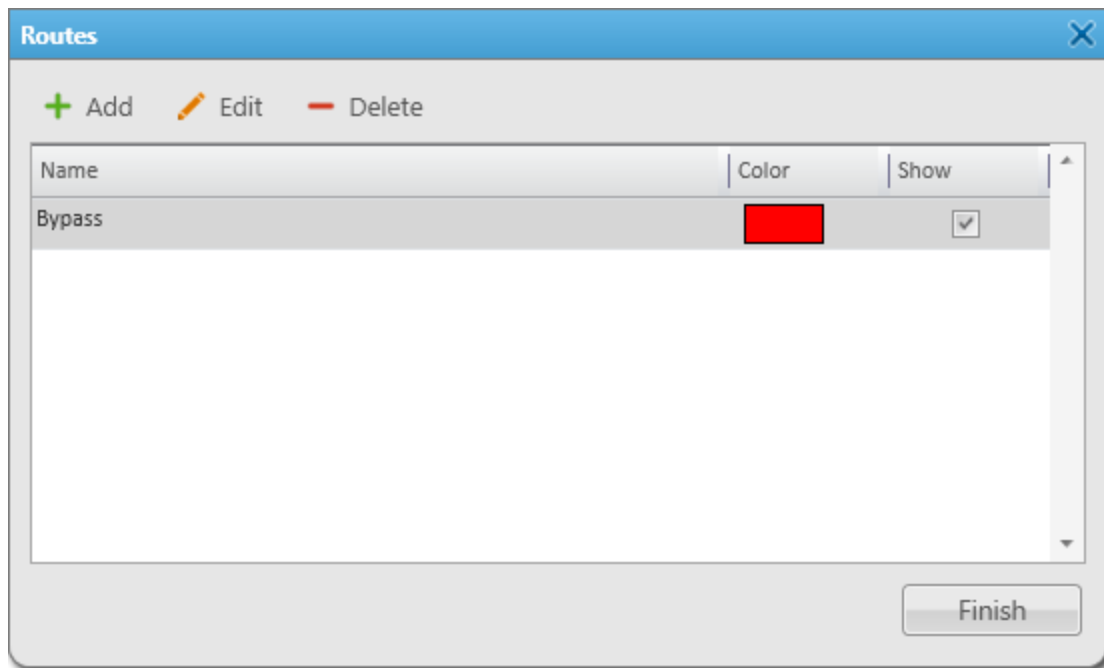
4. In the window that appears, perform one of the following actions:

|	
To add a new route,	click **Add (+)**. The **Route** window appears.
To edit an existing route,	perform the following actions: 1. In the Route table, select the desired route. 2. Click **Edit (✏)**. The **Route** window appears.
To delete the route,	perform the following actions: 1. In the Route table, select the desired route. 2. Click **Delete (—)**. The selected route is deleted from the table.

3.   Proceed to the last step of the procedure.

To display a route on a building plan,	perform the following actions:
	1. For the desired entry of the Route Table, in the **Show** column, select the check box. 2. Proceed to the last step of the procedure.

5.   In the **Route** window, in the **Name** field, type the desired name of the route.
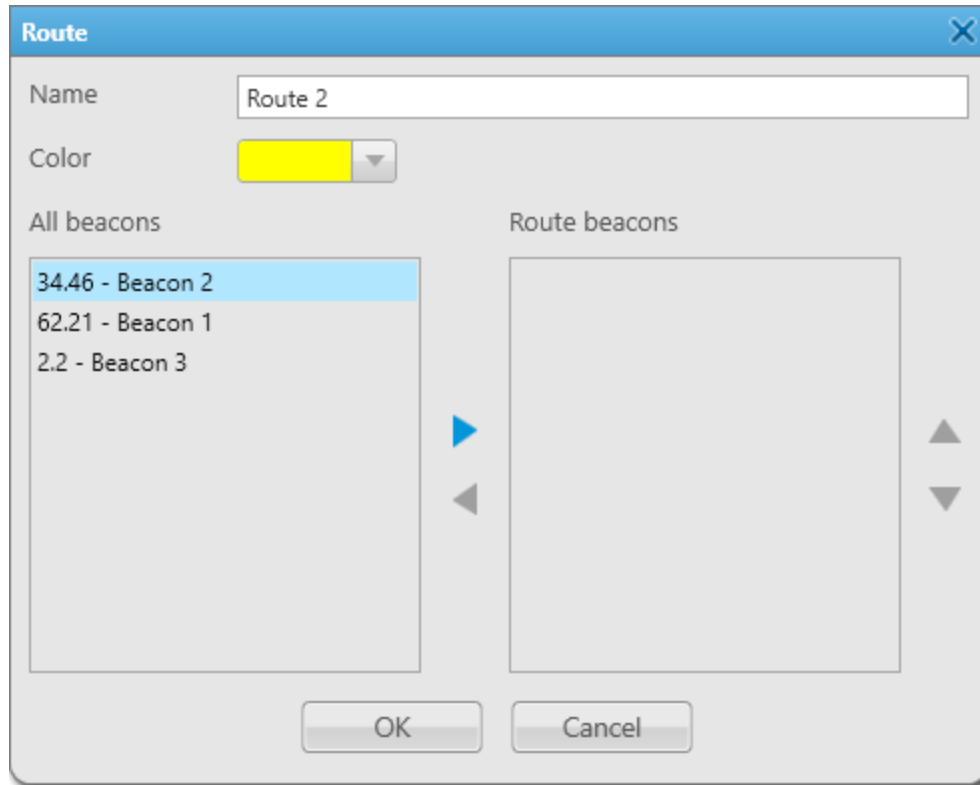
6.   From the expandable **Color** palette, select the desired color for the route on the building plan.

7.   Perform the desired action:

To add a new beacon to the route,	perform one of the following actions: • Select the desired beacon in the **All beacons** area, and then click the Add (▶) button. • Double-click the desired beacon in the **All beacons** area. • Drag the desired beacon from the **All beacons** area to the **Route beacons** area. The selected beacon appears in the **Route beacons** area.
To reorder route points,	perform the following actions: 1. In the **Route beacons** area, select the desired beacon. 2. Click **Up (▲)** or **Down (▼)** until the beacon reaches the desired position in the list.

To remove a beacon from the route,

perform one of the following actions:

- Select the desired beacon in the **Route beacons** area, and then click the Remove (◄) button.

- Double-click the desired beacon in the **Route beacons** area.

- Drag the desired beacon from the **Route beacons** area to the **All beacons** area.

The selected beacon disappears from the **Route beacons** area.

8. Click **OK**.

9. In the **Routes** window, click **Finish**.

4.7.2.2.5 Displaying All Tracks

Follow the procedure to display the tracks of all radios for a certain period or track them in real time.

Prerequisites:

- Ensure the operator has the **Manage tracks** right. For details, see Operators.

- Ensure the desired SmartPTT Radioserver is running, otherwise the tracks will not be available to built.

- Ensure that the SmartPTT Radioserver Event Log is activated in SmartPTT Radioserver Configurator, otherwise the tracks will not be available to built. For details, see "Configuring Event Log Database Connection" in *SmartPTT Installation and Configuration Guide*.

Procedure:

1. On the indoor map, click **Expand the Control Panel (‹)** to expand the Control Panel.

2. On the Control Panel, expand the **Radio Tracks** tab.

3. Click **Show All**.
   The **All Radio Tracks** window appears.
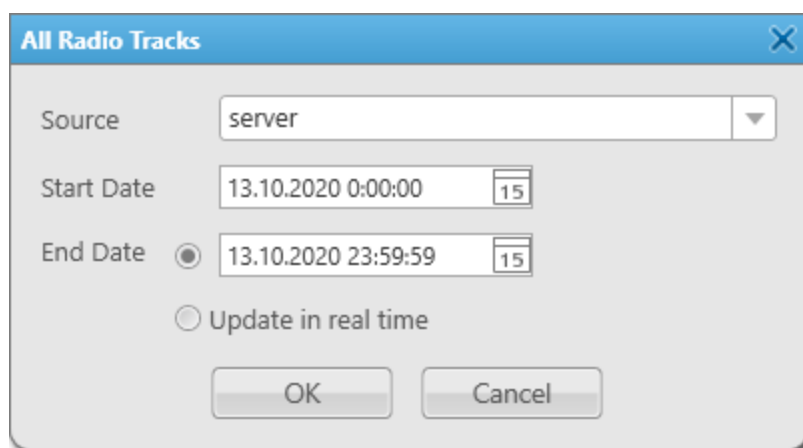
4.   From the **Source** list, select the desired SmartPTT Radioserver whose database will be used as a data source to build tracks.

5.   In the **Start Date** field, set the time and date of the track recording start.

6.   Set the date and time for the end of the track recording:

To specify the exact date and time of the track recording ending,	select **End Date** and, in the field on the right, enter the desired date and time.
To track the movement of radios in real time,	select **Update in real time**.

7.   Click **OK**.
Tracks appear on the building plan, and track entries appear on the **Radio Tracks** tab.

Postrequisites:

•   To remove all tracks from the building plan, on the **Radio Tracks** tab, click **Clear All**.

•   To add a single track to the building plan, on the **Radio Tracks** tab, click **Add Track (+)**. For details, see Displaying Track.

4.7.2.2.6 Displaying Track

Follow the procedure to show a radio track on a building plan.

Prerequisites:

•   Ensure the desired SmartPTT Radioserver is running, otherwise a track will not be available to built.

•   Ensure that the SmartPTT Radioserver Event Log is activated in SmartPTT Radioserver Configurator, otherwise the tracks will not be available to built. For details, see "Configuring Event Log Database Connection" in *SmartPTT Installation and Configuration Guide*.

•   To build a track for an authorized user, ensure the user authorization service is configured in SmartPTT Radioserver Configurator. For details, see "Configuring User Database Connection" in *SmartPTT Installation and Configuration Guide*.

•   Ensure the operator has rights to manage tracks. For details, see Operators.

Procedure:

1.   On the indoor map, click **Expand the Control Panel (<)** to expand the Control Panel.

2.   On the Control Panel, expand the **Radio Tracks** tab.

3.   Click **Add Track (✚)**.
     The **Radio Track** window appears.

4.   From the **Source** list, select the desired SmartPTT Radioserver whose database will be used as a data source to build a track.

5.   Select an object for which the track will be built:

To built a track for a radio,	perform the following actions:
	1. Select **Radio**.
	2. From the list below, select a radio for which the track will be built.
To built a track for an authorized user,	perform the following actions:
	1. Select **User**.
	2. From the list below, select an authorized user for which the track will be built.

6.   From the expandable **Color** palette, select the desired track color.

7.   In the **Start Date** field, set the time and date of the track recording start.

8.   Set the date and time for the end of the track recording:

To specify the exact date and time of the track recording ending,	select **End Date** and, in the field on the right, enter the desired date and time.
To track the movement of the object in real time,	select **Update in real time**.

9.   Click **OK** to display the track on the building plan.
     The track appears on the building plan, and the track entry appears on the **Radio Tracks** tab.

Postrequisites:

•   To edit a track, on the **Radio Tracks** tab, in the elements of the desired track, click **Edit track (✏)**.

- To remove a track, on the **Radio Tracks** tab, in the elements of the desired track, click **Delete track (—)**.

- To remove all tracks from the building plan, on the **Radio Tracks** tab, click **Clear All**.

- To not display a track on the building plan, on the **Radio Tracks** tab, clear the check box next to the desired track name.

4.7.2.2.7 Animating Track

Follow the procedure to animate a radio track on the building plan.

Prerequisites:

- Ensure the operator has the **Manage tracks** right. For details, see Operators.

- Ensure the entry of the desired radio or authorized user track is displayed on the **Radio Tracks** tab. For details, see Displaying Track and Displaying All Tracks.

Procedure:

1. On the indoor map, click **Expand the Control Panel (⟨)** to expand the Control Panel.

2. On the Control Panel, expand the **Radio Tracks** tab.
   The entries of the added tracks appear.
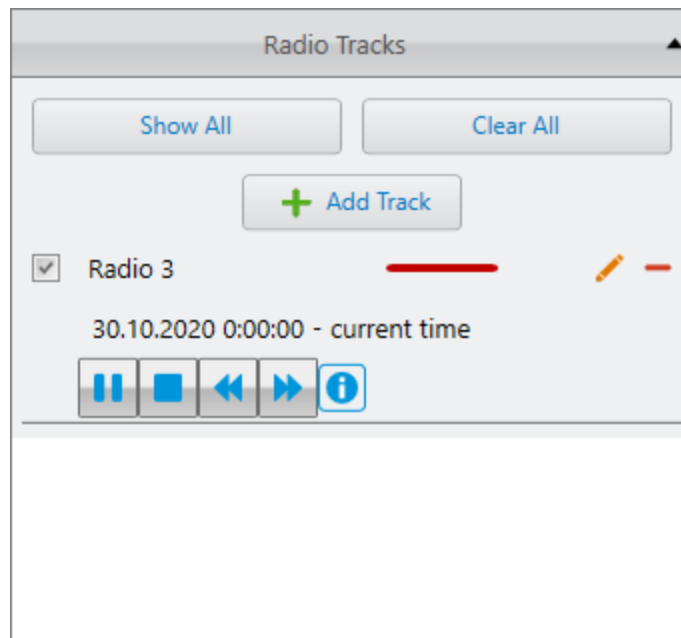
3. In the elements of the desired track, perform the following actions:

   a. Select the check box next to the track name to display a track on the building plan.

   b. Click **Start Playback (▶)**.
      The track starts animating on the indoor map.

   c. Perform the desired actions:

To pause animation of a track,	click **Pause Playback (‖)**.
To change the animation speed of a track,	click **Decrease speed (◀◀)** or **Increase speed (▶▶)**.
To stop animation of a track,	click **Stop Playback (■)**.

d.   *(Optional)* To display the radio position at certain time, click **Track details (** **)**, and then, on the **Track Details** panel, double-click the desired entry in the Track Details Table.

4.8 Cross Patches

The Cross Patches feature provides the ability to establish connection between talkgroups that operate on different frequencies or channels.

> **Important**
> You cannot combine several talkgroups from the same channel in one cross patch, or combine talkgroups from different non-affiliated radioservers in one cross patch.

All participants of the cross patch receive a call made to it. All calls (including calls made by a dispatcher or a telephone subscriber) made to a talkgroup included in the cross patch are transmitted to all participants of the cross patch.

Cross patches are created in SmartPTT Dispatcher by an operator. After creating a cross patch, all operators in the SmartPTT system can see this cross patch, edit, enable or disable it (if they have a permission).

> **Important**
> Access to cross patches is unavailable if desktop client authentication on SmartPTT Radioserver is enabled and the profile assigned to the client prohibits cross patches management. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

If an operator who created the cross patch logs off or closes the application, the cross patch will remain available to other operators.

> **Important**
> When all operators log out or close the applications, the cross patch will remain enabled and will continue to operate.

> **Important**
> A voice call can be retransmitted to another server only from the server that originally received this voice call. That means, you can not create a chain of cross patches.

> **NOTE**
> For private calls between various radio systems, you can use bridging. For details, see Bridging.

Cross Patches Panel

The **Cross Patches** panel is used to create and manage cross patches.
For information on creating and managing cross patches, see Creating and Editing Cross Patches.

You can open the **Cross Patches** panel by clicking **Tools → Cross Patches** on the menu bar.

> **NOTE**
> If SmartPTT Radioserver is inactive, the added cross patches are not displayed on the **Cross Patches** panel.
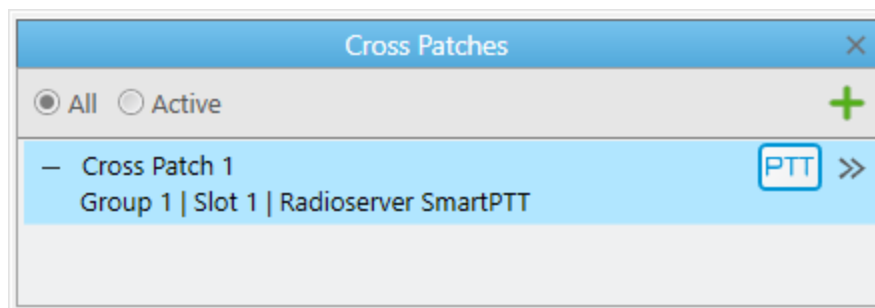
On the panel, you can display all or only active cross patches. The added cross patch entry provides the cross patch name, information about its participants, the PTT button to make calls to the cross patch, and the Actions (≫) button to open the Actions menu.
For information on initiating cross patch calls, see Initiating Cross Patch Calls.

Cross Patch Actions

The Actions menu provides the ability to perform the following actions:

- Disable or enable the cross patch. For details, see <u>Disabling and Enabling Cross Patches</u>.

- Mute or unmute the cross patch. For details, see <u>Muting and Unmuting Cross Patches</u>.

- Open the **Cross Patch** window for editing the cross patch. For details, see <u>Creating and Editing Cross Patches</u>.

- Delete the cross patch.

> **NOTE**
> You can also manage cross patches on the corresponding custom console element. For details, see <u>Custom Consoles</u>.

Cross patches between talkgroups and dynamic groups

In SmartPTT Dispatcher, virtual groups consisting of SmartPTT Mobile users and talkgroups have the form of cross patches between talkgroups and dynamic groups and are called multigroups.
For information on dynamic groups and SmartPTT Mobile users, see <u>Dynamic Groups</u> in this guide and "SmartPTT Mobile" in *SmartPTT Installation and Configuration Guide*.

A multigroup must have at least two members (a dynamic group and a talkgroup). If a multigroup was created in the SmartPTT Mobile application, a cross patch with the same name and members will be displayed in SmartPTT Dispatcher. Similarly, if a cross patch with dynamic groups was created in SmartPTT Dispatcher, a multigroup with the same name and members will be displayed in the SmartPTT Mobile application.

> **NOTE**
> Cross patches between talkgroups and individual SmartPTT Mobile users are not supported.

> **NOTE**
> SmartPTT Mobile users cannot edit or delete cross patches with dynamic groups created in SmartPTT Dispatcher. Dispatchers can edit and delete any cross patch, no matter where it was created.

For information on configuring and using cross patches, see the sections below.

Inter-Server Patching

The Inter-Server Patching feature provides the ability to connect each SmartPTT Radioserver to one or several other radioservers. The connected radioservers will be considered afilliated. You can use this feature to combine talkgroups from different radioservers in one cross patch using the standard interface of the cross patch tool. The calls made to a talkgroup included in the cross patch will be transmitted to all participants of the cross patch even if they are on different radioservers, provided that the radioservers are affiliated. This feature provides the ability to perform the following actions:

- Connect two or more radioservers.

- Make and receive group calls to/from other radioservers.

- Use cross patches to connect talkgroups from different radioservers.

- Log and record voice calls on affiliated radioservers.

4.8.1 Creating and Editing Cross Patches

Follow the procedure to create a cross patch.

Prerequisites:

If desktop client authentication on SmartPTT Radioserver is enabled, ensure that the profile assigned to the client allows managing cross patches. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

Procedure:

1. If the **Cross Patches** panel is closed, on the menu bar, click **Tools → Cross Patches**.
   The **Cross Patches** panel appears.
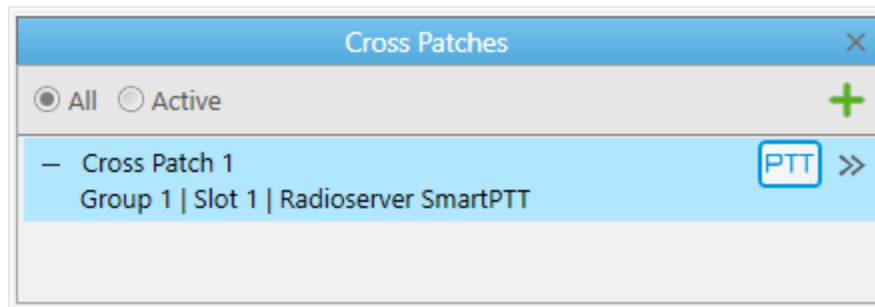
2. Perform one of the following actions:

To add a cross patch,	perform the following actions:
	1. On the **Cross Patches** panel, click **Add cross patch (✚)**. The **Cross Patch** window appears.
	2. In the window that appears, add the desired object to the **Cross Patch Objects** area in one of the following ways:
	• Double-click the desired object.
	• Drag the desired object to the area.
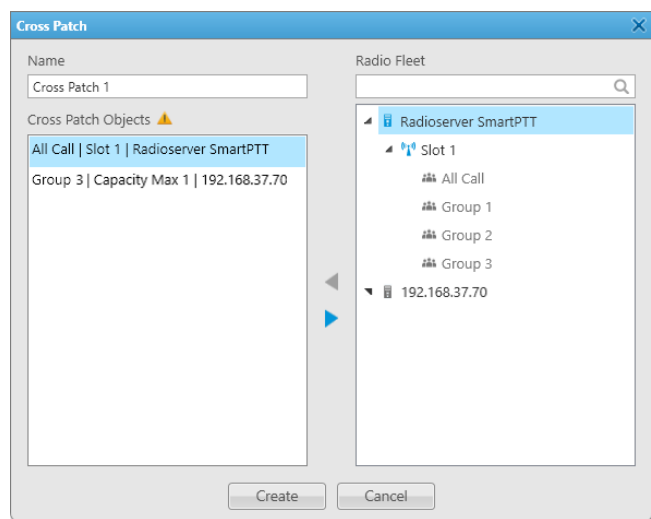
- Select the desired object, and then click Add (◀).

> **NOTE**
> If the cross patch includes objects from non-affiliated radioservers, the corresponding icon (⚠) appears. Such objects will not participate in voice retransmission.

3. Click the **Create** button.
   A new cross patch appears in the **Cross Patches** panel, and becomes enabled.

> **Important**
> A voice call can be retransmitted to another server only from the server that originally received this voice call. That means, you can not create a chain of cross patches.

To edit a cross patch, perform the following actions:

1. Open the properties of the existing cross patch in one of the following ways:

   - On the **Cross Patches** panel, double-click the desired cross patch.

   - On the **Cross Patches** panel, in the right part of the desired cross patch entry, click the Actions (≫) button, and then select **Properties (🔳)**.

   The **Cross Patch** window appears.

2. In the window that appears, perform the desired changes.

3. Click **OK** to apply changes and close the window.

4.8.2 Initiating Cross Patch Calls

Follow the procedure to initiate a cross patch call.

Prerequisites:

- Ensure the **Cross Patches** panel is opened.

- Ensure the desired cross patch is added and enabled. For details, see [Creating and Editing Cross Patches](#).

- Obtain the current settings of pointing devices and hotkeys. For details, see [Control Devices](#).

Procedure:

Initiate the cross patch call in one of the following ways:

- Depending on pointing device settings, press and hold, or click the PTT button of the desired cross patch.

- Select the cross patch, and then, depending on the PTT button hotkey settings, press and hold, or press the hotkey.

## 4.8.3 Disabling and Enabling Cross Patches

Follow the procedure to disable or enable a cross patch.

Prerequisites:

If desktop client authentication on SmartPTT Radioserver is enabled, ensure that the profile assigned to the client allows managing cross patches.
An operator can also enable or disable a cross patch without waiting until current calls will be finished if the profile assigned to the client allows immediate patch enable/disable. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

Procedure:

1. If the **Cross Patches** panel is closed, on the menu bar, click **Tools → Cross Patches**.
   The **Cross Patches** panel appears.
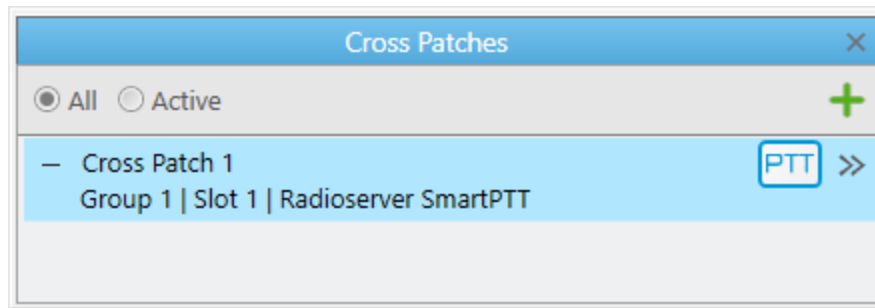
2. On the **Cross Patches** panel, in the right part of the desired cross patch entry, click the Actions (≫) button.
   The cross patch Actions menu appears.

3. In the Actions menu, depending on the cross patch state, perform one of the following actions:

To disable the cross patch,	click the **Disable (■)** button. The button changes to **Enable (▶)**; the cross patch entry becomes shaded.
To enable the cross patch,	click the **Enable (▶)** button. The button changes to **Disable (■)**.

4.8.4 Muting and Unmuting Cross Patches

Follow the procedure to to mute or unmute a cross patch.

**Prerequisites:**

If desktop client authentication on SmartPTT Radioserver is enabled, ensure that the profile assigned to the client allows managing cross patches. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

Procedure:

1. If the **Cross Patches** panel is closed, on the menu bar, click **Tools → Cross Patches**.
   The **Cross Patches** panel appears.

2.   On the **Cross Patches** panel, perform one of the following actions:

To mute a cross patch,	perform the following actions: 1. Click the Actions (≫) button. 2. Click **Mute** (⏴✗).
To unmute a cross patch,	perform the following actions: 1. Click the Actions (≫) button. 2. Click **Unmute** (⏴⏵).

4.9 Custom Consoles

Custom Consoles are fully customizable SmartPTT Dispatcher panels that provide access to radio system objects and SmartPTT Dispatcher features.

SmartPTT Dispatcher provides the ability to create panels that meet requirements of the specific radio system and/or dispatcher. You can configure the appearance of the panel, add elements and change their parameters to simplify access to system objects and features. Any image in the BMP, JPG, or PNG format can be used as the console background.

You can open the **Custom Consoles** window for creating and configuring consoles by clicking **Settings (⚙)** →**Interface** → **Custom Consoles** on the menu bar.

Most of the console elements provide controls that can be used to interact with radio objects and features that they represent.

> **NOTE**
> Access to some of the elements may require the corresponding operator permission and/or license. For details, see the description of the desired element in the Custom Console Elements Table below.

You can open the configured Custom Console by clicking **Tools** →**<name of the custom console>** on the menu bar. If no Custom Console is created, the option is unavailable. To remove the configured Custom Console from the menu, clear the **Active** check box in the **Custom Consoles** window.

You can work with more than one Custom Console at the same time.

For information on custom console configuration, see Custom Console Configuration.

> **Important**
> Custom console configuration is available only to the Administrator.

For information on custom console elements configuration and usage, see the sections below.

4.9.1 Custom Console Elements

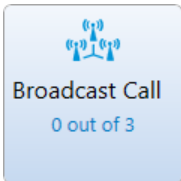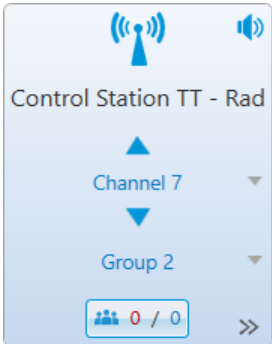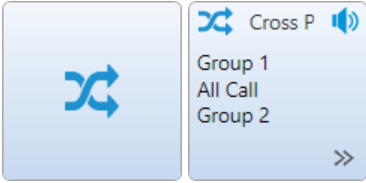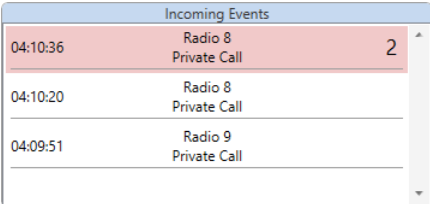Custom Consoles provide various elements representing radio system objects and SmartPTT Dispatcher features. You can add the desired elements, customize their appearance, or change their properties in the Console Configuration window.
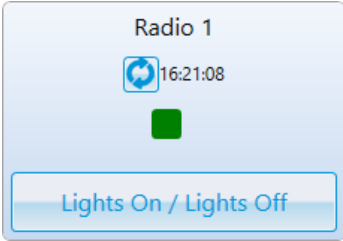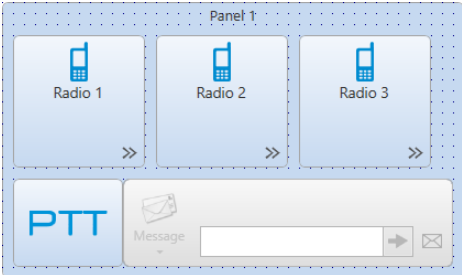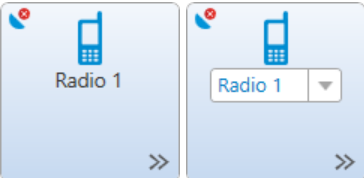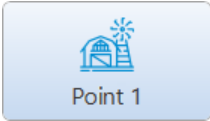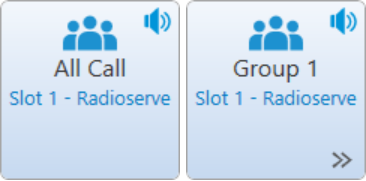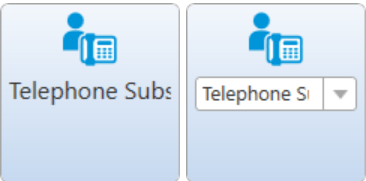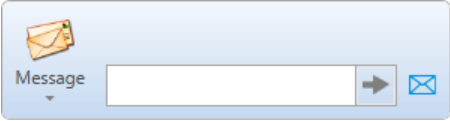
> **NOTE**
> Access to some of the elements may require the corresponding operator permission and/or license.

SmartPTT Dispatcher provides the following Custom Console elements:

Element	Description
Broadcast Call Broadcast Call 0 out of 3	The Broadcast Call element provides the ability to initiate group calls and All Calls on all available channels of the radio system at the same time. The element is unavailable in the analog radio systems. The element provides information on the number of all available channels and channels used by SmartPTT Dispatcher for transmissions at the moment. For example, if *2 out of 3* is displayed, that means SmartPTT Dispatcher makes calls on 2 out of 3 available channels. **NOTE** To initiate broadcast calls, you must configure talkgroups in the radio system settings in SmartPTT Radioserver Configurator. For details, see "Adding and Editing Talkgroups" in the corresponding network settings description in *SmartPTT Installation and Configuration Guide*.
Channel Selector Channel 1 Channel 2	The Channel Selector elements provide the ability to switch to the control station channel represented by the element. Each element corresponds to one control station channel. If no control station is connected or active in the radio system, the element is unavailable. For correct functioning of the Channel Selector element, the control station channels must be configured in SmartPTT Radioserver Configurator. For information on MOTOTRBO control stations see the "MOTOTRBO Control Stations" section in *SmartPTT Installation and Configuration Guide*.
Channel Control Station TT - Rad Channel 7 Group 2 0 / 0	The Channel element provides the ability to work with the control stations and IP Site Connect channels available in the radio system. The Channel element can display the indicator that appears if the corresponding check box is selected in the Custom Console settings. The indicator provides information on the number of missed private calls (red number) and total number of missed calls on the channel (blue number). You can view detailed information on all missed calls on the channel in the **Missed Calls** window by clicking the Missed Calls (0 / 2) button.

Element	Description
Cross Patch 	The Cross Patch element provides the ability to interact with cross patches. For information on cross patches, see Cross Patches. You can add a new cross patch or edit an existing one. For details, see Adding and Editing Cross Patch Elements. You can assign the desired cross patch to the new Cross Patch element on the Custom Console. For details, see Assigning Cross Patches.
Dispatcher 	The Dispatcher element provides the ability to interact with other SmartPTT dispatchers. To call the desired dispatcher, double-click the corresponding element on the Custom Console. The **Dispatchers** window appears, and the call will be initiated automatically. **Important** To interact with other dispatchers, an operator must have the **Connect with external dispatchers** right. For details, see Operators.
Image	The Image element is a non-interactive element that contains an image that can be selected in the Custom Console settings. You can use BMP, JPG, or PNG.
Incoming Events 	The **Incoming Events** element provides information on incoming events in SmartPTT Dispatcher, such as missed private calls, messages, and call notifications received during the current operation session.
Incoming Telemetry 	The Incoming Telemetry element provides the ability to monitor the current status of GPIO pins on the radios in the dispatched radio system.
Multiselect 	The Multiselect element provides the ability to create multiselect groups consisting of radios and/or talkgroups. For information on adding or deleting a radio or talkgroup from a multiselect group using the Multiselect element, see Configuring Multiselect Group. Multiselect groups can be used for the following purposes: • Initiating calls to multiple radio objects at the same time (multiselect calls). All participants of a multiselect call can hear an operator and cannot hear other participants of their multiselect group. • Sending messages to multiple radio objects at the same time using the TMS element. For details, see Sending Messages from Custom Console. • Performing other actions available to multiple radio objects using the hot keys assigned in SmartPTT Dispatcher settings. For details, see Assigning Hotkeys.

Element	Description
Outgoing Telemetry	The Outgoing Telemetry element provides the ability to send configured telemetry commands and monitor the current status of GPIO pins in the dispatched radio system.

Element	Description
Panel	The Panel element provides the ability to interact with multiple Custom Console elements at the same time. Panels may hold all types of Custom Console elements except another Panel element.

Actions applied using interactive elements, such as PTT, TMS, and Voice Notification elements, will be applied to all available elements located within the same Panel element.

You can drag the desired elements to the panel. All elements placed on the Panel element will be moved together with it within the main area.

The actions performed on the panel are not applied to deleted from the Panel element elements and elements that were moved outside the panel after its size was changed. The elements on the panel borders are not considered as a part of the panel. |

Element	Description
PTT	The PTT element provides the ability to initiate a call to all available radios and talkgroups that are located on the same panel with the PTT element. To use the PTT element, you must add it to the Panel element with the desired radios and/or talkgroups. The PTT element cannot be used on its own.

Element	Description
Radio	The Radio element provides the ability to initiate private voice calls to radios added to the SmartPTT Dispatcher list of radios. You can use this element to perform the following actions:

• Initiate a private voice call to the radio using the preferred method of the call initiation. For details, see Configuring Call Element Actions.

• Initiate a group call to multiple radios by clicking the desired radios while holding the Ctrl key, and then using the preferred method of the call initiation. For details, see Configuring Call Element Actions.

• Open the radio Actions menu by clicking the Actions ( ) button on the element.

• Open the radio Call Window by right-clicking the element.

The Custom Console provides two types of the Radio element:

• Element assigned to a specific (fixed or reassignable) radio.

• Element with a number pad for calling radios by entering their ID or selecting them from the SmartPTT Dispatcher list of radios. |

Element	Description
Data source	The data source element provides information on the data source parameters in real time and can be used for quick access to the **Data provider** panel in SmartPTT Dispatcher. **NOTE** The data source element is available only if the data acquisition module is activated in SmartPTT Dispatcher settings. For details, see Activating Data Acquisition Module.
Talkgroup	The Talkgroups element provides the ability to interact with talkgroups and initiate All Calls. The Custom Console provides two types of the Talkgroup element: • Element for interacting with talkgroups • Element for initiating All Calls on the configured channel.
Telephone Subscriber	The Telephone Subscriber element provides the ability to interact with telephone subscribers added to SmartPTT Dispatcher. **Important** The Telephone Subscriber element is available only if the Telephone Interconnect license is installed and the operator has the **Make telephone calls** right. For details, see Licenses and Operators.
TMS	The TMS element provides the ability to send text messages to a single or multiple radios and/or talkgroups in the radio system. Using the TMS element, you can perform the following actions: • Send a custom message or a message template. • Send a custom message or a message template by opening the **Send Message** window that provides extended functionality for sending messages. For details, see Sending Messages from the Send Message Window. For information on sending messages using the TMS element, see Sending Messages from Custom Console.
Voice Notification	The Voice Notifications element provides the ability to play a configured voice notification for the selected talkgroup or channel. **Important** Voice notifications are created and configured in SmartPTT Radioserver Configurator. For details, see "Voice Notifications" in *SmartPTT Installation and Configuration Guide*.

For detailed information on Custom Console elements, see the SmartPTT Dispatcher embedded help.

4.9.2 Adding and Editing Cross Patch Elements

Follow the procedure to add a new or edit an existing Cross Patch element in the Custom Console.

Prerequisites:

Ensure that the Cross Patch element is added in the Custom Console.
For information on the Custom Consoles configuration, see Configuring Console Workspace.

Procedure:

1. In the Custom Console, perform one of the following actions:

To add a new cross patch that will be assigned to the element,	perform the following actions: 1. Click the empty Cross Patch element. The **Cross Patches** window appears. 2. In the window that appears, click the **Create (+)** button.
To edit an existing cross patch assigned to the element,	open the Actions (≫) menu of the desired element, and then click **Properties ( )**.
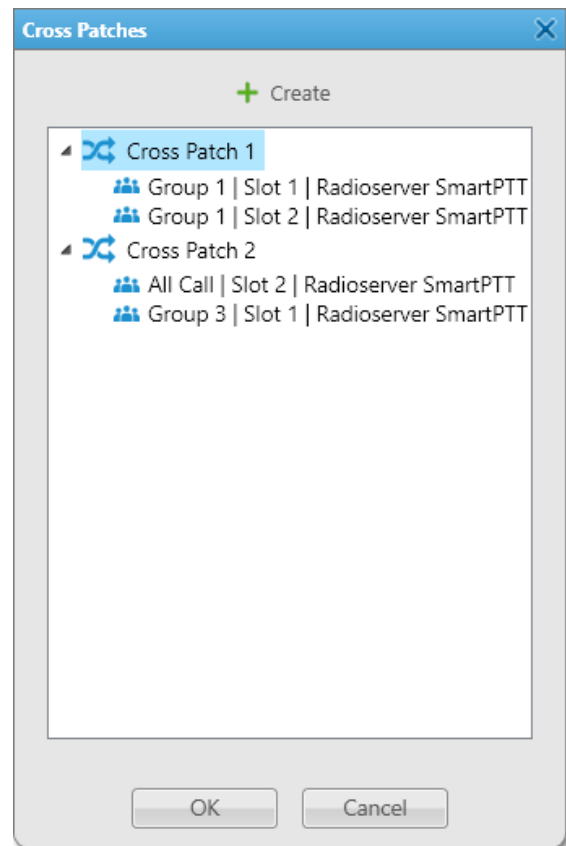
The **Cross Patch** window appears.
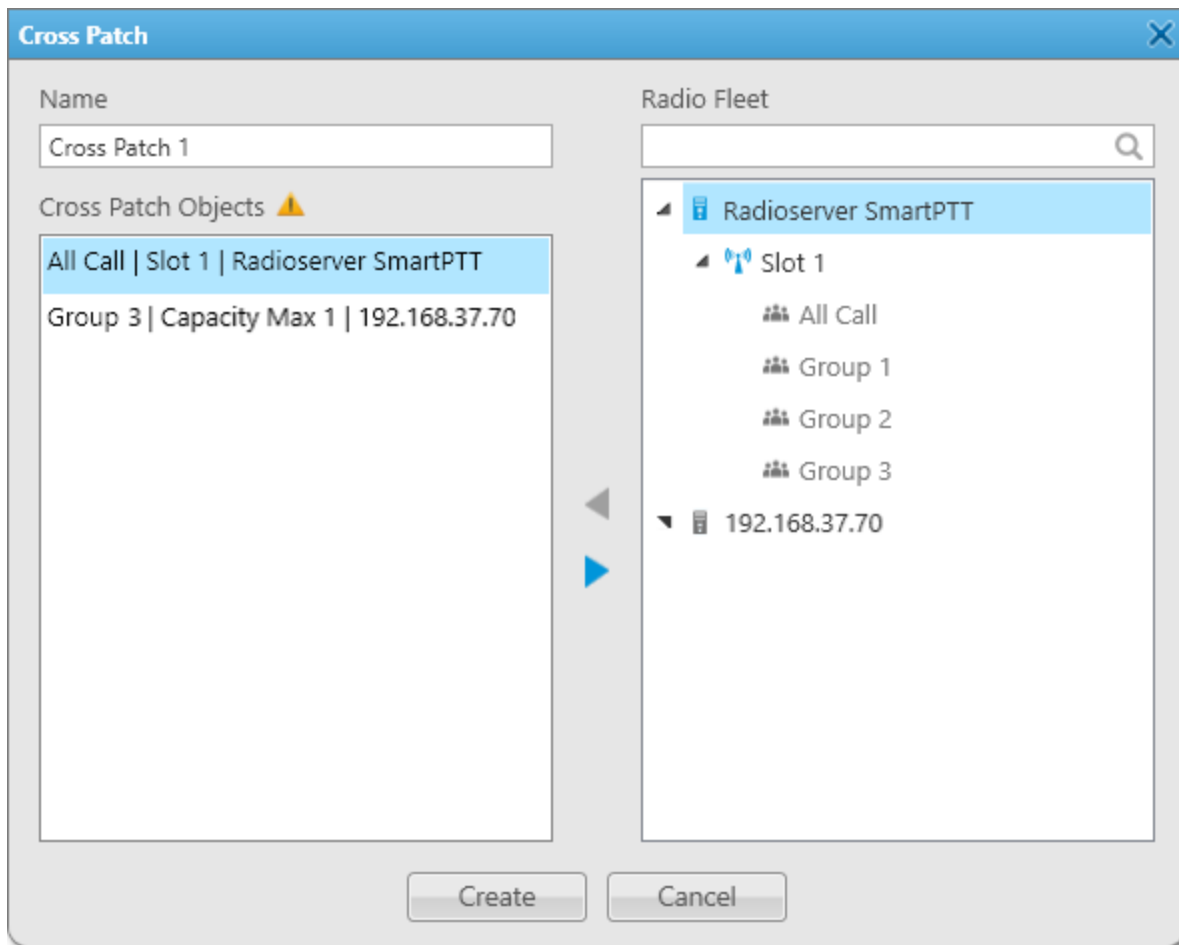
2. *(Optional)* In the window that appears, in the **Name** field, type the cross patch name.

3. Edit the list of cross patch members:

To add an object to the cross patch,	perform one of the following actions:
	• Select the desired object in the **Radio Fleet** area, and then click the Add (◀) button.
	• Double-click the desired radio in the **Radio Fleet** area.
	• Drag the desired radio from the **Radio Fleet** area to the **Cross Patch Objects** area.
	The selected object appears in the **Cross Patch Objects** area.
To remove an object from the cross patch,	perform one of the following actions:
	• Select the desired object in the **Cross Patch Objects** area, and then click the Remove (▶) button.

- Double-click the desired radio in the **Cross Patch Objects** area.

- Drag the desired radio from the **Cross Patch Objects** area to the **Radio Fleet** area.

The selected object disappears from the **Cross Patch Objects** area.

4. To complete configuration, click **Create**.

4.9.3 Assigning Cross Patches

Follow the procedure to assign the cross patch to the element in the Custom Console.

Prerequisites:

- Ensure that the Cross Patch element is added in the Custom Console.
  For information on the Custom Consoles configuration, see Configuring Console Workspace.

- Ensure the operator has at least one created cross patch.
  For details, see Adding and Editing Cross Patch Elements or Creating and Editing Cross Patches.

Procedure:

1. Click the empty Cross Patch element.
    The **Cross Patches** window appears.
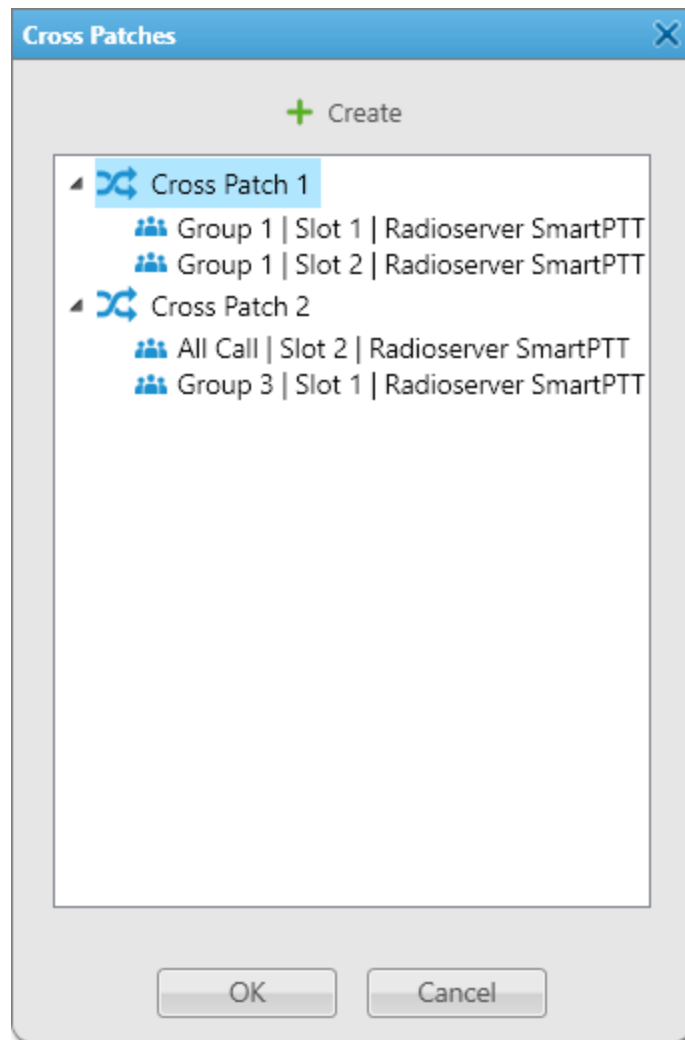
2. In the window that appears, select the desired cross patch from the list, and then click **OK**.
    The selected cross patch will be assigned to the element.

Postrequisites:

To clear the element, in the Actions (≫) menu of the cross patch, click **Clear Element (✕)**.
The selected element becomes empty.

4.9.4 Configuring Multiselect Group

Follow the procedure to add a radio, or talkgroup to a multiselect group, edit it, or remove it from the multiselect group using the Multiselect element in the Custom Console.

Prerequisites:

Ensure that the Multiselect element is added in the Custom Console.
For information on the Custom Consoles configuration, see Configuring Console Workspace.

Procedure:

1. Click the multiselect group icon ( ) on the element to open the **Multiselect** window.
   The **Multiselect** window appears.
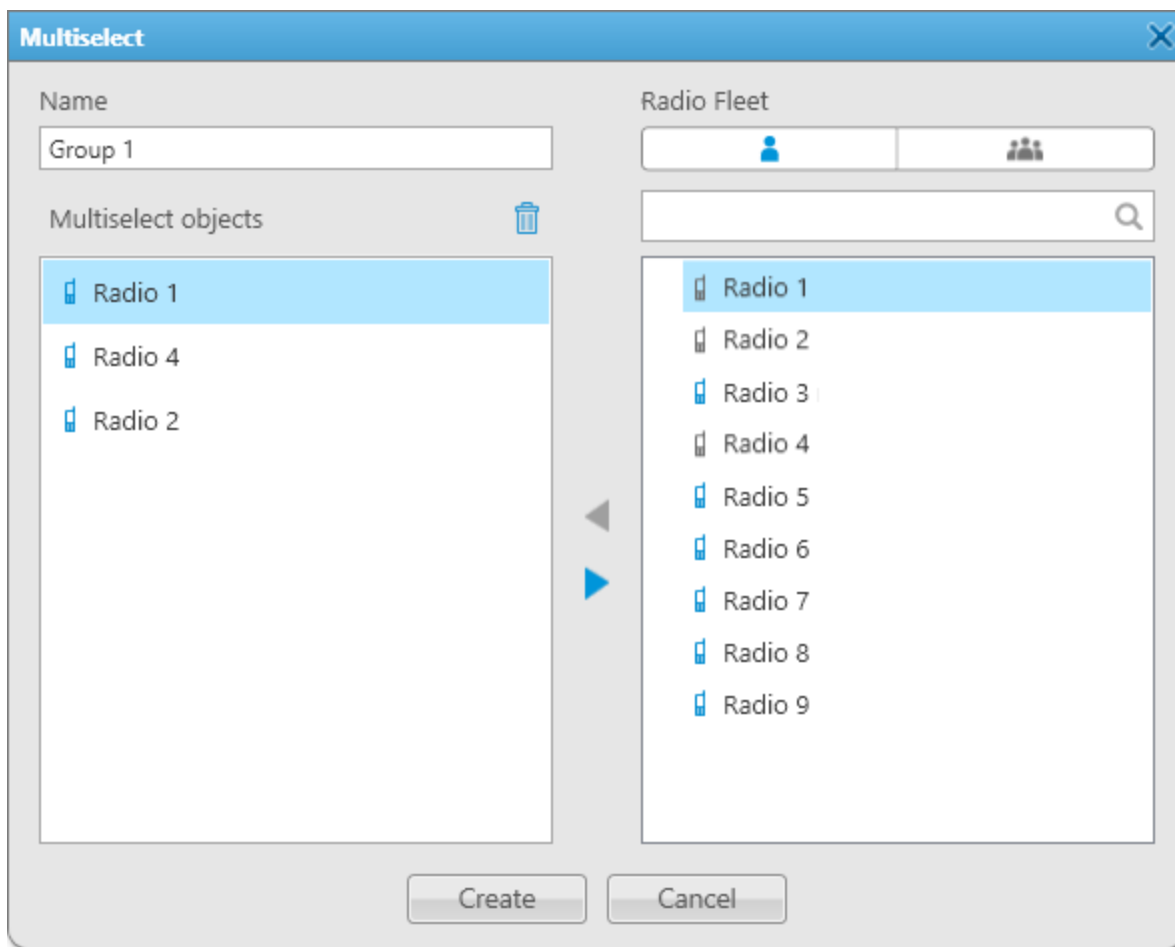
2. *(Optional)* In the window that appears, type the multiselect group name.

3. In the **Radio Fleet** area, select the **Radios ( )** or **Talkgroups ( )** tab to show the desired objects.

4. Perform the desired action:

   To add a new participant to the multiselect group,   perform one of the following actions:

   - Select the desired radio object in the **Radio Fleet** area, and then click the Add ( ) button.

	• Double-click the desired radio object in the **Radio Fleet** area.
	• Drag the desired radio object from the **Radio Fleet** area to the **Multiselect objects** area.
	The selected object appears in the **Multiselect objects** area.
To remove a participant from the multiselect group,	perform one of the following actions: • Select the desired radio object in the **Multiselect objects** area, and then click the Remove (▶) button. • Double-click the desired radio object in the **Multiselect objects** area. • Drag the desired radio object from the **Multiselect objects** area to the **Radio Fleet** area. The selected object disappears from the **Multiselect objects** area.

5. Click **Create** to save changes.

4.9.5 Sending Messages

Follow the procedure to send a text message to a single or multiple radios and/or talkgroups using the TMS element.

Prerequisites:

Ensure that the TMS element and the desired radios and talkgroups are added to the Custom Console.
For information on the Custom Consoles configuration, see Custom Console Elements.

Procedure:

1. Select one or multiple radios and/or talkgroups to which you want to send a message.

> **NOTE**
> If the TMS element is located within the Panel element, you do not need to select recipients. The message will be sent to all radios and talkgroups located on the same Panel element.

2. Perform one of the following actions:

| To type a new message and send it from the TMS element, | in the text field, type your message, and then click **Send (➥)**. |
| To send a message template from the TMS element, | to the left of the text field, click the **Message (✉)** button, and then, from the Templates list, select the name of the desired template. |

To type a new message or edit a message template before sending it from the **Message** window,

perform the following actions:

1. Click the **Message (✉)** button to the right of the text field. The **Message** window appears.
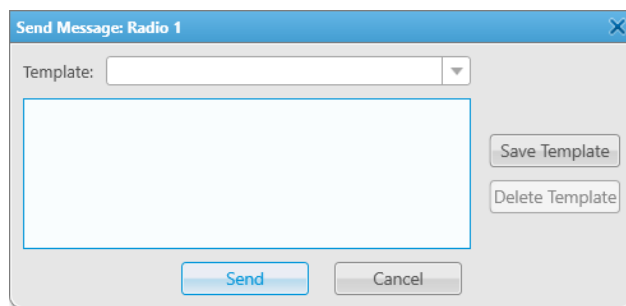
2. In the window that appears, type your message in the text field or use a message template, and then click **Send**.
   For information on working with the **Message** window, see <u>Sending Messages from the Send Message Window</u>.

The information that a message is sent appears in the radio and/or talkgroup Call Window and in the SmartPTT Dispatcher Event Log.

4.10 Bridging

Bridging provides voice communication between radios and/or talkgroups from various sites and/or radio systems that cannot use voice communication under normal conditions. Bridging, by contrast with cross patches, provides the ability to integrate both group and private calls.

> **Important**
> To use bridging in SmartPTT Dispatcher, you must activate it in SmartPTT Radioserver Configurator. For details, see "Bridging" in *SmartPTT Installation and Configuration Guide*.

> **Important**
> Access to bridging is unavailable if desktop client authentication on SmartPTT Radioserver is enabled and the profile assigned to the client prohibits bridging management. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

Bridging Features

> **Important**
> To use the bridging feature, you need the corresponding license. For details, see <u>Licenses</u>.

The bridging service is supported for digital and analog channels in the following networks:

- IP Site Connect

- Capacity Plus sites

> **NOTE**
> The bridging service does not depend on whether SmartPTT Dispatcher is active or not.

By using the bridging service in SmartPTT, you can perform the following actions:

- Voice communication between radio systems with different frequency ranges

- Radio systems integration to increase the total voice communication coverage area

- Privileged radios integration into multiple radio systems

You cannot use bridging to send text messages between radio systems.

> **Important**
> Bridging is unavailable for systems accessed over the 4-wire interfaces.

> **WARNING**
> To prevent unstable system operation, ensure routes do not create a loop.

Route Groups and Profiles

SmartPTT Dispatcher provides the ability to configure profiles and route groups to manage bridging. For example, you can configure two-way bridging route. When somebody makes a call to the source radio system, the call will also be relayed to the destination radio system, and vice versa.

> **Important**
> Bridging configuration is available only to the Administrator and operators with the **Manage bridging settings** right. For details, see Operators.

You can use profiles to save route groups that provide settings to manage bridging routes.

> **Important**
> Bridging profiles in SmartPTT must be distinguished from profiles that are assigned to client accounts in SmartPTT Radioserver Configurator. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

Route is a basic unit of bridging process, and is an integral part of a route group. Routes cannot be used separately from route groups.

A route group unites several routes into one group. Route groups can be activated and deactivated for using routes inside these groups. For information on adding route groups, see Adding Route Groups.

You can use profiles to switch quickly between activated configured route groups. Profiles can be created for general purposes, for carrying out engineering work, for emergency situations, etc.
For information on configuring profiles, see Configuring Profiles.

4.10.1 Adding Route Groups

Follow the procedure to add a route group.

Prerequisites:

- Ensure the operator has the **Manage bridging settings** right.
  For information on the operator rights, see Operators.

- If desktop client authentication on SmartPTT Radioserver is enabled, ensure that the profile assigned to the client allows bridging management. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

- Ensure that the corresponding license is installed. For details, see Licenses.

Procedure:

1. On the **Radio Fleet** panel, to the right of the desired SmartPTT Radioserver, click the Actions (≫) button.

2. In the Actions menu, select **Configure Call Bridging Table**.
   The **Bridging Configuration** window appears.
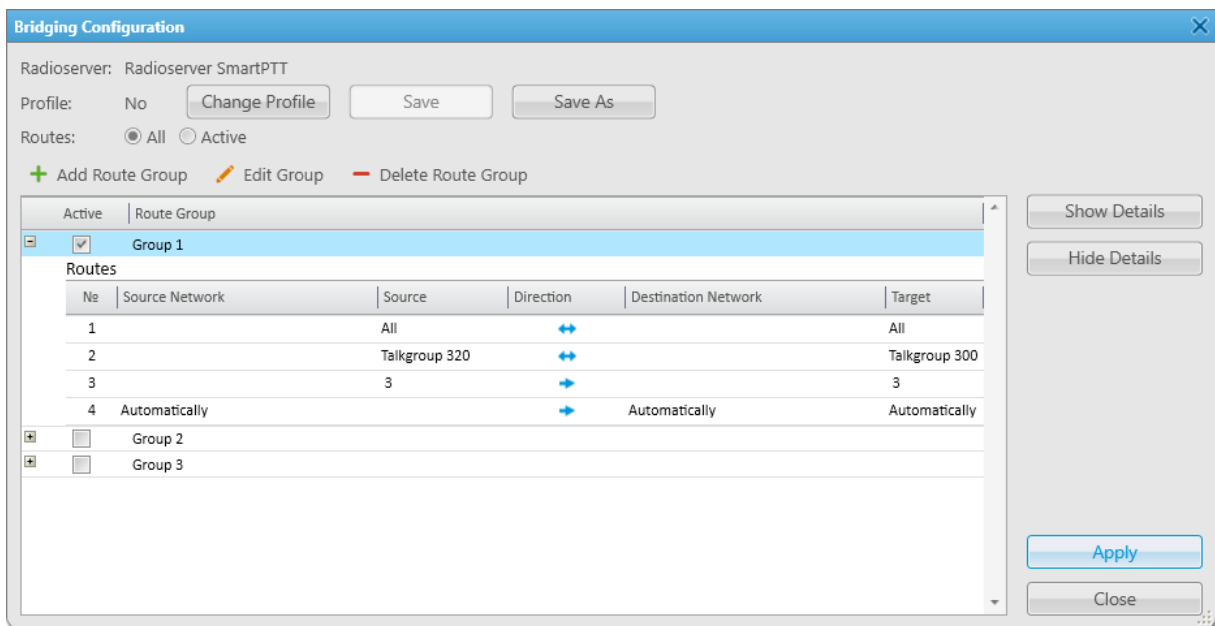
3. In the window that appears, click **Add Route Group** (+).
    The **Add Route Group** window appears.
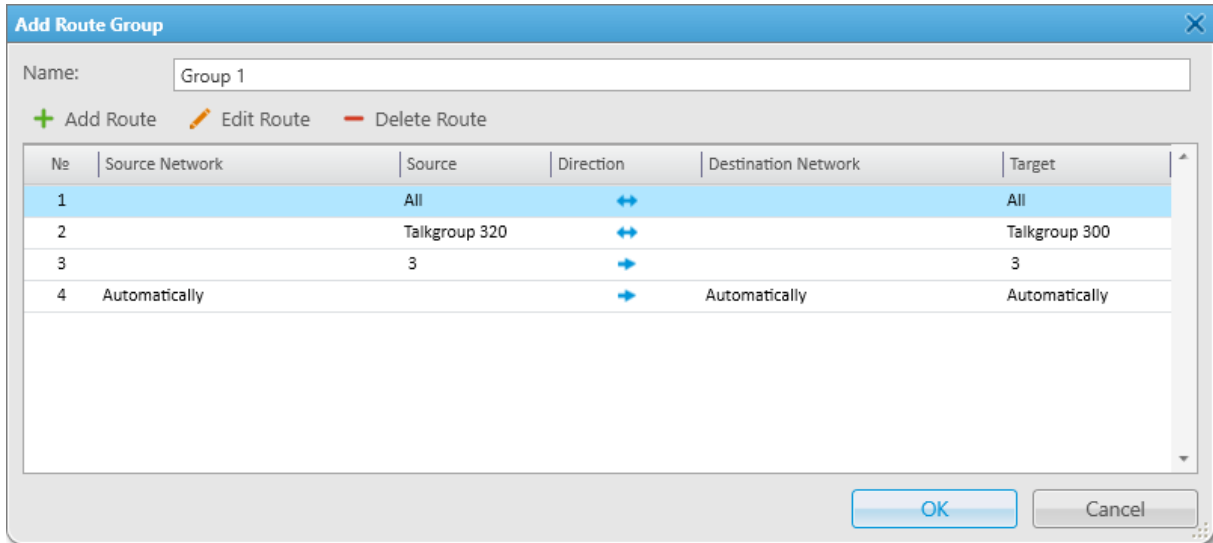
4. In the window that appears, in the **Name** field, type the group name.

5. Add the desired routes to the group depending on the call types:

To route any type of voice calls,	see Configuring All Routes.
To route group calls and All Calls,	see Configuring Non-Private Routes.
To route private calls only,	see Configuring Private Routes.
To route private voice calls initiated and received by radios included in the radio group,	see Configuring Dynamic Routes.

6. Click **OK** to apply changes and close the window.

Postrequisites:

• To edit the route group, in the **Bridging Configuration** window, select the desired group, and then click **Edit Group** (✎).

• To delete the route group, in the **Bridging Configuration** window, select the desired group, and then click **Delete Group** (━).

4.10.1.1 Configuring All Routes

Follow the procedure to route all voice calls from the source network to the destination network.

Prerequisites:

Ensure that the desired networks are configured in SmartPTT Radioserver Configurator.

Procedure:

1. On the **Radio Fleet** panel, to the right of the desired SmartPTT Radioserver, click the Actions (≫) button.
    The SmartPTT Radioserver Actions menu appears.

2. In the Actions menu, select **Configure Call Bridging Table**.
    The **Bridging Configuration** window appears.
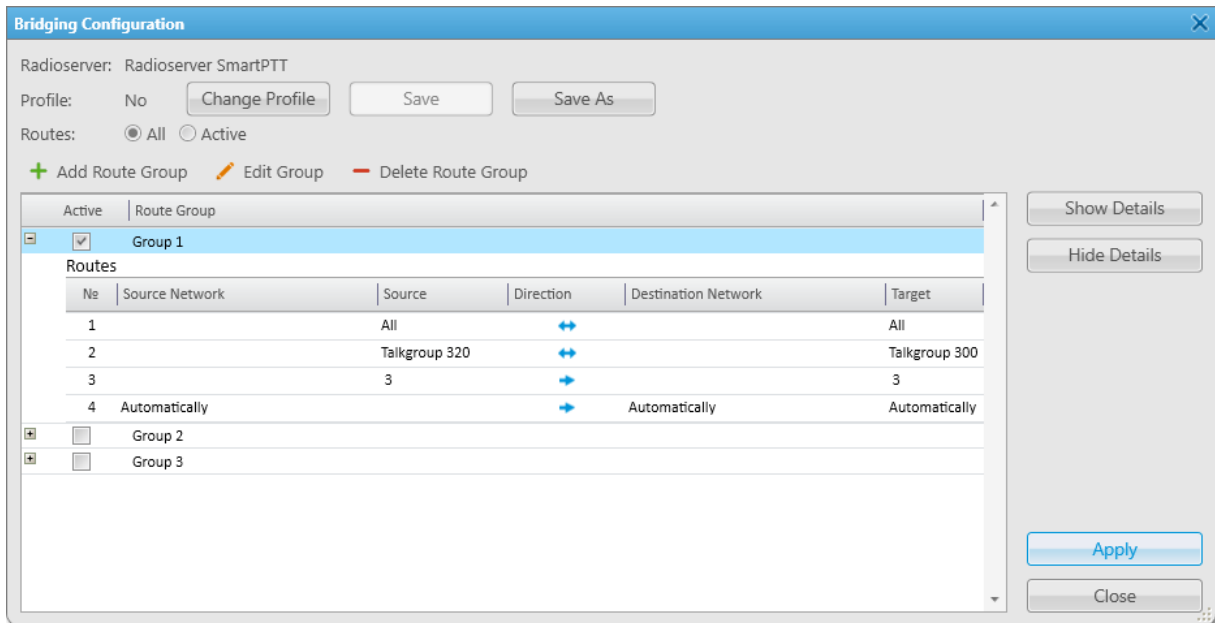
3. In the window that appears, click **Add Route Group** (+).
   The **Add Route Group** window appears.

4. In the window that appears, click **Add Route** (+).
   The **Route** window appears.

5.   In the window that appears, in the **Route Number** field, type a unique route number.

6.   From the **Route Type** list, select *All*.

7.   From the **Source Control Station** list, select the desired source channel.

8.   From the **Destination Control Station** list, select the desired destination channel.

9.   From the **Direction** list, select one-way or two-way direction.

10. *(Optional)* Select the **Process Routed Calls** check box to route incoming calls by another route.

11. Click **OK** to apply changes and close the window.

Postrequisites:

• To edit the route, in the **Add Route Group** window, select the desired route, and then click **Edit Route (✏)**.

• To delete the route, in the **Add Route Group** window, select the desired route, and then click **Delete Route (➖)**.

4.10.1.2 Configuring Private Routes

Follow the procedure to route private radio calls.

> **Important**
> Private calls cannot be routed in networks with control stations.

Prerequisites:

• Ensure that the desired networks are configured in SmartPTT Radioserver Configurator.

• Obtain the desired radio ID from the source network.

Procedure:

1.   On the **Radio Fleet** panel, to the right of the desired SmartPTT Radioserver, click the Actions (≫) button.
     The SmartPTT Radioserver Actions menu appears.

2.   In the Actions menu, select **Configure Call Bridging Table**.
     The **Bridging Configuration** window appears.

3. In the window that appears, click **Add Route Group** (+).
    The **Add Route Group** window appears.

4. In the window that appears, click **Add Route** (+).
    The **Route** window appears.

5. In the window that appears, in the **Route Number** field, type a unique route number.

6. From the **Route Type** list, select *Radio*.

7. From the **Source Control Station** list, select the desired source channel.

8. From the **Destination Control Station** list, select the desired destination channel.

9. In the **Source** field, type the radio ID from the source network.

NOTE
The **Target** field is unavailable when you configure individual radio calls.

10. From the **Direction** list, select one-way or two-way direction.

11. *(Optional)* Select the **Process Routed Calls** check box to route incoming calls by another route.

12. Click **OK** to apply changes and close the window.

Postrequisites:

- To edit the route, in the **Add Route Group** window, select the desired route, and then click **Edit Route (✎)**.

- To delete the route, in the **Add Route Group** window, select the desired route, and then click **Delete Route (➖)**.

4.10.1.3 Configuring Non-Private Routes

Follow the procedure to route group calls or All Calls.

Prerequisites:

Ensure that the desired networks are configured in SmartPTT Radioserver Configurator.

Procedure:

1. On the **Radio Fleet** panel, to the right of the desired SmartPTT Radioserver, click the Actions (≫) button.
   The SmartPTT Radioserver Actions menu appears.

2. In the Actions menu, select **Configure Call Bridging Table**.
   The **Bridging Configuration** window appears.
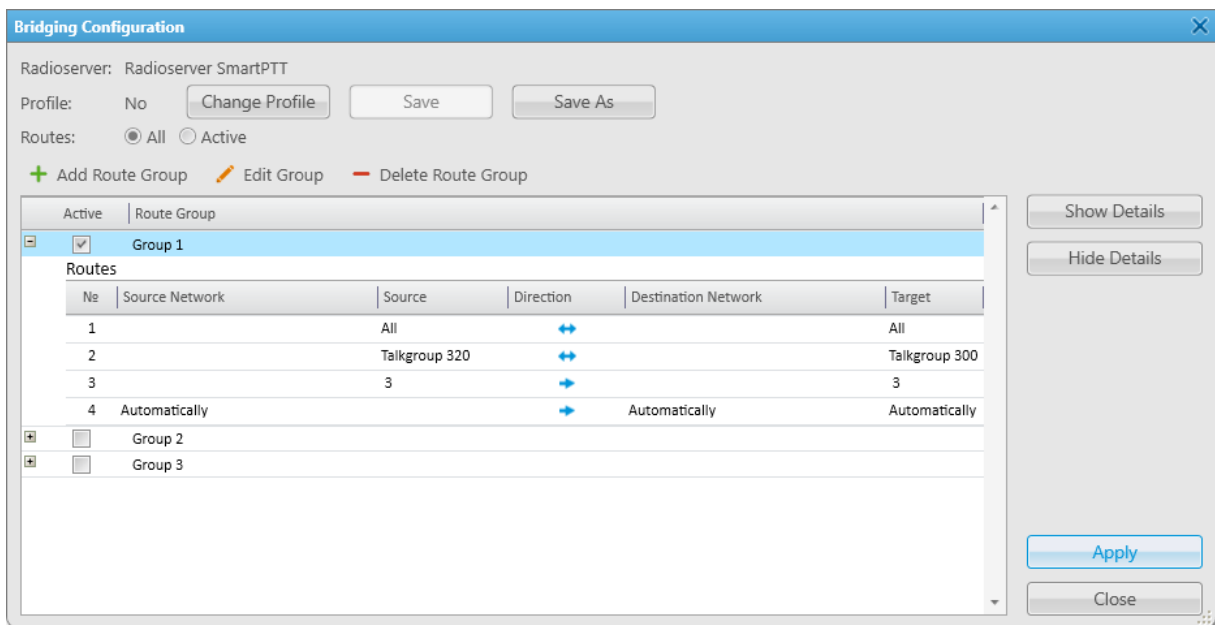
3. In the window that appears, click **Add Route Group (➕)**.
   The **Add Route Group** window appears.

4. In the window that appears, click **Add Route** (+).
   The **Route** window appears.

5. In the window that appears, in the **Route Number** field, type a unique route number.

6. From the **Route Type** list, select *Talkgroup*.

7. From the **Source Control Station** list, select the desired source channel.

8. From the **Destination Control Station** list, select the desired destination channel.

9. From the **Source** list, select the desired source talkgroup or All Call.

10. From the **Target** list, select the desired destination talkgroup or All Call.

11. From the **Direction** list, select one-way or two-way direction.

12. *(Optional)* Select the **Process Routed Calls** check box to route incoming calls by another route.

13. Click **OK** to apply changes and close the window.

Postrequisites:

- To edit the route, in the **Add Route Group** window, select the desired route, and then click **Edit Route** (/).

- To delete the route, in the **Add Route Group** window, select the desired route, and then click **Delete Route** (—).
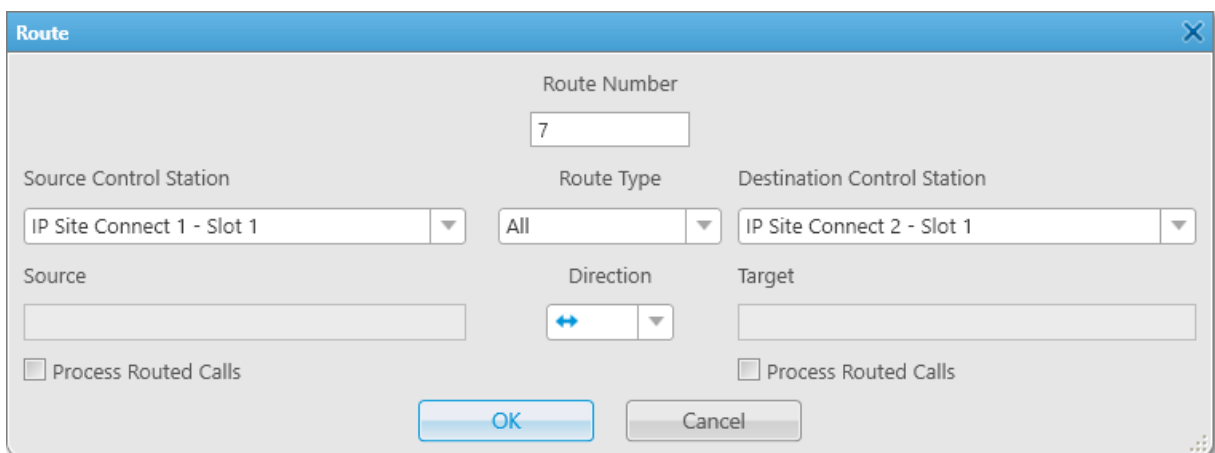
4.10.1.4 Configuring Dynamic Routes
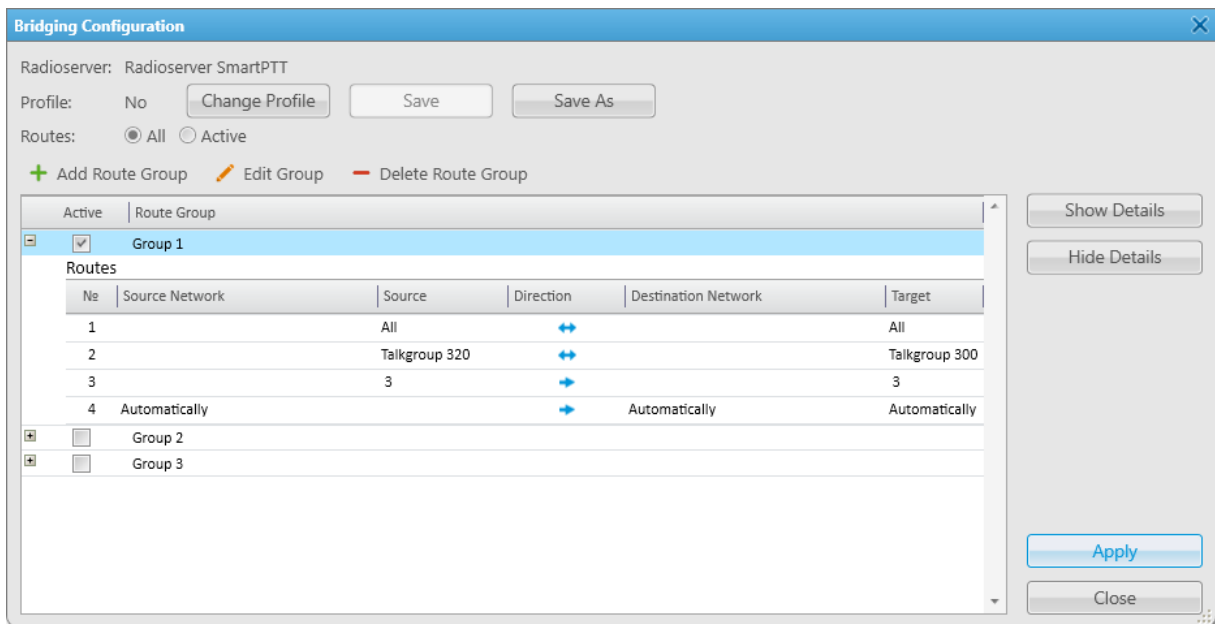
Follow the procedure to route private voice calls initiated and received by radios included in the radio group.

> **Important**
> Private calls cannot be routed in networks with control stations.

Prerequisites:

Ensure the radio group is added in SmartPTT Radioserver Configurator. For details, see "Managing Radio Groups" in *SmartPTT Installation and Configuration Guide*.

> **NOTE**
> Do not confuse radio groups (created in SmartPTT Radioserver Configurator) and talkgroups (radio system entities which are set in radio codeplugs).

Procedure:

1. On the **Radio Fleet** panel, to the right of the desired SmartPTT Radioserver, click the Actions (») button.
    The SmartPTT Radioserver Actions menu appears.

2. In the Actions menu, select **Configure Call Bridging Table**.
    The **Bridging Configuration** window appears.
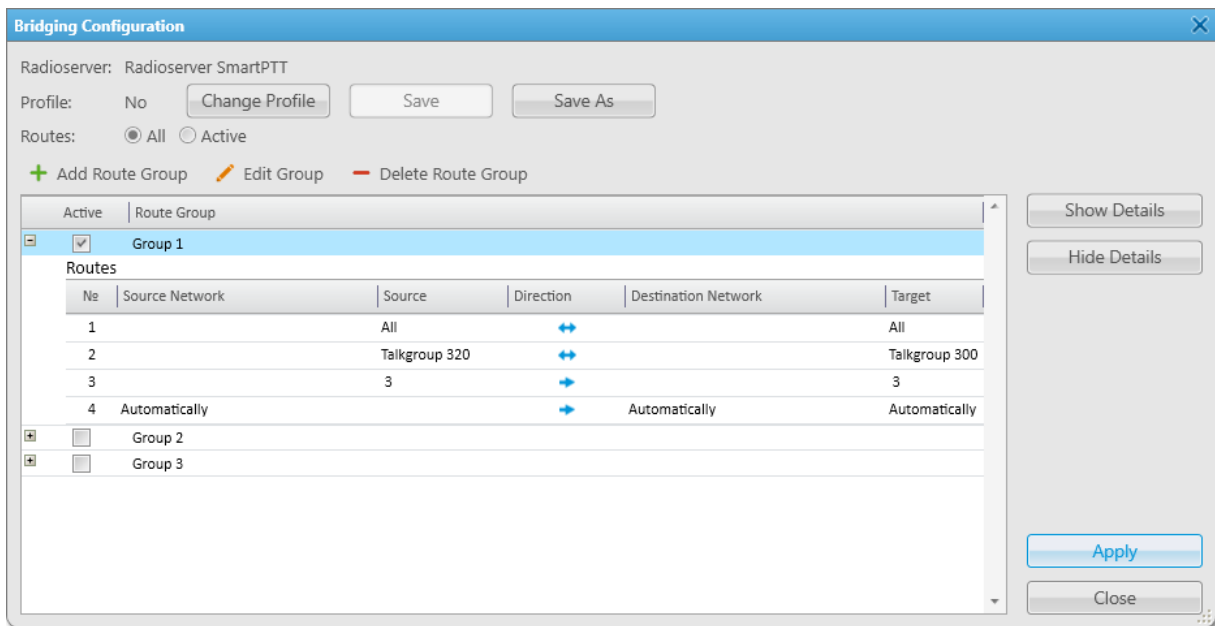
3. In the window that appears, click **Add Route Group (+)**.
    The **Add Route Group** window appears.
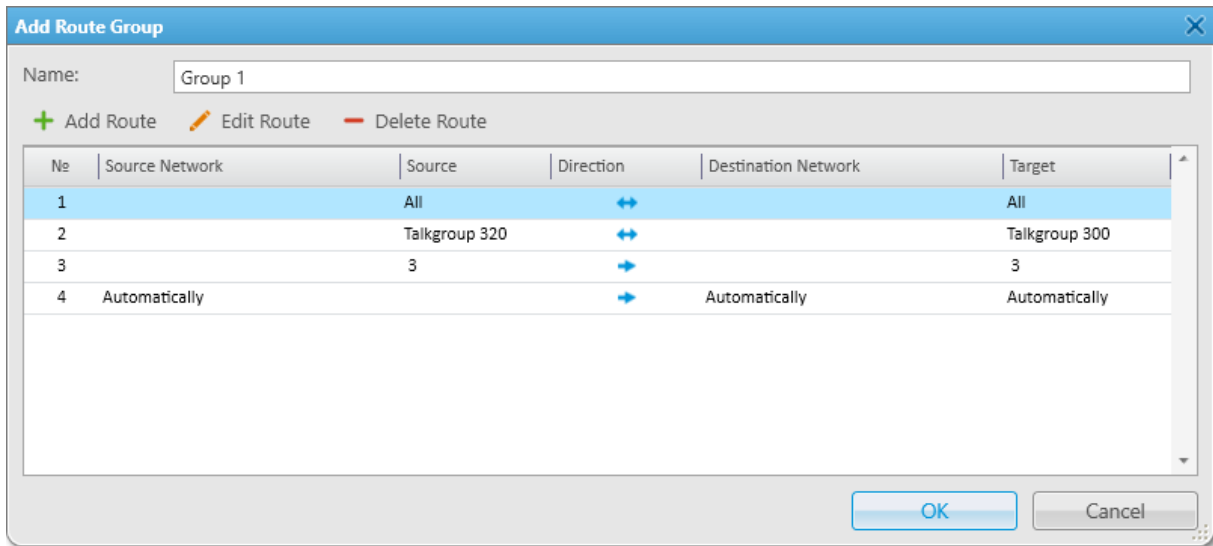
4. In the window that appears, click **Add Route** (➕).
   The **Route** window appears.

5. In the window that appears, in the **Route Number** field, type a unique route number.

6. From the **Route Type** list, select *Dynamic*.

7. In the **Subscriber Group** field, select the desired radio group.

8. From the **Direction** list, select any direction.

9. Click **OK** to apply changes and close the window.

Postrequisites:

- To edit the route, in the **Add Route Group** window, select the desired route, and then click **Edit Route** (✏️).

- To delete the route, in the **Add Route Group** window, select the desired route, and then click **Delete Route** (➖).

4.10.2 Configuring Profiles

Configuration and managing of profiles in SmartPTT Dispatcher include the following:

- Adding profiles. For details, see Adding Profiles.

- Switching between added profiles, and renaming and deleting profiles. For details, see Managing Profiles.

4.10.2.1 Adding Profiles

Follow the procedure to save the current configuration as a new profile.

Prerequisites:

- Ensure you added the desired route groups. For details, see Adding Route Groups.

- Ensure the operator has the **Manage bridging settings** right.
  For information on the operator rights, see Operators.

- Ensure the bridging service is activated in SmartPTT Radioserver Configurator. For details, see "Managing Bridging" in *SmartPTT Installation and Configuration Guide*.

- If desktop client authentication on SmartPTT Radioserver is enabled, ensure that the profile assigned to the client allows bridging management.
  For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

Procedure:

1. In the **Bridging Configuration** window, in the Route Groups table, select the **Active** check boxes next to the desired route groups.

2. *(Optional)* To the right of **Routes**, click **All** or **Active** to display all or only active route groups.
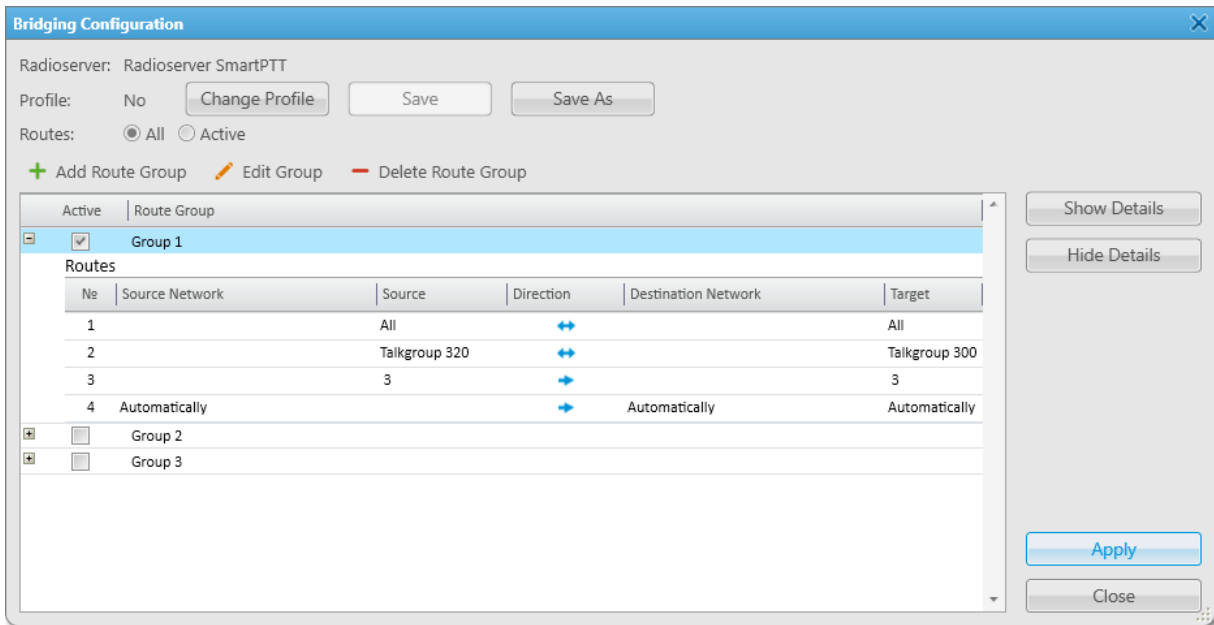
3. Save the configuration as a new profile:

   a. In the **Bridging Configuration** window, click **Save As**.
      The **Enter Profile Name** window appears.
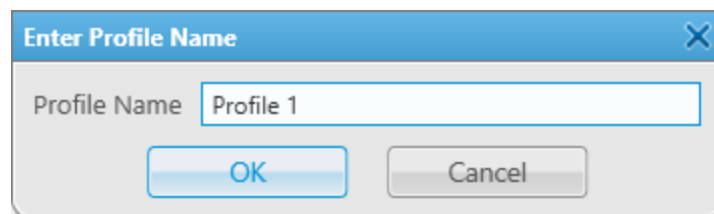
      b.   In the window that appears, in the **Profile Name** field, type the desired profile name.

      c.   Click **OK** to apply changes and close the window.
            The saved profile configuration appears.

4. To apply the profile settings, click **Apply**.
The asterisk character (*) appears next to the profile name.

4.10.2.2 Managing Profiles

Follow the procedure to switch, rename, or delete the profile.

Prerequisites:

- Ensure the operator has the **Manage bridging settings** right.
For information on the operator rights, see Operators.

- Ensure that bridging is activated in SmartPTT Radioserver Configurator. For details, see For details, see "Managing Bridging" in *SmartPTT Installation and Configuration Guide*.

- If desktop client authentication on SmartPTT Radioserver is enabled, ensure that the profile assigned to the client allows bridging management. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

Procedure:

1. In the **Bridging Configuration** window, click **Change Profile**.
The **Bridging Profiles** window appears.
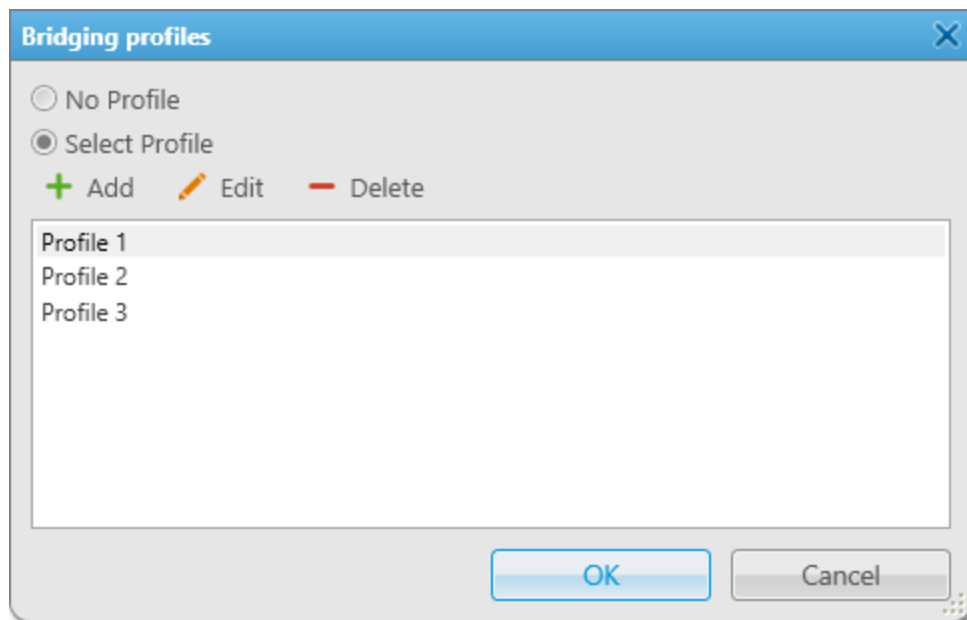
2. In the window that appears, click **No Profile** or **Select Profile** to manage groups using profiles.

3. If **Select Profile** is selected, in the **Bridging Profiles** window, perform one of the following actions:

To switch between profiles,	select the desired profile from the list.
To rename the profile,	perform the following actions:
	1. Select the desired profile from the list, and click **Edit** (✎). The **Enter Profile Name** window appears.
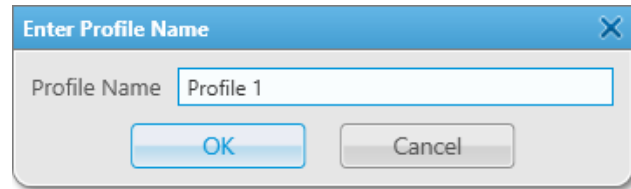
2. In the window that appears, type a new name for the profile.

3. Click **OK** to apply changes and close the window.

To delete the profile, perform the following actions:

1. Select the desired profile from the list, and click **Delete (➖)**.

2. In the window that appears, click **OK**.

4. In the **Bridging Profiles** window, click **OK** to apply changes and close the window.

4.11 Text Messages

The Text Messaging feature provides the ability to send and receive text messages in SmartPTT Dispatcher. You can also use this feature to create templates for frequently sent messages.

The character limit for a text message is 500 characters, including spaces and punctuation marks.

> **Important**
> To send text messages, an operator must have the **Send text messages** right.
> For information on user roles in SmartPTT Dispatcher, see Operators.

> **Important**
> The Text Messaging feature is unavailable if desktop client authentication on SmartPTT Radioserver is enabled and the profile assigned to the client prohibits sending and receiving text messages. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

> **NOTE**
> The Text Messaging feature is unavailable to SmartPTT Mobile users.

Actions with Messages

In SmartPTT Dispatcher, you can perform the following actions with text messages:

- Send text messages to radios and talkgroups. For details, see Sending Messages from the Send Message Window and Sending Messages from the Call Window.

- Receive messages from radios.

- Send and receive messages from other dispatchers. For details, see Sending Messages to Dispatchers.

- Create templates for frequently sent messages. For details, see Managing Message Templates.

When a message from a radio is received, a new entry with information about the message appears in the Event Log and Call Window. In the **Call Windows** settings, you can also configure the Call Window to appear automatically after receiving a message from a radio. For details, see Configuring Call Windows.

When a message from another dispatcher is received, the **Dispatchers** window appears. For details, see Accepting Calls from Other Dispatchers.

You can set an audio notification to inform you of a new incoming message. For details, see "Rules" in *SmartPTT Installation and Configuration Guide*.

Message Sending

In SmartPTT Dispatcher, you can send text messages to radios and talkgroups in one of the following ways:

- From the **Send Message** window.
  This window provides full functionality of the SmartPTT Dispatcher Text Messaging feature. For details, see Sending Messages from the Send Message Window and Managing Message Templates.

- From the radio or talkgroup Call Window.
  The Call Window is usually used for sending quick messages. For details, see Sending Messages from the Call Window.

- From the **TMS** element in the Custom Console.
  The **TMS** element can be used for sending quick messages and message templates without editing them. For details, see Sending Messages from Custom Console.

- Automatically after the rule triggers, if the Message Sending feature was configured on the **Initiator Alerts** tab. For details, see Rules and Lone Worker Mode.

NOTE
In the rule settings window, on the **Other** tab, you can configure the e-mail and SMS sending for any type of rule. For details, see Configuring Other Services.

- Using deferred actions.
  The Deferred Actions feature provides the ability to send text messages to offline radios. When a radio appears in the network, it will receive the message. For details, see Creating Deferred Messages.

Message Status

You can track the status of your messages in the **Status** column of the Event Log and in the log field of the Call Window.

The message can have the following statuses:

Status	Description
Message delivered	The message was successfully delivered to the target radio.
Message not delivered	The message was not delivered due to issues with the radio connection to the radio system
Message accepted	A message from a radio or another dispatcher was received.
Message sent	The message was successfully sent to the talkgroup.
Message was not sent	The message was not sent to the talkgroup due to issues with the SmartPTT Dispatcher connection to SmartPTT Radioserver.

SmartPTT Dispatcher does not display the talkgroup radios that received the message. To check the message delivery status for a specific radio, you can resend the message to the desired radio individually.

NOTE
The delivery status may be affected by radio equipment settings. For information on your system configuration, contact your system administrator.

4.11.1 Sending Messages from the Send Message Window

Follow the procedure to send a text message to a radio or a talkgroup from the **Send Message** window.

Prerequisites:

- Ensure the operator has the **Send text messages** right. For details, see Operators.

- If desktop client authentication on SmartPTT Radioserver is enabled, ensure that the profile assigned to the client allows sending and receiving text messages. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

- If desktop client authentication on SmartPTT Radioserver is enabled, ensure that the profile assigned to the client allows sending and receiving text messages. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

Procedure:

1. Open the **Send Message** window in one of the following ways:

To open it from the **Radio Fleet** panel,	to the right of the desired radio, talkgroup, or category name, click the Actions (≫) button, and then click **Send Message (✉)**.
To open it from the **Radios** panel or the Custom Console panel,	click the Actions (≫) button on the desired radio or talkgroup element, and then click **Send Message (✉)**.
To open it for a radio from the **Maps** panel,	on the map or on the **Radios** tab of the **Radios** panel, right-click the desired radio, and then click **Send Message (✉)**.
To open it for a category from the **Maps** panel,	on the expandable **Radios** panel, on the **Categories** tab, right-click the desired category, and then click **Send Message (✉)**.
To open it from the Call Window of a radio or a talkgroup,	in the Call Window, click **Message (✉)**. For information on Call Windows, see Call Windows.

2. Depending on the message that you want to send, perform one of the following actions:

To type a new text message,	in the text field, type your message, and then click **Send**.
To use a message template,	perform the following actions: 1. From the **Template** list, select the name of the desired template. The text of the message appears in the text field below. 2. *(Optional)* In the text field, edit the text of the message. 3. Click **Send**.

The information on the sent message appears in the log field of the Call Window and in the Event Log.

> **NOTE**
> If you send the message to a talkgroup or a category on the **Radio Fleet** panel, the information on its delivery is displayed for each radio and talkgroup individually.

Postrequisites:

For information on working with message templates, see Managing Message Templates.

4.11.2 Sending Messages from the Call Window

Follow the procedure to send a quick message from the Call Window of a radio or a talkgroup.

Prerequisites:

- Ensure the operator has the **Send text messages** right. For details, see Operators.

- Ensure that the Call Window of the desired radio or talkgroup is open. For details, see Call Windows.

- If desktop client authentication on SmartPTT Radioserver is enabled, ensure that the profile assigned to the client allows sending and receiving text messages. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

Procedure:

Send the message in one of the following ways:

To type a new message and send it from the Call Window,	at the bottom of the Call Window, in the text field, type your message, and then click **Send (➡)**.
To type a new message or use a message template and send it from the **Send Message** window,	perform the following actions: 1. Click **Message (✉)** to the right of the text field. 2. In the **Send Message** window, type the message in the text field or use a message template, and then click **Send**. For information on sending messages from the **Send Message** window, see Sending Messages from the Send Message Window.

The information on the sent message appears in the log field of the Call Window and in the Event Log.

4.11.3 Managing Message Templates

Follow the procedure to configure message templates for frequently sent messages.

Prerequisites:

- Ensure an operator has the **Send text messages** right. For details, see Operators.

- Ensure that the text messaging is activated in SmartPTT Radioserver Configurator. For details, see "Activating Text Message Sending and Receiving" in *SmartPTT Installation and Configuration Guide*.

- If desktop client authentication on SmartPTT Radioserver is enabled, ensure that the profile assigned to the client allows sending and receiving text messages. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

Procedure:

1. Open the **Send Message** window.

2. Depending on what you are going to do with the template, perform one of the following actions:

To create a new template,	perform the following actions: 1. In the text field, type your message, and then click **Save Template**.

2. In the **Message Template Name** window, in the text field, type the template name.

> **NOTE**
> If you leave the field empty, the template gets the *New Template* name that you can change later.

To edit an existing template,   perform the following actions:

1. From the **Template** list, select the name of the desired template.

2. In the text field below, edit the template message.

3. Click **Save Template**.

To delete an existing template,   perform the following actions:

1. From the **Template** list, select the name of the desired template. The text of the message appears in the text field below.

2. Click **Delete Template**.

3. In the **Delete Template** window, click **OK**.

4.12 Job Tickets

The Job Tickets feature provides the ability to send job tickets to radios and track implementation of the assigned tasks. When a radio receives a job ticket, the radio user can change the radio status, for example reject this job ticket or mark that the task implementation started. Job tickets can be send both to individual radios and to talkgroups.

> **NOTE**
> The Job Tickets feature is not available in Capacity Max systems.

> **NOTE**
> The Job Tickets feature is not available to SmartPTT Mobile users.
> For information on the mobile application, see "SmartPTT Mobile" in *SmartPTT Installation and Configuration Guide*.

Only radios with a display can receive job tickets. The radios that do not support the Job Tickets functionality but have a display receive job tickets as messages, for example, *<JTS> Job Ticket №1 Create weekly report*.
To check whether a radio supports this functionality, contact your system administrator.

Job Tickets Panel

The **Job Tickets** panel provides the ability to manage assignments and track their implementation.

You can open the **Job Tickets** panel by clicking **Tools** → **Job Tickets** on the menu bar.

The **Job Tickets** panel is divided into the following areas:

- Filters.
  The **Filters** area provides the ability to filter job tickets in the Job Tickets Table. You can filter job tickets by their names, assignees, statuses, date and time when job tickets were created or updated.
  For information on filtering job tickets, see Filtering Job Tickets.

- Management area.
  The Management area contains the Job Tickets Table and controls for managing job tickets. The Management area provides the ability to create job tickets, assign them to radios, edit and delete them, as well as update statuses, and track tickets implementation.
  For information on job tickets management, see Managing Job Tickets.

- Status Change Log.
  In the **Status Change Log** area, a table is located that displays the status assigned to the job ticket by an assignee, as well as date and time of its update.

Job Tickets Table

By default, in the Management area, the Job Tickets Table contains all job tickets sent by this dispatch console. You can use it to see the name and description of a ticket, its assignee, status, delivery update, as well as creation, expiration, and its status update dates. For information on the table see below:

- The **Job ticket** column contains the ticket name and its number that was assigned by the automatic numbering feature if it was enabled.

- The **Description** column provides the job ticket description.

- The **Assigned** column contains the radio or talkgroup to which the job ticket was sent.

- The **Status** column indicates the implementation status of the job ticket set by the assignee. When the assigned radio changes the job ticket status, the status in the Job Tickets Table changes accordingly. If the job ticket is assigned to a talkgroup, the status in the table shows the latest status update and the name of the radio that updated it. All status updates performed by participants of the talkgroup are available in the **Status Change Log** area.

- The **Created** column contains date and time when the job ticket was created.

- The **Expires** column contains date and time when the job ticket becomes invalid. The expiration time is calculated automatically and depends on the expiration period that was set during ticket creation.

- The **Updated** column contains date and time when the job ticket status was last updated by the assignee.

- The **Delivery status** column indicates if a job ticket was sent and received by the assignee.

When a job ticket is sent to a radio, no status is displayed if the assignee is transmitting and its receiving channel is busy. As soon as the transmission finishes, the status changes to *Delivered*.

In the Job Tickets Table, the job tickets with the *Delivered* and *Not Delivered* statuses for radios, as well as *Sent* and *Not Sent* for talkgroups are highlighted with fading dark orange color (▪).

> **NOTE**
> When a job ticket is sent to a talkgroup, SmartPTT Dispatcher does not display radios that received the job ticket. To check the job ticket delivery status for a specific radio, you can resend this ticket to the desired radio individually.

After the job ticket expiration period ends, the *Ticket outdated* status appears. However, the assignee can still update its status. The job tickets with this delivery status are highlighted in the Job Tickets Table with pink color (▪).

If the job ticket assignee is offline and the expiration period ends before the assignee appears online, the job ticket will not be sent. Until the expiration period ends, assignees will receive job tickets as soon as they appear online.

> **NOTE**
> Expired job tickets are not hidden when the **Show completed tickets** check box is cleared.

You can sort the job tickets displayed in the table by columns and arrange the entries in ascending or descending order by clicking the name of the desired column.

Actions with Job Tickets

An operator can perform the following actions with job tickets:

- Create new job tickets and send them to radios and talkgroups, as well as track the job ticket implementation status. For details, see Managing Job Tickets.

- Set status color and audio signal when status is changed. For details, see Managing Job Ticket Statuses.

- Filter the list of job tickets. For details, see Filtering Job Tickets.

4.12.1 Filtering Job Tickets

Follow the procedure to filter the job tickets in the Job Tickets Table.

Prerequisites:

Ensure that the **Job Tickets** panel is open.

Procedure:

1. In the upper-left corner of the **Job Tickets** panel, click the Expand (⊞) button to expand the **Filters** area.

2.   Set the desired filter parameters:

To filter job tickets by name,	perform the following actions: 1. Select the **Job ticket** check box. 2. From the unlocked list on the right, select the desired job ticket name.
To filter job tickets by the radio or talkgroup that is its assignee,	perform the following actions: 1. Select the **Assignee** check box. 2. From the unlocked list on the right, select the desired radio or talkgroup name.
To filter job tickets by status,	perform the following actions: 1. Select the **Status** check box. 2. From the unlocked list on the right, select the desired job ticket status.
To filter job tickets by creation date and time,	perform the following actions: 1. Select the **Created** check box. 2. In the unlocked fields on the right, enter the start and end points of the desired job ticket creation time range.
To filter job tickets by status update date and time,	perform the following actions: 1. Select the **Updated** check box. 2. In the unlocked fields on the right, enter the start and end points of the desired job ticket status update time range.

Example

If you set the start point at 01.04.2020 00:00:00 and the end point at 07.04.2020 23:59:59 in the **Updated** fields, only the job tickets that were updated after 1 April 2020 and before 7 April 2020 will appear in the Job Tickets Table.

3.   Click **Apply (▼)** to apply selected filters to the Job Tickets Table entries.

Postrequisites:

To clear the applied filters and display all entries in the Job Tickets Table, click **Clear (⬅)**.

4.12.2 Managing Job Tickets

Follow the procedure to add, resend, or delete a job ticket as well as update all job ticket statuses or view the status change log of an individual job ticket.

Prerequisites:

(Optional) In the window for managing job ticket statuses, configure additional job ticket parameters:

- Automatic numbering

- Sending notifications when a dispatcher deletes an uncompleted job ticket

- Default status

- For job ticket statuses, the color, sound signal, and status completion settings

For details, see Managing Job Ticket Statuses.

Procedure:

1. On the menu bar, click **Tools → Job Tickets**.
   The **Job Tickets** panel appears.

2. *(Optional)* To resend, delete, or view information about a job ticket with the completion status, select the **Show completed tickets** check box.

3. In the Management area, perform one of the following actions:

To add a new job ticket and send it to a single or multiple radios or talkgroups,	click **Add** (✚). The **Job ticket** window appears.
To edit a job ticket before resending,	in the Job Tickets table, select the desired job ticket, and then click **Resend** (🔄). The **Job ticket** window appears.
To delete a job ticket,	perform the following actions: 1. In the Job Tickets table, select the desired job ticket, and then click **Delete ticket** (➖). 2. In the **Deleting ticket** window, click **OK**. The job ticket is deleted from the table. 3. Proceed to step 9.
To update job ticket statuses after a period of the dispatch console inactivity,	perform the following actions: 1. Click **Update statuses** (🗒). 2. *(Optional)* If no changes occurred during the inactivity period, in the **Information** window, click **OK**. 3. Proceed to step 9.
To view information on status updates of a job ticket,	perform the following actions: 1. In the Job Tickets table, select the desired job ticket. In the **Status Change Log** table, all statuses of the selected job ticket are displayed with the date and time of their assignment. 2. Proceed to step 9.

4. In the **Job ticket** window, in the **Job ticket** field, type the name of the job ticket.

5. In the **Description** field, type a short description of the job ticket.

6. In the **Expiration period (hr)** field, enter the amount of time in hours for which the job ticket will be valid.

> **NOTE**
> Assignees do not receive information about the job ticket validity period and cannot see if it has already expired. To ensure the job ticket task is not performed after its expiration time, you can delete it from the Job Tickets Table (if the **Send notification to radio when uncompleted job ticket was deleted by dispatcher** check box is selected in the window for managing job ticket statuses), send another job ticket indicating the cancellation or specify the job ticket expiration period in the **Description** field before sending it.

7. Drag and drop the desired radios or talkgroups from the **Radio Fleet** panel to the **Assignees** area.

> **NOTE**
> If you want to remove an assignee, select the desired assignee in the **Assignees** area, and then press the Delete key. You can remove several assignees simultaneously by selecting them using the Shift or Ctrl keys.

8. Click **OK** to send the job ticket.
    The new job ticket entry appears in the Job Tickets table.

9. *(Optional)* If necessary, close the **Job Tickets** panel by clicking Close (×).

> **NOTE**
> The panel cannot be closed if the layout is locked.

Postrequisites:

Configure the desired parameters to filter the job tickets displayed in the Job Tickets table. For details, see Filtering Job Tickets.

4.13 Telephone Interconnect

In SmartPTT Dispatcher, operators can initiate calls to telephone subscribers and vice versa. Between operators and telephone subscribers, voice is transmitted in the full-duplex mode.

> **NOTE**
> SmartPTT also supports server telephony. It provides the ability to connect radio users and telephone subscribers in the half-duplex mode. To use this feature, you must configure the radioserver connection to the PBX.
> For information on SmartPTT Radioserver configuration, see "SIP Telephony" in *SmartPTT Installation and Configuration Guide*.

If you configure the radioserver connection to the PBX, you can use SmartPTT Dispatcher to initiate calls between radio users and telephone subscribers. If you configure only SmartPTT Dispatcher settings, you will be able to connect only telephone subscribers and SmartPTT Dispatcher. SmartPTT uses the Session Initiation Protocol (SIP) to establish connection with the desired telephone subscribers.

Important
To access the Telephone Interconnect feature, you must install the corresponding license, and the operator must have the **Make telephone calls** right.
For information on user roles in SmartPTT Dispatcher, see Operators.
For information on licenses, see Licenses.

NOTE
The SIP ports can be blocked by firewall software. Contact your system administrator to check if your firewall settings allow SIP.

SmartPTT Dispatcher Telephone Interconnect features

- Voice call from SmartPTT Dispatcher to a telephone subscriber

- Voice call from a telephone subscriber to SmartPTT Dispatcher

- Initiation of a voice call between a radio user and telephone subscriber

- Service sounds playback (sound alert for incoming call, sound alert for outgoing call)

- Configuration of call volume directly in SmartPTT Dispatcher

Telephony Glossary

VoIP gateway is a separate device or PBX module to connect SmartPTT Dispatcher to the telephone network.

Private Branch eXchange (PBX) is a telephone system within an enterprise that switches calls between users on local lines, while enabling all users to share a certain number of external phone lines.

Public Switched Telephone Network (PSTN) is the wired phone system that is accessed using phones, PBX, and data transmission equipment.

Interaction with Telephone Subscribers

The Telephone Interconnect feature provides dispatchers with the ability to call telephone subscribers and vice versa. In SmartPTT Dispatcher, you can also create a list of telephone subscribers to make calls.

NOTE
To connect radio users with telephone subscribers, you must configure the radioserver connection to the PBX. The radioserver configuration procedure does not depend on the type of connection configured in SmartPTT Dispatcher.
For information on SmartPTT Radioserver configuration, see "SIP Telephony" in *SmartPTT Installation and Configuration Guide*.

SmartPTT Dispatcher provides the following connection options:

- Call a telephone subscriber from SmartPTT Dispatcher. For details, see Initiating Calls to Telephone Subscribers.

- Initiate connection between radios or talkgroups and telephone subscribers using SmartPTT Dispatcher. For details, see Connecting Radios with Telephone Subscribers.

- Call SmartPTT Dispatcher from a telephone subscriber. For details, see Accepting Calls from Telephone Subscribers.

- Initiate a conference call that provides the ability to connect telephone subscribers, radios, talkgroups and/or dispatchers. For details, see Conference Calls.

> **NOTE**
>
> To make the **Make Conference Call ( )** button available on the SmartPTT Dispatcher menu bar, enable calls to telephone subscribers in the telephony settings.

If connection is established between a telephone subscriber and a talkgroup, the dispatcher that initiated the call can participate in the conversation. If the connection is private (between a telephone subscriber and a single radio), the dispatcher can only listen to the conversation without taking part in it.

If SmartPTT Dispatcher establishes connection between a telephone subscriber and a radio or a talkgroup, only the call participants can end the call. SmartPTT Dispatcher cannot affect it in any way after the call was initiated.

> **NOTE**
>
> A special tone on the radio indicates the end of the call. If the radio user initiates a new transmission before they hear the tone, the transmission will be initiated incorrectly and may fail.

4.13.1 Adding and Editing Telephone Subscribers

Follow the procedure to add a new subscriber to the list of telephone subscribers in SmartPTT Dispatcher or edit an existing subscriber.

Prerequisites:

- From PBX settings obtain numbers of the desired telephone subscribers.

- If you do not use SIP automatic addressing, from SmartPTT Radioserver Configurator obtain the following information:

    - Radioserver call number. For details, see "Configuring Incoming Calls" in *SmartPTT Installation and Configuration Guide*.

    - IP address and port number of the SIP server. For details, see "Configuring Outgoing Calls" in *SmartPTT Installation and Configuration Guide*.

- If you want to use the automatic SIP addressing format, ensure that the VoIP gateway default settings are specified in the Telephone Interconnect settings. For details, see <u>Configuring General Telephone Interconnect Settings</u>.

- If you want to use SIP account for connection to the telephone subscriber, ensure that the desired account is added to the SIP Accounts list in SmartPTT Dispatcher. For details, see<u>Managing SIP Accounts</u>.

- *(Optional)* Prepare the following files:

    - Telephone subscriber's avatar.

    - Audio file that will play in SmartPTT Dispatcher when receiving a call from this telephone subscriber.

Procedure:

1. On the menu bar, click **Settings ( ) →Telephone Interconnect →Telephone Subscribers**.
   The **Telephone Subscribers** window appears.
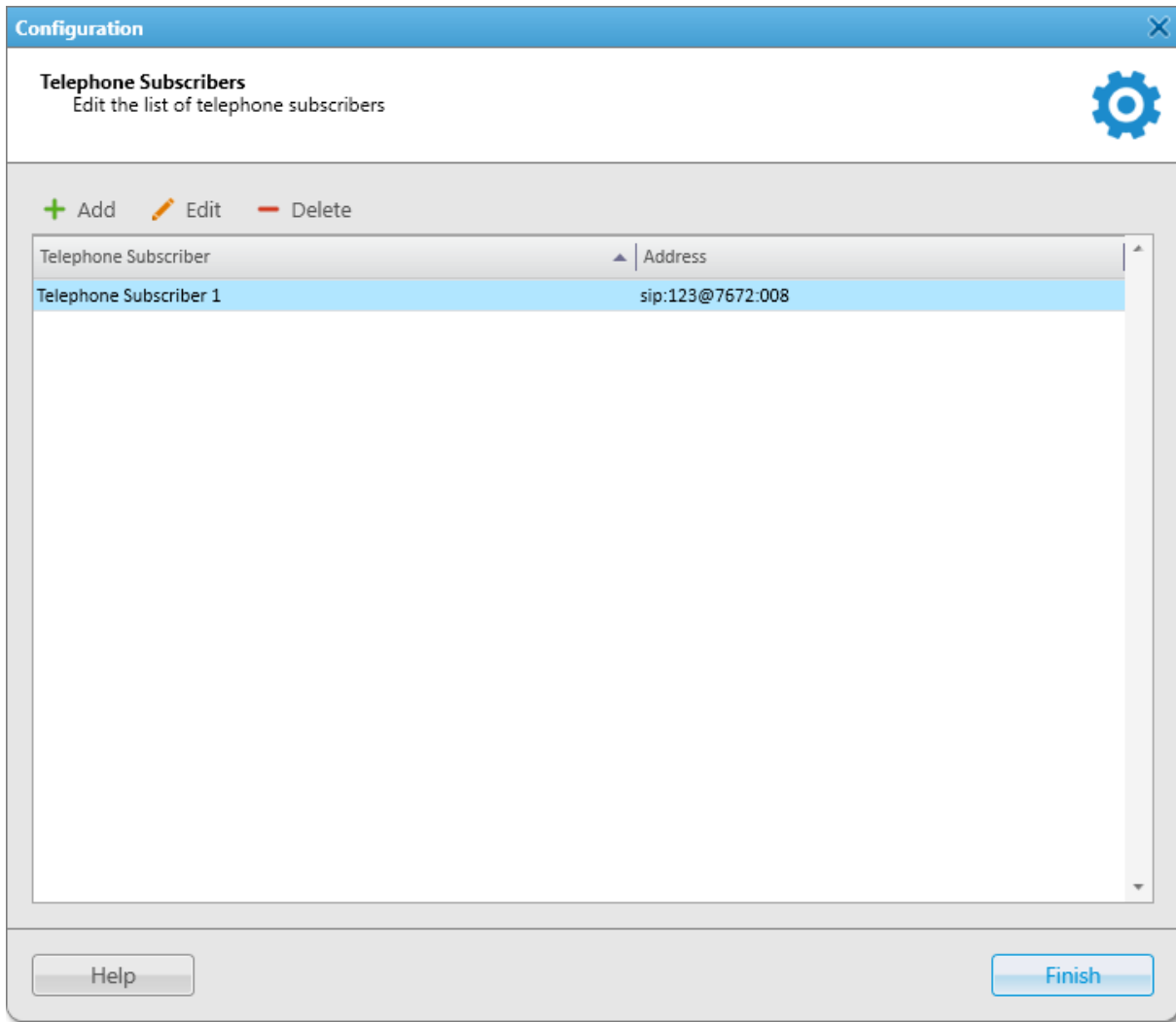
2. Perform one of the desired actions:

To add a new telephone subscriber,	in the top part of the window, click **Add** (+).
To edit an existing telephone subscriber,	perform the following actions: 1. Select the desired subscriber from the list. 2. In the top part of the window, click **Edit** (✏).

The **Telephone Subscriber** window appears.

3. In the **Subscriber** field, type the subscriber's name.

4. Select the desired SIP addressing format:

To use default gateway settings,	perform the following actions:
	1. In the **SIP-Address** area, select **Automatic**.
	2. In the **Number** field, type the phone number of the telephone subscriber.
To use the subscriber's full address,	perform the following actions:
	1. In the **SIP-Address** area, select **Full Address**.

2. In the **Outgoing** field, type the subscriber's SIP address for outgoing calls in the following format:
    sip:<prefix><number>@<gateway>:<port>

3. In the **Incoming** field, type the subscriber's SIP address for incoming calls in the following format:
    sip:<prefix><number>@<gateway>:<port>

> **NOTE**
> A SIP address is composed from dial prefix for outgoing or incoming calls, telephone subscriber phone number, VoIP gateway IP address, and VoIP SIP port in the following format: *sip:<prefix><number>@<gateway>:<port>*. All these parameters except the telephone subscriber phone number can be configured as default in the **Telephone Interconnect** window.
> For information on the **Telephone Interconnect** window configuration, see <u>Telephone Interconnect Settings</u>.
> On the screenshot, you can see a SIP address for the *1111* phone number where the dial prefix for outgoing calls is *12*, the dial prefix for incoming calls is not specified, VoIP gateway IP address is *82.000.14.46*, and SIP port is *5060*.

5. *(Optional)* Select the **Enable SIP Account** check box, and then, from the list on the right, select the desired SIP account.

6. Configure incoming call alert sound:

To restore default settings and use the standard system sound,	next to **Sound for Incoming Call Alert**, click **Use a system sound ($\boxed{\times}$)**.
To use custom sound,	perform the following actions: 1. Next to **Sound for Incoming Call Alert**, click **Select a sound file for an incoming call ($\boxed{...}$)**. 2. In the window that appears, select the desired audio file.

7. Configure telephone subscriber's avatar:

To select an image for the subscriber's avatar,	perform the following actions: 1. In the upper-left corner of the window, click **Select**. 2. In the window that appears, select the desired image.
To remove current subscriber avatar,	in the upper-left corner of the window, click **Delete Subscriber Photo ($\boxed{\times}$)**.

8. In the **Telephone Subscriber** window, click **OK**.

Postrequisites:

To delete an existing telephone subscriber, in the **Telephone Subscribers** window, click the name of the subscriber, and then click **Delete (▬)**.

4.13.2 Initiating Calls to Telephone Subscribers

Follow the procedure to initiate a call to a telephone subscriber.

Prerequisites:

Ensure the operator has the **Make telephone calls** right.
For information on the operator rights, see Operators.

Procedure:

1. On the menu bar, click **Telephone Subscribers** (⯐).
    The **Telephone Subscribers** window appears.

2. In the window that appears, call the desired telephone subscriber:

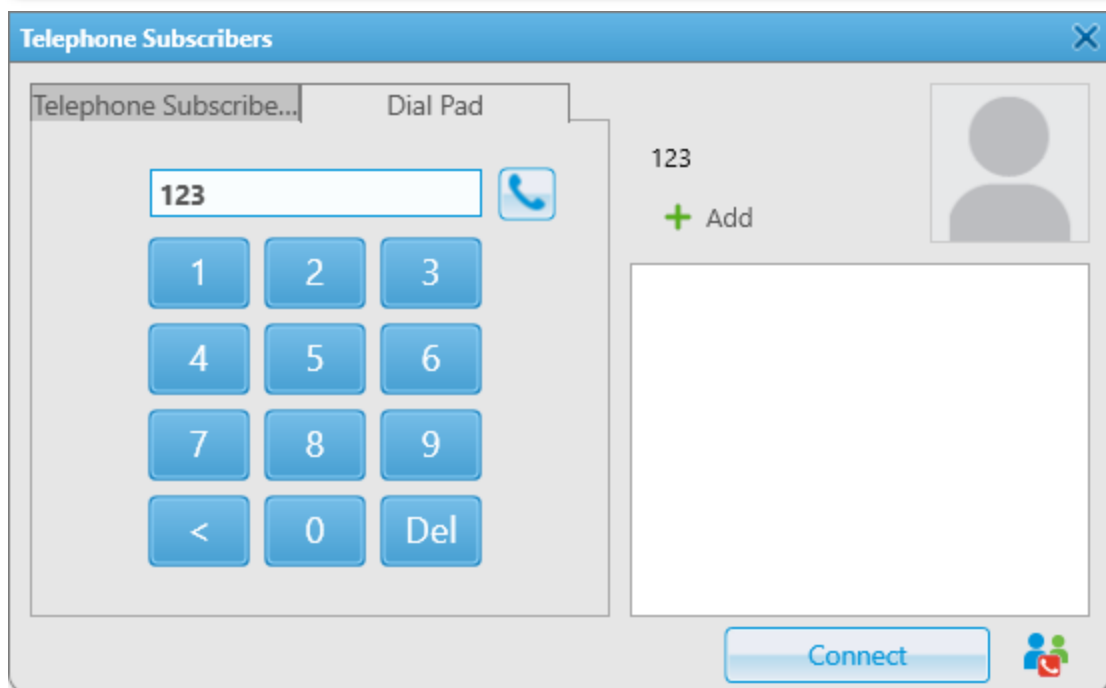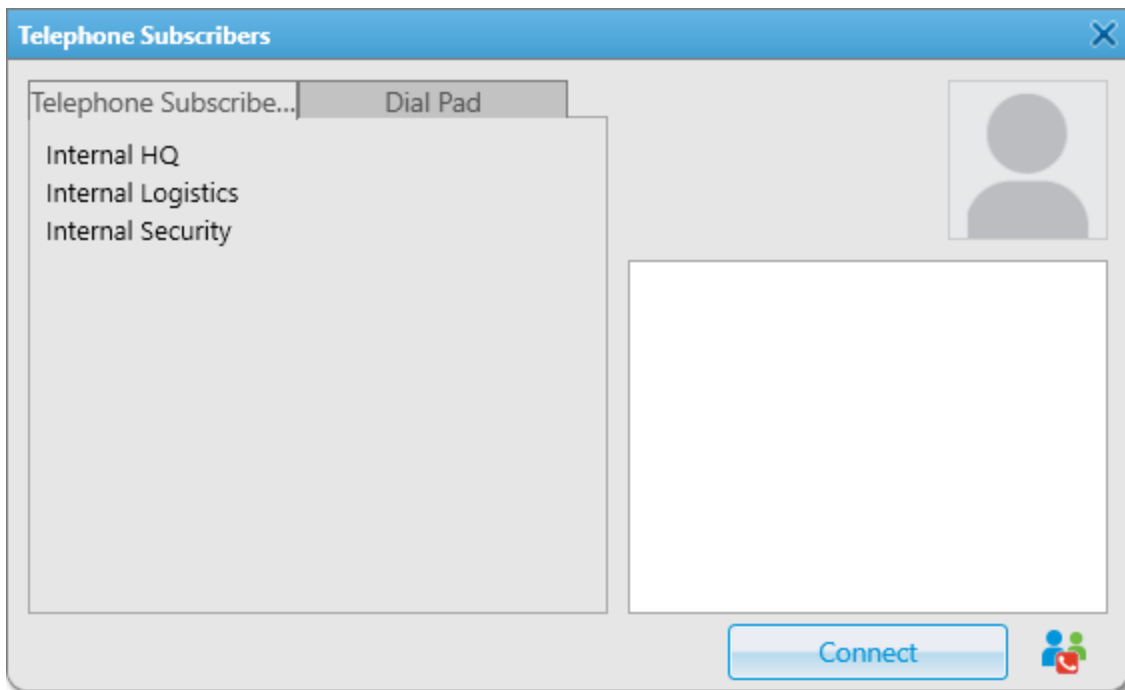| To call a subscriber added to the SmartPTT Dispatcher list of telephone subscribers,	perform the following actions: 1. On the **Telephone Subscribers** tab, select the desired subscriber from the list. The name and the avatar of the selected subscriber appear in the upper-right corner of the window. 2. In the lower-right corner of the window, click **Connect**.
To call a subscriber that is not added to the SmartPTT Dispatcher list of telephone subscribers,	perform the following actions: 1. On the **Dial Pad** tab, dial the desired subscriber's number. The **Add (+)** button appears in the right part of the window. **NOTE** If the VoIP gateway default settings are specified, you need to dial only the subscriber's phone number. If default settings are not specified, you need to dial the subscriber's full SIP address. A SIP address is composed from dial prefix for outgoing or incoming calls, telephone subscriber phone number, VoIP gateway IP address, and VoIP SIP port in the following format: *sip:<prefix><number>@<gateway>:<port>* 2. *(Optional)* Add the subscriber to SmartPTT Dispatcher by clicking the **Add (+)** button and specifying information on them in the **Telephone Subscriber** window. 3. Click the **Phone ( )** button to the right of the number field or click the **Connect** button in the lower-right corner of the window.

The **Connect** button changes to **Disconnect**, the name of the called subscriber appears in the Recent Calls list above the list of telephone subscribers.

3. *(Optional)* On the **Extension Dialing** tab, dial the DTMF extension code to reach the desired subscriber.

NOTE
After dialing the subscriber's number, apart from a private call, you can initiate a conference call by clicking the **Make Conference Call ( )** button. For details, see [Initiating Conference Calls from the Telephone Subscribers Window](#).

4. To finish the call, click **Disconnect** or wait until it finishes automatically after the subscriber hangs up.

4.13.3 Connecting Radios with Telephone Subscribers

Follow the procedure to establish connection between a radio or a talkgroup and a telephone subscriber.

Prerequisites:

Ensure an operator has the **Make telephone calls** right.
For information on the operator rights, see [Operators](#).

Procedure:

1. Open the telephone subscriber selection window in one of the following ways:

To open the window from the **Radio Fleet** panel,	click the desired radio or talkgroup Actions (») button, and then click **Call Telephone Subscriber ( )**.

To open the window from the **Radios** panel or the Custom Console panel,	click the desired radio or talkgroup Actions (≫) button, and then click **Call Telephone Subscriber** (📠).
To open the window from the map panel,	on the map or on the expandable **Radios** panel, right-click the desired radio, and then click **Call Telephone Subscriber** (📠).
To open the window from the radio or talkgroup Call Window,	in the Call Window of the desired radio or talkgroup, click **Call Telephone Subscriber** (📠). For information on Call Windows, see Call Windows.

The window with the name of the selected radio or talkgroup appears.
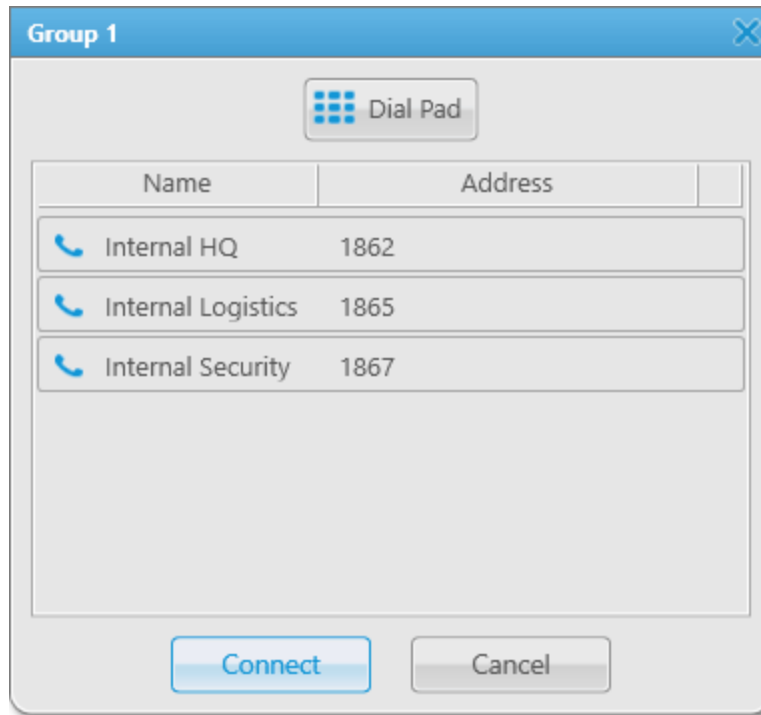
2. Connect the radio or talkgroup to the desired telephone subscriber:

To connect to a subscriber added to the SmartPTT Dispatcher list of telephone subscribers,	select the desired subscriber from the list of telephone subscribers, and then click **Connect**, or double-click the desired subscriber name.
To connect to a subscriber that is not added to the SmartPTT Dispatcher list of telephone subscribers,	perform the following actions: 1. Click the **Dial Pad** (⠿) button. The **Dial Pad** window appears.
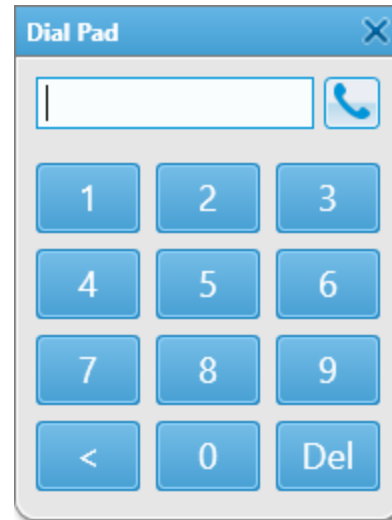
2. Dial the desired subscriber's number, and then click the **Phone** (📞) button.

    NOTE
    If the VoIP gateway default settings are specified, you need to dial only the subscriber's phone number. If default settings are not specified, you need to dial the subscriber's full SIP address. A SIP address is composed from dial prefix for outgoing or incoming calls, telephone subscriber phone number, VoIP gateway IP address, and VoIP SIP port in the following format: *sip:<prefix><number>@<gateway>:<port>*

The **Call Telephone Subscriber** window appears.
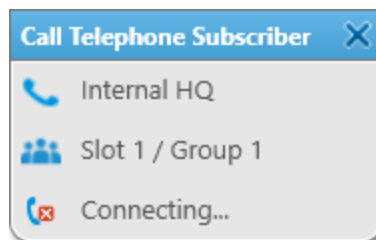
NOTE
The window will not appear if it is prohibited in the Call Window settings. For details, see Configuring Call Windows.

3. To close the **Call Telephone Subscriber** window, click Close (✕).

NOTE
Closing the window does not end the call. Only the call participants can end the call.

4.13.4 Accepting Calls from Telephone Subscribers

Follow the procedure to accept an incoming call from a telephone subscriber.

Procedure:

1. In the **Incoming call** window that appears when a telephone subscriber calls SmartPTT Dispatcher, click **Accept**.
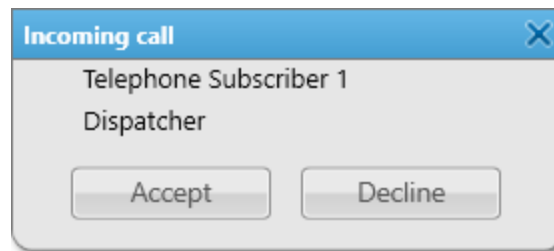
    The **Telephone Subscribers** window appears. The call starts.
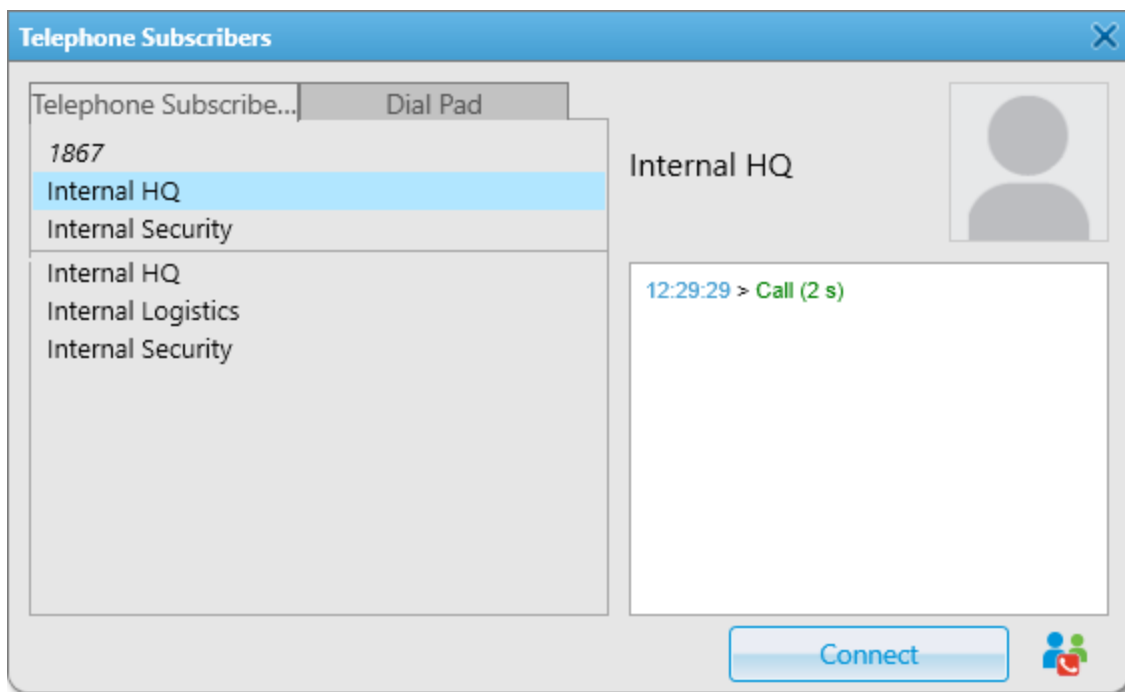
2. To end the call, click **Disconnect** or wait until the call ends automatically after the subscriber hangs up.
   The **Disconnect** button changes to **Connect**.

3. *(Optional)* If the calling telephone subscriber is not added to the SmartPTT Dispatcher list of telephone subscribers, you can add them by performing the following actions:

    a. In the right part of the window, under the number of the calling subscriber, click **Add (+)**.
   The **Telephone Subscriber** window appears.

b.   Select the desired SIP addressing format:

To use default gateway settings,	perform the following actions:
	1. In the **SIP-Address** area, select **Automatic**.
	2. In the **Number** field, type the subscriber's phone number.

To use the subscriber's full address,	perform the following actions:
	1. In the **SIP-Address** area, select **Full Address**.
	2. In the **Outgoing** field, type the subscriber's SIP address for outgoing calls in the following format: sip:<prefix><number>@<gateway>:<port>.
	3. In the **Incoming** field, type the subscriber's SIP address for incoming calls in the following format: sip:<prefix><number>@<gateway>:<port>.

c.   (Optional) In the upper-left corner of the window, click **Select**, and then, in the window that appears, select an image for the subscriber's avatar.
The selected avatar appears above the **Select** button.

d.   (Optional) Select the **Enable SIP Account** check box, and then, from the list on the right, select the desired SIP account.

e.   (Optional) Click **Select a sound file for an incoming call** (…), and then, in the window that appears, select an audio file with the desired incoming call alert sound.

f.   At the bottom of the window, click **OK**.

Postrequisites:

• To remove the subscriber avatar, click **Delete Subscriber Photo (x)**.

• To restore the standard system sound, click **Use a system sound (x)**.

• To edit parameters of telephone subscribers or delete telephone subscribers, see <u>Adding and Editing Telephone Subscribers</u>.

4.14 Conference Calls

SmartPTT Dispatcher provides the ability to organize conference calls. This functionality connects radio system objects in a single call. All participants of a conference call can hear and speak to each other, but cannot see who participates. Only the dispatcher that initiated a conference call can see, add, and remove participants from it.

> **Important**
> Conference calls are available to operators with the **Make conference calls** right.
> For information on user roles in SmartPTT Dispatcher, see Operators.

The following radio objects can participate in conference calls:

- Radios

- Talkgroups

- Dispatchers

- Telephone subscribers

> **NOTE**
> Connection to telephone subscribers through a conference call requires the **Telephone Interconnect Service** license.

The conference call initiates automatically when you add a participant to the Participants field in the **Conference Calls** window. Conference calls have the following connection statuses:

- The *Ringing* status indicates that the invitation request has been sent, and SmartPTT Dispatcher is waiting for connection to be established.

- The *Call* status indicates that connection has been successfully established and the conference call is in progress.

A special tone indicates the end of the call on the radio. If the radio initiates a new transmission before hearing the tone, the transmission will be initiated incorrectly and can fail.

> **NOTE**
> The conference call ends automatically when the **Conference call idle session timeout** period set in SmartPTT Radioserver Configurator expires. For details, see "Configuring Phone Calls" in *SmartPTT Installation and Configuration Guide.*

Ways of Initiating Conference Calls

In SmartPTT Dispatcher, you can organize a conference call in one of the following ways:

- By selecting the desired participants from the **Conference Calls** window. For details, see Initiating Conference Calls from the Conference Calls Window.

> **NOTE**
> To unlock the **Make Conference Call** (🖼) button in the SmartPTT Dispatcher menu bar, you need to configure Telephone Interconnect settings. For details, see Telephone Interconnect.

- By inviting a specific participant to the conference call using the following SmartPTT Dispatcher elements:

  - SmartPTT Dispatcher panels. For details, see Initiating Conference Calls from Dispatcher Panels.

  - The **Dispatchers** window. For details, see Initiating Conference Calls from the Dispatchers Window.

  - The **Telephone Subscribers** window. For details, see Initiating Conference Calls from the Telephone Subscribers Window.

4.14.1 Initiating Conference Calls from the Conference Calls Window

Follow the procedure to initiate a conference call using the **Make Conference Call (** 🔲 **)** button.

Prerequisites:

- Ensure that the desired radio or dispatcher is online.

- Ensure the operator has the **Make conference calls** right. For details, see Operators.

Procedure:

1. On the menu bar, click **Make Conference Call (** 🔲 **)**.
   The **Conference Calls** window appears.
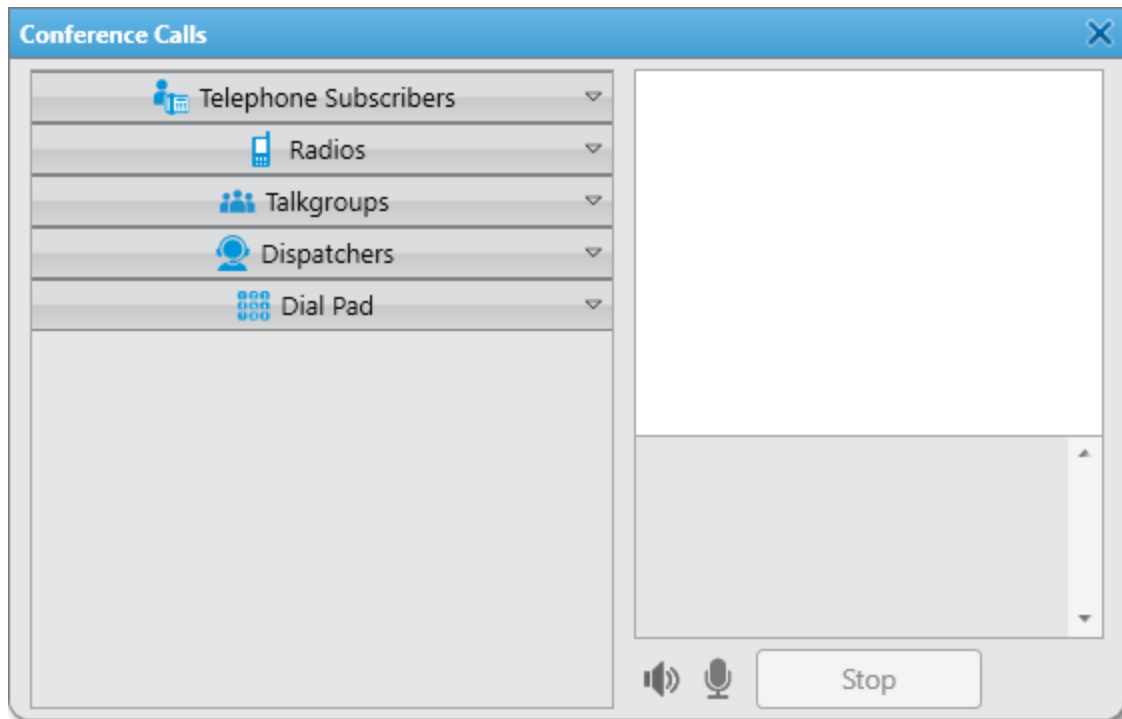
2. In the window that appears, send a conference call request to the desired participant:

To send a call request to a radio, talkgroup, dispatcher, or telephone subscriber registered in SmartPTT Dispatcher,	in the left part of the **Conference Calls** window, expand the desired group, and then double-click or drag the desired conference participant to the Participants area in the upper-right corner of the window. The selected radio object appears in the Participants area in the right part of the window.
To send a call request to a telephone subscriber not registered in SmartPTT Dispatcher,	perform the following actions: 1. In the left part of the **Conference Calls** window, click **Dial Pad**. The dial pad appears.

2.   On the dial pad, dial the desired subscriber's number, and then click the Call (📞) button.

> **NOTE**
> If the VoIP gateway default settings are specified in SmartPTT Radioserver Configurator, you must only dial the subscriber's phone number. If default settings are not specified, you need to dial the subscriber's full address.
> The selected radio object appears in the Participants area in the right part of the window.

To send call requests to more participants to the conference call,	repeat the steps above.
To remove a participant from the current conference call,	click End Conference Call (🔚) next to the name of the desired participant in the Participants area. The selected participant disappears from the Participants area in the right part of the window.
To end the conference call for all participants,	click **Stop**.

Postrequisites:

•   To mute the conference call sound and turn off your microphone, click **Mute** (🔊).

•   To turn off your microphone and keep listening to the conference participants, click **Turn off microphone** (🎤).

4.14.2 Initiating Conference Calls from Dispatcher Panels

Follow the procedure to initiate a conference call by sending an invitation request to a radio, or talkgroup.

Prerequisites:

•   Ensure that the desired radio is online.

•   Ensure the operator has the **Make conference calls** right. For details, see Operators.

Procedure:

Initiate a conference call in one of the following ways:

To send a call request to a radio, or talkgroup from the **Radio Fleet** panel,	click the Actions (≫) button on the desired radio object, and then click **Make Conference Call** (👥). The **Conference Calls** window with information on the initiated conference call appears.
To send a call request to a radio from the **Radios** panel,	click the Actions (≫) button on the desired radio object element, and then click **Make Conference Call** (👥). The **Conference Calls** window with information on the initiated conference call appears.
To send a call request to a radio from the map panel,	on the map, right-click the desired radio object, and then click **Make Conference Call** (👥). The **Conference Calls** window with information on the initiated conference call appears.

To send a call request to a radio, or talkgroup from the Call Window,	in the Call Window of the desired radio object, click **Make Conference Call** ( ). The **Conference Calls** window with information on the initiated conference call appears. For information on Call Windows, see see Call Windows.
To remove a participant from the current conference call,	click End Conference Call ( ) next to the name of the desired participant in the Participants area. The selected participant disappears from the Participants area in the right part of the window.
To end the conference call for all participants,	click **Stop**.

Postrequisites:

- For information on adding participants from the **Conference Calls** window, see Initiating Conference Calls from the Conference Calls Window.

- To mute the conference call sound and turn off your microphone, click **Mute** ( ).

- To turn off your microphone and keep listening to the conference participants, click **Turn off microphone** ( ).

4.14.3 Initiating Conference Calls from the Telephone Subscribers Window

Follow the procedure to initiate a conference call by sending an invitation request to a telephone subscriber.

Prerequisites:

- Ensure that the desired telephone subscriber is online.

- Ensure that the required conference calls parameters are configured in the Telephone Interconnect settings.

- Ensure you have a license that permits access to Telephone Interconnect settings. For details, see Licenses.

- Ensure the operator has the **Make conference calls** right. For details, see Operators.

Procedure:

1. On the menu bar, click **Telephone Subscribers** ( ).
   The **Telephone Subscribers** window appears.
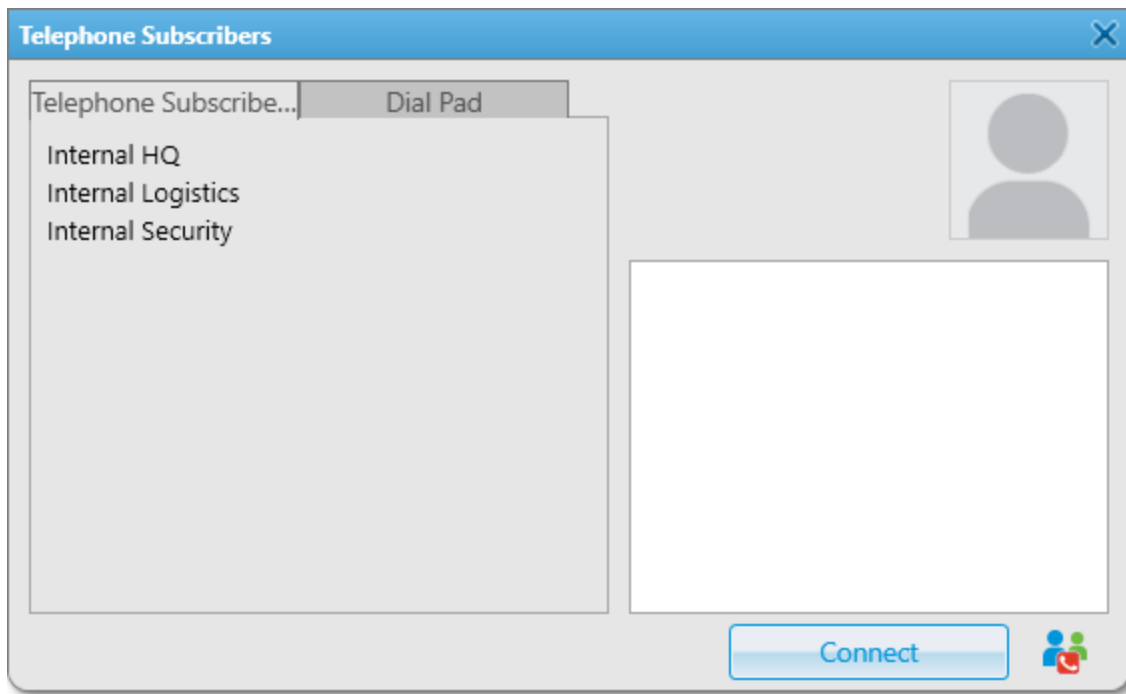
- In the window that appears, initiate a conference call in one of the following ways:

To send a call request to a telephone subscriber registered in SmartPTT Dispatcher,	on the **Telephone Subscribers** tab, from the list of telephone subscribers, select the desired subscriber, and then click **Make Conference Call** ( ) in the lower-right corner of the window. The **Conference Calls** window with information on the initiated conference call appears.
To send a call request to a telephone subscriber not registered in SmartPTT Dispatcher,	on the **Dial Pad** tab, dial the desired subscriber's number, and then click **Make Conference Call** ( ) in the lower-right corner of the window. The **Conference Calls** window with information on the initiated conference call appears. **NOTE** If the VoIP gateway default settings are specified, you only need to dial the subscriber's phone number. If default settings are not specified, you need to dial the subscriber's full address.
To remove a participant from the current conference call,	click End Conference Call ( ) next to the name of the desired participant in the Participants area. The selected participant disappears from the Participants area in the right part of the window.
To end the conference call for all participants,	click **Stop**.

Postrequisites:

- For information on adding participants from the **Conference Calls** window, see Initiating Conference Calls from the Conference Calls Window.

- For information on adding participants from SmartPTT Dispatcher panels, see Initiating Conference Calls from Dispatcher Panels.

- To mute the conference call sound and turn off your microphone, click **Mute** ( ).

- To turn off your microphone and keep listening to the conference participants, click **Turn off microphone** ( ).

4.14.4 Initiating Conference Calls from the Dispatchers Window

Follow the procedure to initiate a conference call by sending an invitation request to a dispatcher from the **Dispatchers** window.

Prerequisites:

- Ensure that the desired dispatcher is added to SmartPTT Dispatcher and online.

- Ensure the operator has the **Make conference calls** right. For details, see Operators.

Procedure:

1. On the menu bar, click **Dispatchers** ( ).
   The **Dispatchers** window appears.
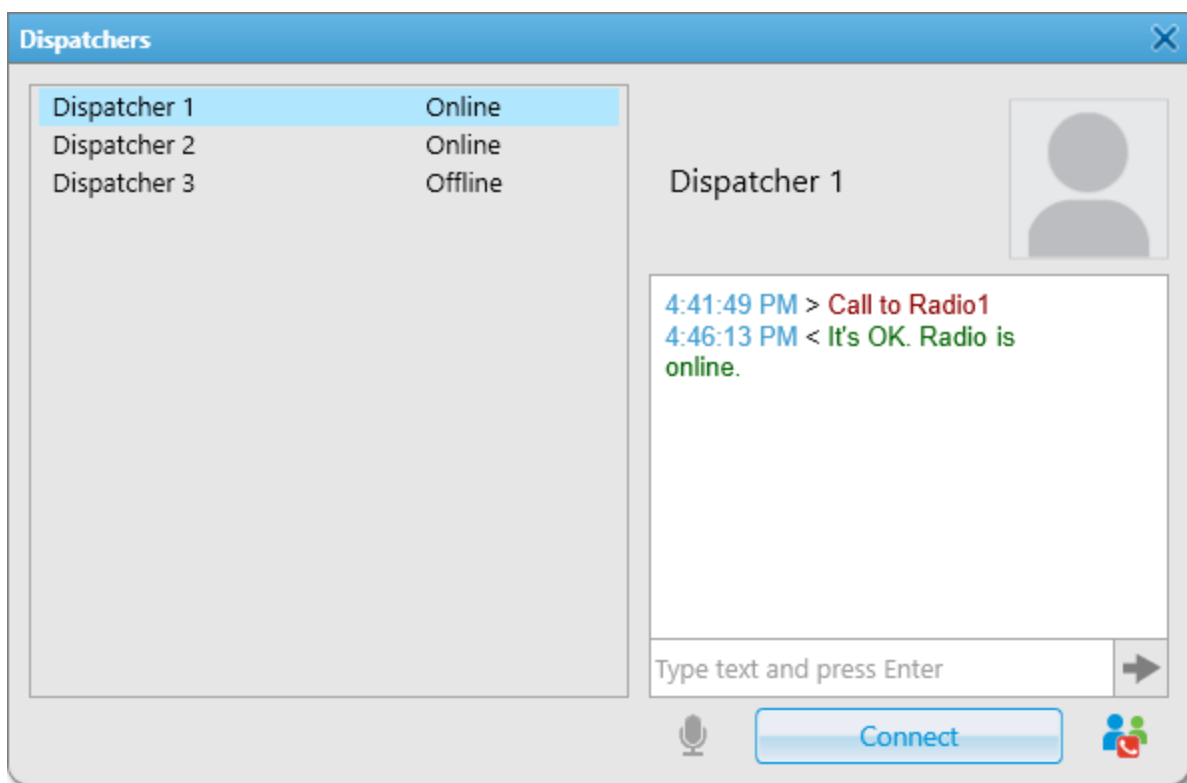
2. In the windows that appears, organize a conference call:

To send a call request to a dispatcher registered in SmartPTT Dispatcher,	from the list of dispatchers, select the desired dispatcher, and then click **Make Conference Call** ( ) in the lower-right corner of the window. The **Conference Calls** window with information on the initiated conference call appears. **NOTE** If during the conference call the **Dispatchers** window is open, closing it will remove the dispatcher from the conference-call automatically.

To remove a participant from the current conference call,	click End Conference Call (🗙) next to the name of the desired participant in the Participants area. The selected participant disappears from the Participants area in the right part of the window.
To end the conference call for all participants,	click **Stop**.

Postrequisites:

- For information on adding participants from the **Conference Calls** window, see Initiating Conference Calls from the Conference Calls Window.

- For information on adding participants from SmartPTT Dispatcher panels, see Initiating Conference Calls from Dispatcher Panels.

- For information on adding participants from the **Telephone Subscribers** window, see Initiating Conference Calls from the Telephone Subscribers Window.

- To mute the conference call sound and turn off your microphone, click **Mute** (🔊).

- To turn off your microphone and keep listening to the conference participants, click **Turn off microphone** (🎤).

4.15 Dispatchers

SmartPTT Dispatcher provides the ability to communicate with other operators of the SmartPTT system. To communicate with other dispatchers, the system provides the following ways:

- Initiate and receive voice calls

- Make conference calls. For details, see Initiating Conference Calls from the Dispatchers Window.

- Exchange text messages

> **Important**
> To communicate with other dispatchers, the operator must have the **Connect with external dispatchers** right. If the operator does not have this permission, the **Dispatchers (👤)** button will be disabled in the SmartPTT Dispatcher menu bar. If no dispatchers are added to SmartPTT Dispatcher, this button will also be disabled.
> For information on user roles in SmartPTT Dispatcher, see Operators.

Communication with Other Dispatchers

To initiate communication with other dispatchers, you must configure the Dispatchers List. For details, see Dispatcher List Configuration.

You can initiate a voice call, conference call, or send a text message to another dispatcher by clicking the **Dispatchers (👤)** button on the SmartPTT Dispatcher menu bar.

To the right of the dispatcher name, you can see one of the following statuses:

- The *Offline* status indicates that the dispatcher is unavailable (SmartPTT Dispatcher has not been started or this dispatcher has no corresponding permission to communicate with other dispatchers).

- The *Online* status indicates that the dispatcher is available for communication.
  If another dispatcher is available for communication, you can initiate a voice call, add them to a conference call, or send a text message.

- The *Ringing* status indicates that voice communication with the dispatcher is establishing.

- The *Call* status indicates that communication is established.

Actions with Other Dispatchers

In SmartPTT Dispatcher, you can communicate with other dispatchers in the following ways:

- By initiating voice calls. For details, see Initiating Voice Calls to Dispatchers.

- By accepting voice calls. For details, see Accepting Calls from Other Dispatchers.

- By sending text messages. For details, see Sending Messages to Dispatchers.

4.15.1 Initiating Voice Calls to Dispatchers

Follow the procedure to initiate a voice call to another dispatcher.

Prerequisites:

- Ensure the **Dispatchers (👤)** button on the SmartPTT Dispatcher menu bar is available. If not, ensure the operator has the **Connect with external dispatchers** right or at least one dispatcher is added. For details, see Operators.

- Ensure the desired dispatcher is online.

Procedure:

1. On the menu bar, click the **Dispatchers (👤)** button.
   The **Dispatchers** window appears.

2. In the window that appears, from the list of dispatchers on the left, select the desired dispatcher.

3.   Click the **Connect** button.
     The **Connect** button changes to **Disconnect**. The *Online* status changes to *Ringing*.

4.   Wait until the dispatcher accepts the call.
     After the dispatcher accepts the call, and the status changes to *Call*, speak into your microphone.

5.   Click **Disconnect** to end the call.
     The **Disconnect** button changes to **Connect**.

4.15.2 Sending Messages to Dispatchers

Follow the procedure to send a text message to another dispatcher.

Prerequisites:

*   Ensure the **Dispatchers (👤)** button on the SmartPTT Dispatcher menu bar is available. If not, ensure the operator has the **Connect with external dispatchers** right or at least one dispatcher is added. For details, see Operators.

*   Ensure the desired dispatcher is online.

Procedure:

1.   On the menu bar, click the **Dispatchers (👤)** button.
     The **Dispatchers** window appears.

2.   In the window that appears, from the list of dispatchers on the left, select the desired dispatcher.

3.   In the text field on the right, type the message, and then press Enter or click the **Send (➡)** button.
     The sent message appears in the chat field above the text field.

Postrequisites:

You can view the sent message details in the Event Log. For details, see SmartPTT Dispatcher Event Log.

4.15.3 Accepting Calls from Other Dispatchers

Follow the procedure to accept an incoming call from another dispatcher.

Procedure:

1. In the **Incoming call** window that appears in SmartPTT Dispatcher, click the **Accept** button.
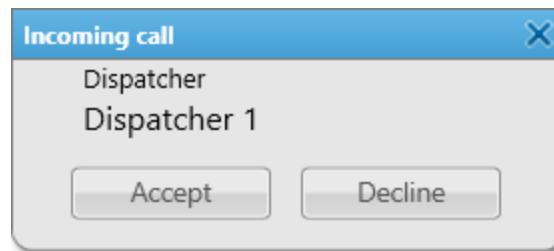
The **Dispatchers** window appears. The call starts.
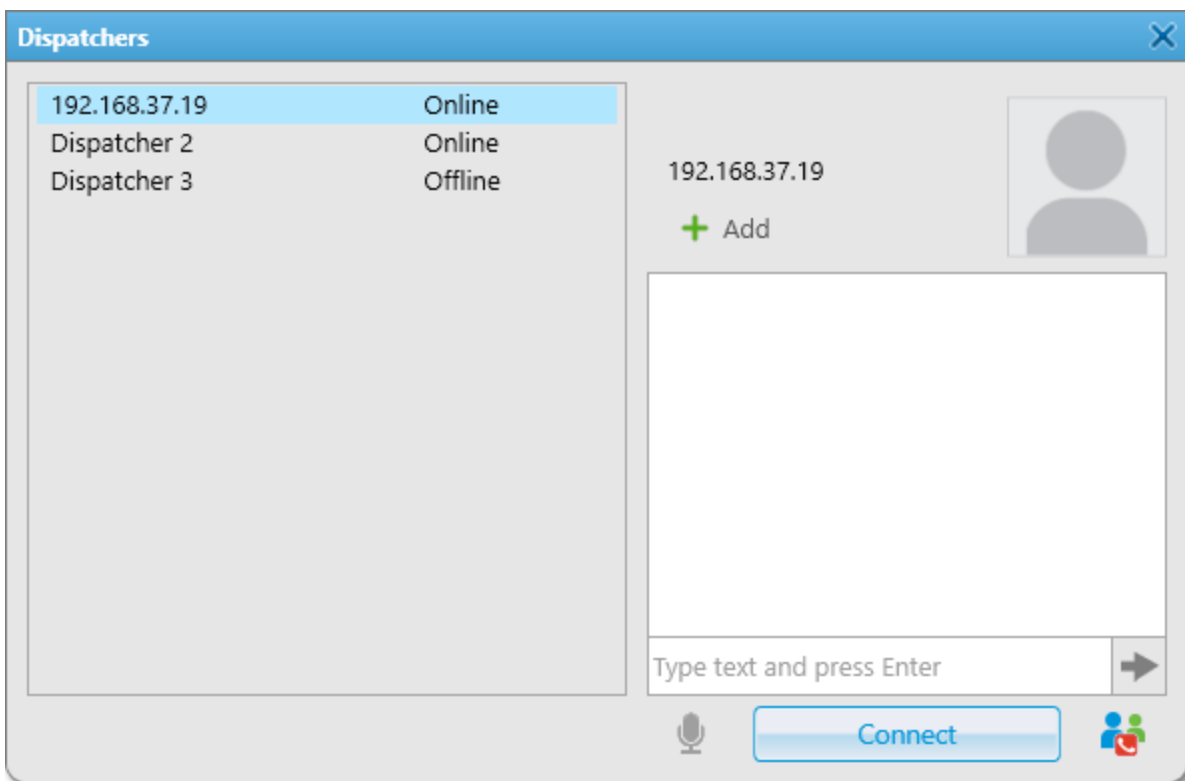
2.   Click **Disconnect** to end the call.
     The **Disconnect** button changes to **Connect**.

3.   *(Optional)* If the incoming call is initiated by a dispatcher that is not added to SmartPTT Dispatcher, you can add a new dispatcher
     to the list by performing the following actions:

     a.   Under the dispatcher IP address, click the **Add (+)** button.
          The **Dispatcher** window appears.
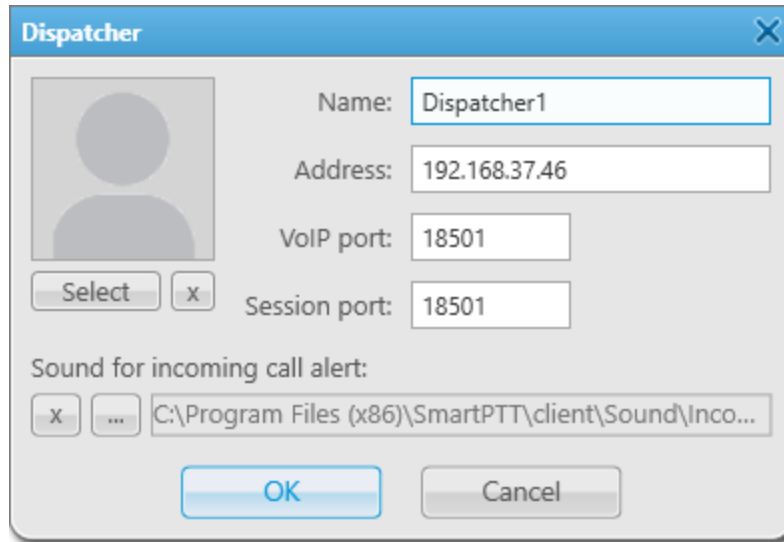
     b.   In the window that appears, in the **Name** field, type the dispatcher name.

     c.   *(Optional)* To select the avatar for the dispatcher, in the left part of the window, click **Select**.

     d.   *(Optional)* To select a tone for incoming dispatcher calls, click Browse (…).

     e.   Click **OK** to save the changes and close the window.
          The dispatcher IP address changes to the dispatcher name.

4.16 Monitoring

The Monitoring feature available in SmartPTT Dispatcher provides the operator with the ability to monitor the SmartPTT system events
and resources performance and download this information as reports.

Before you start working with the Monitoring feature, you must activate it in SmartPTT Radioserver Configurator and configure the
monitoring database connection, otherwise, it will be unavailable in SmartPTT Dispatcher.
For information on activating monitoring and configuring its database connection, see the "Configuring Monitoring Database
Connection" section in *SmartPTT Installation and Configuration Guide*.

> **Important**
> To display monitoring in SmartPTT Dispatcher, the corresponding license is required.
> For information on licenses, see Licenses.

The **Monitoring** submenu is available from the **Tools** menu on the SmartPTT Dispatcher menu bar.

Monitoring functionality in SmartPTT provides the following features:

*   Air Monitoring provides a real-time graphical representation of the voice and data transmitted over the air.

*   Topology provides a real-time graphical representation of the radio system configuration and the connection status of its
    elements.

*   Diagnostics provides a real-time information on the current state and alarms on MOTOTRBO repeaters.

- Monitoring Event Log provides a real-time information on the current state and alarms on the radio system devices, such as repeaters, routers, and UPS.

> **Important**
> Monitoring feature is unavailable if desktop client authentication on SmartPTT Radioserver is enabled and the profile assigned to the client prohibits monitoring. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

> **NOTE**
> Monitoring is not available for SmartPTT Mobile users.
> For information on the mobile application, see "SmartPTT Mobile" in *SmartPTT Installation and Configuration Guide*.

Air Monitoring

The Air Monitoring feature provides the ability to monitor current system operations using graphical representation of data and voice received from MOTOTRBO repeaters. Data and voice packets transmitted on the logical channel are displayed on the **Air Monitoring** panel as colored vertical bars. The height of the bar corresponds to the signal strength level, and the color corresponds to the type of the event according to the legend. Based on the height of the bar, the signal level can vary from low to high. The levels corresponding to the RSSI ranges in decibels are displayed on the right side of each diagram.

The following types of events can be represented in the air monitoring diagram: call, telephone call, ARS, GPS, TMS, telemetry, indoor and system. In addition, the panel has an Air Monitoring Table that provides detailed information on each event in the network.

You can open the **Air Monitoring** panel by clicking **Tools** → **Monitoring** → **Air Monitoring** on the SmartPTT Dispatcher menu bar.

The **Air Monitoring** panel contains the list of networks that were active at the moment when the panel was opened. If a network becomes inactive, it disappears from the list.

> **Important**
> Air monitoring is not available in the Capacity Max and Connect Plus systems.

In SmartPTT Dispatcher, you can control the display of monitoring data on the **Air Monitoring** panel.
For information on configuring the display of events on the air monitoring diagram, see <u>Configuring Air Monitoring</u>.

Topology

Topology represents a schematic diagram of active networks connected to SmartPTT Radioserver.

You can open the **Topology** panel by clicking **Tools** → **Monitoring** → **Topology** on the SmartPTT Dispatcher menu bar.

A topology diagram can be built in two ways:

- Using the data specified during network configuration. For details, see "Network Monitoring" in *SmartPTT Installation and Configuration Guide*.

- Automatically, based on the information received from the available network repeaters. In this case, the diagram will not display supplemental network devices (power supplies, routers, etc.).

> **Important**
> A topology diagram is not available in Capacity Max.

> **Important**
> To correctly display repeaters of a backhaul chain on the **Topology** panel, you must first update topology in SmartPTT Radioserver Configurator. For details, see "Updating Topology" in *SmartPTT Installation and Configuration Guide*.

The **Topology** panel contains a list of conventions (legend) used in the network topology diagram with an explanation of their meaning. Network objects on the **Topology** diagram are displayed depending on their type and condition, as well as the links between them. Topology objects on the diagram can be placed vertically or horizontally.

Using the context menu, you can open the **Server Control** and **Repeater Control** windows to control remotely such topology elements as SmartPTT Radioserver and hardware repeaters connected to SmartPTT Radioserver by right-clicking the desired object and selecting the appropriate action in the context menu. For details, see Radioserver Remote Control and Repeater Remote Control.

Using the context menu, you can open the information window of any topology element, except networks, application peers, and locations by right-clicking the desired object and selecting the appropriate action in the context menu. This window provides the ability to view statistics and parameters of the desired object. When an alarm occurs on a device (except for routers and UPS), the Alarms area appears in the device information window, containing information about the cause and time of the alarm.
For information on the device information window and topology schematic diagram, see the SmartPTT Dispatcher embedded help.

Diagnostics

The Diagnostics feature provides a list of devices to which SmartPTT Radioserver is connected and detailed information about their current status.

> **Important**
> Diagnostics is not available in Capacity Max.

You can open the **Diagnostics** panel by clicking **Tools →Monitoring →Diagnostics** on the SmartPTT Dispatcher menu bar.

The **Diagnostics** panel consists of the Diagnostics Table that contains information about all devices connected to SmartPTT Radioserver and the area that provides the following information:

- Information on current alarms on a device.
  Each alarm has its own color indicator of the alarm severity. Depending on the type of alarm, the indicator can be red (critical alarm), yellow (non-critical alarm), or blue (noises on a device).

- Technical information about the device state. It is displayed only for some types of devices.

- Information on various parameters related to the reception or transmission of data.

- Various information on the selected device.

- Alarms that are monitored for the selected device.

For information on the table, see the SmartPTT Dispatcher embedded help.

Monitoring Event Log

The Monitoring Event Log provides information on the state of device connection to SmartPTT Radioserver.

> **Important**
> The Monitoring Event Log is not available in Capacity Max.

> **NOTE**
> Do not confuse Monitoring Event Log with the SmartPTT Dispatcher or SmartPTT Radioserver Event Log. Monitoring Event Log monitors alarms on the radio system devices, such as repeaters, routers, or UPS. The SmartPTT Dispatcher Event Log provides information on all events registered in the SmartPTT Dispatcher database. The radioserver Event Log panel provides information on events from all dispatch systems connected to the radioserver. For details, see Event Log and Notification Panels.

You can open the **Event Log** panel by clicking **Tools →Monitoring →Event Log** on the SmartPTT Dispatcher menu bar.

The **Event Log** panel contains the Monitoring Event Log Table. It displays information about events on the current moment or for a specified period.
For information on the table, see the SmartPTT Dispatcher embedded help.
For information on configuring the display of the Monitoring Event Log, see Configuring Monitoring Event Log Display.

Monitoring Reports

In SmartPTT Dispatcher, you can create reports on the SmartPTT Dispatcher and SmartPTT Radioserver operation, including the monitoring reports.

The **Monitoring** submenu is available from the **Reports** menu on the SmartPTT Dispatcher menu bar.

> **Important**
> The menu is available to operators with the **Build reports** right.
> For information on user roles in SmartPTT Dispatcher, see Operators.

To access the monitoring reports, monitoring must also be activated in SmartPTT Radioserver Configurator and the monitoring license must be installed.

Monitoring reports are unavailable if desktop client authentication on SmartPTT Radioserver is enabled and the profile assigned to the client prohibits creating the monitoring reports. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

In SmartPTT Dispatcher, you can create the following monitoring reports:

- The **Air Monitoring** report based on the **Air Monitoring** panel data. For details, see Creating Air Monitoring Report.

- The **Event Log** report based on the Monitoring Event Log data. For details, see Creating Monitoring Event Log Report.

- The **System Usage** report providing information on the radio network channel load, radio network uptime, radio network downtime, etc. For details, see Creating System Usage Report.

For information on the monitoring reports, see also Monitoring Reports.

4.16.1 Configuring Air Monitoring

Follow the procedure to configure air monitoring display.

Prerequisites:

- Ensure you have the corresponding license. For details, see Licenses.

- Ensure the Monitoring feature is activated in SmartPTT Radioserver Configurator. For details, see "Configuring Monitoring Database Connection" in *SmartPTT Installation and Configuration Guide*.

- If desktop client authentication on SmartPTT Radioserver is enabled, ensure that the profile assigned to the client allows using the air monitoring. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

Procedure:

1. On the menu bar, click **Tools** →**Monitoring** →**Air Monitoring**.
   The **Air Monitoring** panel appears.
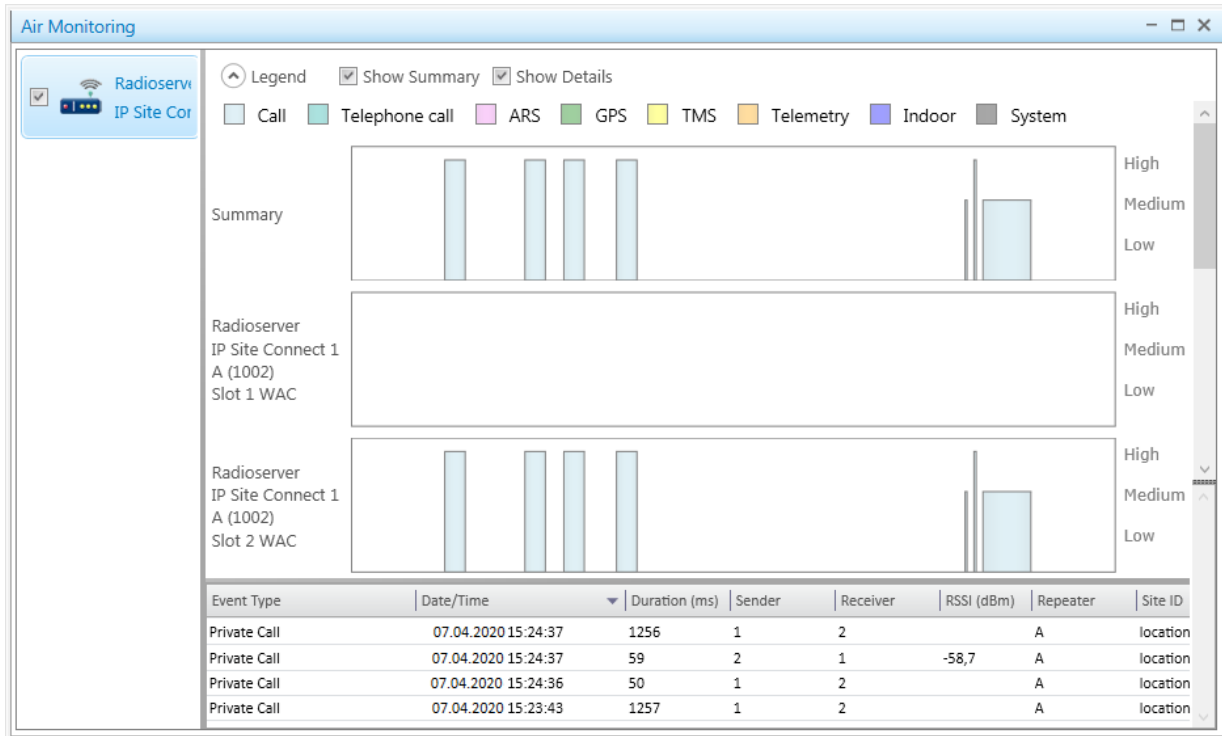
2.   Select the check box next to the name of the desired network.

3.   Configure air monitoring diagrams:

To display events from different slots or networks in one block,	select the **Show Summary** check box.
To display events from different slots or networks in separated blocks,	select the **Show Details** check box.
To display all blocks simultaneously,	select both **Show Summary** and **Show Details** check boxes.

4.16.2 Radioserver Remote Control

Follow the procedure to control the SmartPTT Radioserver computer remotely.

Prerequisites:

- Add and configure the desired radioserver. For details, see Managing Radioservers.

- Configure the radioserver IPMI settings. For details, see Configuring IPMI Settings.

- Ensure you have the corresponding license. For details, see Licenses.

- Ensure the Monitoring feature is activated in SmartPTT Radioserver Configurator. For details, see "Configuring Monitoring Database Connection" in *SmartPTT Installation and Configuration Guide*.

- If desktop client authentication on SmartPTT Radioserver is enabled, ensure that the profile assigned to the client allows using the Monitoring feature. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

- Ensure that the **Topology** panel is open.

Procedure:

1. On the **Topology** panel, right-click the desired radioserver element and select **Control**.
   The **Server Control** window appears.

NOTE
If the **Information** window appears instead of the **Server Control** window, reconfigure IPMI.
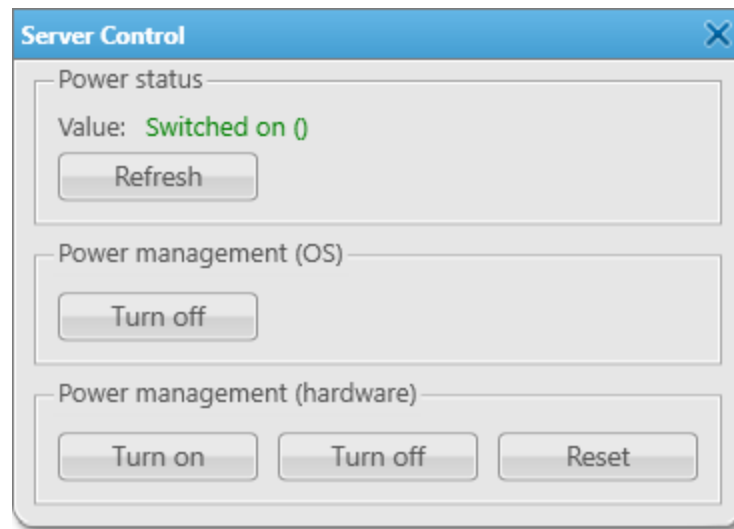
2. In the **Server Control** window, perform one or more of the following actions:

To update the power status,	click **Refresh**. **Important** If the power status is detected as *N/A Unknown*, check that IPMI settings are correct.
To turn on the radioserver computer,	in the **Power management (hardware)** area, click **Turn on**.
To reboot the radioserver computer,	in the **Power management (hardware)** area, click **Reset**. **WARNING** Rebooting the computer can cause irreversible damage and/or data loss.
To turn off the radioserver computer,	perform one of the following actions: • In the **Power management (OS)** area, click **Turn off**. • In the **Power management (hardware)** area, click **Turn off**. **WARNING** Turning off the computer can cause irreversible damage and/or data loss. **NOTE** If the radioserver computer is blocked, you can turn it off only in the **Power management (hardware)** area.

3. Click Close (✕).

4.16.3 Repeater Remote Control

Follow the procedure to remotely control a hardware repeater connected to SmartPTT Radioserver.

Prerequisites:

- Ensure that the **Topology** panel is open.

- Ensure that the status of connection to the desired repeater is displayed in green or yellow in the network topology diagram.

- Ensure you have the corresponding license. For details, see Licenses.

- Ensure the Monitoring feature is activated in SmartPTT Radioserver Configurator. For details, see "Configuring Monitoring Database Connection" in *SmartPTT Installation and Configuration Guide*.

- If desktop client authentication on SmartPTT Radioserver is enabled, ensure that the profile assigned to the client allows using the Monitoring feature. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

Procedure:

1. On the **Topology** panel, right-click the desired repeater element and select **Control**.
   The **Repeater Control** window appears.
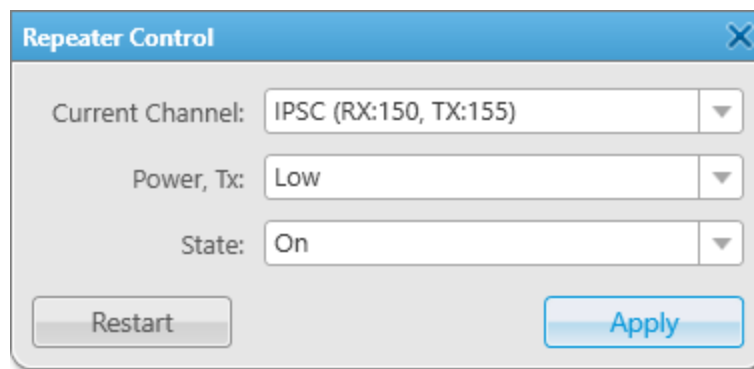
> **NOTE**
> If the **Warning** window with the *No connection* message appears instead of the **Repeater Control** window, check connection to the repeater.
> If the **Warning** window with the *Application peer control is not supported* message appears instead of the **Repeater Control** window, it means that you are trying to control a virtual repeater. You cannot operate virtual repeaters remotely.

2. In the **Repeater Control** window, perform one of the following actions:

To restart a repeater,	click **Restart**.
To configure a repeater,	perform the following actions:

    1. Perform one or several of the following actions:

      a. From the **Current Channel** list, select the desired duplex channel used for the reception and transmission of data.

> **NOTE**
> If the **Current Channel** list contains no items, ensure that you are not trying to control a Connect Plus Master Peer. You cannot operate Connect Plus Master Peers remotely.

> b. From the **Power, Tx** list, select the desired transmitter power mode of a repeater, bands for which are specified in the repeater configuration file.
>
> c. From the **State** list, select the activity or inactivity mode of the repeater receiver and transmitter.
>
> d. *(Optional)* If the **Block** list is available in the window, select the desired repeater path mode from it.
>
> 2. Click **Apply**.

3. Wait until the *Waiting for response* status changes.
   View the operation status:

If the *The operation completed successfully* status is displayed,	perform one of the following actions: • If the repeater is restarted, perform step 5. • If you selected an analog channel instead of a digital channel from the **Current Channel** list in step 2, perform step 4. • If other configuration changes are applied, perform step 5.
If the *Timeout was exceeded* status is displayed,	perform the following actions: 1. Check connection to the repeater. 2. Repeat step 2.
If the *The operation completed with errors* status is displayed,	perform the following actions: 1. Check connection to the repeater and SmartPTT Radioserver. 2. Repeat step 2.

4. *(Optional)* If you selected an analog channel instead of a digital channel from the **Current Channel** list in step 2, perform the following actions:

   a. Click Close (✕).

   b. Reopen the **Repeater Control** window by right-clicking the desired repeater element and selecting **Control**.

   c. From the **Block** list, select the desired repeater path mode.

   d. Click **Apply**.

   e. Repeat step 3.

5. Click Close (✕).

4.16.4 Configuring Monitoring Event Log Display

Follow the procedure to configure monitoring event log display.

Prerequisites:

• Ensure you have the corresponding license. For details, see Licenses.

• Ensure the Monitoring feature is activated in SmartPTT Radioserver Configurator. For details, see "Configuring Monitoring Database Connection" in *SmartPTT Installation and Configuration Guide*.

- If desktop client authentication on SmartPTT Radioserver is enabled, ensure that the profile assigned to the client allows using the air monitoring. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

Procedure:

1. On the menu bar, click **Tools** →**Monitoring** →**Event Log**.
   The **Event Log** panel appears.

2. Configure event displaying:

To display events in the monitoring log at the current moment,	select the **Show Current Events** parameter.
To display events in the monitoring log for a specified period,	perform the following actions: 1. Select the **Show Logged Events** parameter. 2. In the calendar next to the parameter select the desired period.

3. Set SmartPTT Radioserver for displaying of events:

To display connected devices on the desired radioserver,	from the **Radioserver** list select the desired radioserver.
To display connected devices on all radioservers,	from the **Radioserver** list select *All radioservers*.

4. Click the **Apply** button.

4.17 Reports

The Reports feature provides access to a range of tools for creating reports on the SmartPTT Dispatcher and SmartPTT Radioserver operation for the desired period.

Tools for creating reports are available in the **Reports** menu. You can create reports based on information stored in the database. You can configure parameters according to which data is exported from the database to a report. A generated report appears in a separate preview window that provides access to the following actions:

- Save as a separate file of the PRNX format (a file for preview)

- Set page parameters and print

- Export to a separate file in many common formats

- Send to an email address
  For information on examples of created reports, see Exporting Reports.

> **Important**
> The **Reports** menu is available to the operators with the **Reports** right.
> For information on user roles in SmartPTT Dispatcher, see Operators.

SmartPTT Dispatcher provides ability to generate:

- SmartPTT Dispatcher or SmartPTT Radioserver Event Log reports

- Radio activity reports (viewing the number of all calls and group calls)

- Location reports for all radios or specific radios

- Radio movement, categories, and authorized radio users reports

- Online and offline radio reports

- Monitoring reports

- Lone Worker reports (viewing events of radios in the Lone Worker mode)

- Indoor tracking reports for selected radios or authorized radio users

> **NOTE**
> The monitoring reports, the **Lone Workers**, and **Indoor Tracking** reports are unavailable for SmartPTT Mobile users.
> For information on the mobile application, see "SmartPTT Mobile" in *SmartPTT Installation and Configuration Guide*.

Event Log Report

The **Report Wizard** functionality provides the ability to create reports based on information stored in the SmartPTT Dispatcher or SmartPTT Radioserver Event Log.

You can create the report based on the Event Log by clicking **Reports → Report Wizard** on the menu bar.

> **Important**
> If the SmartPTT Radioserver Event Log is not activated in SmartPTT Radioserver Configurator or SmartPTT Radioserver is not running, SmartPTT Radioserver will not be displayed as a data source.
> For details, see "Configuring Event Log Database Connection" in *SmartPTT Installation and Configuration Guide*.

> **Important**
> If desktop client authentication on SmartPTT Radioserver is enabled and the profile assigned to the client prohibits requesting data from the radioserver, you will not receive radioserver data to create a report. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

To generate this report, you can configure the following parameters:

- Data source. You can select a SmartPTT Dispatcher or SmartPTT Radioserver database.

- Data that will be included in the report.

- Parameters to group or sort the report data.

- Parameters to filter report data.

- Report file name and directory on the computer.
  For information on creating reports with the wizard, see Creating Event Log Report.

Radio Activity Report

The **Radio Activity** report contains information on the number of All Call and group calls grouped by hours, minutes or days.

You can create the **Radio Activity Report** report by clicking **Reports → Radio Activity Report** on the menu bar.

To generate a **Radio Activity** report, you can configure the following parameters:

- Start and end dates of events that will be displayed in the report.

- Data source. You can select a SmartPTT Dispatcher or SmartPTT Radioserver database.

- Radio network channel, control station, or trunked radio system to create a report.

- Parameters to group the report data (by days, hours, or minutes).

Important
If the SmartPTT Radioserver Event Log is not activated in SmartPTT Radioserver Configurator or SmartPTT Radioserver is not running, SmartPTT Radioserver will not be displayed as a data source.
For details, see "Configuring Event Log Database Connection" in *SmartPTT Installation and Configuration Guide*.

Important
If desktop client authentication on SmartPTT Radioserver is enabled and the profile assigned to the client prohibits requesting data from the radioserver, you will not receive radioserver data to create a report. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.
For information on **Radio Activity Report** creating, see Creating Radio Activity Report.

Text Chat History Report

The **Text Chat History** report contains SmartPTT Mobile application text messages, and also events related to dynamic group creation, deletion, and editing.

You can create the **Text Chat History** report by clicking **Reports → Text Chat History** on the menu bar.

To generate a **Text Chat History** report, you can configure the following parameters:

- Radioserver data base that will be used to create a report

- Chat type that will be included in the report

- Parties of the private chat

- Start and end dates of the events that will be displayed in the report

- UTC time format

- Filtering messages with a specified text or type

- Report file format

Important
If the SmartPTT Radioserver Event Log is not activated in SmartPTT Radioserver Configurator or SmartPTT Radioserver is not running, SmartPTT Radioserver will not be displayed as a data source.
For details, see "Configuring Event Log Database Connection" in *SmartPTT Installation and Configuration Guide*.

Important
If desktop client authentication on SmartPTT Radioserver is enabled and the profile assigned to the client prohibits requesting data from the radioserver, you will not receive radioserver data to create a report. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.
For information on **Text Chat History** creating, see Exporting Reports.

Radio Location Report

The **Radio Location** report contains information on the radio coordinates for a certain period.

You can create the **Radio Location** report by clicking **Reports → Radio Locations** on the menu bar.

> **Important**
> To create a report, you must have the license that supports GPS. For details, see Licenses.

To generate a **Radio Location** report, you can configure the following parameters:

- Data source. You can select a SmartPTT Dispatcher or SmartPTT Radioserver database.

- Radios that will be included in the report.

- Users that will be included in the report.

- Parameters to group the report data (by radios or users).

- Radio address based on the received GPS coordinates.

- UTC time format.

- RSSI signal level in decibels.

- Route that will be included in the report.

- Displaying only key route points in the report.

> **Important**
> If the SmartPTT Radioserver Event Log is not activated in SmartPTT Radioserver Configurator or SmartPTT Radioserver is not running, SmartPTT Radioserver will not be displayed as a data source.
> For details, see "Configuring Event Log Database Connection" in *SmartPTT Installation and Configuration Guide*.

> **Important**
> If desktop client authentication on SmartPTT Radioserver is enabled and the profile assigned to the client prohibits requesting data from the radioserver, you will not receive radioserver data to create a report. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

> **NOTE**
> You can set the radio address in the report only if the address data provider is configured in the positioning system settings. If you do not specify the address data provider when configuring the report, the Find on Map link will appear in the **Address** column of the created report. The link opens Google Maps or OpenStreetMap service. By clicking this link, you can see the location of the radio on the map.
> For information on **Radio Location** report creating, see Creating Radio Location Report.

Radio Movement Report

The **Radio Movement** report contains information on the radio movement based on the received GPS coordinates.

You can create the **Radio Movement** report by clicking **Reports → Radio Movement** on the menu bar.

> **Important**
> To create a report, you must have the license that supports GPS. For details, see Licenses.

To generate a **Radio Movement** report, you can configure the following parameters:

- Start and end dates of events that will be displayed in the report.

- Data source. You can select a SmartPTT Dispatcher or SmartPTT Radioserver database.

- Radios, radio categories, or radio users whose movement data will be displayed in the report.

- Time duration to determine a radio stop.

- Use of points of interest coordinates to generate a report.

- Maximum deviation of a radio from a point of interest.

> **Important**
> If the SmartPTT Radioserver Event Log is not activated in SmartPTT Radioserver Configurator or SmartPTT Radioserver is not running, SmartPTT Radioserver will not be displayed as a data source.
> For details, see "Configuring Event Log Database Connection" in *SmartPTT Installation and Configuration Guide*.

> **Important**
> If desktop client authentication on SmartPTT Radioserver is enabled and the profile assigned to the client prohibits requesting data from the radioserver, you will not receive radioserver data to create a report. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.
> For information on **Radio Movement** report creating, see Creating Radio Movement Report.

Online Radios Report

The **Online Radios** report provides the ability to export the list of radios that are currently in the network. The report displays both registered and unregistered radios. You can also include information about offline radios in the current report.

You can create the **Online Radios** report by clicking **Reports** → **Online Radios** on the menu bar.

You can generate a report using data from:

- All online radios

- Desired radio

- Specific range of radios

- Offline radios
  For information on **Online Radios** report creating, see Creating Online Radios Report.

Monitoring Reports

Monitoring data reports provide the ability to:

- View radio system calls information

- View information on events and alarms registered on the radio system devices

- View information on the system load

You can create the **Monitoring** reports by clicking **Reports** → **Monitoring** on the menu bar.
For information on monitoring reports creating, see Monitoring Reports.

Lone Workers Report

The **Lone Workers** report provides information about registration, calls, sending messages, and other events for radios in the Lone Worker mode.

You can create the **Lone Workers** report by clicking **Reports** → **Lone Workers** on the menu bar.

To generate a **Lone Workers** report, you can configure the following parameters:

- Start and end dates of events that will be displayed in the report.

- Radios that will be included in the report.

- Parameters by which the report data can be sorted.
  For information on **Lone Workers** report creating, see Creating Lone Workers Report.

Indoor Tracking Reports

The **Indoor Tracking** report contains information on the movement of indoor radios and users based on the data received from special beacons.

You can create the **Indoor Tracking** report by clicking **Reports → Indoor Tracking** on the menu bar.

> **Important**
> For report creating, the Indoor Tracking license is required. For details, see Licenses.

To generate an **Indoor Tracking** report, you can configure the following parameters:

- Start and end dates of events that will be displayed in the report.

- Data source. You can select a SmartPTT Dispatcher or SmartPTT Radioserver database.

- Beacons that will be included in the report.

- Radios that will be included in the report.

- Users that will be included in the report.

- Parameters to group the report data.
  For information on **Indoor Tracking** report creating, see Creating Indoor Tracking Report.

4.17.1 Creating Event Log Report

Follow the procedure to create a report based on the SmartPTT Dispatcher or SmartPTT Radioserver Event Log information.

Prerequisites:

- Ensure that the SmartPTT Radioserver Event Log is activated in SmartPTT Radioserver Configurator, otherwise it will be unavailable for creating a report. For details, see "Configuring Event Log Database Connection" in *SmartPTT Installation and Configuration Guide*.

- Ensure that the desired SmartPTT Radioserver is running, otherwise it will be unavailable for creating a report.

- Ensure the operator has the **Build reports** right. For details, see Operators.

- If desktop client authentication on SmartPTT Radioserver is enabled, ensure that the profile assigned to the client allows requesting data from the radioserver. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

Procedure:

1. On the menu bar, click **Reports → Report Wizard**.
   The **Select data source** window appears.

2. In the window that appears, select the data source for a report:
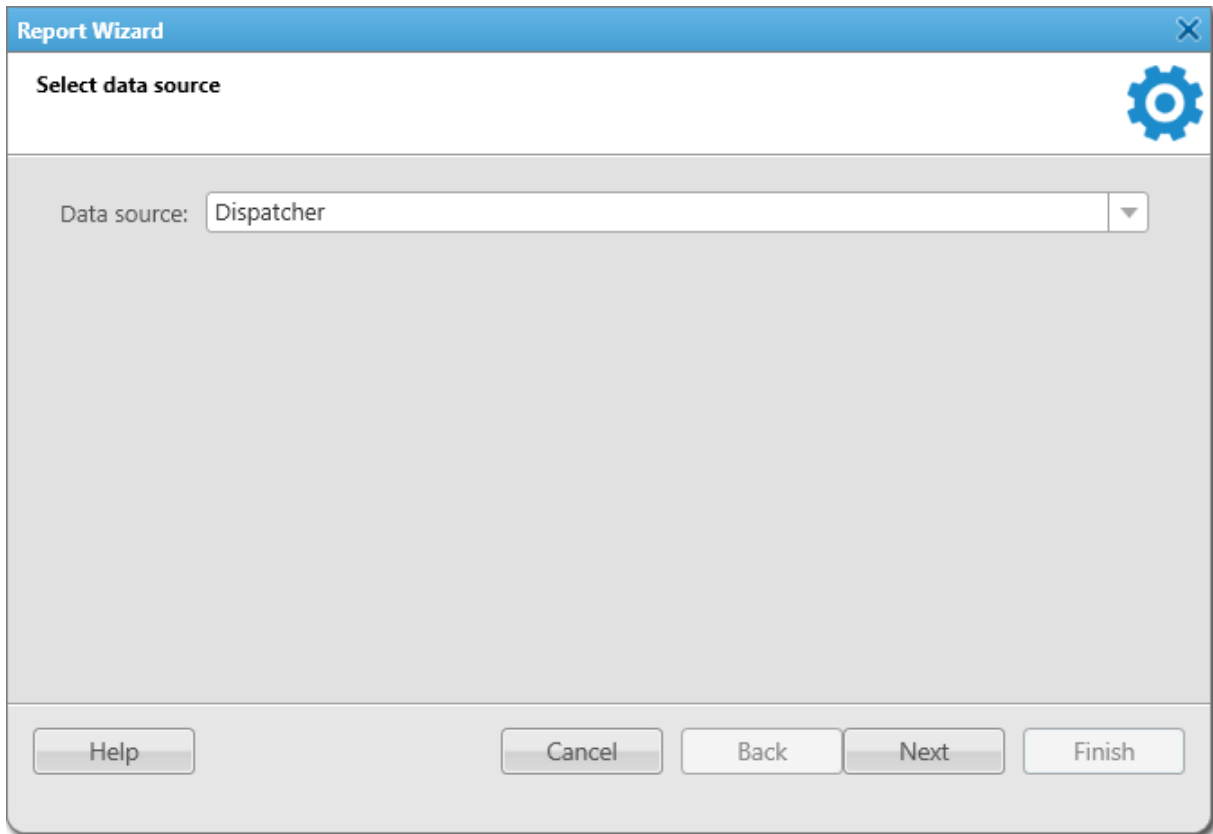
To select the SmartPTT Dispatcher database as the data source,	perform the following actions:
	1. From the **Data source** list, select *Dispatcher*.
	2. Click **Next**.
To select the SmartPTT Radioserver database as the data source,	perform the following actions:
	1. From the **Data source** list, select the desired SmartPTT Radioserver name.
	2. Click **Next**.

3. In the **Select data for the report** window, select the data to display in the report:
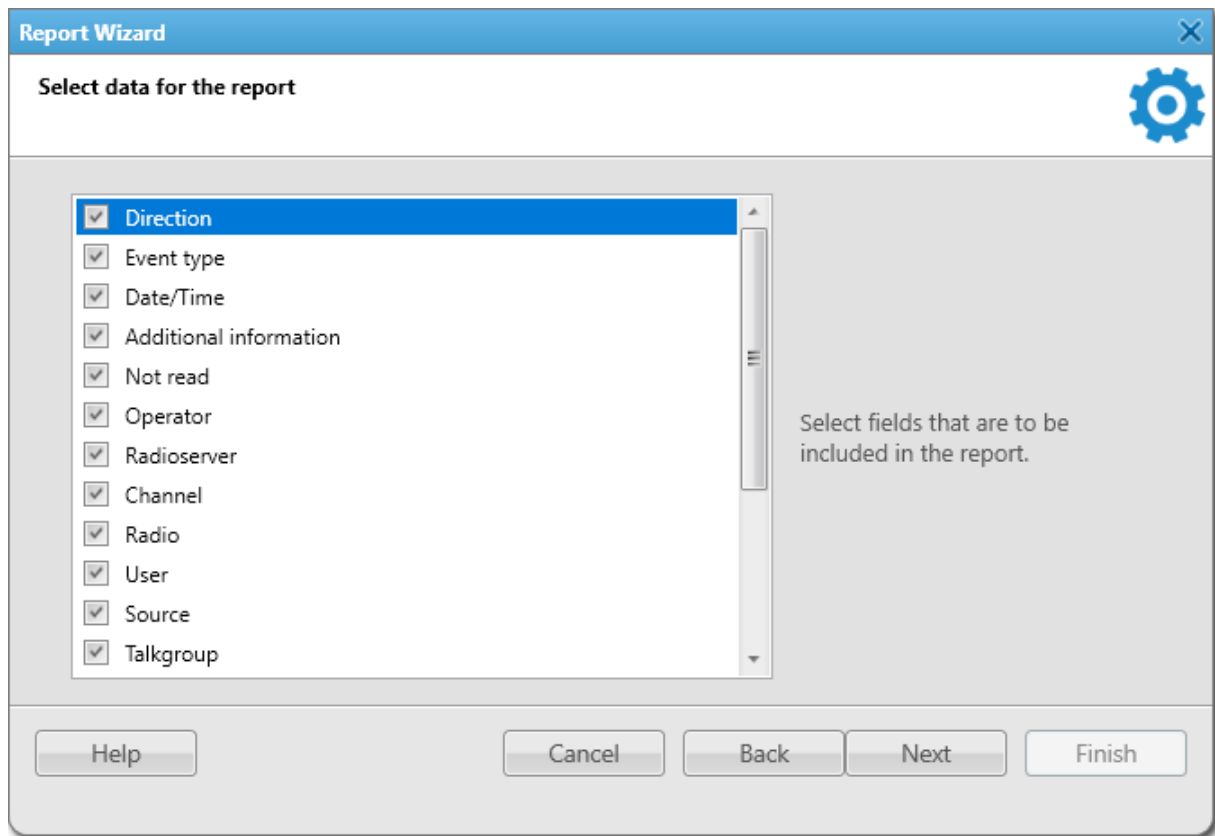
To display specific data in a report,	perform the following actions:
	1. Select the check box next to the desired parameter name.
	2. Click **Next**.
To prevent specific data from displaying in a report,	perform the following actions:
	1. Clear the check box next to the desired parameter name.
	2. Click **Next**.

NOTE
The number of parameters available for displaying in the report depends on the selected data source.

4. *(Optional)* In the **Group and sort report data** window, from the **Group by** list, select the desired parameter by which the report data will be grouped.

NOTE
If the grouping is not specified, the report will be created with the grouping of data set in the Report Wizard by default.

5. *(Optional)* From the **Sort by** list, select the desired parameter by which the report data will be sorted.

NOTE
If the sorting is not specified, the report will be created with the sorting of data set in the Report Wizard by default.

6. Click **Next**.

7. In the **Filter conditions** window, specify the data filtering conditions:

a. Next to the desired parameter, select the **Active** check box to apply filtering.

b. From the **Condition** list, select the required condition to filter the desired parameter: *Equal to*, *Not Equal to*, *Between*.

c. From the **Value** list, select the value by which the desired parameter will be filtered.

d. Click **Next**.

8. In the **Create and save report** window, specify the path to the report file on the computer:
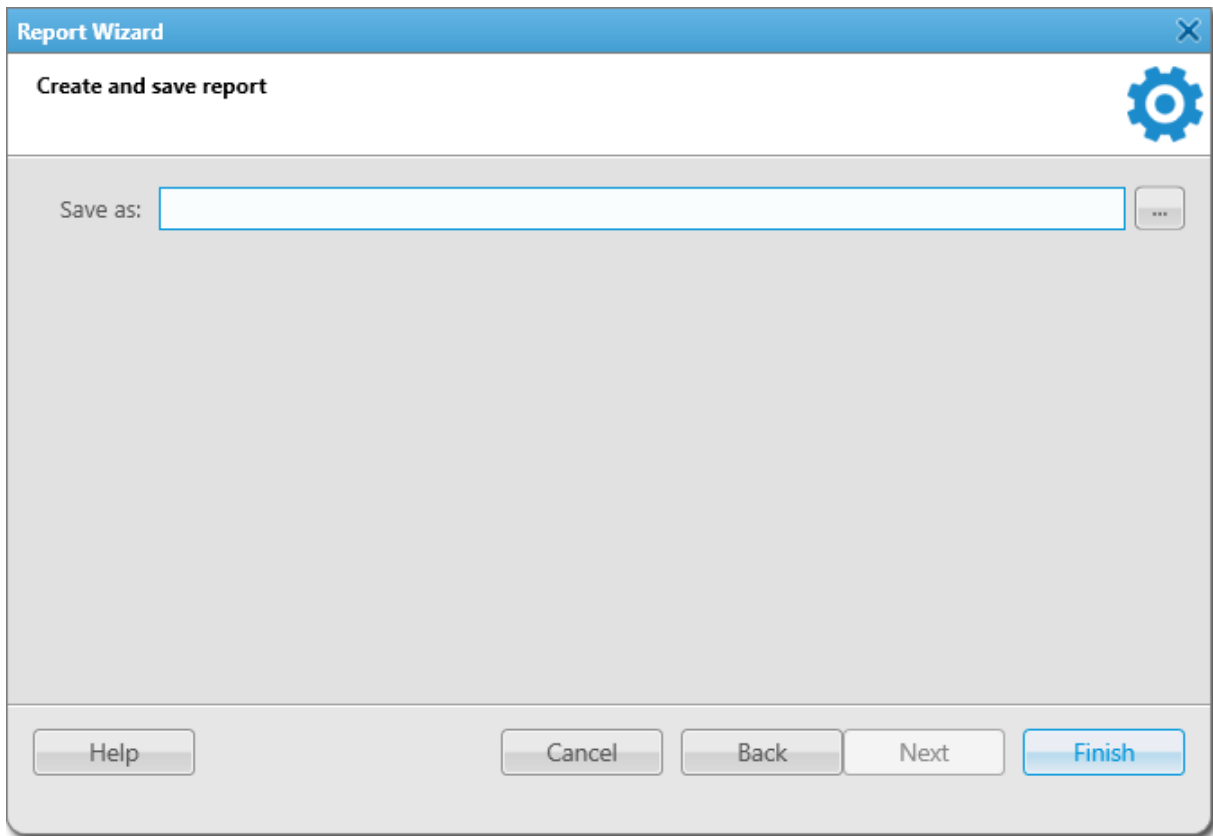
a. Click the Browse (⬚) button.

b. In the **Specify File Name** window, specify the path to save a report on the computer.

c. In the corresponding field, specify the name of a report.

d. From the corresponding list, select the desired format to save a report.
For information on report exporting, see Report Actions.

9. Click **Finish** to create a report.

4.17.2 Creating Radio Activity Report

Follow the procedure to create a report based on radio activity data.

Prerequisites:

- Ensure that the SmartPTT Radioserver Event Log is activated in SmartPTT Radioserver Configurator, otherwise it will be unavailable for creating a report. For details, see "Configuring Event Log Database Connection" in *SmartPTT Installation and Configuration Guide*.

- Ensure that the desired SmartPTT Radioserver is running, otherwise it will be unavailable for creating a report.

- Ensure the operator has the **Build reports** right. For details, see Operators.

- If desktop client authentication on SmartPTT Radioserver is enabled, ensure that the profile assigned to the client allows requesting data from the radioserver. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

Procedure:

1. On the menu bar, click **Reports** →**Radio Activity Report**.
   The **Radio Activity Report** window appears.

2. In the window that appears, in the **Period** field, enter the desired dates and time of events to create a report on the radio activity for the specified period.

3. From the **Source** list, select the data source for the report:

To select the SmartPTT Dispatcher database as the data source,	select the *Dispatcher* value.
To select the SmartPTT Radioserver database as the data source,	select the value with the desired SmartPTT Radioserver name.

4. From the **Channel** list, select the channel for the report:

To display data for the specific channel in the report,	select a value with the name of the desired channel.
To display data for all channels in the report,	select the *All* value.

5. In the **Group by** list, specify data grouping in the report:

To group data in the report by days,	select the *Days* value.
To group data in the report by hours,	select the *Hours* value.
To group data in the report by 30 minutes,	select the *30 minutes* value.
To group data in the report by 10 minutes,	select the *10 minutes* value.
To group data in the report by minutes,	select the *Minutes* value.

6. Click **OK** to create a report.

Postrequisites:

Select a format to export the report.
For information on report exporting, see Report Actions.

4.17.3 Creating Text Chat History Report

Follow the procedure to create the text chat history report.

Prerequisites:

- Ensure that the SmartPTT Radioserver Event Log is activated in SmartPTT Radioserver Configurator, otherwise it will be unavailable for creating a report. For details, see "Configuring Event Log Database Connection" in *SmartPTT Installation and Configuration Guide*.

- Ensure that the desired SmartPTT Radioserver is running, otherwise it will be unavailable for creating a report.

- Ensure the operator has the **Build reports** right. For details, see Operators.

- If desktop client authentication on SmartPTT Radioserver is enabled, ensure that the profile assigned to the client allows requesting data from the radioserver. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

4.17.4 Creating Radio Location Report

Follow the procedure to create a report displaying radio coordinates data.

Prerequisites:

- Ensure you have the license supporting GPS. For details, see Licenses.

- Ensure that the SmartPTT Radioserver Event Log is activated in SmartPTT Radioserver Configurator, otherwise it will be unavailable for creating a report. For details, see "Configuring Event Log Database Connection" in *SmartPTT Installation and Configuration Guide*.

- Ensure that the desired SmartPTT Radioserver is running, otherwise it will be unavailable for creating a report.

- Ensure the operator has the **Build reports** right. For details, see Operators.

- Ensure the operator has the **Request radio location** right. For details, see Operators.

- If desktop client authentication on SmartPTT Radioserver is enabled, ensure that the profile assigned to the client allows requesting data from the radioserver. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

Procedure:

1. On the menu bar, click **Reports** → **Radio Locations**.
   The **Radio Locations** window appears.

2. In the window that appears, in the **Period** field, enter the desired dates and time of events to create a report displaying radio coordinates for the specified period.

3. From the **Source** list, select the data source for the report:

To select the SmartPTT Dispatcher database as the data source,	select the *Dispatcher* value.
To select the SmartPTT Radioserver database as the data source,	select the value with the desired SmartPTT Radioserver name.

4. Specify which coordinates will be displayed in the report:

To display coordinates for radios in the report,	perform the following actions: 1. Select **Radio**. 2. From the list below, select the desired radio or the *All radios* value. 3. *(Optional)* If the grouping by radios is required, select the **Group by radios** check box.
To display coordinates for registered users in the report,	perform the following actions: 1. Select **User**. 2. From the list below, select the desired user or the *All users* value. 3. *(Optional)* If the grouping by users is required, select the **Group by users** check box.

5. *(Optional)* Configure displaying additional information in the report:

To display time in the Coordinated Universal Time standard (UTC+00:00) in the report,	select the **UTC Time** check box.
To display the RSSI signal level in decibels in the report,	select the **RSSI** check box.
To display the radio address in the report,	select the **Address** check box. **NOTE** The **Address** check box is not displayed in the **Radio Locations** window, if the **Address data provider** check box is not selected in the positioning systems settings.
To select the route, on which basis the report will be created,	perform the following actions: 1. Select the **Route** check box. 2. From the unlocked list on the right, select the desired route. 3. *(Optional)* If displaying only the coordinates of key route points is required, select the **Only Key Points** check box.

6. Click **OK** to create a report.

Postrequisites:

Select a format to export the report.
For information on report exporting, see [Report Actions](#).

4.17.5 Creating Radio Movement Report

Follow the procedure to create a report based on radio movement data.

Prerequisites:

- Ensure you have the license supporting GPS. For details, see [Licenses](#).

- Ensure that the SmartPTT Radioserver Event Log is activated in SmartPTT Radioserver Configurator, otherwise it will be unavailable for creating a report. For details, see "Configuring Event Log Database Connection" in *SmartPTT Installation and Configuration Guide*.

- Ensure that the desired SmartPTT Radioserver is running, otherwise it will be unavailable for creating a report.

- Ensure the operator has the **Build reports** right. For details, see [Operators](#).

- Ensure the operator has the **Request radio location** right. For details, see [Operators](#).

- If desktop client authentication on SmartPTT Radioserver is enabled, ensure that the profile assigned to the client allows requesting data from the radioserver. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

Procedure:

1. On the menu bar, click **Reports → Radio Movement**.
   The **Radio Movement** window appears.

2. In the window that appears, in the **Period** field, enter the desired dates and time of events to create the report displaying radio movement for the specified period.

3. From the **Source** list, select the data source for the report:

To select the SmartPTT Dispatcher database as the data source,	select the *Dispatcher* value.
To select the SmartPTT Radioserver database as the data source,	select the value with the desired SmartPTT Radioserver name.

4. Specify which movement information will be displayed in the report:

To display information about the radios movement in the report,	perform the following actions: 1. Select the **Select radios** element. 2. From the list next to the element, select the desired radios.
To display information about the radio categories movement in the report,	perform the following actions: 1. Select the **Select categories** element. 2. From the list next to the element, select the desired radio categories.
To display information about the registered users movement in the report,	perform the following actions: 1. Select the **Select users** element. 2. From the list next to the element, select the desired users.

5. To specify the time after which a radio will be considered as stopped, enter the desired value in the **Minimum stop time interval (min)** field.

6. *(Optional)* Configure displaying points of interest in the report:

To include points of interest in the report,	select the **Enable points of interest** check box.
To set the acceptable distance of the radio deviation from the point of interest,	perform the following actions: 1. Select the **Enable points of interest** check box. 2. Enter the desired value in the unblocked **Radius (m)** field.

7. Click **OK** to create a report.

Postrequisites:

Select a format to export the report.
For information on report exporting, see Report Actions.

4.17.6 Creating Online Radios Report

Follow the procedure to create a report providing information about the radios that are currently online/offline.

Prerequisites:

- Ensure that the SmartPTT Radioserver Event Log is activated in SmartPTT Radioserver Configurator, otherwise it will be unavailable for creating a report. For details, see "Configuring Event Log Database Connection" in *SmartPTT Installation and Configuration Guide*.

- Ensure that the desired SmartPTT Radioserver is running, otherwise it will be unavailable for creating a report.

- Ensure the operator has the **Build reports** right. For details, see Operators.

- If desktop client authentication on SmartPTT Radioserver is enabled, ensure that the profile assigned to the client allows requesting data from the radioserver. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

Procedure:

1. On the menu bar, click **Reports → Online Radios**.
    The **Online Radios** window appears.
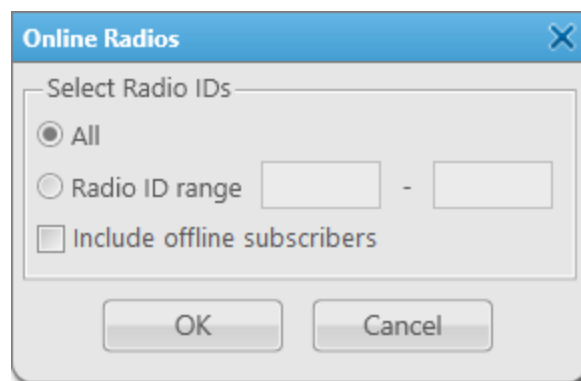
2. In the window that appears, in the **Select Radio IDs** area, specify the desired radios for which the report will be created:

To create a report for all radios,	select the **All** option.
To create a report for several radios,	perform the following actions:

	1. Select the **Radio ID range** option.
	2. Enter the start and end ID of the radio range in the fields.
To create a report for the specific radio,	perform the following actions:
	1. Select the **Radio ID range** option.
	2. Enter the desired radio ID in the first field of the range.
To include data on offline radios in the report,	select the **Include offline subscribers** check box.

3. Click **OK** to create a report.

Postrequisites:

Select a format to export the report.
For information on report exporting, see Report Actions.

4.17.7 Monitoring Reports

Monitoring reports provide the following abilities:

- Display information received from MOTOTRBO repeaters, including information about voice calls.
  For details, see Creating Air Monitoring Report.

- Display information on events and alarms registered on the radio system devices, such as repeaters, routers, and UPS.
  For details, see Creating Monitoring Event Log Report.

- Display information on the system load, uptime, downtime, and other related radio system parameters.
  For details, see Creating System Usage Report.

> **Important**
> The reporting functionality is available only if you have the corresponding license and the **Monitoring** feature is activated in SmartPTT Radioserver Configurator.
> For information on configuring monitoring, see "Configuring Monitoring Database Connection" in *SmartPTT Installation and Configuration Guide*.
> For information on licenses, see Licenses.

> **Important**
> If desktop client authentication on SmartPTT radioserver is enabled and the profile assigned to the client prohibits using the Monitoring feature, you will not be able to create monitoring reports. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

> **NOTE**
> These reports are not available for SmartPTT Mobile users.
> For information on the mobile application, see "SmartPTT Mobile" in *SmartPTT Installation and Configuration Guide*.

4.17.7.1 Creating Air Monitoring Report

Follow the procedure to create the air monitoring report.

Prerequisites:

- Ensure you have the monitoring license. For details, see Licenses.

- Ensure the monitoring feature is activated in SmartPTT Radioserver Configurator. For details, see "Configuring Monitoring Database Connection" in *SmartPTT Installation and Configuration Guide*.

- Ensure that the desired SmartPTT Radioserver is running.

- Ensure the operator has the **Build reports** right. For details, see <u>Operators</u>.

- If desktop client authentication on SmartPTT radioserver is enabled, ensure that the profile assigned to the client allows using monitoring feature. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

Procedure:

1. On the menu bar, click **Reports** →**Monitoring** →**Air Monitoring**.
   The **Air Monitoring** window appears.

2. In the window that appears, in the **Period** field, enter the desired dates and time of events to create the air monitoring report for the specified period.

3. From the **Radioserver** list, select the desired SmartPTT Radioserver.

4. From the **System** list, select the network to create a report:

To create a report for the specific network,	select the desired network.
To create a report for all networks,	select the *All* value.

5. From the **Radio** list, select the radio to create a report:

To build a report for the specific radio,	select the desired radio.
To create a report for all radios,	select the *All* value.

6. *(Optional)* Configure additional parameters to create a report:

To display time in the Coordinated Universal Time standard (UTC+00:00) in the report,	select the **UTC Time** check box.
To sort data in the report,	perform the following actions: 1. Select the **Sort by** check box. 2. Select one of the parameters to sort data in the report: *System, Repeater, Slot, Event type, From, To, Duration (ms), RSSI (dBm)*.

7.   Click **OK** to create a report.

Postrequisites:

Select a format to export the report.
For information on report exporting, see Report Actions.

4.17.7.2 Creating Event Log Report

Follow the procedure to create a report based on data stored in the monitoring Event Log.

Prerequisites:

- Ensure you have the monitoring license. For details, see Licenses.

- Ensure the monitoring feature is activated in SmartPTT Radioserver Configurator. For details, see "Configuring Monitoring Database Connection" in *SmartPTT Installation and Configuration Guide*.

- Ensure that the desired SmartPTT Radioserver is running.

- Ensure the operator has the **Build reports** right. For details, see Operators.

- If desktop client authentication on SmartPTT radioserver is enabled, ensure that the profile assigned to the client allows using monitoring feature. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

Procedure:

1.   On the menu bar, click **Reports → Monitoring → Event Log**.
      The **Event Log** window appears.

2.   In the window that appears, in the **Period** field, enter the desired dates and time of events to create the monitoring log report for the specified period.

3.   From the **Radioserver** list, select the desired SmartPTT Radioserver to create a report:

To create a report for the specific radioserver,	select the desired radioserver.
To create a report for all radioservers,	select the *All radioservers* value.

4.   Click **OK** to create a report.

Postrequisites:

Select a format to export the report.
For information on report exporting, see Report Actions.
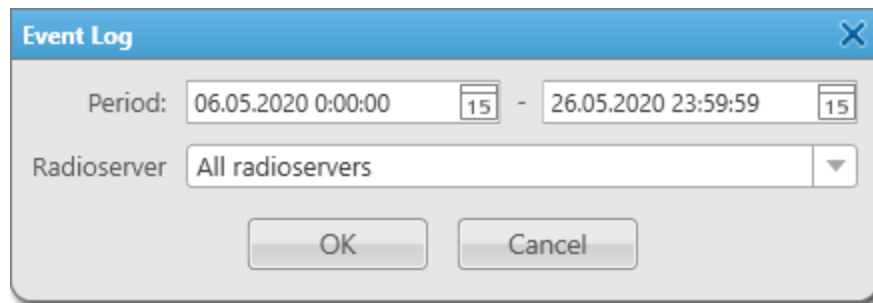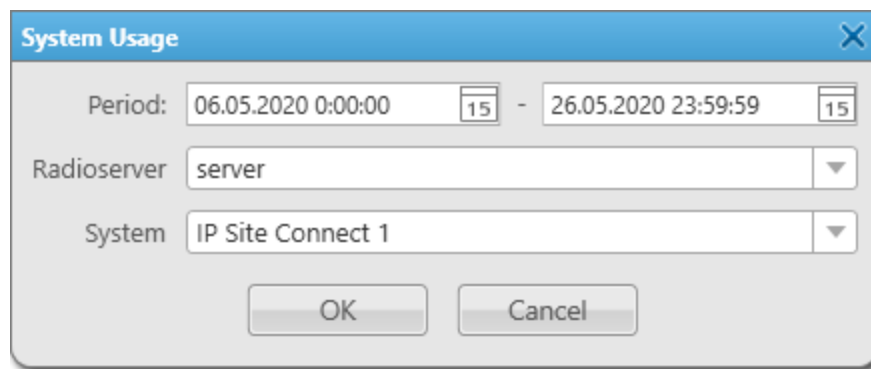
4.17.7.3 Creating System Usage Report

Follow the procedure to create a report providing information on system usage.

Prerequisites:

- Ensure you have the monitoring license. For details, see Licenses.

- Ensure the monitoring feature is activated in SmartPTT Radioserver Configurator. For details, see "Configuring Monitoring Database Connection" in *SmartPTT Installation and Configuration Guide*.

- Ensure that the desired SmartPTT Radioserver is running.

- Ensure the operator has the **Build reports** right. For details, see Operators.

- If desktop client authentication on SmartPTT radioserver is enabled, ensure that the profile assigned to the client allows using monitoring feature. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

Procedure:

1. On the menu bar, click **Reports** →**Monitoring** →**System Usage**.
   The **System Usage** window appears.

2. In the window that appears, in the **Period** field, enter the desired dates and time of events to create the system usage report for the specified period.

3. From the **Radioserver** list, select the desired SmartPTT Radioserver to create a report.

4. From the **System** list, select the desired radiosystem for which a report will be created.

5. Click **OK** to create a report.

Postrequisites:

Select a format to export the report.
For information on report exporting, see Report Actions.
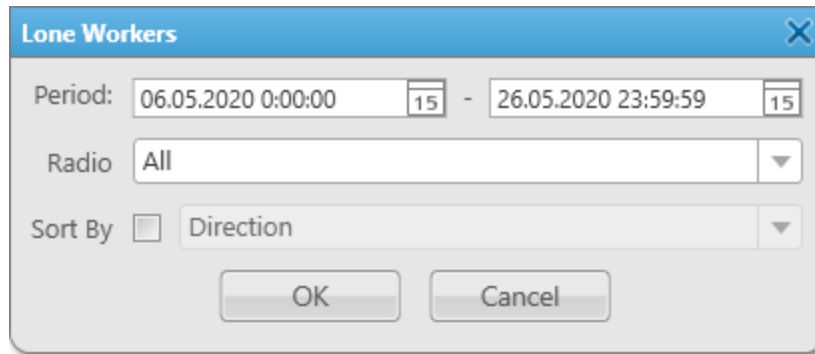
4.17.8 Creating Lone Workers Report

Follow the procedure to create a report providing information about events for radios in the Lone Worker mode.

Prerequisites:

Ensure the operator has the **Build reports** right. For details, see Operators.

Procedure:

1. On the menu bar, click **Reports** →**Lone Workers**.
   The **Lone Workers** window appears.

2. In the window that appears, in the **Period** field, enter the desired dates and time of events to create a report for the specified period.

3. From the **Radio** list, select the radio for the report:

To create a report for the specific radio,	select the name of the desired radio.
To create a report for all radios,	select the *All* value.

4. *(Optional)* From the **Sort By** list, select the desired parameter by which the report data will be sorted:

   a. Select the **Sort By** check box.

   b. From the **Sort by** list, select the desired parameter by which the report data will be sorted: *Direction, Event Type, Date/Time, Additional information, Operator, Radioserver, Channel, Radio, Talkgroup, Status, Duration, Destination*.

5. Click **OK** to create the report.

Postrequisites:

Select a format to export the report.
For information on report exporting, see <u>Report Actions</u>.

4.17.9 Creating Indoor Tracking Report

Follow the procedure to create a report on the movement of indoor radios based on data received from radio beacons.

Prerequisites:

- Ensure you have the Indoor Tracking license. For details, see <u>Licenses</u>.

- Ensure that the SmartPTT Radioserver Event Log is activated in SmartPTT Radioserver Configurator. For details, see "Configuring Event Log Database Connection" in *SmartPTT Installation and Configuration Guide*.

- Ensure that indoor tracking is configured in SmartPTT Radioserver Configurator and SmartPTT Dispatcher.

- Ensure that the desired SmartPTT Radioserver is running.

- Ensure the operator has the **Build reports** right. For details, see <u>Operators</u>.

Procedure:

1. On the menu bar, click **Reports** →**Indoor Tracking**.
   The **Indoor Tracking** window appears.

2. In the window that appears, in the **Period** field, enter the desired dates and time of events to create a report for the specified period.

3. From the **Radioserver** list, select SmartPTT Radioserver for creating the report:

To create a report for the specific SmartPTT Radioserver,	select SmartPTT Radioserver with the desired name.
To create a report for all radioservers,	select the *All radioservers* value.

4. From the **Beacon** list, select the beacon for creating the report:

To create a report for the specific beacon,	select a beacon with the desired name.
To create a report for all beacons,	select the *All beacons* value.

5. Specify which data will be displayed in the report:

To display data for radios in the report,	perform the following actions: 1. Select **Radio**. 2. From the list below, select the desired radio or the *All radios* value.
To display data for registered users in the report,	perform the following actions: 1. Select **User**. 2. From the list below, select the desired user or the *All users* value.

6. *(Optional)* Specify data grouping in the report:

   a. Select the **Group by** check box.

   b. Select the desired value:

To group data in the report by beacons,	from the unblocked list on the right, select the *Beacons* value.
To group data in the report by users,	from the unblocked list on the right, select the *Users* value.

7.   Click **OK** to create a report.

Postrequisites:

Select a format to export the report.
For information on report exporting, see [Report Actions](#).

4.17.10 Exporting Reports

Reports on the SmartPTT Dispatcher and SmartPTT Radioserver operation are created as separate files that can be saved on a computer in the desired format, printed or sent to the desired email address. All these actions are performed in the Print Preview window, where the created report is opened.

Reports on the SmartPTT Dispatcher and SmartPTT Radioserver operation are saved on the computer in the PRNX format.

If necessary, the created report can be exported in any of the following formats: PDF, HTML, MHT, RTF, XLS, XLSX, CSV, TXT, XPS. The created reports can also be saved as image files in the following formats: BMP, EMF, WMF, GIF, JPEG, PNG, TIFF.

> **NOTE**
> Reports created by the Report Wizard on the basis of SmartPTT Dispatcher and SmartPTT Radioserver Event Logs are saved on a computer as separate files in the following formats: HTML, MHT, XLS, XLSX, CSV, TXT.

Example of Event Log Report

The figure below shows the example of a report created with the Report Wizard.

Depending on the values you select when configuring the parameters of the **Event Report**, each generated report can consist of the following elements:

• The default report name.

• The list of selected conditions and its values. You can see the following conditions: **Direction**, **Event type**, **Date**, **Radioserver**, **Channel**, **Talkgroup**, **Radio**, **User**, **Destination**. Data is filtered according to the selected conditions and displayed in the report.

• The summary table filled with data of the following parameters: **Direction**, **Event type**, **Date/Time**, **Additional information**, **Not read**, **Operator**, **Radioserver**, **Channel**, **Radio**, **User**, **Source**, **Talkgroup**, **Destination**, **Status**, **Duration**, **Connection Type**, **Sound Record**, **Lone Worker**, **Note**.

For detailed information on each parameter, see the SmartPTT Dispatcher embedded help.

Example of Radio Activity Report

The figure below shows the example of a report based on radio activity data.

Radio Activity Report

Period: 15.06.2020 00:00:00 - 15.06.2020 23:59:59

	Amount of Calls	Duration, hh:mm:ss
Total Calls	33	00:01:04
All Call	3	00:00:05
Group 1	30	00:00:59

Daily Details

	Amount of Calls	Duration, hh:mm:ss	Period
Total Calls	33	00:01:04	15.06.2020 00:00 - 16.06.2020 00:00
All Call	3	00:00:05	15.06.2020 00:00 - 16.06.2020 00:00
Group 1	30	00:00:59	15.06.2020 00:00 - 16.06.2020 00:00
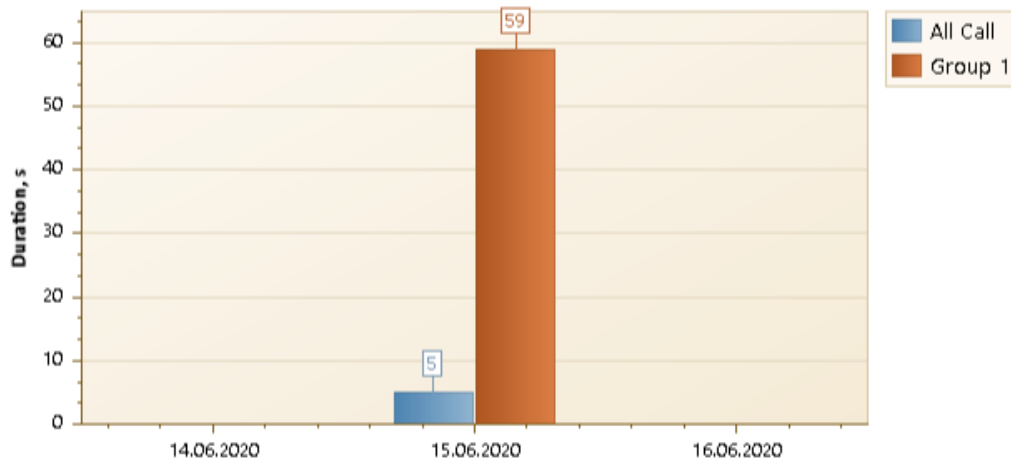
Depending on the values you select when configuring the parameters of the **Radio Activity Report**, each generated report can consist of the following elements:

- The default report name.

- The start and end dates of events that are displayed in the report.

- The summary table with the following data:

  - **Amount of Calls** — number of calls for the specified period.

  - **Duration, hh:mm:ss** — total duration of calls for each type.

- The summary table filled with detailed data for each period.

  - **Amount of Calls** — number of calls for the period.

  - **Duration, hh:mm:ss** — total duration of calls for each type.

  - **Period** — time range of displayed data.

- Visual data representation as a bar chart with a legend.

Example of Text Chat History Report

The figure below shows the example of a **Text Chat History** report in the HTML format.

The report shows the SmartPTT Mobile user chat history for a specific period. Depending on the values you select when configuring the parameters of the **Text Chat History** report, each generated report can contain the following information:

- Name of the chat used to generate the report.

- Period used to generate the report.

NOTE
The period is displayed if you specify the period for which you want to display messages in the report.

- Text that is present in all messages in the report.

> **NOTE**
> The text is displayed in the **Containing text** field if you enable search for messages with the specific text in the **Text Chat History** window. For details, see Creating Text Chat History Report.

- Date and time when the event occurred or the user sent a text message.

- Name of the user that initiated the event or sent the message.

- Service message about creating, editing, deleting a text chat, and adding, deleting users from a text chat. The message text has a blue background.

> **NOTE**
> Service messages are included in the report only if you select the **Include service messages in the report** check box in the **Text Chat History** window. For details, see Creating Text Chat History Report.

- Text message sent by the user. The message background is white.

- Emergency message from the mobile client in the emergency state. The message background is red.

- Last message status registered at the moment the report was created.

- Contacts of the technical support.

- Time and date when the report file was created.

The name of the created report file has the following format: *Chat_<Chat name>_<Period>*, where:

- *<Chat name>* — depending on the chat type, it can have one of the following formats:

  - *<Group chat name>* — name of the group chat.

  - *<Participant 1 name>&<Participant 2 name>* — name of the private chat.

- *<Period>* — has the *<mm-dd-yy_mm-dd-yy>* format that indicates the beginning and end dates of the period. If you did not specify the search period, then this parameter is hidden in the file name.

Example of Radio Location Report

The figure below shows the example of the report based on radio location data.

Radio Location Report

Period: 06.05.2020 0:00:00 - 26.05.2020 23:59:59 (UTC+07:00)

Date	Radio/User	Latitude	Longitude	Speed m/s	Precision (m)	Address
25.05.2020 18:23:38	10	56,47818	85,06979	10,00	1,00	290 Northwest 165th Street # P-800A, Miami, FL 33169, USA
25.05.2020 18:23:35	2	56,47840	85,06976	10,00	1,00	290 Northwest 165th Street # P-800A, Miami, FL 33169, USA
25.05.2020 18:23:32	8	56,47671	85,06915	10,00	1,00	290 Northwest 165th Street # P-800A, Miami, FL 33169, USA
25.05.2020 18:23:31	6	56,47887	85,06638	10,00	1,00	290 Northwest 165th Street # P-800A, Miami, FL 33169, USA
25.05.2020 18:22:46	7	56,47893	85,06641	10,00	1,00	290 Northwest 165th Street # P-800A, Miami, FL 33169, USA
25.05.2020 18:22:35	2	56,47739	85,06633	10,00	1,00	290 Northwest 165th Street # P-800A, Miami, FL 33169, USA
25.05.2020 18:22:32	8	56,47918	85,06657	10,00	1,00	290 Northwest 165th Street # P-800A, Miami, FL 33169, USA
25.05.2020 18:22:12	7	56,47663	85,06907	10,00	1,00	290 Northwest 165th Street # P-800A, Miami, FL 33169, USA
25.05.2020 18:22:12	8	56,47873	85,06967	10,00	1,00	290 Northwest 165th Street # P-800A, Miami, FL 33169, USA
25.05.2020 18:22:12	6	56,47671	85,06683	10,00	1,00	290 Northwest 165th Street # P-800A, Miami, FL 33169, USA
25.05.2020 18:22:12	5	56,47988	85,06799	10,00	1,00	290 Northwest 165th Street # P-800A, Miami, FL 33169, USA
25.05.2020 18:22:12	2	56,47969	85,06880	10,00	1,00	290 Northwest 165th Street # P-800A, Miami, FL 33169, USA
25.05.2020 18:22:12	10	56,47917	85,06942	10,00	1,00	290 Northwest 165th Street # P-800A, Miami, FL 33169, USA
25.05.2020 18:22:12	3	56,47983	85,06758	10,00	1,00	290 Northwest 165th Street # P-800A, Miami, FL 33169, USA
25.05.2020 18:22:12	4	56,47720	85,06956	10,00	1,00	290 Northwest 165th Street # P-800A, Miami, FL 33169, USA
25.05.2020 18:22:12	9	56,47887	85,06961	10,00	1,00	290 Northwest 165th Street # P-800A, Miami, FL 33169, USA
25.05.2020 18:18:22	9	56,47811	85,06979	10,00	1,00	290 Northwest 165th Street # P-800A, Miami, FL 33169, USA
25.05.2020						290 Northwest 165th Street # P-800A,

Depending on the values you select when configuring the parameters of the **Radio Location** report, each generated report can consist of the following elements:

- The default report name.

- The start and end dates of events that are displayed in the report.

- The summary table with the following data:

  - **Date** — date and time when the radio coordinates are registered in the system.

  - **Radio/User** — radio identifier or name of the radio user.

  - **Latitude** — latitude value of the radio geographic location.

  - **Longitude** — longitude value of the radio geographic location.

  - **Speed m/s** — speed of radio movement.

  - **Precision (m)** — precision value for the radio geographic location.

• **Address** — mailing address of the radio location.

Example of Radio Movement Report

The figure below shows the example of the report based on radio movement data.

Radio Movement
Period: 06.05.2020 0:00:00 - 19.05.2020 23:59:59 (UTC+7)

Start time	Stop time	Moving time	Distance, km	Maximum speed, m/s	Location	Stop time interval	Idle time
Radio: 10							
06.05.2020							
13:33:05	14:49:20	01:16:14	207.50	10,00		00:17:35	-
15:06:55	16:38:08	01:31:12	207.50	10,00		-	-
Total for 06.05.2020		02:47:26	415,00			00:17:35	-
08.05.2020							
11:26:53	13:33:28	02:06:34	0.65	-		-	-
Total for 08.05.2020		02:06:34	0,65			-	-
12.05.2020							
10:49:48	10:51:40	00:01:52	0.08	-	Points of interest 4	-	-
Total for 12.05.2020		00:01:52	0,08			-	-
Total for period		04:55:52	415,73			00:17:35	-
Radio: 2							
06.05.2020							
13:33:52	14:15:30	00:41:37	207.57	10,00		00:24:43	-
14:40:13	15:00:51	00:20:38	207.99	-	Points of interest 2	01:33:31	-
16:34:23	16:38:00	00:03:37	207.99	-	Points of interest 2	-	-
Total for 06.05.2020		01:05:52	623,55			01:58:14	-
08.05.2020							
11:27:19	13:34:42	02:07:22	0.36	10,00		-	-
Total for 08.05.2020		02:07:22	0,36			-	-
12.05.2020							
10:49:35	10:51:43	00:02:08	0.34	-		-	-

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Depending on the values you select when configuring the parameters of the **Radio Movement** report, each generated report can consist of the following elements:

• The default report name.

• The start and end dates of events that are displayed in the report.

• The summary table with the following data:

  • **Start time** — date and time when the radio started moving.

  • **Stop time** — date and time when the radio stopped moving.

  • **Moving time** — total time of the radio movement.

  • **Distance, km** — distance value distance that radio traveled during the specified time.

  • **Maximum speed, m/s** — maximum speed of the radio.

  • **Location** — address or the point of interest where the radio stayed without moving.

  • **Stop time interval** — time during which a radio did not move.

  • **Idle time** — time during which a radio is idle.

Example of Online Radios Report

The figure below shows the example of the report based on online and offline radios data.

Online Radios (3)

Radio ID	Network Type	Name
3	MOTOTRBO	Radio 1
4	MOTOTRBO	Radio 2
5	Broadband	Radio 3

Offline Radios (3)

Radio ID	Network Type	Offline since	Name
104	Broadband	12.09.2021 16:47	Radio 1
1007	MOTOTRBO	12.09.2021 10:12	Radio 2
1008	No data	12.09.2021 03:07	Radio 3

Depending on the values you select when configuring the parameters of the **Online Radios** report, each generated report can consist of the following elements:

- The default report name. The name also contains the total number of online/offline radios.

- The summary table with the following data:

    - **Radio ID** — unique identifier of the radio that is currently online/offline.

    - **Network Type** — type of the network where the radio is registered.

    - **Offline since** — date and time since the radio became offline.

    - **Name** — radio name displayed in the network.

Example of Air Monitoring Report

The figure below shows the example of the report based on air monitoring data.

Monitoring Report

Period: 06.05.2020 0:00:00 - 26.05.2020 23:59:59 (UTC+07:00)

System: IP Site Connect 1

Radio: All

Date	System	Site	Repeater	Slot	Voice/Data	Event type	From	To	Duration (ms)	RSSI (dBm)
12.05.2020 10:10:13	IP Site Connect 1		1001	1	Data	System	1	15	297	0,00
12.05.2020 10:10:12	IP Site Connect 1		1001	2	Data	System	1	15	297	0,00
12.05.2020 10:10:08	IP Site Connect 1		1001	1	Data	System	1	15	297	0,00
12.05.2020 10:10:07	IP Site Connect 1		1001	1	Data	System	700	1	297	-77,50
12.05.2020 10:10:07	IP Site Connect 1		1001	2	Data	System	1	15	297	0,00
12.05.2020 10:10:02	IP Site Connect 1		1001	1	Data	System	1	15	297	0,00
12.05.2020 10:10:02	IP Site Connect 1		1001	2	Data	System	1	15	297	0,00
12.05.2020 10:09:46	IP Site Connect 1		1001	1	Data	System	1	700	297	0,00
12.05.2020 10:09:41	IP Site Connect 1		1001	1	Data	System	1	700	297	0,00
12.05.2020 10:09:22	IP Site Connect 1		1001	1	Data	System	1	700	296	0,00
12.05.2020 10:09:08	IP Site Connect 1		1001	1	Data	System	700	1	50	-79,01
12.05.2020 10:09:07	IP Site Connect 1		1001	1	Data	System	1	700	297	0,00
12.05.2020 10:09:02	IP Site Connect 1		1001	1	Data	System	1	700	281	0,00
12.05.2020 10:08:58	IP Site Connect 1		1001	1	Data	System	700	1	297	-78,13
12.05.2020 10:08:43	IP Site Connect 1		1001	1	Data	System	1	700	296	0,00
12.05.2020 10:08:39	IP Site Connect 1		1001	1	Data	System	1	700	297	0,00
12.05.2020 10:08:21	IP Site Connect 1		1001	1	Data	System	700	1	50	-78,29
12.05.2020 10:08:20	IP Site Connect 1		1001	1	Data	System	1	700	297	0,00
12.05.2020 10:08:10	IP Site Connect 1		1001	1	Data	System	1	700	297	0,00

Depending on the values you select when configuring the parameters of the **Air Monitoring** report, each generated report can consist of the following elements:

- The default report name.

- The start and end dates of events that are displayed in the report.

- The additional display options such as *System, Radio, UTC time*.

- The summary table with the following data:

  - **Date** — date and time when the event was registered in the system.

  - **System** — radio system name.

  - **Site** — site identifier (applied only for Linked Capacity Plus networks).

  - **Repeater** — name of a repeater.

  - **Slot** — number of a slot used to transmit data.

  - **Voice/Data** — type of transmitted data.

  - **Event type** — type of a transmitted event.

  - **From** — unique identifier of the event initiator.

  - **To** — unique identifier of the event receiver.

  - **Duration (ms)** — duration of the event.

  - **RSSI (dBm)** — RSSI level in decibels.

Example of Monitoring Event Log Report

The figure below shows the example of the Monitoring **Event Log** report.

Event Log
Period: 01.04.2020 0:00:00 - 01.05.2020 23:59:59
Radioserver: All radioservers

Radioserver	Network	Site	Event Time	Device Type	Repeater	Device Name	Device ID	Alarm Severity	Description
server	IP Site Connect 1		07.04.2020 12:06:27	Repeater	1548	Server	1548	-	Repeater state become normal: Disconnected
server	IP Site Connect 1		07.04.2020 12:06:27	Repeater	1	Repeater1	1	-	Repeater state become normal: Disconnected
server	IP Site Connect 1		07.04.2020 12:06:28	Repeater	1001	repeater 7	1001	-	Repeater state become normal: Disconnected
server	IP Site Connect 1		07.04.2020 12:06:28	Repeater	14	14	14	-	Repeater state become normal: Disconnected
server	IP Site Connect 1		07.04.2020 12:11:24	Repeater	1548	Server	1548	-	Repeater state become normal: Disconnected
server	IP Site Connect 1		07.04.2020 12:11:24	Repeater	1	Repeater1	1	-	Repeater state become normal: Disconnected
server	IP Site Connect 1		07.04.2020 12:11:25	Repeater	1001	repeater 7	1001	-	Repeater state become normal: Disconnected
server	IP Site Connect 1		07.04.2020 12:11:26	Repeater	14	14	14	-	Repeater state become normal: Disconnected
server	IP Site Connect 1		07.04.2020 12:17:12	Repeater	1	Repeater1	1	Major Alarm	Repeater emergency state identified: Disconnected
server	IP Site Connect 1		07.04.2020 12:17:12	Repeater	1001	repeater 7	1001	Major Alarm	Repeater emergency state identified: Disconnected
server	IP Site Connect 1		07.04.2020 12:17:12	Repeater	14	14	14	Major Alarm	Repeater emergency state identified: Disconnected
server	IP Site Connect 1		07.04.2020 12:17:34	Repeater	1548	Server	1548	-	Repeater state become normal: Disconnected
server	IP Site Connect 1		07.04.2020 12:17:34	Repeater	1	Repeater1	1	-	Repeater state become normal: Disconnected
server	IP Site Connect 1		07.04.2020 12:17:36	Repeater	2001	2001	2001	-	Repeater state become normal: Disconnected
server	IP Site Connect 1		07.04.2020 12:17:36	Repeater	238	238	238	-	Repeater state become

Depending on the values you select when configuring the parameters of the Monitoring **Event Log** report, each generated report can consist of the following elements:

- The default report name.

- The start and end dates of events that are displayed in the report.

- The name of the radioserver whose database was used as a data source to create the report.

- The summary table with the following data:

  - **Radioserver** — name of the radioserver where the event was registered.

  - **Network** — name of the network where the event was registered.

  - **Site** — site identifier (applied only for Linked Capacity Plus networks).

  - **Event time** — date and time when the event happened.

  - **Device type** — type of the device connected to the radioserver.

  - **Repeater** — unique identifier of the repeater.

  - **Device Name** — name of the device connected to the radioserver.

  - **Device ID** — unique identifier of the device connected to the radioserver.

  - **Alarm Severity** — degree of alarm severity, such as *Critical*, *Major*, *Minor*.

  - **Description** — additional information about the device state.

Example of System Usage Report

The figure below shows the example of the report based on the system usage data.

Report: System Usage
Period: 06.05.2020 0:00:00 - 26.05.2020 23:59:59
System: IP Site Connect 1

Sites: 6

Site	Number of Channels	Number of Radios	Online, h:mm:ss	Offline, h:mm:ss
333	2	0	0:37:46	494:08:46
5159	2	0	0:11:22	494:35:10
Server	2	0	480:56:23	13:50:09
repeater 7	2	4	429:40:20	65:06:12
Repeater1	2	0	14:21:08	480:25:25
repeater 2	2	0	102:33:24	392:13:09
System Total	12	4	494:46:33	-

Channels

Site	Number of Channels	Duration, h:mm:ss,ms
333	1	-
	2	-
	Summary	0:00:00
5159	1	-
	2	-
	Summary	0:00:00
Server	1	-
	2	-
	Summary	0:00:00
repeater 7	1	0:06:40,79
	2	0:00:20,19
	Summary	0:07:00,98
Repeater1	1	-
	2	-

Depending on the values you select when configuring the parameters of the **System Usage** report, each generated report can consist of the following elements:

- The default report name.

- The start and end dates of events that are displayed in the report.

- The name of the radio network which the report was created for.

- The summary table filled with data on each site configured in the selected radio system. You can see the following parameters:

  - **Site** — repeater identifier, site identifier, radioserver identifier in the selected radio network.

  - **Number of Channels** — total number of channels on each site.

  - **Number of Radios** — total number of radios registered in this site.

  - **Online, h:mm:ss** — total amount of time during which radios of this site are online.

  - **Offline, h:mm:ss** — total amount of time during which radios of this site are offline.

- The summary table filled with data on channel usage of each site in the selected radio network. You can see the following parameters:

  - **Site** – name of the site in the selected radio network.

  - **Number of Channels** – total number of channels on each site.

  - **Duration, h:mm:ss, ms** – amount of time used by each channel of the site.

- The summary table filled with data on each radio. You can see the following parameters:

  - **#** – sequence number of the radio in the list.

  - **Radio ID** – unique identifier of the radio.

  - **Name** – name of the radio.

  - **Sites** – name of the site where this radio is registered.

Example of Lone Workers Report

The figure below shows the example of the report based on data of radios in the Lone Worker mode.

Depending on the values you select when configuring the parameters of the **Lone Workers** report, each generated report can consist of the following elements:

- The default report name.

- The start and end dates of events that are displayed in the report.

- The name of the radio which the report was created for.

- The summary table filled with data on each event registered for this radio. You can see the following parameters:

  - **Direction** – direction of the data transmission relative to the selected radio. You can see the following values:

    - *Incoming* – the event was received by the radio.

    - *Outgoing* – the event was initiated by the radio.

  - **Event type** – type of the registered event.

  - **Date/Time** – date and time when the event was registered.

  - **Additional information** – details about the registered event. For example, ID of the incoming initiator, an operator name, etc.

  - **Operator** – displays the operator name. The account name of this operator was used to start the SmartPTT Dispatcher when the event happened.

  - **Radioserver** – name of the radioserver where the event was registered.

- **Channel** – name of the channel where the event was registered.

- **Radio** – name or ID of the device where the event was registered.

- **Talkgroup** – name of the radio talk group.

- **Status** – status of the registered event.

- **Duration** – duration of the event.

- **Destination** – name or ID of the receiver of the registered event.

- **Source** – name or ID of the event initiator.

Example of Indoor Tracking Report

The figure below shows the example of the Indoor Tracking report. The report is based on data received from special beacons.

Indoor Tracking
Period: 12.05.2020 0:00:00 - 12.05.2020 23:59:59

Radioserver	Beacons	Radio/User	Date/Time	Message
192.168.36.170	34.46	600	12.05.2020 15:10:19	Radio Location
192.168.36.170	34.46	600	12.05.2020 15:09:22	Radio Location
192.168.36.170	34.46	600	12.05.2020 15:07:19	Radio Location
192.168.36.170	34.46	600	12.05.2020 15:06:20	Radio Location
192.168.36.170	34.46	600	12.05.2020 15:05:17	Radio Location
192.168.36.170	34.46	600	12.05.2020 15:04:26	Radio Location
192.168.36.170	34.46	600	12.05.2020 15:03:18	Radio Location
192.168.36.170	34.46	600	12.05.2020 15:01:20	Radio Location
192.168.36.170	34.46	600	12.05.2020 15:00:19	Radio Location
192.168.36.170	34.46	600	12.05.2020 14:59:20	Radio Location
192.168.36.170	34.46	600	12.05.2020 14:58:19	Radio Location
192.168.36.170	34.46	600	12.05.2020 14:57:21	Radio Location
192.168.36.170	34.46	600	12.05.2020 14:56:20	Radio Location
192.168.36.170	34.46	600	12.05.2020 14:55:19	Radio Location
192.168.36.170	34.46	600	12.05.2020 14:54:19	Radio Location
192.168.36.170	34.46	600	12.05.2020 14:53:20	Radio Location
192.168.36.170	34.46	600	12.05.2020 14:52:20	Radio Location
192.168.36.170	34.46	600	12.05.2020 14:51:19	Radio Location
192.168.36.170	34.46	600	12.05.2020 14:50:19	Radio Location
192.168.36.170	34.46	600	12.05.2020 14:49:19	Radio Location
192.168.36.170	34.46	600	12.05.2020 14:48:19	Radio Location
192.168.36.170	34.46	600	12.05.2020 14:47:17	Radio Location
192.168.36.170	34.46	600	12.05.2020 14:46:20	Radio Location
192.168.36.170	34.46	600	12.05.2020 14:45:19	Radio Location
192.168.36.170	34.46	600	12.05.2020 14:44:22	Radio Location

Depending on the values you select when configuring the parameters of the **Indoor Tracking** report, each generated report can consist of the following elements:

- The default report name.

- The start and end dates of the events that are displayed in the report.

- The summary table showing information about indoor location of the radio at a specific time. You can see the following parameters:

  - **Radioserver** – IP address of the radioserver whose database was used as a data source when creating the report.

  - **Beacons** – identifier of the beacon for which the report was generated.

  - **Radio/User** – identifier of the radio or name of the radio user.

  - **Data/Time** – date and time when the radio was detected near the beacon.

- **Message** – text notifying that the system received data on radio location.

4.17.10.1 Report Actions

Follow the procedure to perform the desired actions with the generated report in the **Print Preview** window.

Procedure:

1. Create the desired report. For details, see Reports.
   The **Print Preview** window appears.

> **NOTE**
> The **Print Preview** window appears when you create a report from the **Reports** menu, and if you do not use the Report Wizard to create a report.
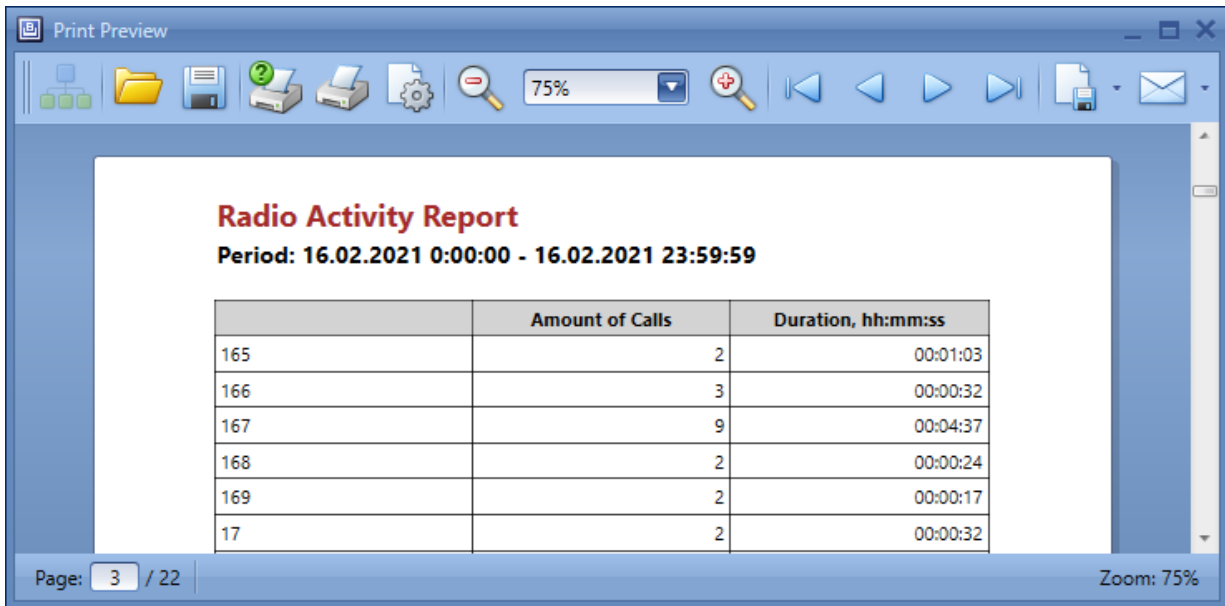
2. In the window that appears, perform the desired action with the report:

To zoom in/zoom out the report page,	perform one of the following actions:: • From the Page Size list, select the desired page size in percentage points. • Click **Zoom out ( )**/**Zoom in ( )**.
To go to the next/previous report page,	click **Next Page ( )**/**Previous Page ( )** respectively.
To go to the first/last report page,	click **First Page ( )**/**Last Page ( )** respectively.
To go to a specific report page,	in the lower-left corner, in the **Page** field, enter a page number, and then press ENTER.
To open a report saved as a file in the PRNX format,	perform the following actions: 1. Click **Open ( )**. 2. In the window that appears, select the desired file in the PRNX format.

	3. Click **Open**.
To save the created report to the PRNX format,	perform the following actions: 1. Click **Save** (🖫). 2. In the window that appears, specify a folder and a file name to save the file. 3. Click **Save**.
To choose a printer and print the report,	perform the following actions: 1. Click **Print** (🖨). 2. In the window that appears, select a print device. 3. Configure the desired printing options. 4. Click **Print**.
To print the report using default print device,	click **Quick Print** (🖨). The default print device will print the report.
To setup report page options,	perform the following actions: 1. Click **Page Setup** (⚙). The **Page Setup** window appears. 2. In the window that appears, configure report page options. 3. Click **OK**.
To export the report,	perform the following actions: 1. Click the arrow on the **Export Document** (🖳) button. 2. From the menu, select the desired file format to export the report. 3. In the window that appears, configure export options. 4. Click **OK**. 5. In the window that appears, specify a folder and name to save the file. 6. Click **Save**.
To send the report using email,	perform the following actions: 1. Click the arrow on the **Send via e-mail** (✉) button. 2. From the menu, select the desired file format to send the report using email. 3. In the window that appears, configure export options. 4. Click **OK**. 5. In the window that appears, specify a folder and name to save the file.

6. Click **Save**. The default email client appears. The report file will be automatically attached to the email.

7. Fill the desired fields and send the email.

4.18 Telemetry

The Telemetry service transmits and processes telemetry signals between SmartPTT Dispatcher and radios connected to sensors or actuators using GPIO pins.

Important
Telemetry actions are available to the operators with the **Send telemetry commands** right.
For information on user roles in SmartPTT Dispatcher, see Operators.

NOTE
The Telemetry feature is available only to DMR radios.

SmartPTT Dispatcher provides the following features:

*   Receive dry (volt-free) contacts data

*   Notify if the signal was changed

*   Send telecommands

Important
Telemetry features are unavailable if desktop client authentication on SmartPTT Radioserver is enabled and the profile assigned to the client prohibits access to telemetry actions. For details, see "Profiles" in *SmartPTT Installation and Configuration Guide*.

You can send telecommands using a channel with normal traffic (for example, the dedicated channel of a single-site system). Radios with corresponding firmware can send telecommands after pressing the programmed button using a dedicated telemetry data channel that must be configured in the codeplug.

Configured actions can be assigned to a radio or talkgroup using the **Telemetry (🔌)** element. Then they can be executed from the radio or talkgroup Call Window.

NOTE
The telemetry actions can be assigned only to the radios that are registered in the system. If the radio is not registered, the Telemetry feature will be unavailable.

NOTE
The telemetry actions are unavailable for All Calls. Only outgoing telemetry actions are available for talkgroups.

Telemetry events can trigger custom rules to initiate various actions. To use this feature, in the the Custom Rule Table select *Telemetry* as the condition type.
For information on custom rule configuration, see Custom Rules.

You also can send configured telecommands and monitor the current status of GPIO pins on a Custom Console if you set the **Incoming Telemetry** and **Outgoing Telemetry** tiles in the Console Configuration window. For details, see Custom Consoles.

For information on performing telemetry actions in SmartPTT Dispatcher, see the sections below.

4.18.1 Executing Telemetry Actions from Radio Call Window

Follow the procedure to execute an outgoing telemetry action from the radio Call Window.
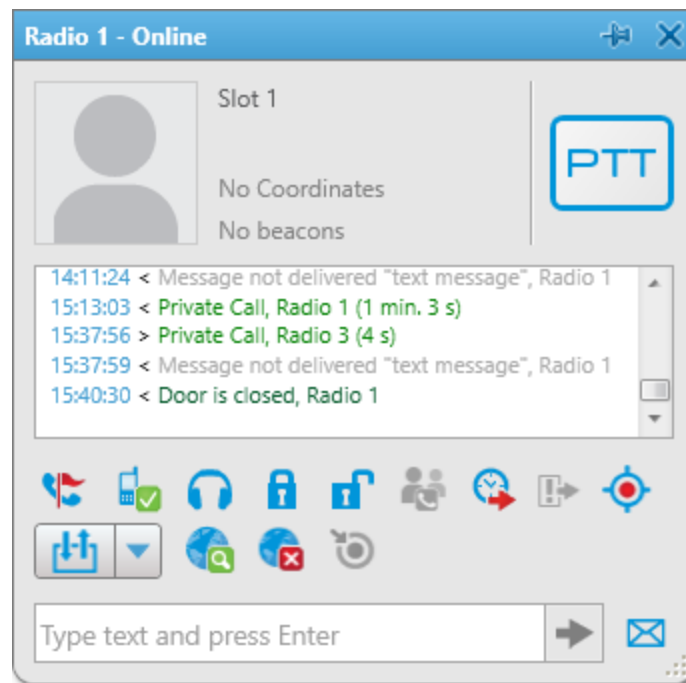
Prerequisites:

- Assign the desired telemetry actions to the radio. For details, see Assigning Telemetry to Radios.

- Ensure the radioserver is online.

Procedure:

1. To open the radio Call Window, perform one of the following actions:

To open the radio Call Window from the **Radio Fleet** panel,	double-click the desired radio on the **Radio Fleet** panel.
To open the radio Call Window from the **Radios** panel or in the Custom Console,	right-click the desired radio on the **Radios** panel or in the Custom Console.

   For information on the radio Call Window, see Call Windows.

2. From the Outgoing Telemetry (▼) menu, select the desired telemetry action to execute.

   Important
   To execute telemetry actions, the radio contacts or VIO must be mapped to a physical GPIO line in the radio codeplug.

3. *(Optional)* To receive the current telemetry status, click **Get Status of Telemetry Contact (⊞)**.
   The updated status will be displayed in the radio Call Window log.

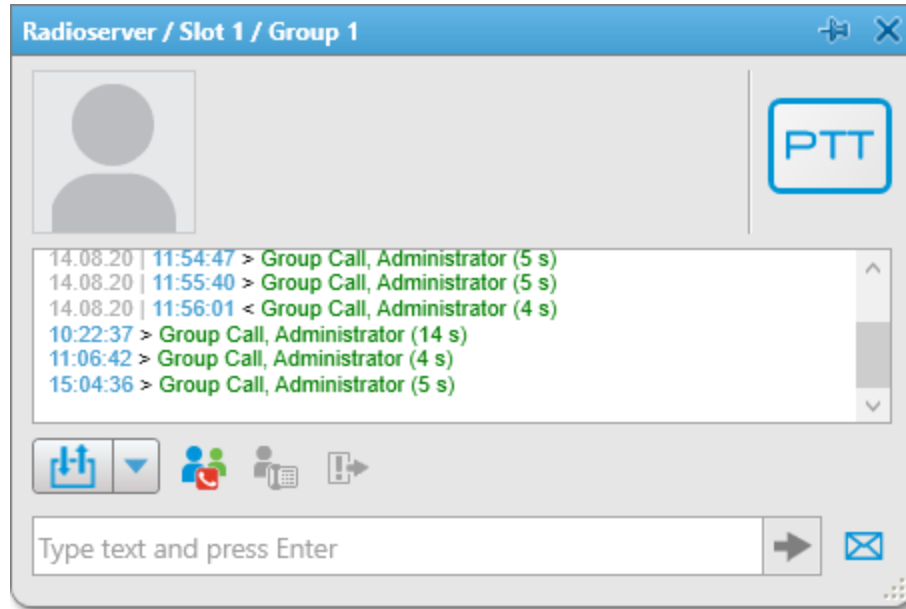# 4.18.2 Executing Telemetry Actions from Talkgroup Call Window

Follow the procedure to execute an outgoing telemetry action from the talkgroup Call Window.

Prerequisites:

- Assign the desired telemetry actions to the talkgroup. For details, see Assigning Telemetry to Talkgroups.

- Ensure the radioserver is online.

Procedure:

1. On the **Radio Fleet** panel, double-click the desired talkgroup.
   The talkgroup Call Window appears.

2. From the Outgoing Telemetry (▼) menu, select the desired telemetry action to execute. This action will be executed by the radios that listen to this talkgroup.

   Important
   To execute telemetry actions, the radio contacts or VIO must be mapped to a physical GPIO line in the radio codeplug.

Contact Us

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Customer support is provided by SmartPTT Technical Support Center. You can contact a support engineer via email support@smartptt.com or by submitting a request on the official support website support.smartptt.com

You can find the full SmartPTT Terms of Technical Support on the official website https://smartptt.com/smartptt-terms-of-technical-support/

SmartPTT Technical Support Center does not consult on deployment and maintenance of Motorola Solutions products except on settings related to SmartPTT connection and data communication.

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