SmartPTT Express Installation and Configuration Guide

Revision History

Revision	Description	Date
1.0	Initial release of the document. The document is compliant to SmartPTT Express 2.0.	March 2019

Revision History Conventions

Each document has its own revision number that consists of two dot-separated numbers. Number are "release" and "edition".

The first number (release) represents the compliance to the specific release of the product. The number increases with each new release of the product. The product may have its own versioning.

The second number (edition) indicates that the document content is modified if compared with the previous revision. Modified document contains various enhancements, issue fixes, and more. Changes between document revisions are available in the table for a limited number of editions.

With each new release, revision history provides edition updates only for the documents published before the release date.

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About This Document

The document explains how to install and configure the SmartPTT Express software, a client—server dispatch software for DIMETRA Express. It informs system administrator on necessary configuration changes in computer operating system and provides brief information on how to maintain the software.

Conventions & Assumptions

The document uses the following conventions:

Convention	Example
Named user interface elements	the **Save** button
Values and expandable list items	the **Always** option
Hyperlinks	https://smartptt.com/products/smartptt-express/
Cross-references	See Glossary on page 80.
Another documents	*SmartPTT Express User Guide*

The document assumes the following:

- Customer hardware, software, and network equipment can be properly configured by the system administrator who has his/her own approaches to operating system configuration.

- DIMETRA Express is properly configured as a radio system and can be properly configured by the Customer-assigned engineer.

Related Information

The document does not cover another products configuration until it is explicitly required. In other cases, a reference to another manuals is provided with information on what must be performed.

SmartPTT Express Documentation

To create SmartPTT Express backups, SmartPTT Express Server configuration must include layouts information. Such information occurs only after the Dispatch Position is started and configured. Information related to the Dispatch Position configuration is available in *SmartPTT Express User Guide* .

Motorola's Documentation

This document refers to the following Motorola's resources:

- DIMETRA Express Maintenance Guide (must be received from Motorola).

- DIMETRA Express embedded help (available in DIMETRA Network Manager).

Windows Administrator Notes

The following references provided for Customer's system administrator in case of quick configuration overview:

- Authorization on Windows Dev Center
  (https://docs.microsoft.com/en-us/windows/desktop/secauthz/authorization-portal)

- Managing Groups on Windows Dev Center
  (https://docs.microsoft.com/en-us/windows/desktop/ad/managing-groups)

- Managing Users on Windows Dev Center
  (https://docs.microsoft.com/en-us/windows/desktop/ad/managing-users)

- Power Management on Microsoft Dev Center (https://docs.microsoft.com/en-us/windows/desktop/power/power-management-portal)

- Windows Time Service on Windows IP Pro Center
  (https://docs.microsoft.com/en-us/windows-server/networking/windows-time-service/windows-time-service-top)

Chapter 1. Overview

SmartPTT Express is a dispatch software for DIMETRA™ Express, a multisite trunked radio system from Motorola Solutions. DIMETRA is the Motorola's brandname for TETRA-compliant radio systems. For more information on DIMETRA, see https://www.motorolasolutions.com/en_xu/products/tetra/infrastructure/tetra-core-network/dimetra-express.html.

SmartPTT Express is a client—server software that supports standalone and collocated installation of server and client components.
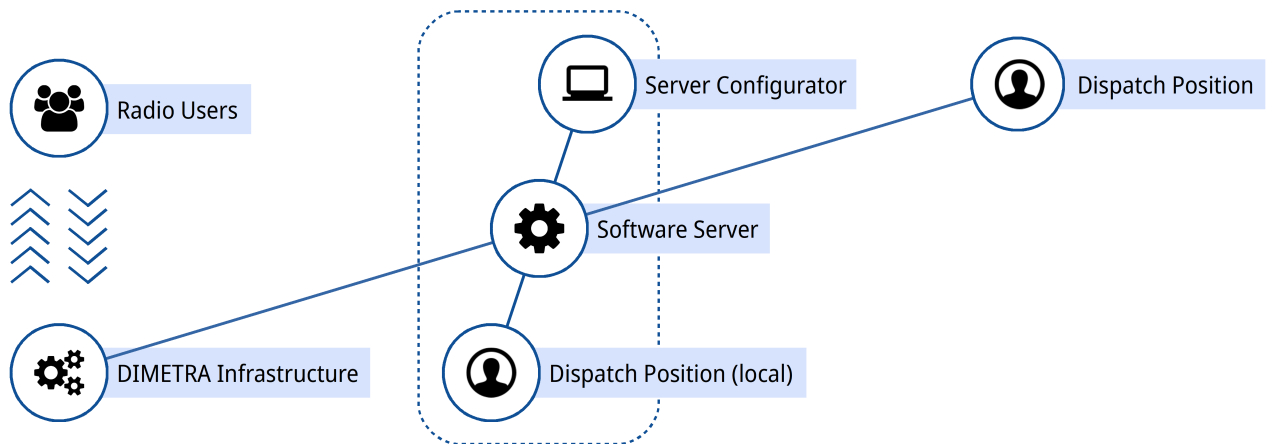
Figure 1: SmartPTT Express Overview

SmartPTT Express connects to the DIMETRA Express Server over IPv4 and receives all the supported dispatch features from it. Note that only one DIMETRA Express Server is supported.

1.1 Components

SmartPTT Express includes the SmartPTT Express Server component, Server Configurator, and Dispatch Position.

1.1.1 SmartPTT Express Server & Server Configurator

SmartPTT Express Server is the software server component. It provides users access to the DIMETRA Express radio users and talkgroups. On the computer it appears as the Windows service named **SmartPTT Express Server**.
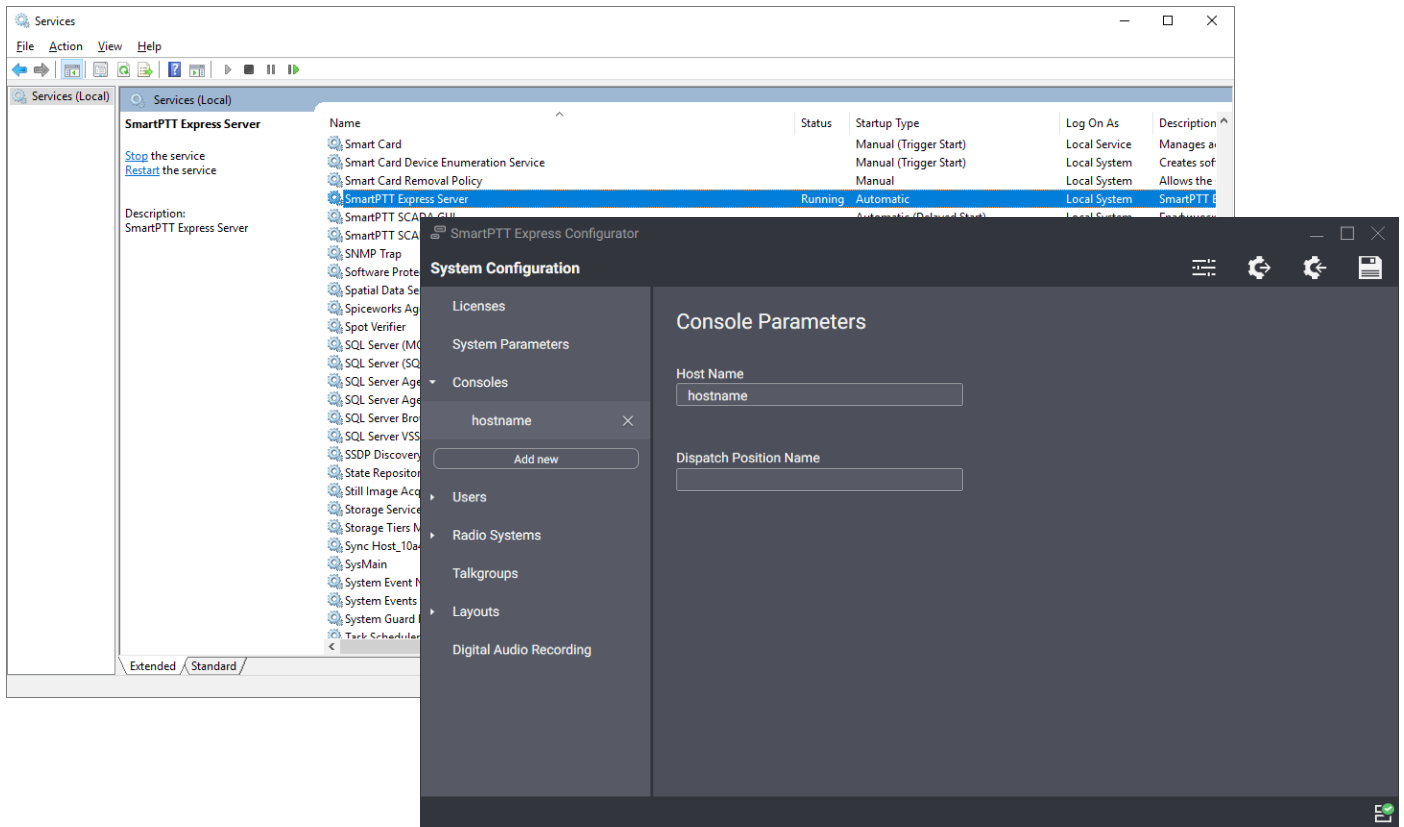
Figure 2: SmartPTT Express Server Service and Server Configurator Window

Most of SmartPTT Express Server settings are available for modification with the Server Configurator application. It is the GUI-based Windows application that accesses SmartPTT Express Server settings over IP network. It provides input validation, export and import of the configuration settings, and saves changes.

To apply some changes, SmartPTT Express Server restart is required. Server Configurator informs users on the restart necessity when changes are saved.

The application installs together with the SmartPTT Express Server, on the same computer. It is unavailable for the standalone installation and it is not intended for the remote SmartPTT Express Server connection.

1.1.2 Dispatch Position

Dispatch Position is the dispatch console software that provides dispatch features using the software buttons, other visual controls, audible and visual indication of event.
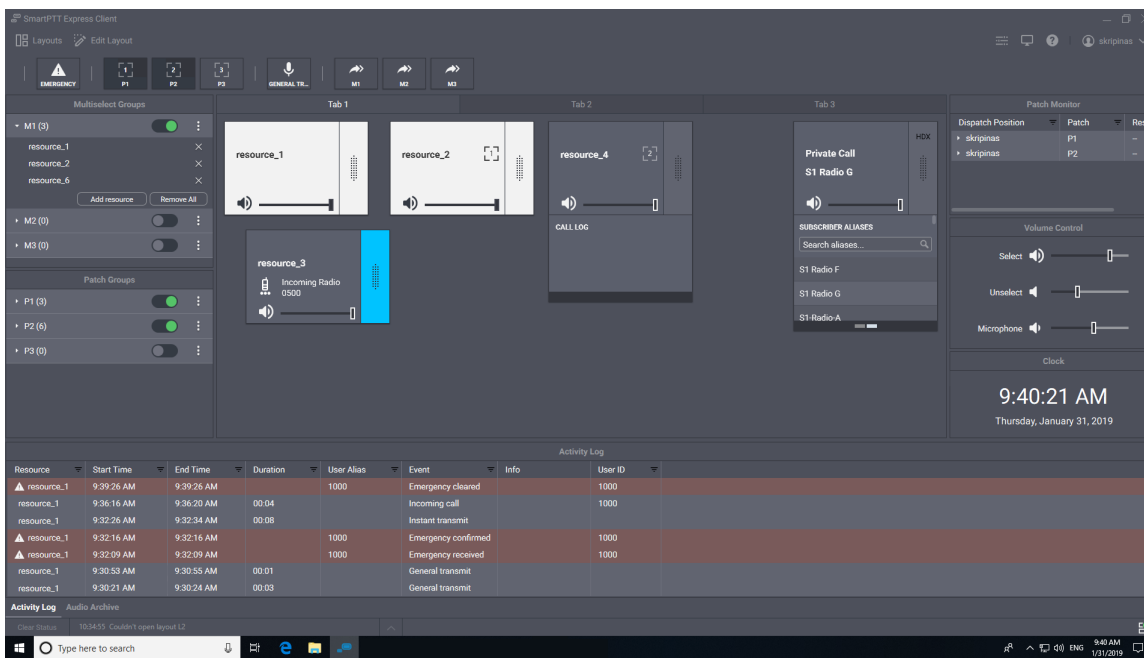
Figure 3: Dispatch Position Overview (Example)

Dispatch Position requires continuous connection to the SmartPTT Express Server. If the connection is lost, Dispatch Position immediately logs off the user to prevent data desynchronization.

1.1.3 Other Software

SmartPTT Express installation file includes the proper versions of the Microsoft .NET Framework, Visual C++ Redistributor package. The software is installed automatically if required.

1.2 Features

SmartPTT Express provides multiple features.

Dispatch features

- Incoming and outgoing group calls (Group PTT).

- Call parties identification.

- Half-duplex and full-duplex private calls (individual calls).

- Various call types: General Transmit, Instant Transmit, All-Points Bulletin (APB) Transmit.

- Single & multiple talkgroup selection.

- Incoming emergency alarms and emergency calls.

- Talkgroup patching.

- Voice logging & records playback.

- Communication with other Dispatch Position users over DIMETRA Express Server.

User Features

- Tile-based design.

- System and per-call volume control.

- Console activity log and talkgroup call log.

- Contact list for private calls.

- Built-in voice record player.

- Workplace/layout customization: buttons, panels, tabs, and tiles.

- PTT accessories support (microphones, headsets, footswitches).

- Multilingual user interface.

Administration features

- Access to DIMETRA radio users and talkgroups over the DIMETRA Express Server.

- Flexible role model with editable permissions.

- Centralized layout storage and loading.

- Runtime application of the configuration changes.

SmartPTT Express requires licenses to unlock the required features. To order licenses, contact the Elcomplus representative in your region.

1.3 Capacity

SmartPTT Express provides the following capacity:

- Single active radio system (DIMETRA Express).

- Up to 120 talkgroups and DIMETRA-limited amount of radios; up to 60 talkgroups per dispatch console.

- Up to 10 simultaneous full-duplex and/or half-duplex private calls.

- Up to 3 multiselect groups (1 active at a time); each group may include up to 16 talkgroups.

- Up to 3 patch groups that can be activates simultaneously; each group may include up to 16 talkgroups.

- Up to 10 active dispatch consoles in the system (limited by DIMETRA).

1.4 System Requirements

SmartPTT Express states some requirements to be satisfied to install, configure and use it as a dispatch software. This includes hardware requirements, software requirements, networking requirements, and audio accessory requirements. All the information is available in the following sections of the document.

1.4.1 Radio System Compatibility

SmartPTT Express supports only the DIMETRA™ Express 1.2 radio systems.

1.4.2 Hardware Requirements

Computer hardware intended to host the SmartPTT Express software must comply the particular requirements.

Target Platform (Recommended)

SmartPTT Express is tested on HP Z2 Mini G3 computer, an 8.5-inch workstation developed by Hewlett-Packard. This is a recommended computer to install and host the software. For more information on the computer, see https://store.hp.com/UkStore/Merch/Offer.aspx?p=b-hp-z2-mini-workstation.

Minimum Requirements

Custom computers intended to host the SmartPTT Express software must comply the minimum requirements provided in Table 1.

Table 1: Hardware Requirements

Parameter	Value
Processor	dual-core processor with 3.4 GHz clock frequency
	Multithread: Required.
Memory	8 GB
Disk	Space: 256 GB and more
	Read/write speed: 600 MB/s
Audio	High-definition 2.0 audio
Graphics (Dispatch Position hosts only)	GDDR5 with 2 GB memory
Monitor	Display Size: 19˝ and more

Parameter	Value
	Screen Resolution: 1280×1200 px and more
LAN	10/100/1000 Base T
I/O Ports	1 video output
	2-channel audio output
	1 microphone input
	1 keyboard input, and/or 1 mouse input, and/or touchscreen

For better performance, Solid State Drives (SSD) or Enterprise Flash Drives (EFD) are recommended to use instead of regular hard disk drives.

For details on the software operation under the Customer's load, contact Elcomplus representative in your region.

1.4.3 Software Requirements

SmartPTT Express is a Windows-only software. Customer's operating system must comply the requirements provided in Table 2.

Table 2: Operating System Requirements

Parameter	Value
Editions	Windows 10 Pro, version 1607 and newer
	Windows 10 Enterprise, version 1607 and newer
	Windows 10 Enterprise LTSC 2016
	Windows 10 Enterprise LTSC 2019
System Type	64-bit

For more information on LTSC versions of Windows 10, see https://docs.microsoft.com/en-us/windows/whats-new/ltsc/.

1.4.4 Network Environment Requirements

When SmartPTT Express is configured and operable, the loaded network must comply the requirements provided in Table 3.

Table 3: Network Environment Requirements

Parameter	Value
IP Addressing	IPv4 only
Maximum Packet Loss	1 %
Maximum Two-Way Delay	150 ms
Maximum Jitter	100 ms

Chapter 2. Environment Preparation

Customer infrastructure that complies SmartPTT Express system requirements must be properly configured. The chapter provides information on both necessary and recommended configurations.

2.1 DIMETRA Configuration

To support SmartPTT Express, DIMETRA Express must be configured to support API-type consoles. For the configuration request and/or assistance, contact the authorized Motorola Solutions representative.

Proper configuration must include the following actions:

- Installing the proper DIMETRA license file.

- Allocating two unassigned IP addresses in your network.

- Applying allocated IP addresses in the following way:

    - Assigning the first IP address as the address of the API-type console.

    - Assigning the second IP address as the external voice logger address.

- Adding console users.

After the configuration, the following parameters must be received from DIMETRA that will be required during SmartPTT Express configuration:

- IP address of the DIMETRA Express Server.

- Console user credentials (logins and passwords).

- Credentials of the voice logger client account.

- Radio IDs and DIMETRA Console User IDs.

- Host names used by DIMETRA to communicate with the API-type consoles.

Minimum required information is available in *DIMETRA Express Maintenance Guide* and DIMETRA embedded help. For more information, contact the authorized Motorola Solutions representative.

2.2 Addressing Notes

SmartPTT Express and DIMETRA Express support IPv4 addresses only. No IPv6 is supported.

If SmartPTT Express will be used as both dispatch and voice logging software, SmartPTT Express Server host must have two IP addresses simultaneously. The first IP address is used to authenticate SmartPTT Express Server as an API-type console in DIMETRA. The second IP address is used to authenticate it as an external voice logger.

2.2.1 Communication with DIMETRA

During the communication with SmartPTT Express Server, DIMETRA Express uses both IP addresses and host names. Using host names cannot be avoided. Therefore, SmartPTT Express Server host must resolve the names to the DIMETRA Server IP. The resolution can be performed in the following ways:

- If DNS Server is used in the Customer Enterprise Network, host names must be added to DNS server.

- If no DNS Server is used, host names must be added to the **<%WINDIR%>\System32\drivers\etc\hosts** file on the SmartPTT Express Server computer.

Up-to-date host names are available in the embedded help of the DIMETRA Network Manager. For details, contact Motorola Solutions representative in your region.

2.2.2 Communication with Dispatch Positions

SmartPTT Express Server identifies Dispatch Positions by their host names only. All the host names must be resolved to the IP addresses of the corresponding dispatch console computers. For more information on the host names resolution, see

2.3 Disk Space Management

SmartPTT Express requires you to plan the free disk space for the following purposes:

- Manage event logging.

- Manage voice record storage.

Event Logging

SmartPTT Express uses Windows logging services to store system events information. It is necessary for troubleshooting. The log is created in the SmartPTT Express Server host after the corresponding SmartPTT Express component is installed. The log name is **G2.SmartPTT System Event Log**, and it is available among the standard Applications and Services Logs.

Initial log size is 1028 KB. You should increase the log size considering 1 GB per week (168 hours) as a reference point. During the configuration, users must configure the log retention policy, backup rules, and more. For details, contact your system administrator.

Voice Record Storage

SmartPTT Express stores voice records in the **C:** drive of the SmartPTT Express Server host. The storage location (including the disk letter) cannot be changed.

By default, the storage increases until more than 80% of the disk space is used. When the value is reached, retention policy the SmartPTT Express Server configuration takes effect and the storage stops growing.

> **Important:**
> Voice record storage does not allocate (reserve) the disk space.

Plan the disk space using ~42 KB per one-minute call as a reference point. Calculate the required disk space using the expected call rate, number of simultaneous voice calls, and the storage retention timeout. For details, contact your system administrator.

2.4 System Roles & Authorization

SmartPTT Express provides the following user roles:

Operators
Able to log on to the Dispatch Position only. Able to load the limited set of layouts, and use provided features only.

Privileged Operators
Receive all the operator permissions. Additionally, able to edit the opened layout by adding / removing tabs, buttons, and tiles. Unable to save changes.

Supervisors
Receive all the privileged operator permissions. Additionally, able to change audio settings, create and edit layouts, save layout changes. Instant Transmit and APB Transmit initiated by supervisors override those initiated by Operators.

Administrators
Receive all the supervisor permissions. Additionally, able to access any layout and talkgroup available in SmartPTT Express. Moreover, administrators are able to authorize in Server Configurator to change SmartPTT Express settings.

Each system role in SmartPTT Express must be associated with the Windows user group. It can be a default user group, or the one created intentionally for SmartPTT Express. If the same group is assigned to multiple system roles, roles with smaller amount of privileges will disappear.

> **Notice:**
> All the user groups must be in the same Active Directory, or in the SmartPTT Express Server computer.

For user authorization, all user groups must contain at least one Windows user account. The account may belong to multiple groups at once. At this, user receives the highest role privileges.

For details on the system roles configuration, see Assigning User Groups to System Roles on page 35.

Required User Account Settings

SmartPTT Express provides the following requirements to Windows user accounts:

- User password must not be empty even if the operating system allows such credentials.

- User accounts must be enabled.

- User password must not be expired at the moment of use.

- Users must not be required to change their passwords at next logon.

2.5 Power-Saving Mode Turnoff

Operating system may initiate a power-saving mode on computers after the inactivity timeout is expired. This practically stops the operating system and, therefore, all of its running services and application.

Computers intended to work as SmartPTT Express hosts, must not enter a power-saving mode. This includes the prevention of the following actions:

- Entering the sleep mode.

- Entering the hibernate mode.

- Turning off automatically.

For details, contact your system administrator.

2.6 Network Time Synchronization

For SmartPTT Express hosts, network time synchronization can be organized for coherent reading and writing events from databases. Since all SmartPTT hosts are Windows computers, a Windows Time Service can be used. For details, see https://docs.microsoft.com/en-us/windows-server/networking/windows-time-service/windows-time-service-top ("Windows Time Service" at *Windows IT Pro Center*).

If DIMETRA Express uses external NTP Server, it is recommended to synchronize all the SmartPTT Express hosts with the same NTP Server. If DIMETRA does not utilize time synchronization, the synchronization can be organized in another way. For details, contact your system administrator.

2.7 Date & Time Format Adjustment

SmartPTT Express uses the Windows long date format and long time format to show date and time in the dedicated panels of Dispatch Positions. Adjust the corresponding date and time formats before you start using Dispatch Positions.

No changes are applied in runtime. If you modify the format while the Dispatch Position is opened, you must reopen it to apply changes.

2.8 Antivirus & Firewall Configuration

Customer antivirus or firewall software, at some configurations, may consider SmartPTT Express a suspicious software. Actions they perform (file and network traffic scanning) may turn SmartPTT Express into the inoperable or low-performance state.

To avoid this, system administrators must perform the following actions:

- Add all the SmartPTT Express executable files to the antivirus ignore list. For details, see Table 4.

- Unlock network traffic for specific port numbers in the firewall software. For details, see Table 5.

Table 4: Root Directories with Executable Files and Subfolders

Host	Default path
SmartPTT Express Server host	C:\Program Files\SmartPTT Express\Server\
SmartPTT Express Server host	C:\Program Files (x86)\SmartPTT Express\Configurator\
Dispatch console computers	C:\Program Files (x86)\SmartPTT Express\Client\

Table 5: Firewall Ignore List for Network Ports

Default port & protocol	Host	Description
54000 (TCP)	SmartPTT Express Server	Control interface between SmartPTT Express Server and Server Configurator. For details, see Re-Configuring SmartPTT Express Server on page 51.
53000 (TCP)	SmartPTT Express Server	Control interface between SmartPTT Express Server and Dispatch Positions. For details, see Configuring SmartPTT Express Server Interfaces on page 36.
55000* (UDP)	SmartPTT Express Server	Voice traffic between SmartPTT Express Server and Dispatch Positions.
7101 (TCP)	SmartPTT Express Server	Control interface between SmartPTT Express Server and DIMETRA. For details, see Adding & Editing DIMETRA Connection on page 41.
49152–49152 (UDP)	SmartPTT Express Server	Real-time voice traffic between SmartPTT Express Server and DIMETRA. For details, see Adding & Editing DIMETRA Connection on page 41.

Default port & protocol	Host	Description
61000–61000 (UDP)	SmartPTT Express Server	Voice records reception from DIMETRA. For details, see Connecting to DIMETRA Voice Logging Service on page 46.
ANY (TCP)	dispatch console	Control interface between SmartPTT Express Server and Dispatch Position.
ANY (UDP)	dispatch console	Voice traffic between SmartPTT Express Server and Dispatch Position.

Ports marked with asterisk (*) must not be changed or cannot be changed.

Chapter 3. Software Installation

SmartPTT Express installation file includes all the necessary software components to install it and provide applications start and usage.

3.1 Installing SmartPTT Express

Follow the procedure to install SmartPTT Express on the computer.

Prerequisites:

- Obtain the required authorization type and the SmartPTT Express Server IP address.

- Make the installation file (default name is **SmartPTTExpressSetup.exe**) available on the SmartPTT host using the local or network storage.

Prerequisites:

1. Start the installation file from the SmartPTT host.
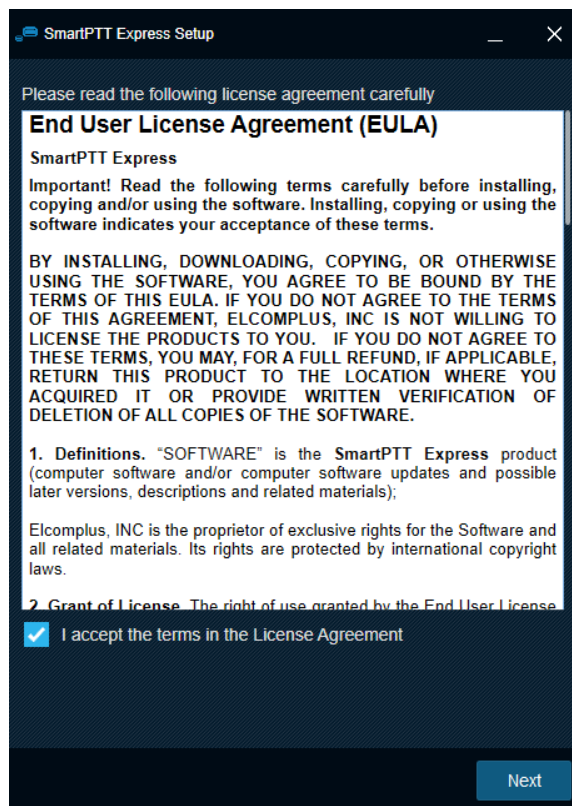   End-User License Agreement (EULA) appears.

Figure 4: EULA in the Installation Program

2. In the window that appears, select ☑ **I accept the terms in the License Agreement**. Then click **Next**.
The list of software components appears.
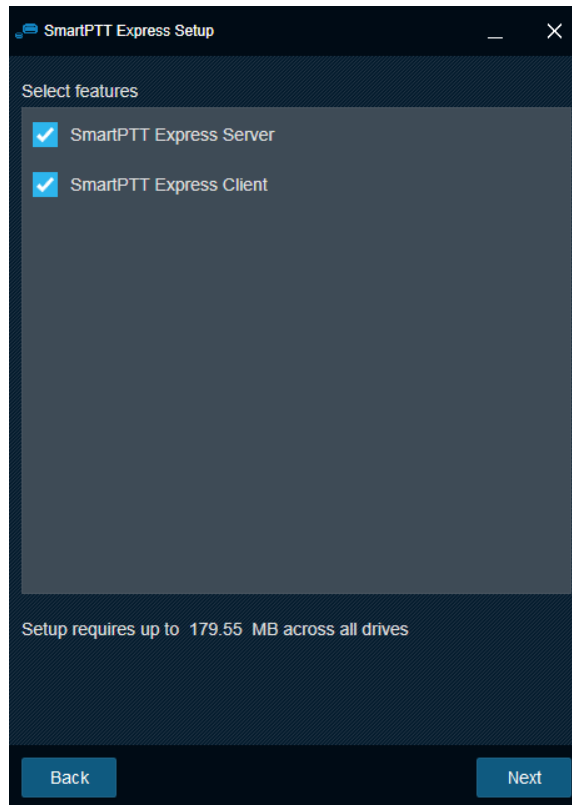

Figure 5: Software Components in the Installation Program

3. In the window that appears, perform the following actions:

To install SmartPTT Express Server,	select ☑ **SmartPTT Express Server**. Otherwise, clear it.
To install Dispatch Position,	select ☑ **SmartPTT Express Client**. Otherwise, clear it.

4. Click **Next**.
Installation paths appear.
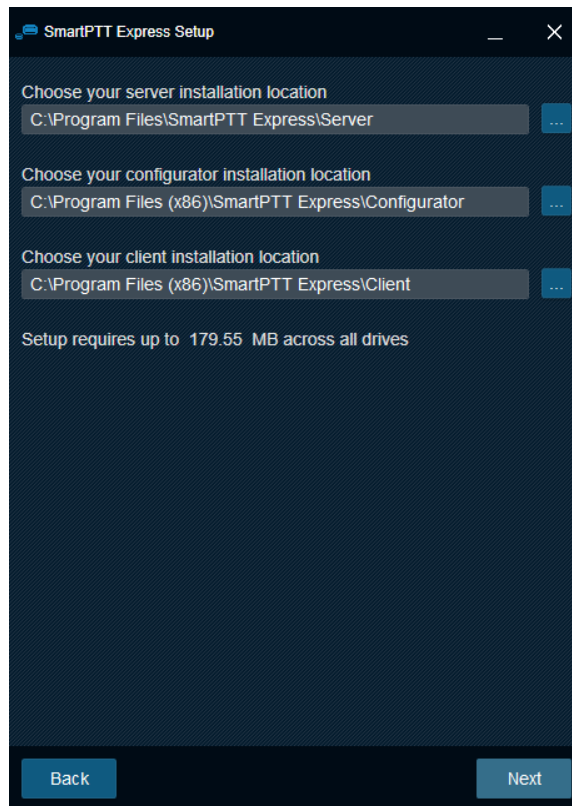
Figure 6: Software Installation Paths

5. (Optional) Change the installation path:

    a. On the right of the text field of the corresponding component, click **Browse** ▫ .

    b. In the dialog box, select the required path. Then click **Open**.
       New path appears in the text field.

Important:

Installation program is unable to create folders that do not exist in the operating system. Do not type the installation paths, only select them.

6. Repeat the previous step for other components. Then click **Next**.
   Initial authentication settings appear.

Figure 7: Authentication Settings
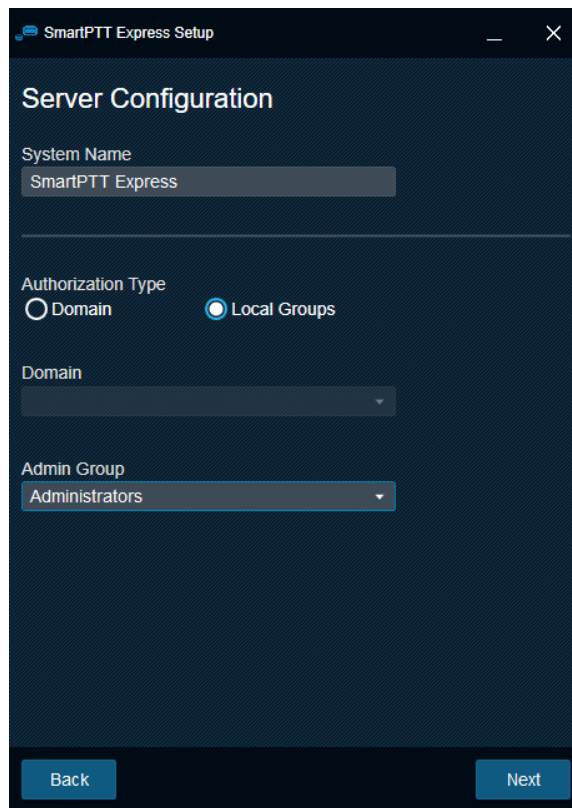
7. In the window that appears, in the **System name** field, enter the name of the SmartPTT Express.

8. Select the user authentication method:

To set the domain authorization, ...	perform the following actions:
	1. Click ⊙ **Domain**.
	2. From the **Domain** list, select the required domain name.
To set the local authorization, ...	click ⊙ **Local Groups**.

9. From the **Admin Group** list, select the Windows group of administrators. Then click **Next**.
   Initial Server Configurator or Dispatch Position settings appear.

10. In the window that appears, perform the following actions:

   a. In the **Server IP Address** field, enter the SmartPTT Express Server IPv4 address in dot-decimal notation.

   b. If the **Port** field appears, enter the TCP port of the SmartPTT Express Server host.
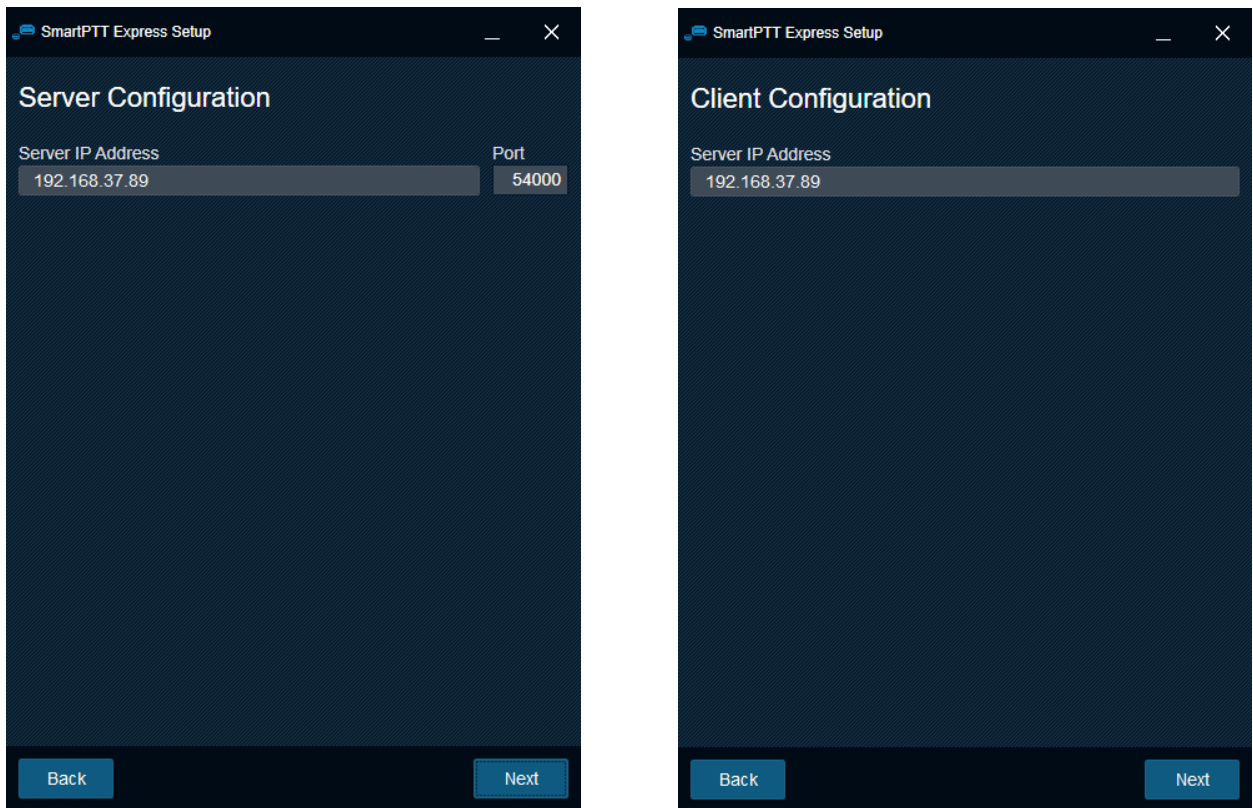
   c. Click **Next**.

Figure 8: Initial Server Configurator and Dispatch PositionSettings

11. Perform one of the following actions:

If the **Client Configuration** window appears,	repeat the previous step.
If another window appears,	process to the next step.

12. In the window that appears, select the required check boxes to add shortcuts to the Windows Desktop. Then click **Next**.
    Installation summary appears.

13. In the window that appears, look through the installation summary info. Then perform one of the following actions:

If the information is correct,	click **Install**.
If incorrect data appears,	perform the following actions:
	1. Click **Back** until the incorrect data fields appear.
	2. Change the data as described above.
	3. Click **Next** until the installation summary appears again.
	4. Repeat the current step.

14. When the installation completes, perform one of the following actions:

To restart the computer immediately,	click **Restart now**.
To delay the computer restart and close the installation program,	click **Restart later**.

> **Important:**
> Do not start the SmartPTT Express software until you restart the computer.

Postrequisites:

Change SmartPTT Express Server Event Log size. For details, see Disk Space Management on page 17.

3.2 Installing Standalone Dispatch Position

Follow the procedure to install Dispatch Position on the dedicated computer. The procedure is the shortened text-only version of the full installation procedure. For details, see Installing SmartPTT Express on page 22.

Prerequisites:

- Obtain the SmartPTT Express Server host IP.

- Make the installation file (default name is **SmartPTTExpressSetup.exe**) available to start from the dispatch console computer.

Procedure:

1. Start the installation file.
   End-User License Agreement (EULA) appears (see Figure 4 on page 22).

2. In the window that appears, select ☑ **I accept the terms in the License Agreement**. Then click **Next**.
   List of software components appears (Figure 5 on page 23).

3. In the window that appears, perform the following actions:

   a. Clear ☐ **SmartPTT Express Server**.

   b. Select ☑ **SmartPTT Express Client**.

   c. Click **Next**.
      Installation path appears.

4. (Optional) Change the installation path:

   a. On the right of the text field with the default path, click **Browse** ▪ .

   b. In the dialog box, select the required path. Then click **Open**.
      New path appears in the text field.

5. Click **Next**.
    SmartPTT Express Server IP address input appears (see Figure 8 on page 26).

6. In the window that appears, in the **Server IP Address** field, enter the SmartPTT Express Server IP address.
    Shortcut creation settings appear.

7. In the window that appears, select the check box to add a shortcut to the Windows Desktop. Then click **Next**.
    Installation summary appears.

8. In the window that appears, look through the installation summary info. Click **Install**.

9. When the installation completes, perform one of the following actions:

To restart the computer immediately,	click **Restart now**.
To delay the computer restart and close the installation program,	click **Restart later**.

Important:
Do not start Dispatch Position until you restart the computer.

3.3 Modification of the Installed Software

If you start the installation file on the computer with the installed SmartPTT Express, the application offers software modification options. This includes the following:

Modify
The button starts the procedure similar to the installation. During the procedure, user is able to install the component that is currently absent on the computer or uninstall the one that is no longer required on the computer.

Repair
The button starts software installation repairing. This includes binary and executable file updates, registry entries checkout, and other actions.

Uninstall
The button starts the uninstallation procedure that deletes service files (if required). For details, see Uninstalling Software on page 52.

Configure
The button starts the modification of the SmartPTT Express Server authentication and the SmartPTT Express Server interface update. For details, see Re-Configuring SmartPTT Express Server on page 51.

Figure 9: Installed Software Modification Options

Chapter 4. SmartPTT Express Server Configuration

SmartPTT Express configuration is performed using the Server Configurator application. After the configuration completes, Dispatch Position will be able to successfully authorize its users.

4.1 Logging on to the Server Configurator

Follow the procedure to log on to the Server Configurator and access SmartPTT Express Server settings.

Important:
After you log on to the Server Configurator you must finish the SmartPTT Express Server configuration. Otherwise, you will be unable to save any other changes you require.

Prerequisites:

- Obtain administrator credentials (login and password). For details, see System Roles & Authorization on page 18.

- Obtain the SmartPTT Express Server IP address and TCP port. For details, see Installing SmartPTT Express on page 22.

- Start SmartPTT Express Server. For details, see SmartPTT Express Server Service Control on page 32.

Procedure:

1. Start Server Configurator.
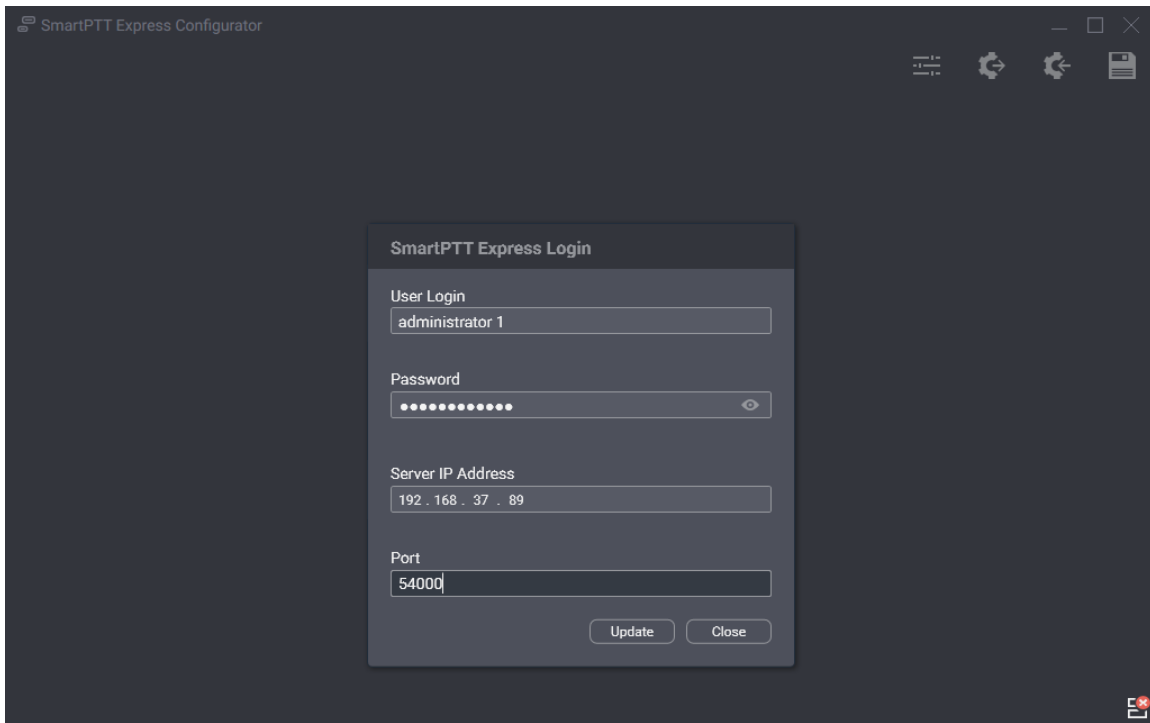   Main window of the Server Configurator appears; the **SmartPTT Express Login** window appears.

Figure 10: Logging on to Server Configurator

2. If the **Disconnected** ⬛ icon appears in the Status Bar of the main window of the Server Configurator, perform the following actions:

   a. In the **SmartPTT Express Login** window, click **Server Connection**.

   b. In the **Server IP or Host Name** field, type the SmartPTT Express Server IPv4 address in dot-decimal notation.

   c. In the **Port** field, type the TCP port number.

   d. Click **Update**.
   The **Connected** ⬛ icon must appear in the Status Bar.

Notice:

   If the **Connected** ⬛ icon does not appear, modify the SmartPTT Express Server installation. For details, see Modification of the Installed Software on page 28.

3. In the **User name / ID** field, type the user login.

4. In the **Password** field, type the user password.

5. Click **Log In**.
   The **SmartPTT Express Login** window disappears; SmartPTT Express Server settings appear in the main window of the Server Configurator.

Postrequisites:

If you log on to Server Configurator for the first time, perform the first start configuration. For details, see First-Start Configuration on page 34.

4.2 Changing Language

Follow the procedure to change the language in Server Configurator.

Prerequisites:

Log on to the Server Configurator.

Procedure:

1. In Server Configurator, on the Toolbar, click **Configurator settings** 🖵 .
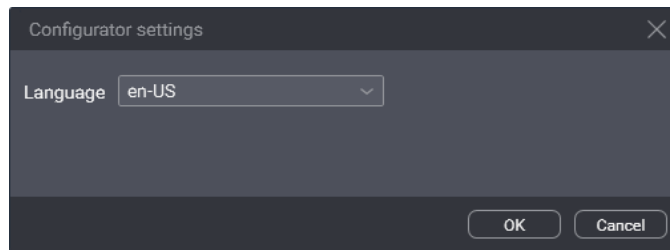   The **Configurator settings** window appears.

Figure 11: Server Configurator Language Selection

2. In the window that appears, from the **Language** list, select the required language by its IETF tag. Then click **OK**.

3. To apply changes immediately, reopen Server Configurator.

4.3 SmartPTT Express Server Service Control

In Windows, SmartPTT Express Server is a regular Windows service that can be started, stopped, and restarted. Started service is required to provide the configuration and dispatching. Restart may require to apply some configuration changes.

To control the service, users must perform the following actions:

- Use the **Stop SmartPTT Express Server** and **Start SmartPTT Express Server** shortcuts in the **Start** menu.

- Apply shortcut menu options to the **SmartPTT Express Server** service (available in the **Services** window and the **Services** tab of the **Task Manager** application).

- Apply `net start` and `net stop` commands to the **SmartPTT Express Server** service.

- User other Windows service management tools and approaches.

4.4 Generating Hardware ID

Follow the procedure to generate the Hardware ID and provide it to Elcomplus.

Prerequisites:

- Install SmartPTT Express Server.

- Log on to the Server Configurator.

Procedure:

1. In Server Configurator, click **Licenses**.
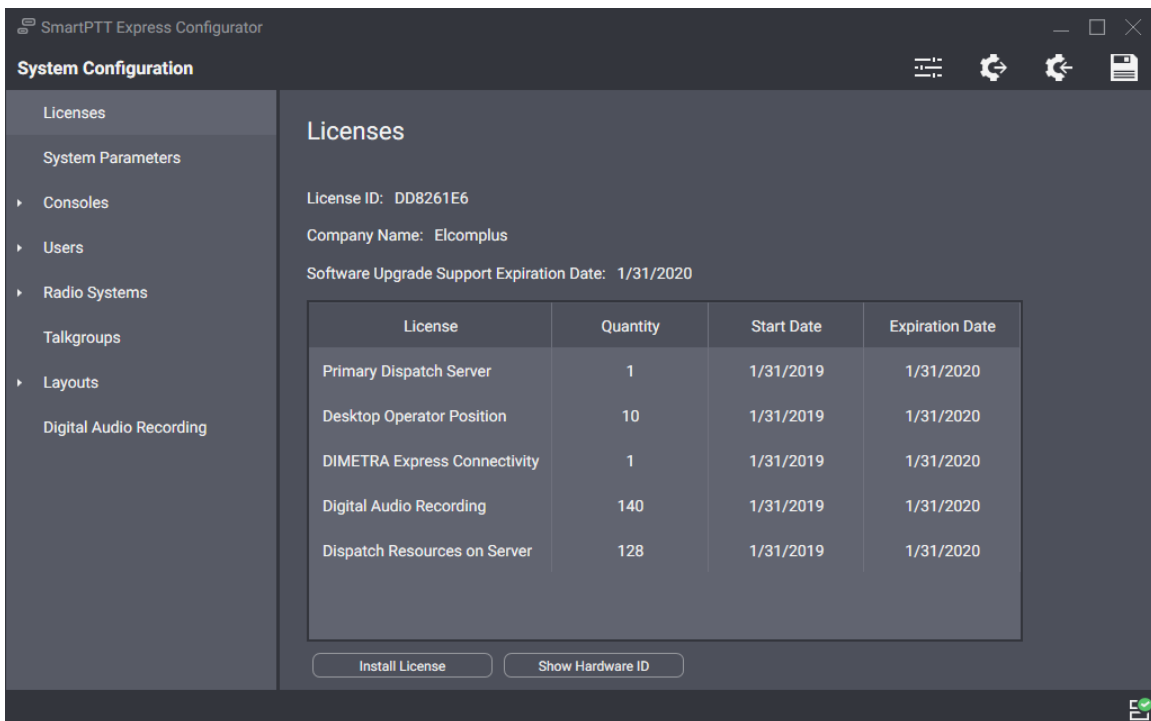   License parameters appear.

Figure 12: Accessing Licensing Settings

2. In the right pane, at the bottom of the table, click **Show Hardware ID**.
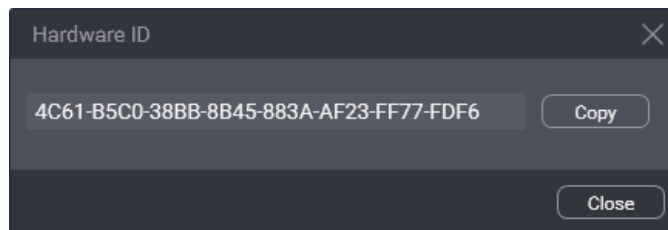   The **Hardware ID** window appears.

Figure 13: Viewing Hardware ID

3. In the window that appears, click **Copy** to copy the Hardware ID code to clipboard.

4. In the window, click **Close**.

5. Deliver the Hardware ID code to the Elcomplus representative. If demanded, add another relevant information.

Postrequisites:

Install the license file after you receive it. For details, see Installing License on page 34.

4.5 First-Start Configuration

After the license file reception, the following actions must be performed:

- Install the license file. For details, see Installing License on page 34.

- Select user groups for supervisors, operators, and privileged operators. For details, see Assigning User Groups to System Roles on page 35.

- Determine SmartPTT Express Server addresses and ports. For details, see Configuring SmartPTT Express Server Interfaces on page 36.

Until configuration changes are completed, SmartPTT Express Server changes cannot be saved.

4.5.1 Installing License

Follow the procedure to install the license file and unlock SmartPTT Express features.

Prerequisites:

- Receive the license file from Elcomplus. Copy it to the SmartPTT Express Server computer.

- Log on to the Server Configurator.

Procedure:

1. In Server Configurator, click **Licenses**.
   Licensing parameters appear in the right pane (see Figure 12 on page 33).

2. In the right pane, click **Install License**.
   The dialog window appears.

3. In the dialog window, select the received .spttlx file. Then click **Open**.

4. In the **Licenses** pane, view the table with licenses. Ensure that the information is correct.

Postrequisites:

- Assign user groups to system roles. For details, see Assigning User Groups to System Roles on page 35.

- Configure SmartPTT Express Server interfaces. For details, see Configuring SmartPTT Express Server Interfaces on page 36.

4.5.2 Assigning User Groups to System Roles

Follow the procedure to change the authentication settings in SmartPTT Express.

Prerequisites:

- Obtain user group names for all system roles.

- Log on to the Server Configurator.

Procedure:

1. In Server Configurator, in the left pane, click **System Parameters**.
   System parameters appear in the right pane.

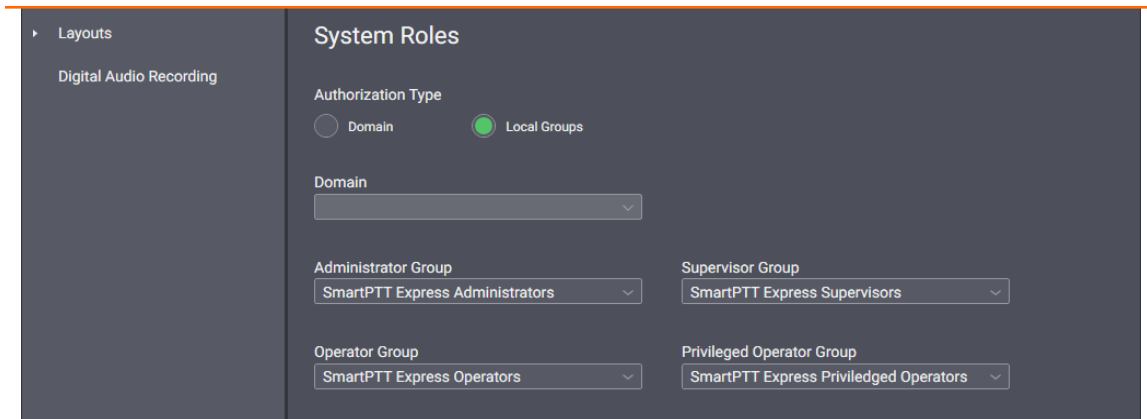Figure 14: System Roles Configuration in Server Configurator

2. In the right pane, in the **System Roles** area, change the authentication method:

To set the domain authorization,	… perform the following actions: 1. Click ⦿ **Domain**. 2. From the **Domain** list, select the required domain name.
To set the local authorization,	… click ⦿ **Local Groups**.

3. In the same area, set the required user groups:

- From the **Supervisor** list, select the user group for supervisors.

- From the **Operator** list, select the user group for regular operators.

- From the **Privileged Operator** list, select the user group for privileged operators.

- (Optional) From the **Administrator** list, select the user group for administrators.

4. Perform one of the following actions:

If you complete the first-start configuration,	in the Toolbar, click **Save configuration** 💾 .
If you didn't complete the first-start configuration,	configure SmartPTT Express Server interfaces. For details, see Configuring SmartPTT Express Server Interfaces on page 36.
If you do not perform the first-start configuration,	in the Toolbar, click **Save configuration** 💾 .

4.5.3 Configuring SmartPTT Express Server Interfaces

Follow the procedure to configure SmartPTT Express Server communication interfaces with dispatch consoles.

Prerequisites:

- Obtain the SmartPTT Express Server IP address, TCP and the corresponding UDP ports.

- Log on to the Server Configurator.

Procedure:

1. In Server Configurator, in the left pane, click **System Parameters**.
   System parameters appear in the right pane.
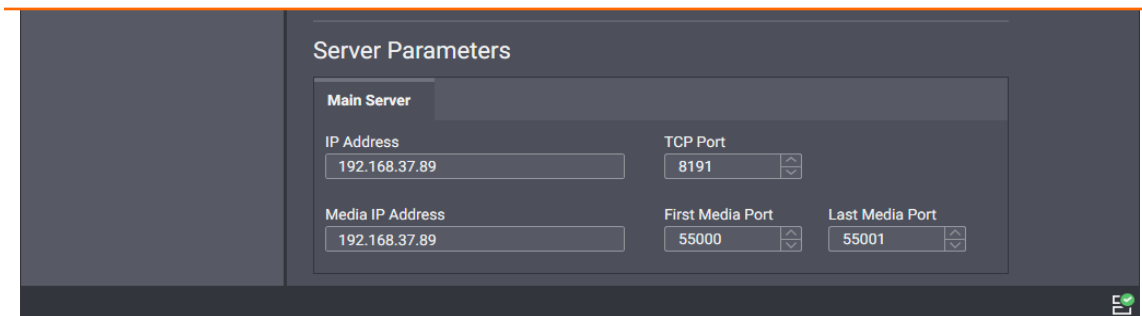
Figure 15: Interfaces Configuration in Server Configurator

2. In the right pane, in the **Main Server** area, in the **IP Address** field, type the SmartPTT Express Server IPv4 address in dot-decimal notation.

3. In the **Media IP** field, type the same address again.

4. In the **TCP Port** field, enter the unlocked TCP port number. For details, see Table 5: Firewall Ignore List for Network Ports on page 20.

5. Leave values in the **First Media Port** and **Last Media Port** fields unchanged.

6. Perform one of the following actions:

If you complete the first-start configuration,	in the Toolbar, click **Save configuration** 🖫 .
If you didn't complete the first-start configuration,	edit system roles. For details, see Assigning User Groups to System Roles on page 35.
If you do not perform the first-start configuration,	in the Toolbar, click **Save configuration** 🖫 .

Postrequisites:

To apply changes immediately, restart the SmartPTT Express Server. For details, see SmartPTT Express Server Service Control on page 32.

4.5.4 Editing Miscellaneous Settings

Follow the procedure to edit miscellaneous SmartPTT Express Server settings.

Prerequisites:

Log on to the Server Configurator.

Procedure:

1. In Server Configurator, in the left pane, click **System Parameters**.
   System parameters appear in the right pane.
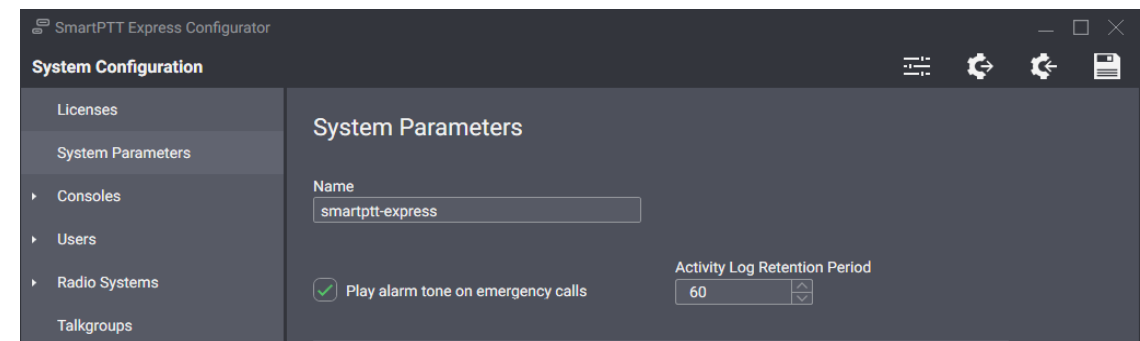
Figure 16: Miscellaneous SmartPTT Express Server Settings

2. In the right pane, in the **System Parameters** area, perform the following actions:

To play alarm tone in Dispatch Position each time emergency call triggers emergency state,	select ☑ **Play alarm tone on emergency calls**.
To turn off the alarm tone for emergency calls,	clear ☐ **Play alarm tone on emergency calls**.

3. In the **Activity Log Retention Period** field, enter the retention period (in minutes) for activity log entries.

4.   (Optional) In the **Name** field, type the SmartPTT Express name.

5.   In the Toolbar, click **Save configuration** 🖫 .

4.6 Adding & Editing Consoles

Follow the procedure to add a new or edit the existing dispatch console in Server Configurator.

Prerequisites:

- Obtain the host name/computer name/system name of the dispatch console computer.

- Log on to the Server Configurator.

Procedure:

1.   In Server Configurator, in the left pane, expand **Consoles**.
     List of existing consoles and the **Add new** button appear under the expanded control.
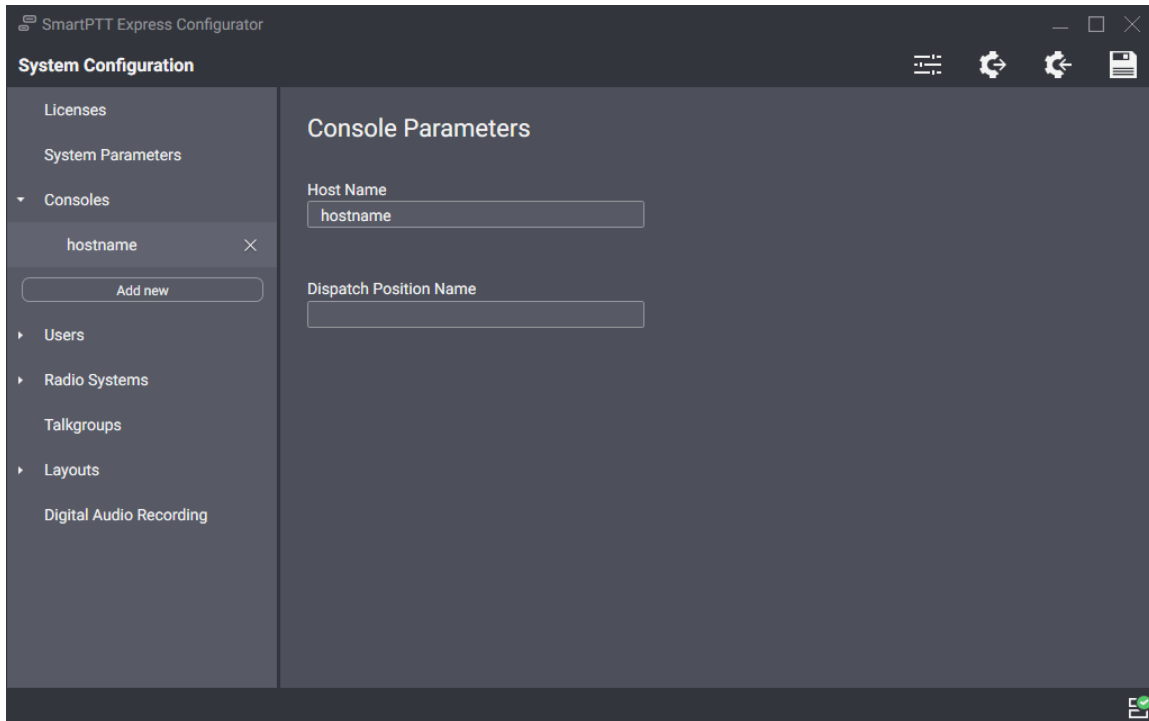
Figure 17: Console Configuration in Server Configurator

2.   Perform one of the following actions:

To add a new console,	click **Add new**.
To edit the existing console settings,	click the required console.

3.   In the right pane, in the **Host Name** field, type the host name (letter case is irrelevant).

4. (Optional) In the **Dispatch Position Name** field, type the console name that will appear in Dispatch Position.

5. In the Toolbar, click **Save configuration** 💾 .

Postrequisites:

- Repeat the procedure to add other consoles.

- Add console host names and the corresponding IP addresses to the DNS Server configuration or the **hosts** file of the SmartPTT Express Server computer.

- To apply changes immediately, restart the SmartPTT Express Server. For details, see SmartPTT Express Server Service Control on page 32.

4.7 Adding & Editing Users

Follow the procedure to add and/or edit SmartPTT Express users.

Prerequisites:

- Obtain logins of the created Windows users. For details, see System Roles & Authorization on page 18.

- Log on to the Server Configurator.

Procedure:

1. In Server Configurator, in the left pane, expand **Users**.
   List of users and the **Add new** button appear under the expanded control.
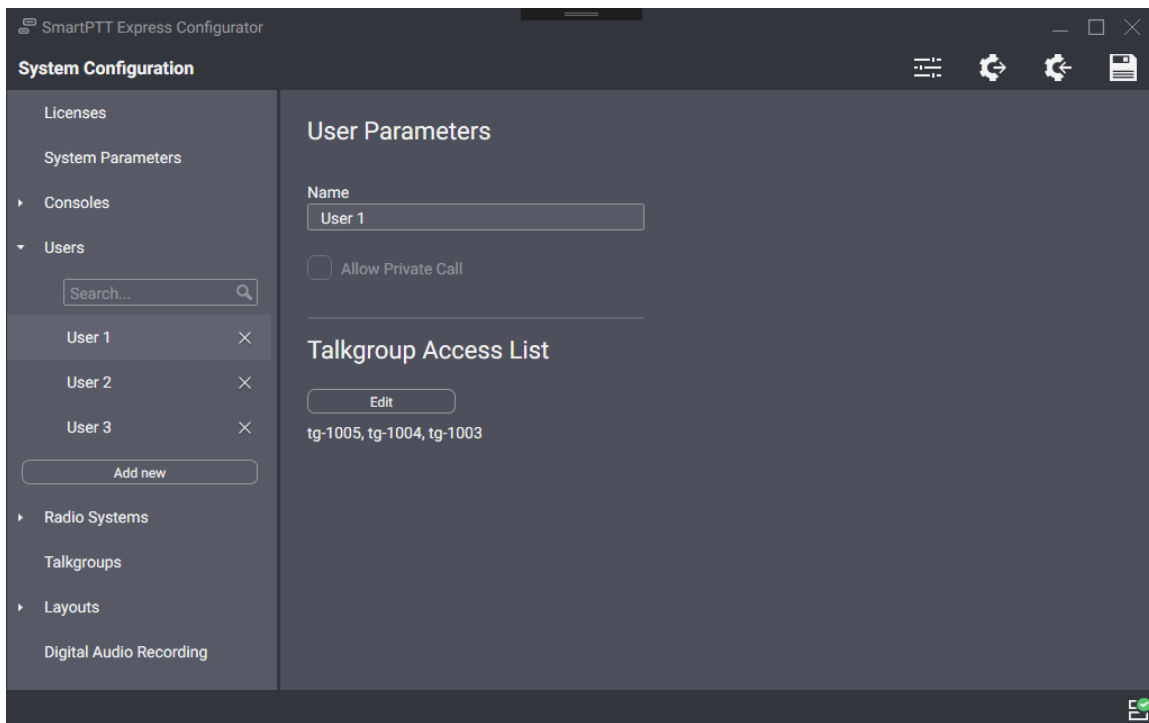
Figure 18: User Account Configuration in Server Configurator

2. Perform one of the following actions:

To add a new user,	click **Add new**.
To edit the existing user settings,	click the required user.

3. In the right pane, in the **Name** field, enter the corresponding Windows user login.

4. If available, configure the private call permissions:

To allow private calls for the user,	select ☑ **Allow Private Call**.
To deny private calls reception and initiation to the user,	clear ☐ **Allow Private Call**.

Important:
The ☑ **Allow Private Call** parameter becomes available after SmartPTT Express Server synchronizes with the DIMETRA Express Server.

5. In the Toolbar, click **Save configuration** 💾 .

Postrequisites:
Repeat the procedure to add other users.

4.8 DIMETRA Connection

Connection to the DIMETRA Express radio system includes the following mandatory actions:

- Configuration of SmartPTT Express Server interfaces. For details, see Adding & Editing DIMETRA Connection on page 41.

- Account synchronization. For details, see Synchronizing DIMETRA and SmartPTT User Accounts on page 42.

4.8.1 Adding & Editing DIMETRA Connection

Follow the procedure to add or edit the connection to the DIMETRA Express Server.

Prerequisites:

- Add console users to Server Configurator. For details, see Adding & Editing Users on page 39.

- Obtain DIMETRA Express IP address and port number for API-type consoles. For details, see DIMETRA Configuration on page 16.

Procedure:

1. In Server Configurator, in the left pane, expand **Radio Systems**.

2. Perform one of the following actions:

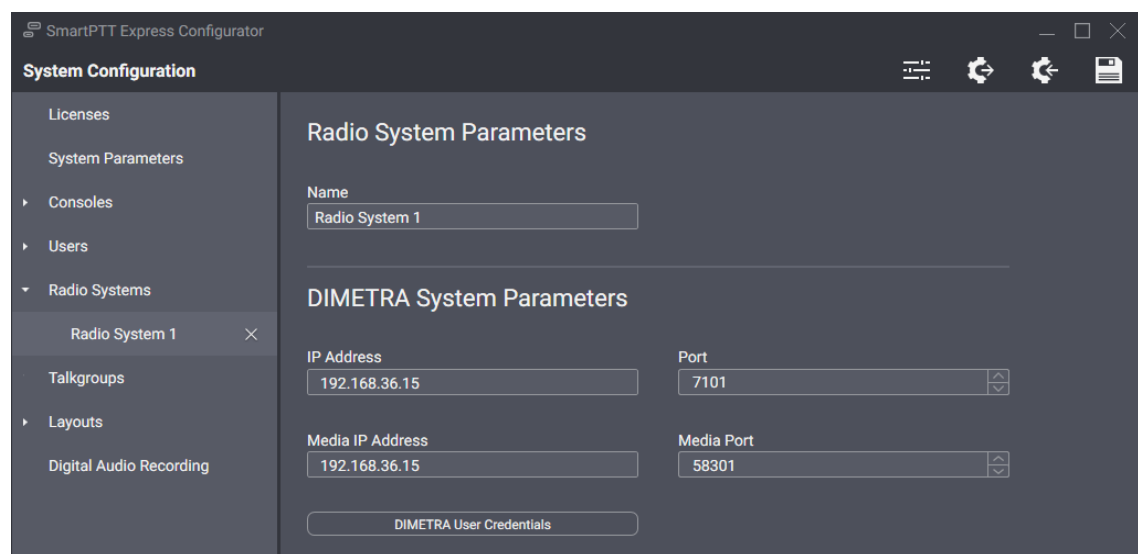|	
To add a radio system,	click **Add new**.
To edit the connection settings,	click the subnode.

Figure 19: DIMETRA Interface Connection in Server Configurator

3. In the right pane, in the **Name** field, type the radio system name.

4. In the **DIMETRA System Parameters** area, enter DIMETRA interface parameters:

   a. In the **IP Address** field, type the DIMETRA Express IP.

   b. In the **Media IP Address** field, type the same address again.

   c. In the **Port** field, type the Corba TCP Port Number.

   d. Leave the value in the **Media Port** field unchanged.

5. Synchronize DIMETRA and SmartPTT user accounts. For details, see Synchronizing DIMETRA and SmartPTT User Accounts on page 42.

6. In the **Server Parameters** area, enter the SmartPTT Express Server interface parameters:

   a. In the **Local IP Address** filed, enter the SmartPTT Express Server IPv4 address in dot-decimal notation.

   b. In the **Local Media IP Address** field, type the same address again.

   c. In the **Local Port** field, type the Corba TCP Port Number.

   d. Leave values in the **Local Media Ports** fields unchanged.

7. In the **System Description** area, click the **Sync** button.
   The connection and synchronization with DIMETRA Express Server starts; when completed, the corresponding dialog box appears.

8. In the Toolbar, click **Save configuration** 💾 .

Postrequisites:

- Allow private call to SmartPTT Express users. For details, see Adding & Editing Users on page 39.

- Configure talkgroup availability to SmartPTT Express users. For details, see Managing Talkgroup Access on page 43.

- To apply changes immediately, restart the SmartPTT Express Server. For details, see SmartPTT Express Server Service Control on page 32.

4.8.2 Synchronizing DIMETRA and SmartPTT User Accounts

Follow the procedure to synchronize DIMETRA user accounts with Dispatch Position user accounts. Consider each DIMETRA user as an active Dispatch Position user.

Prerequisites:

- Obtain DIMETRA user credentials. For details, see DIMETRA Configuration on page 16.

- In Server Configurator, access the radio system settings.

Procedure:

1. In Server Configurator, in the right pane of the radio system, click **DIMETRA User Credentials**. The **DIMETRA User Credentials** window appears.
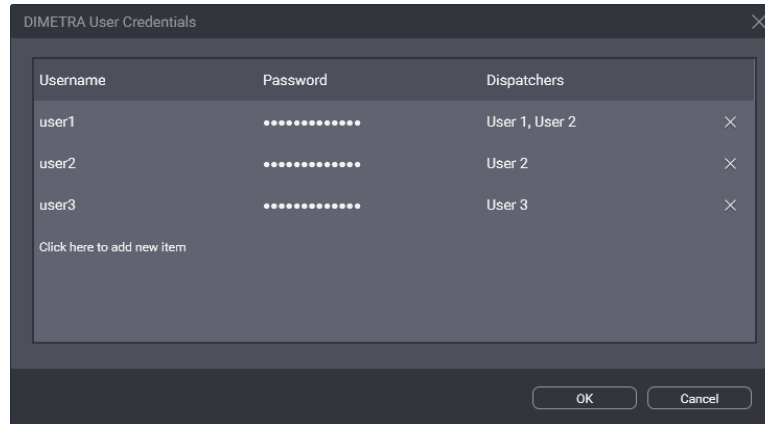

Figure 20: User Accounts Synchronization in Server Configurator

2. In the window that appears, process an account association:

   a. Perform one of the following actions:

To add a new association,	click the **Click here to add new item** entry at the bottom of the table.
To edit the existing association,	double-click the required entry.

   b. In the entry, in the **Username** column, type the console user name exactly as in DIMETRA. You can use the same name only once.

   c. In the **Password** column, type the user password exactly as in DIMETRA.

   d. (Optional) In the same column, press and hold **View Password** ◉ to show password symbols and check its correctness.

   e. In the **Dispatchers** column, from the list, select the one or multiple Dispatch Position users.

   f. In the right part of the entry, click **OK**.

3. Repeat the previous step for other accounts.

4. In the **DIMETRA User Credentials** window, click **OK**.

5. In the Toolbar, click **Save configuration** 🖫 .

4.8.3 Managing Talkgroup Access

Follow the procedure to manage talkgroup availability to users.

Prerequisites:

Synchronize SmartPTT Express Server with DIMETRA Express Server. For details, see Adding & Editing DIMETRA Connection on page 41.

Procedure:

1. In Server Configurator, in the left pane, expand **Users**, and then select the required user.
    User settings appear in the right pane (see Figure 18).

2. In the right pane, in the **Talkgroup Access List** area, click **Edit**.
    The **Talkgroup Access Assignment** window appears.
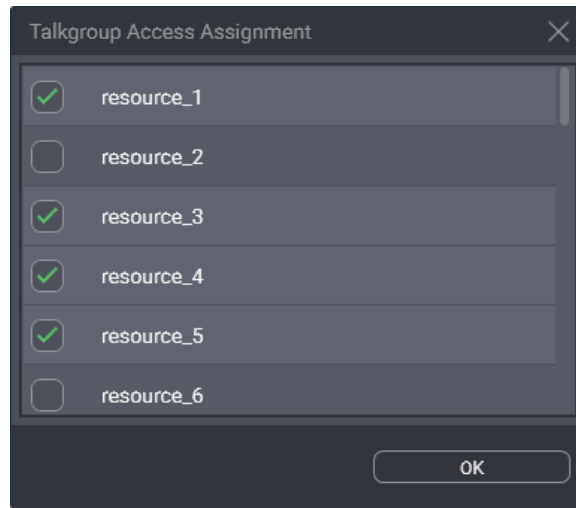
Figure 21: Talkgroup Access Configuration

3. In the window that appears, perform the following actions:

To grant access to the talkgroups,	select check boxes which names correspond to the allowed talk-groups.
To deny access to the talkgroups,	clear check boxes which names correspond the denied talk-groups.

4. In the Toolbar, click **Save configuration** 🖫 .

Postrequisites:

Repeat the procedure to configure access settings for other users.

4.9 Configuring Talkgroup Availability

Follow the procedure to edit the available talkgroup settings.

Prerequisites:

Synchronize with DIMETRA Express. For details, see [Adding & Editing DIMETRA Connection](#) on page 41.

Procedure:

1. In Server Configurator, in the left pane, click **Talkgroups**.
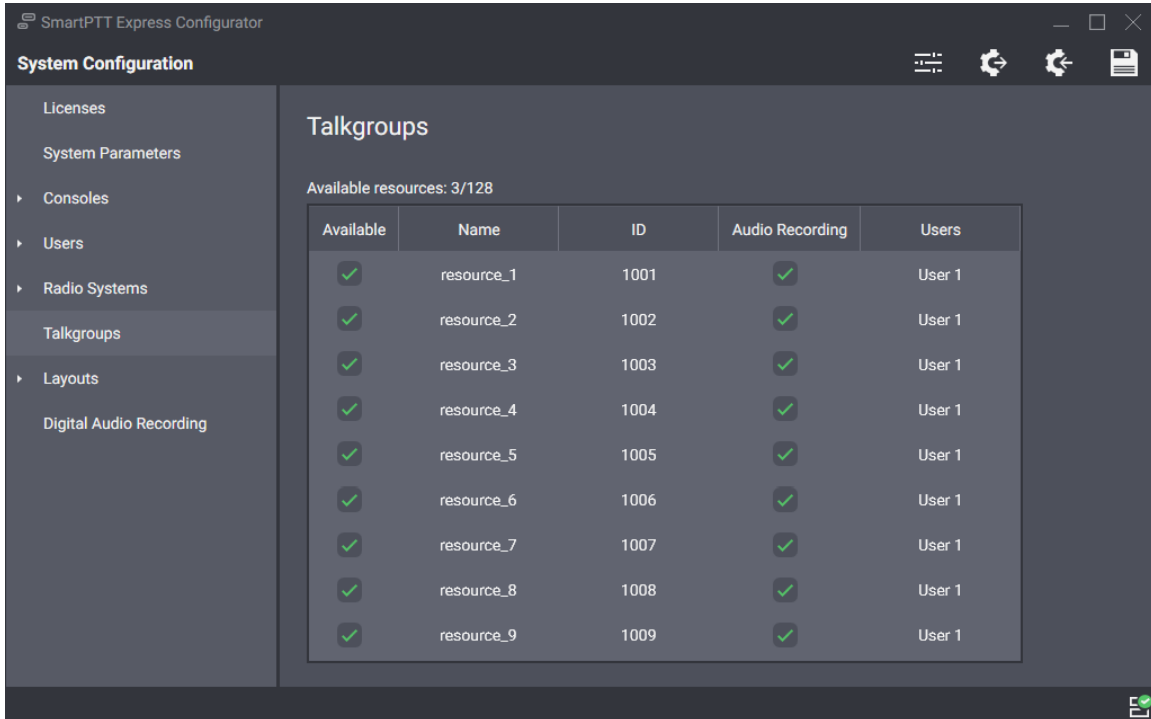
Figure 22: Talkgroup Availability Configuration

2. In the right pane, in the table, for each of the required talkgroup, perform the following actions:

   a. In the **Name** and/or **ID** column, view the talkgroup name and/or ID.

   b. In the **Available** column, select the check box to make the talkgroup available in SmartPTT Express.

   c. In the **Audio Recording** column, select the check box to record the group calls.

   d. In the **Users** column, click the cell.
      User list appears.

   e. In the user list, perform the following actions:

To add a user,	select his/her login in the list.
To remove the user,	click his/her login in the list.

3. Repeat the previous step for other required talkgroups.

4. In the Toolbar, click **Save configuration** 🖫 .

Postrequisites:

To apply changes immediately, restart the SmartPTT Express Server. For details, see SmartPTT Express Server Service Control on page 32.

4.10 Voice Logging Configuration

Voice logging configuration in SmartPTT Express includes the following mandatory actions:

- Configuration of the additional DIMETRA connection. For details, see Connecting to DIMETRA Voice Logging Service on page 46.

- Record storage configuration. For details, see Configuring Voice Record Storage on page 47.

4.10.1 Connecting to DIMETRA Voice Logging Service

Follow the procedure to connect to the DIMETRA Voice Logger.

Prerequisites:

Obtain the following parameters from DIMETRA:

- DIMETRA Server IP and TCP port for external voice loggers.

- Logging client credentials

- DIMETRA user IDs.

For details, see DIMETRA Configuration on page 16.

Procedure:

1. In Server Configurator, in the left pane, expand **Radio Systems**, and then select the subnode.
   Radio system settings appear.

2. In the right pane, in the **Digital Audio Recording Parameters** area, select ☑ **Enable Audio Recording**.
   Audio recording settings appear.

Figure 23: Voice Logging Configuration

3. In the **Local IP Address** field, enter the SmartPTT Express Server IP address configured as the external voice logger in DIMETRA.

4. In the **Local Media IP Address** field, enter the same address again.

5. In the **Local Port** field, enter the Corba TCP Port Number.

6. Leave values in the **Local Media Ports** fields unchanged.

7. In the **Username** field, type the logging client name.

8. In the **Password** field, type the logging client password.

9. In the **Radio IDs** field, enter Radio User IDs that were configured in DIMETRA and whose transmissions must be logged by DIMETRA. Only IDs available in DIMETRA configuration are allowed.

Important:

If a private call is initiated between users whose IDs are in the field, transmission records will be duplicated.

10. In the Toolbar, click **Save configuration** 🖫 .

4.10.2 Configuring Voice Record Storage

Follow the procedure to configure voice record storage in the SmartPTT Express Server host.

Prerequisites:

Determine storage size, retention period and overwrite/overflow policy. For details, see Disk Space Management on page 17.

Procedure:

1. In Server Configurator, in the left pane, click **Digital Audio Recording**.
Storage settings appear.
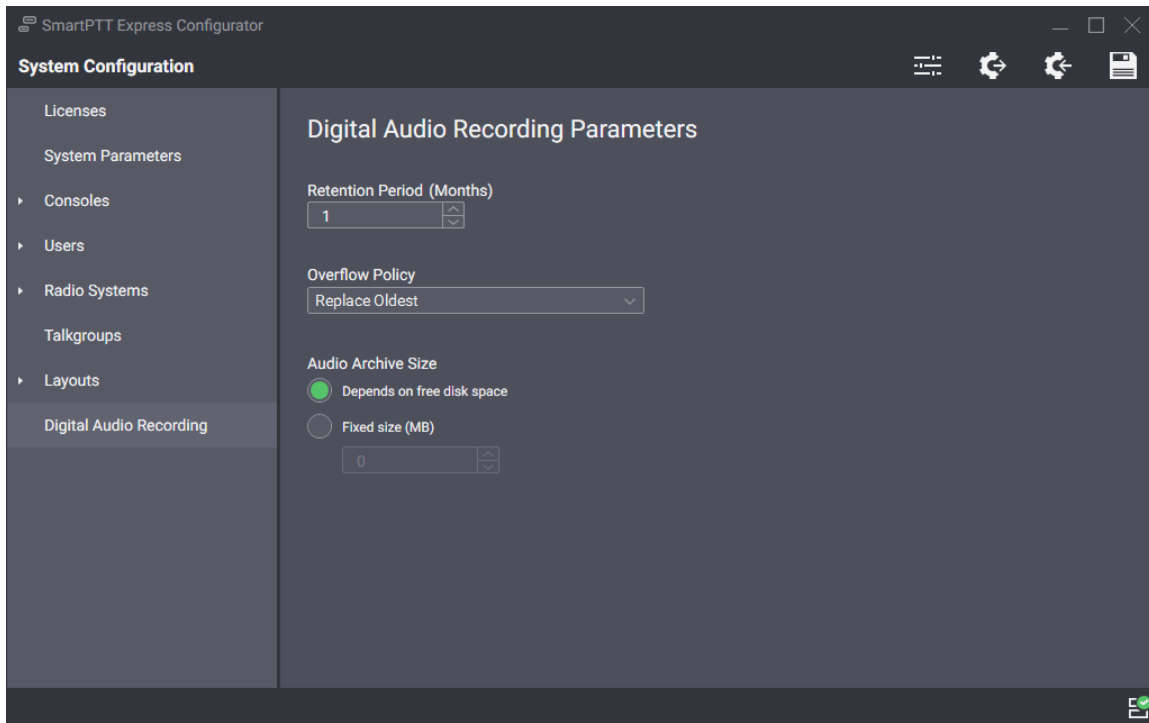
Figure 24: Audio Recording Configuration

2. In the right pane, in the **Retention Period** field, enter the duration of voice transmission storing in the Audio Archive until they are deleted.

> **Notice:**
> If SmartPTT Express Server is not restarted, changes applied on the next calendar day.

3. From the **Overflow Policy** list, select the required option:

To stop adding new voice records in order to keep older records in the archive until they are deleted,	selects **Discard New**.
To start deleting older records in order to add new records in the archive,	selects **Replace Oldest**.

4. Configure the size of the audio archive:

To set the dynamic size of the audio archive (grows until 20% of the disk space remains free),	click ⦿ **Depends on free disk space**.
To fix the Audio Archive size,	perform the following actions:
	1. Click ⦿ **Fixed size**.
	2. In the **Fixed size** field, enter the audio archive

<hr>

size in megabytes.

<hr>

> **Notice:**
> SmartPTT Express Server checks the disk space each 30 minutes and reduces the database size if it consumes extra space.

5. In the Toolbar, click **Save configuration** 🖫 .

Postrequisites:

To avoid delays in changes application, restart the SmartPTT Express Server. For details, see SmartPTT Express Server Service Control on page 32.

4.11 Exporting Configurations

Follow the procedure to export the SmartPTT Express Server configuration to the file. You can use the file as a backup..

Prerequisites:
Log on to the Server Configurator.

Procedure:

1. In Server Configurator, in the Toolbar, click **Backup configuration** ↻ .
   Dialog box appears.

2. In the dialog box, specify the path to the file.

3. In the **File Name** field, enter the name of the exported file. Then click **Save**.

Postrequisites:
Ensure that the exported file is stored on another physical disk.

Chapter 5. Maintenance & Re-Installation

SmartPTT Express maintenance includes the small set of actions.

5.1 Editing Layout Availability Settings

Follow the procedure to edit list of Dispatch Position users that must be able to open and/or edit layouts.

Prerequisites:

Create and configure layouts using Dispatch Position. For details, see Chapter 2 "Layout Configuration" in *SmartPTT Express User Guide* .

Procedure:

1. In Server Configurator, in the left pane, expand **Layouts**, and then click the required layout.
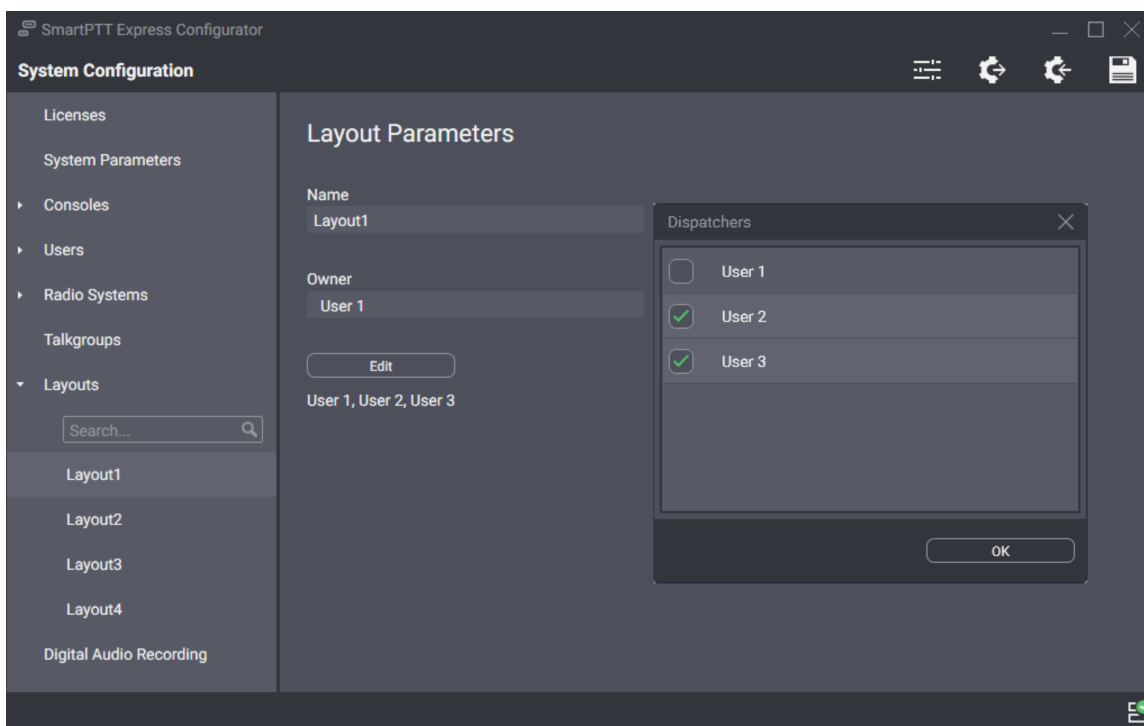   Layout settings appear in the right pane.

Figure 25: Layout Settings Modification

2. In the right pane, click **Edit**.
   The **Dispatchers** window appears (see Figure 25).

3. In the window that appears, perform the following actions:

To make the layout available to Dispatch Position users,	select check boxes with the corresponding names.
To make the layout unavailable to Dispatch Position users,	clear check boxes with the corresponding names.

4. In the **Dispatchers** window, click **OK** to end the editing.

5. (Optional) View the additional information:

    a. In the **Name** field, view the current layout name.

    b. In the **Owner** field, view the supervisor name who created the layout.

> **Notice:**
> Layout owner will keep the access to layout even if the corresponding check box is cleared in the **Dispatchers** window.

6. In the Toolbar, click **Save configuration** 🖫 .

5.2 Importing Configurations

Follow the procedure to import/restore the SmartPTT Express Server configuration.

Prerequisites:

- Ensure that you have the valid configuration (.bkp) file.

- Log on to the Server Configurator.

Procedure:

1. In Server Configurator, in the Toolbar, click **Restore configuration** ↺ .
    Dialog box appears.

2. In the dialog box, specify the required file. Then click **Open**.

3. In the Toolbar, click **Save configuration** 🖫 .

Postrequisites:

To apply changes immediately, restart the SmartPTT Express Server. For details, see SmartPTT Express Server Service Control on page 32.

5.3 Re-Configuring SmartPTT Express Server

Follow the procedure to edit the authorization type and Server Configurator connection settings.

Prerequisites:

- Make the installation file available to start from the SmartPTT Express Server computer.

- Determine a new authorization type, SmartPTT Express Server IP address and TCP port.

Procedure:

1. Start the installation file.
   The **SmartPTT Express Setup** window appears.

2. In the window that appears, click **Configure**.
   The **Server Configuration** window appears (see Figure 7 on page 25).

3. In the window that appears, in the **Authorization Type** area, perform one of the following actions:

To set the domain authorization,	perform the following actions:
	1. Click ⊙ **Domain**.
	2. From the **Domain** list, select the required domain name.
To set the local authorization,	click ⊙ **Local Groups**.

4. (Optional) In the **System Name** field, enter the name. Then click **Next**.
   SmartPTT Express Server connection parameters appear (see Figure 8 on page 26).

5. In the window that appears, perform the following actions:

   a. In the **Server IP Address** field, enter the SmartPTT Express Server IP address.

   b. If appears, in the **Port** field, enter the free TCP port number.

   c. Click **Next**.
      Summary information appears.

6. In the window that appears, view changes. Then click **Configure**.
   Re-configuration starts.

7. When the re-configuration is complete, in the window, click **Close**.

5.4 Uninstalling Software

Follow the procedure to uninstall SmartPTT Express from the computer. Supplemental software (frameworks and redistributable packages) remain installed as it can be utilized by another software.

Prerequisites:

Create the configuration backup. For details, see Exporting Configurations on page 49.

Procedure:

1. On the computer with SmartPTT Express, start the installation file.
   The **SmartPTT Express Setup** window appears.
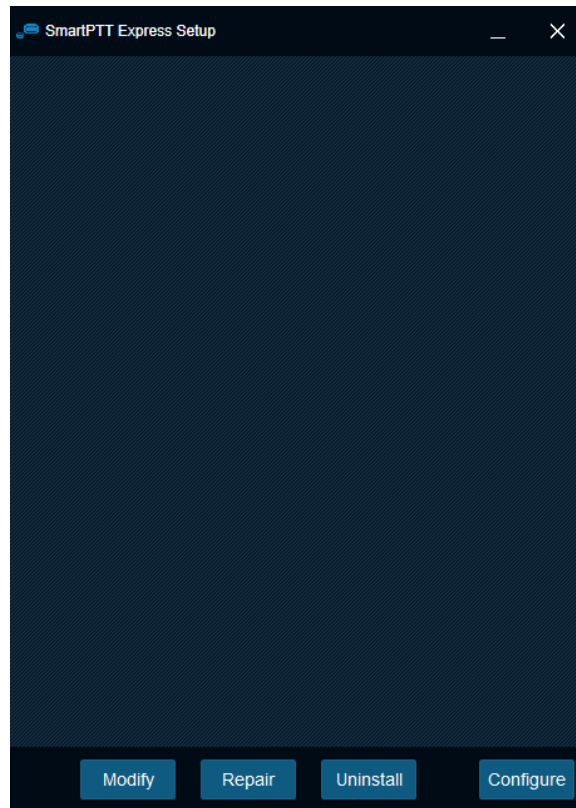
Figure 26: Installed Software Modification

2. In the window that appears, click **Uninstall**.
   Uninstallation options appear.
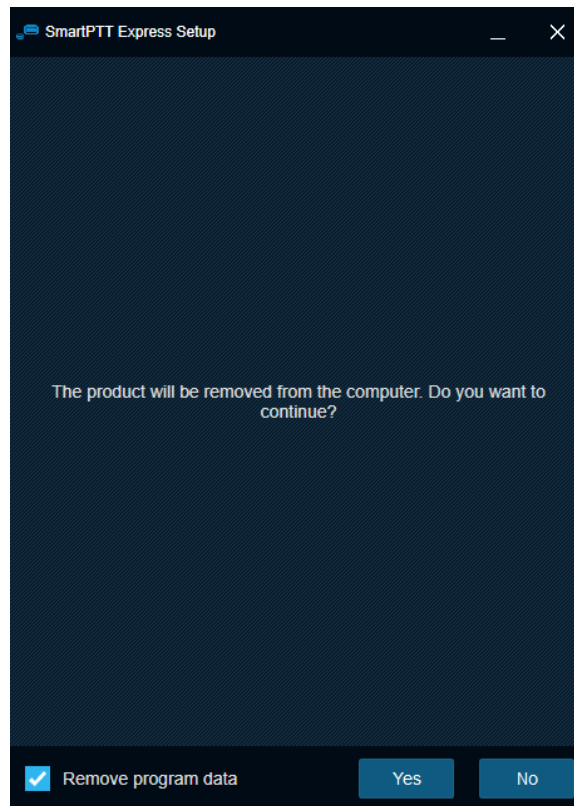
3. Perform one of the following actions:

To delete program data that include console settings, layouts, tones, and audio archive,	select ☑ **Remove program data**.
To keep program data on the computer,	clear ☐ **Remove program data**.

4. Click **Yes**.

5. When the uninstallation completes, close the window.

Chapter 6. Troubleshooting

The following information provides information of selected problems SmartPTT Express users may experience and ways to resolve them.

6.1 DIMETRA Connection Issues on Settings Update

Problem may occur when you re-configure DIMETRA Express to adjust it with the configured and operable SmartPTT Express Server. In particular, this occurs when you use both dispatch and voice logging features. After you apply changes in DIMETRA, SmartPTT Express Server will be unable to connect DIMETRA.

To resolve the issue, you must restart SmartPTT Express Server and synchronize it with DIMETRA again. To avoid such issues in the future, complete the DIMETRA Express configuration and then start the SmartPTT Express configuration.

6.2 DIMETRA Settings Update Issues

Problem may occur when you apply changes in DIMETRA Express Server and then immediately synchronize SmartPTT Express Server with it. At this, no updates happens.

To resolve the problem, you should wait until changes are applied in DIMETRA. The update time may take 40 seconds or more. Try to synchronize with DIMETRA after this time. If your changes include new IP addresses and ports, update and apply the corresponding SmartPTT Express Server settings.

If you cannot update DIMETRA configuration after 5 minutes, contact the technical support engineer.

6.3 Voice Calling Issues

Problem may occur when you cannot receive and/or initiate voice calls in Dispatch Position. This may happen after DIMETRA settings were updated and SmartPTT Express Server was re-synchronized with it.

To resolve the problem, you should check if the SmartPTT Express Server IP address is added to the console list in DIMETRA Express. This is required to receive and initiate calls. After you add it, apply changes in DIMETRA, re-synchronize it with SmartPTT Express Server, save and apply SmartPTT Express Server changes.

6.4 Audio Archive Settings Update

Problem may occur when user modifies audio archive settings. If user saves changes, they will not be applied immediately. The following rules are applied to the settings:

- New database size is checked and adjusted within 30 minutes.
- New retention period is applied in the next day.

To apply changes immediately, user must restart the SmartPTT Express Server. If no changes occurred within the time, and SmartPTT Express Server restart does not apply them, contact the technical support engineer.

Appendix A. Configurator User Interface

The appendix describes user interface elements available in the Server Configurator application.

A.1 SmartPTT Express Login Window

The window provides settings to connect Server Configurator to the SmartPTT Express Server and authenticate administrators.

Figure 27: Authorization Window: Collapsed (left) and Expanded (right)

In the window, the following fields are available:

User Login

Login of the SmartPTT Express user that have administrator permissions. For details, see System Roles & Authorization on page 18.

Password

Password of the SmartPTT Express user. For details, see System Roles & Authorization on page 18.

View Password ◉

Shows/hides password characters instead of bullets. Appears in the **Password** field when at least one character is typed in the field.

Server Connection

Shows the IPv4 address and port number used by Server Configurator to connect to the SmartPTT Express Server.

Server connection settings are the following:

Server IP Address

In the field, user types the IPv4 address of the SmartPTT Express Server host in dot-decimal notation.

Port

In the field, user types the TCP port number configured in SmartPTT Express Server to accept Server Con-

figurator connection requests. Default is **54000**. The port is configured during the installation and can be changed during the installed SmartPTT Express Server modification.

At the bottom of the field, the following buttons appear:

Login

The button initiates the user authentication process. It is available only if both **Login** and **Password** fields are not empty and the SmartPTT Express Server connection is established successfully (the **Connected** ⊠ icon appears in the Status Bar).

Exit

The button closes the authorization window and the Server Configurator application.

Update

Validates the parameters of connection to the SmartPTT Express Server and starts connecting Server Configurator to the SmartPTT Express Server.

A.2 Toolbar

Top part of the main Server Configurator (Toolbar) provides general-purpose controls over the SmartPTT Express Server configuration.

Figure 28: Server Configurator Toolbar

In the Toolbar, the following buttons are available:

Configurator Settings ☰

The button opens the **Configurator Settings** window. For details, see Configurator Settings Window on page 59.

Backup Configuration ⟳

The button provides user with capability to back up the current SmartPTT Express Server configuration. Backing up means exporting the configuration to the encrypted file with .bkp extension.

Restore Configuration ⟲

The button provides user with capability to restore the SmartPTT Express Server configuration from the .bkp file. When user restores a configuration, all the changes saved and applied immediately.

Save Configuration 💾

The button initiates the validation of the configuration changes performed by the user in Server Configurator. If changes are valid and do not involve IP address changes, they will be applied. If changes are invalid, the **Invalid Configuration Data** window appears. For details, see Invalid Configuration Data Window on page 59.

A.2.1 Configurator Settings Window

In the window, user is able to change the Server Configurator language.
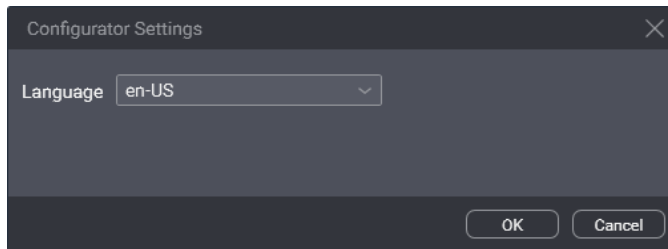

Figure 29: Configurator Settings Window

In the window, the **Language** list is available. It provides the list of IETF-like codes. Each code refers to the particular language.

A.2.2 Invalid Configuration Data Window

In the window, user sees invalidly configured parameters of the SmartPTT Express Server. All invalid configuration messages are grouped by tab names.
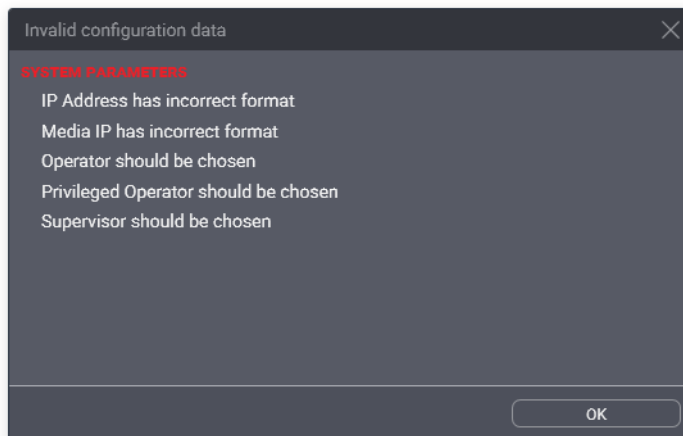
Figure 30: Invalid Configuration Data Window (Example)

The window does not block the access to the Server Configurator tabs and fields. If administrator clicks the parameter name in the window, the corresponding tab opens.

At the bottom of the window, the **OK** button appears that closes the window on click.

A.3 Licenses Tab

The **Licenses** tab provides information required for SmartPTT Express licensing and the license monitoring.
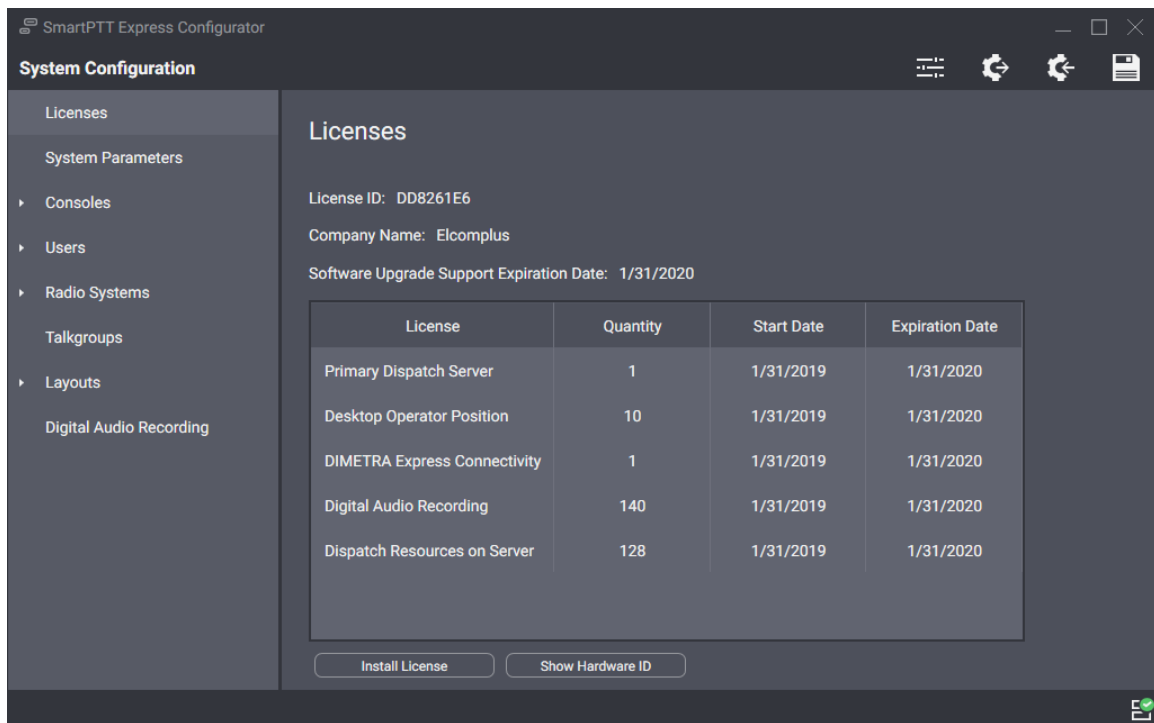
Figure 31: Licenses Tab

The right pane provides the following information:

- General license information

- Purchased licenses

- Licensing controls

The general license information consists of the following entries:

License ID

Unique license code that identifies the Customer.

Company Name

Name of the licensee.

Software Upgrade Support Expiration Date

Expiration date of the free software update. User is unable to start the SmartPTT Express version that is released after the date provided in this line.

Important:

SmartPTT Express does not block the software upgrade installation that will be incompatible with the license. The installed software will be inoperable and unavailable to configure until the proper license is installed.

Table with purchased licenses consists of the following columns:

License

Shows name of the license items. For license explanations, please contact Elcomplus representative in your region.

Quantity

Number of particular licenses.

Start Date

Date when the license is active and the corresponding service starts providing.

Expiration Date

The column shows the last date when the corresponding service will be provided in SmartPTT Express.

At the bottom of the tab, the following buttons are available:

Install License

Opens the dialog window where user selects the license file. The file extension is **.spttlx**.

Show Hardware ID

Opens the **Hardware ID** window. For details, see Hardware ID Window on page 61.

A.3.1 Hardware ID Window

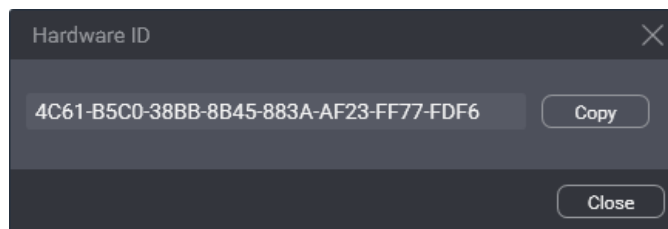In the window, the Hardware ID value appears.

Figure 32: Hardware ID Window

In the window, the following buttons are available:

Hardware ID Field

Value of the Hardware ID that is required to order the compatible license.

> **Notice:**
> Do not confuse Hardware ID with License ID.

Copy

Copies the Hardware ID value (with delimiters) to the clipboard. The copied ID can be used to the Elcomplus and order the license.

At the bottom of the window, the **Close** button is available. The button closes the window.

A.4 System Parameters

The tab provides general SmartPTT Express Server settings which are distributed between the following areas:

- System Parameters. For details, see System Parameters on page 62.

- System Roles. For details, see System Roles on page 62.

- Main Server. For details, see Main Server on page 64.

A.4.1 System Parameters

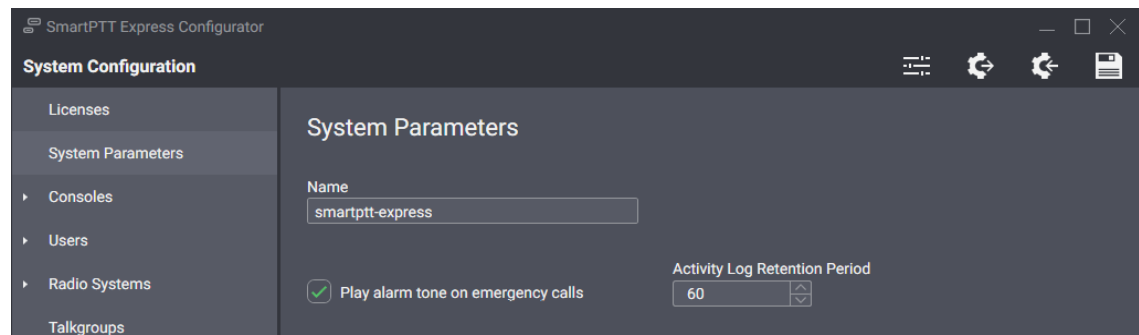The area provides the miscellaneous SmartPTT Express Server settings.

Figure 33: General System Parameters

In the area, the following settings are available:

Name
Name of the SmartPTT Express system that is used for internal purposes only.

☑ **Play alarm tone on emergency calls**
Blocks/unblocks the alarm tone playback on dispatch consoles when emergency call is received from a radio user. If cleared, the tone will play on emergency alarms only.

Activity Log Retention Period
Duration of the events availability in the Activity Log. When the time expires, event information is deleted. Ranges are the following: minimum is **10**; maximum is **1440** (24 hours); increment is **1**; default is **60**. SmartPTT Express Server checks the retention period once in 10 minutes.

A.4.2 System Roles

The area provides SmartPTT Express authentication and authorization settings.
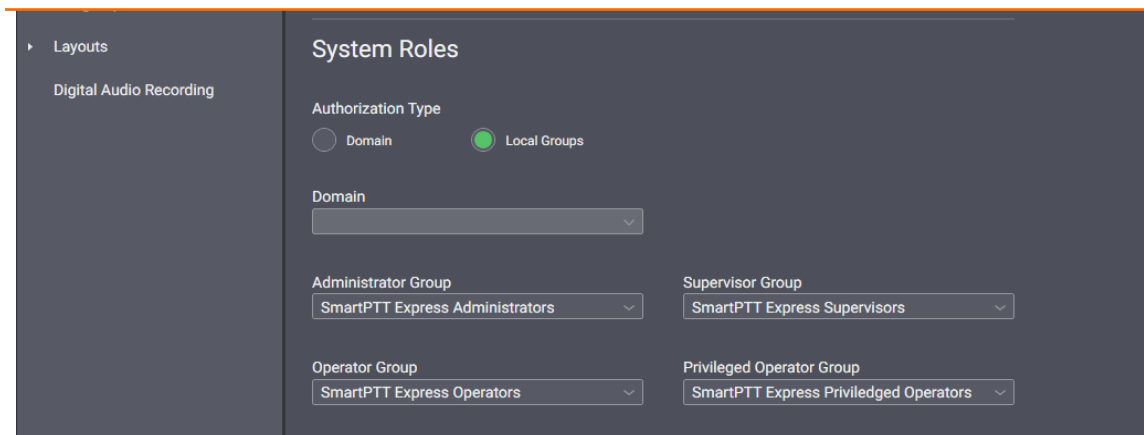
Figure 34: User Roles in System Parameters

In the area, the following settings are available:

◉ Domain

Users must select the option if they want to configure the domain authorization in SmartPTT Express.

◉ Local Groups

Users must select the option if they want to configure the "local" authorization in SmartPTT Express, based on user accounts and groups created in the SmartPTT Express Server host.

Domain

List of domains discovered in the Customer Enterprise Network. Available and required only if the ◉ **Domain** option is selected.

Administrator

User group which members receive administrator permissions in SmartPTT Express. Only one group can be selected. For details, see System Roles & Authorization on page 18.

> **Notice:**
> Changing the group of administrators does not take effect until user logs off from the SmartPTT Express Server.

Supervisor

User group which members receive supervisor permissions in SmartPTT Express. For details, see System Roles & Authorization on page 18.

Operator

User group which members receive regular operator permissions in SmartPTT Express. For details, see System Roles & Authorization on page 18.

Privileged Operator

User group which members receive the privileged operator permissions in SmartPTT Express. For details, see System Roles & Authorization on page 18.

A.4.3 Main Server

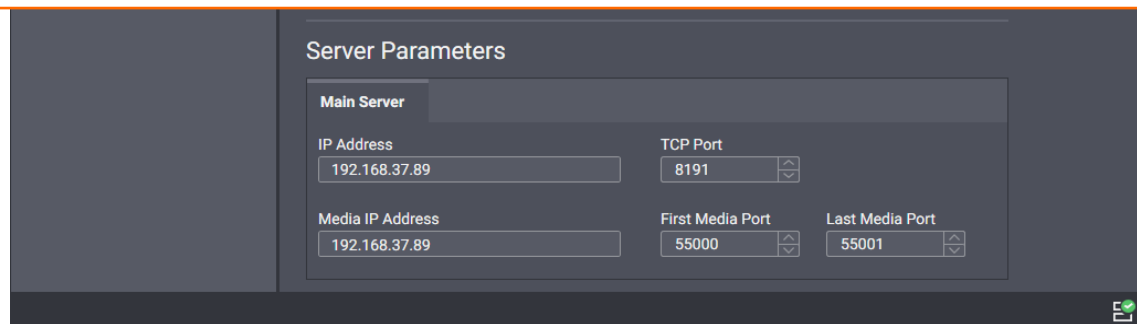The area provides SmartPTT Express Server interfaces opened to dispatch consoles.

Figure 35: SmartPTT Express Server Interface Settings

In the area, the following settings are available:

IP Address

In the field, users must type the IPv4 address of the SmartPTT Express Server host in dot-decimal notation. The address is the part of the SmartPTT Express Server control interface that is used to manage Dispatch Positions. If **127.0.0.1** is entered, only the locally installed Dispatch Position will be able to connect to SmartPTT Express Server.

TCP Port

In the field, user enters the free TCP port number of the SmartPTT Express Server host. The port is the part of the SmartPTT Express Server control interface that is used to manage Dispatch Positions. Default port number is **53000**.

Media IP

In the field, user enters the IPv4 address of the SmartPTT Express Server host in dot-decimal notation. The address is the part of the SmartPTT Express Server voice interface that is used to exchange voice traffic between SmartPTT Express Server and Dispatch Positions. If **127.0.0.1** is entered, only the locally installed Dispatch Position will be able to connect to SmartPTT Express Server.

First Media Port

Administrators must leave the default value (**55000**) in the field unchanged. The port number must not be considered during the port unlock process.

Last Media Port

Administrators must leave the default value (**55000**) in the field unchanged. The port number must not be considered during the port unlock process.

A.5 Consoles

The expandable control provides the list of dispatch consoles. At the bottom of the expanded control, the **Add new** button is available that adds a new entry to the list. When administrator clicks any of the list entries, the corresponding settings appear in the right pane.
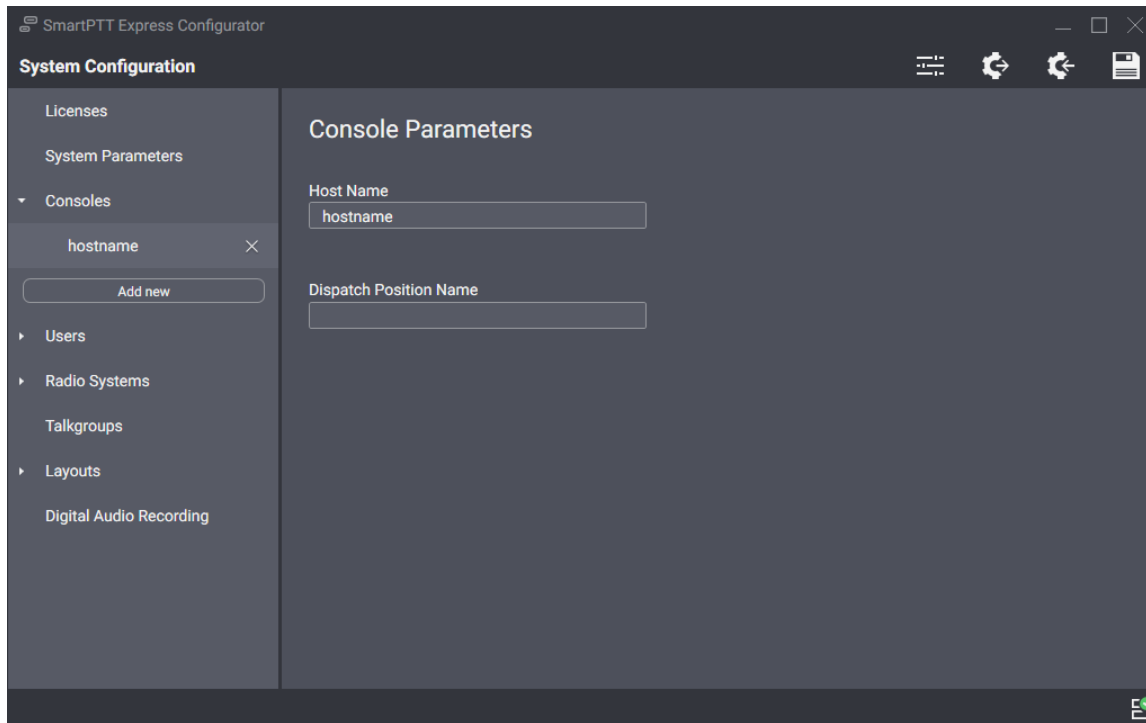
Figure 36: List of Consoles and Console Settings

In the right pane, the following settings are available:

Host Name

Host name of the dispatch console computer that must be resolved to the computer IP address in the DNS server or the **\%WINDIR%>\System32\drivers\etc\hosts** file in the SmartPTT Express Server computer. For details, see Communication with Dispatch Positions on page 17.

Dispatch Position Name

Alias of the dispatch console that is used internally in SmartPTT Express.

A.6 Users

The expandable control provides list of Dispatch Position users and their settings. At the bottom of the expanded control, the **Add new** button is available that adds a new entry to the list. When administrator clicks any of the list entries, the corresponding settings appear in the right pane.
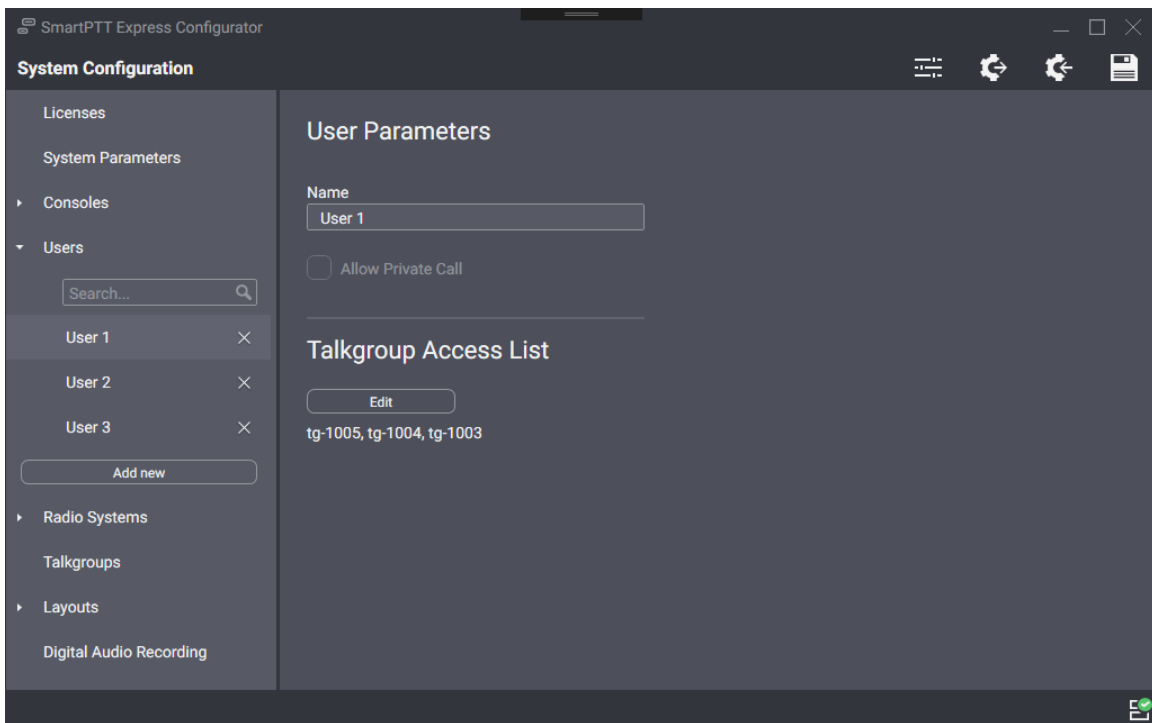
Figure 37: User Settings

In the right pane, the following settings are available:

Name

In the field, user enters the user name that must be exactly the same as the corresponding Windows user login.

Notice:

If administrators must be authorized in Dispatch Position, their logins must be added to the list of users as well as those of other system roles.

☑ **Allow Private Call**

The check box manages private call permission to the user. If administrator selects the check box, user will be able to use the private call feature in Dispatch Position. If administrator clears the check box, private calls will be unavailable to user and the corresponding layout controls will be blocked/disabled.

Notice:

The check box does not effect users with administrator permissions.

Edit

The button appears in the **Talkgroup Access List** area. It opens the **Talkgroup Access Assignment** window. For details, see

A.6.1 Talkgroup Access Assignment Window

The window provides the list of talkgroups received from DIMETRA Express after the SmartPTT Express Server is synchronized with it. For details, see Talkgroups on page 73. By selecting and/or clearing check boxes, user controls the talkgroup availability to the user.

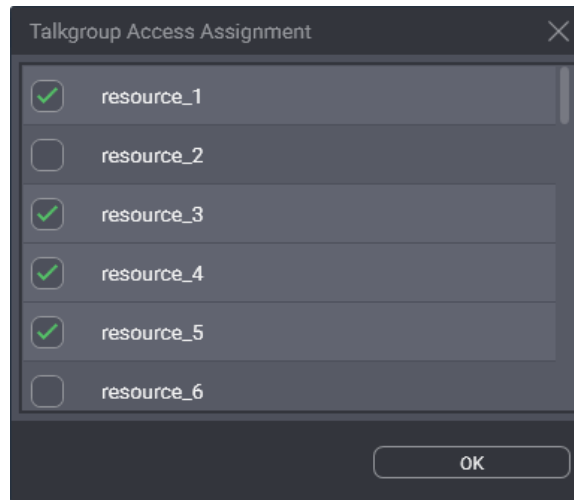Figure 38: Talkgroup Access Assignment Window

In the window, the following settings are available:

☑ **{Talkgroup Name}**

Each check box is named after the talkgroup. When administrator selects the check box, the talkgroup becomes available to the edited user. If administrator clears the check box, the talkgroup becomes unavailable to user and disappear from the layout (if the user is working in Dispatch Position).

OK

The button accepts changes and closes the window.

A.7 Radio Systems

The expandable control provides the capability to add and configure the single DIMETRA Express connection. The configuration process includes multiple mandatory actions that block saving the configuration changes. For this reason, DIMETRA Express can be added and removed by administrator.

A.7.1 Radio System Parameters

The area provides the **Name** field where administrator types the radio system name. The name is used for internal purposes only.
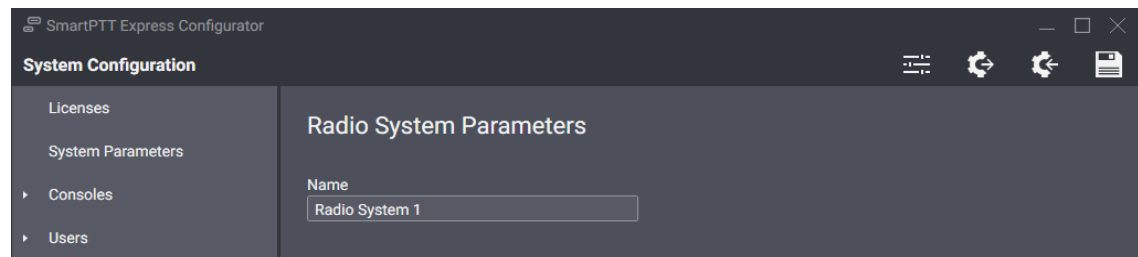
Figure 39: DIMETRA Express System Name

A.7.2 DIMETRA System Parameters

The area provides network interface settings of the DIMETRA Express Server opened to SmartPTT Express.
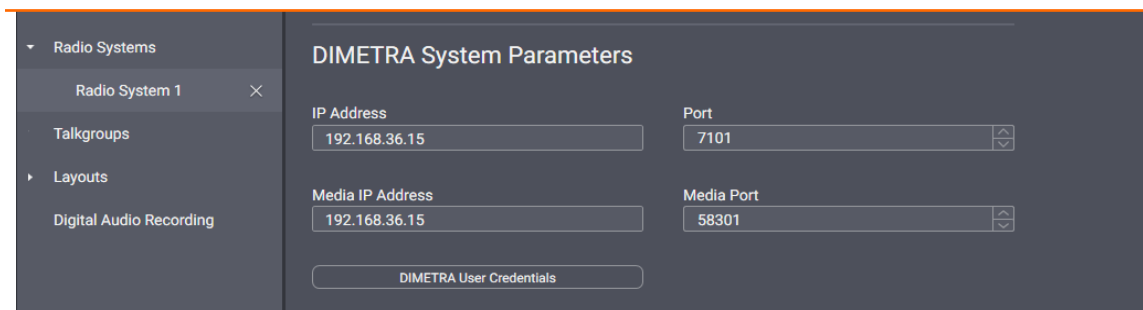

Figure 40: DIMETRA Interfaces Opened for SmartPTT Express

In the area, the following settings are available:

IP Address

In the field, user types the DIMETRA Express Server IP address, exactly as it is provided in DIMETRA. For details, see DIMETRA Configuration on page 16.

Port

In the field, user types the Corba TCP Port Number, exactly as it is provided in DIMETRA. For details, see DIMETRA Configuration on page 16. Default port number is **7101**.

Media IP Address

In the field, user types the Link 1 IP Address, exactly as it is provided in DIMETRA. For details, see DIMETRA Configuration on page 16.

Media Port

User leaves the value in the field unchanged. Default port number is **58301**.

DIMETRA User Credentials

The button opens the **DIMETRA User Credentials** window. For details, see DIMETRA User Credentials Window on page 69.

A.7.3 DIMETRA User Credentials Window

The windows provides settings to associate DIMETRA user accounts with Dispatch Position user accounts. Each DIMETRA user can be associated with multiple Dispatch Position users.
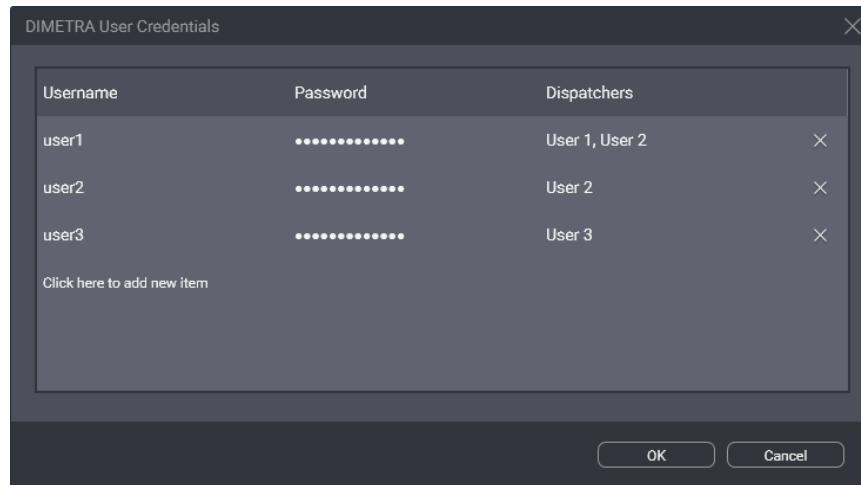

Figure 41: DIMETRA User Credentials Window

In the window, the table appears that consists of the following columns:

Username

For each table entry, shows user names that must correspond to Login Names in DIMETRA. If administrator double clicks the name, it becomes editable.

Notice:

DIMETRA does not provide login names; all the names must be typed by administrators.

Password

For each table entry, shows password in the form of bullet symbols. If administrator double clicks the password, it becomes editable and available for preview.

View Password ◎

The button is available next to the password bullets while the password text is being edited. If administrator presses and holds the button, actual password reveals. When administrator releases the button, the password is replaced by the bullets.

Dispatcher

For each table entry, shows Dispatch Position users added in the **Users** tab of the Server Configurator. For details, see Users on page 65. If administrator double clicks users, the list of users appears to select another user. If administrator tries to select the option for the second time, the Dispatch Position user becomes unassigned from the DIMETRA console user.

On the right of each entry, one of the following buttons appear.

OK

The button appears when administrator double clicks an entry. It accepts administrator changes. When administrator clicks the button, it is substituted with the **Remove** ✕ button.

Remove ✕

The button removes the corresponding entry from the table. If administrator double clicks an entry, all the buttons are substituted with the **OK** buttons to avoid the occasional removal.

At the bottom of the table the **Click to add new item** control appears. When administrator clicks it, a new entry is added to the table.

At the bottom of the window, the following buttons are available:

OK

The button accepts all administrator changes and closes the window.

Cancel

The button cancels all administrator changes and closes the window. It helps to restore the occasionally removed entries.

A.7.4 Server Parameters

The area provides SmartPTT Express Server network interfaces opened to DIMETRA Express.
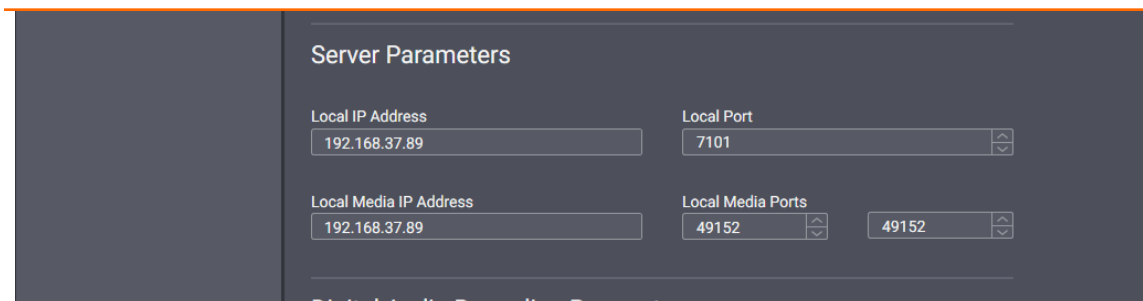

Figure 42: SmartPTT Express Server Interface Opened to DIMETRA Express

In the area, the following settings are available:

Local IP Address

In the field, user types the IP address of the SmartPTT Express Server host configured as the API-type console address in DIMETRA. For details, see DIMETRA Configuration on page 16.

Local Port

In the field, user enters the TCP port number configured as Corba TCP Port Number in DIMETRA. Default port number is **7101**. For details, see DIMETRA Configuration on page 16.

Local Media IP Address

In the field, user types the same IP address as in the **Local IP Address** field.

Local Media Ports

The parameter includes two fields that determine the UDP port range in the SmartPTT Express Server host. The ports within the range are reserved for voice traffic exchange between radio users and Dispatch Position users. Default values in the fields are **49152**.

A.7.5 Digital Audio Recording Parameters

The area provides interface settings of the DIMETRA Voice Logger.

Figure 43: Voice Recording Settings

In the area, the following settings are available:

☑ **Enable Audio Recording**

The check box determines if the SmartPTT Express Server acts as the external voice logger for DIMETRA Express or not. If user selects the check box, the required SmartPTT Express Server parameters become available to edit. If administrator clears the check box, parameters disappear and SmartPTT Express Server will not be used as the voice logger.

Local IP Address

In the field, user types the dedicated IPv4 address of the SmartPTT Express Server host in dot-decimal notation. The address must be different from that used in the **Server Parameters** area. For details, see Server Parameters on page 70.

Local Port

In the field, user types the TCP port number of the dedicated SmartPTT Express Server interface. The port is used as the control port between SmartPTT Express Server and DIMETRA Voice Logger. Default port number is **7101**; it is equal to the default Corba TCP Port Number.

Local Media IP Address

In the field, user duplicates the value from the **Local IP Address** field that is placed in the **Digital Audio Recording Parameters** area.

Local Media Ports

The parameter includes two fields that determine the UDP port range in the dedicated SmartPTT Express Server interface. The ports within the range are reserved for voice records reception from DIMETRA. Default port number in both fields is **61000**.

Username

In the field, user types the Login Name, exactly as it is provided in DIMETRA. For details, see DIMETRA Configuration on page 16.

Password

In the field, user types the password, exactly as it is set in DIMETRA. For details, see DIMETRA Configuration on page 16. The field automatically hides password symbols and replaces them with bullets.

View Password ◎

The button is available in the right part of the **Password** field. If administrator presses and holds the button, actual password reveals. When administrator releases the button, the password hides.

Radio IDs

Users IDs whose transmissions must be provided to SmartPTT Express if recorded by DIMETRA. Only User IDS available in DIMETRA must be entered, other IDs are not acceptable. DIMETRA may not record the transmission if the number of simultaneous calls in the radio network exceeds the voice logging capacity. To set ID ranges, hyphens must be used (for example, **1-10**). To list individual IDs and ID ranges, commas must be used (for example, **1-10,15,16,20-25**). Ranges are the following: minimum is **1**; maximum is **13900000**; increment is **1**.

> **Important:**
>
> If users from the field initiate private calls to each other, the relevant transmissions will be duplicated in the audio archive.

A.7.6 System Description

The area provides the text box where the DIMETRA Express description appears. The description is imported from the DIMETRA.
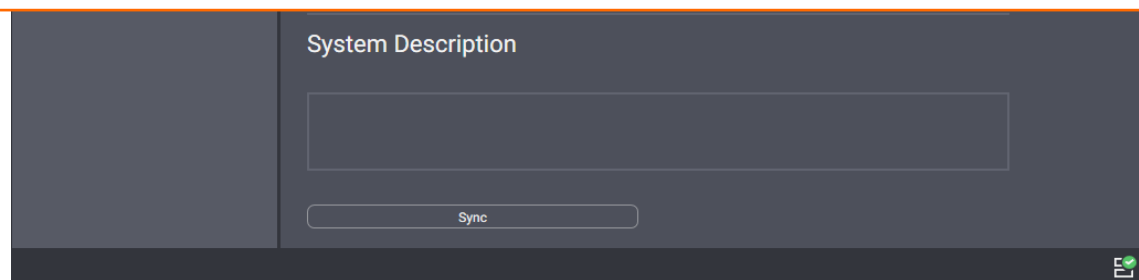

Figure 44: DIMETRA Express System Description

At the bottom of the right pane, the **Sync** button is available. When administrator clicks it, SmartPTT Express Server starts connecting to DIMETRA and authenticating in it to receive talkgroups, system description, and perform other necessary actions.

A.8 Talkgroups

The tab provides a list of talkgroups configured in DIMETRA and controls to configure their availability in SmartPTT Express.
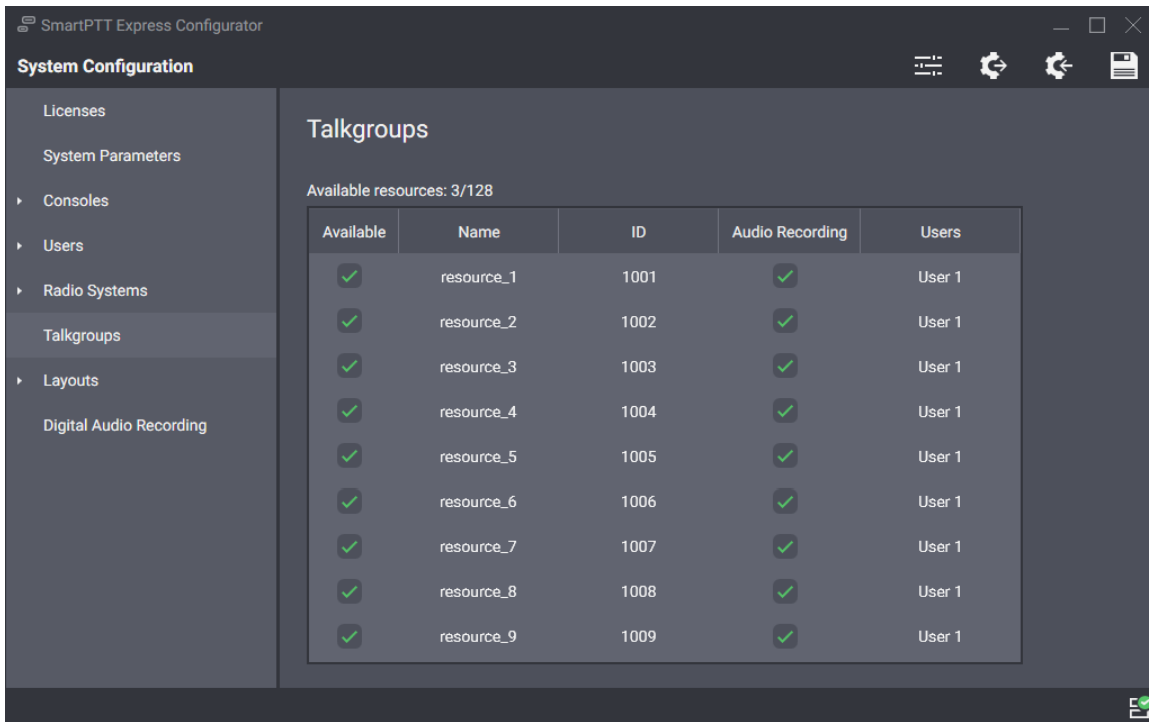

Figure 45: Talkgroup Parameters

Above the list of talkgroups, the counter is placed that shows the number of talkgroups available in SmartPTT Express and the maximum number of talkgroups that can be available. The maximum number is determined with the corresponding license. For details, see Licenses Tab on page 59.

Talkgroups are organized in the table that consists of the following columns:

Available

In the column, check box is provided. If user selects the check box, the talkgroup will be available to add in Dispatch Position. When the counter expires, no talkgroup can be selected. If user clears the check box, the talkgroup becomes unavailable in SmartPTT Express and hides from all the layouts.

Name

In the column, name of the talkgroup appears. The name derives from DIMETRA and cannot be changed in Server Configurator.

ID

In the column, the Talkgroup ID appears. The ID derives from DIMETRA and cannot be changed in Server Configurator.

Audio Recording

In the column, for each talkgroup, a check box is provided. If user clears the check box, relevant group calls will not be stored in SmartPTT Express. If user selects the check box, relevant group calls will be stored in SmartPTT Express if provided by DIMETRA. DIMETRA may not record the call if the number of simultaneous calls in the system exceeds the licensed voice logging capacity.

> **Important:**
>
> Check boxes do not guarantee the group call recording, only its provision to SmartPTT Express.

Users

In the column, list of SmartPTT Express users appears who can add and operate the talkgroup.

A.9 Layouts

The expandable control provides list of layouts created in Dispatch Position. When user clicks any of the list entries, the corresponding information appears in the right pane.
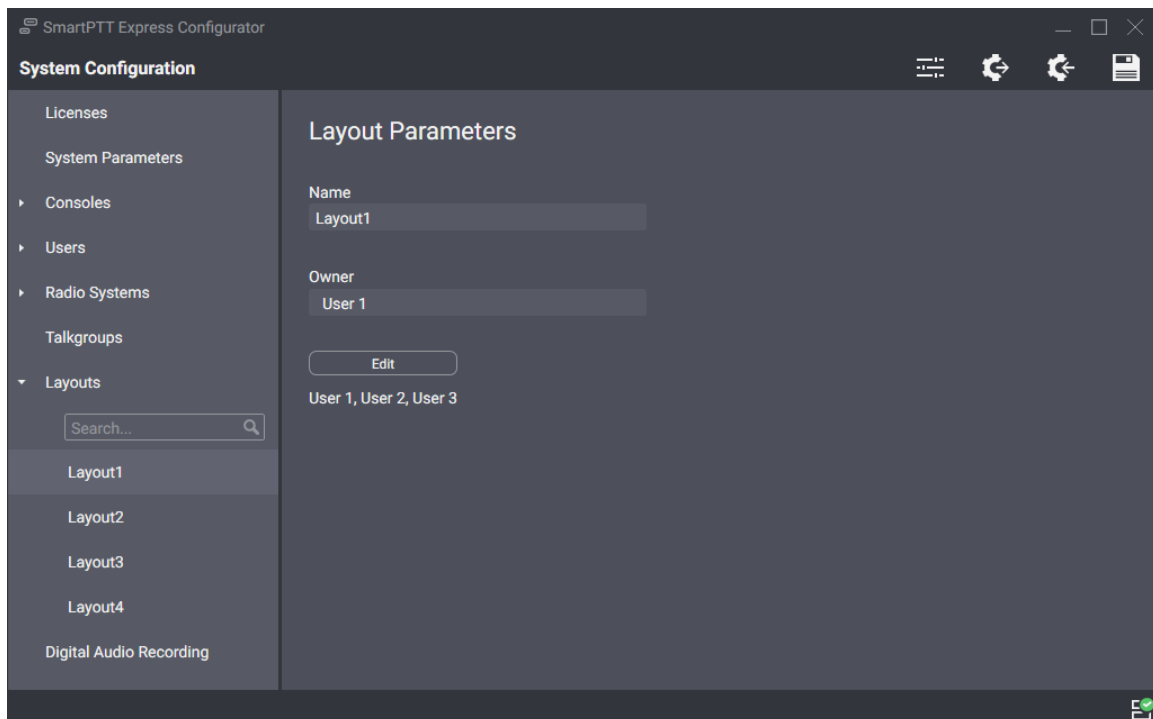

Figure 46: List of Layouts and Their Settings

In the right pane, the following settings are available:

Name

Layout name that is determined by a Dispatch Position user during the layout creation. Layout cannot be renamed after it is created.

Owner

Name of the user who created the layout in Dispatch Position.

Edit

Opens the **Dispatchers** window. For details, see Dispatchers Window on page 75.

A.9.1 Dispatchers Window

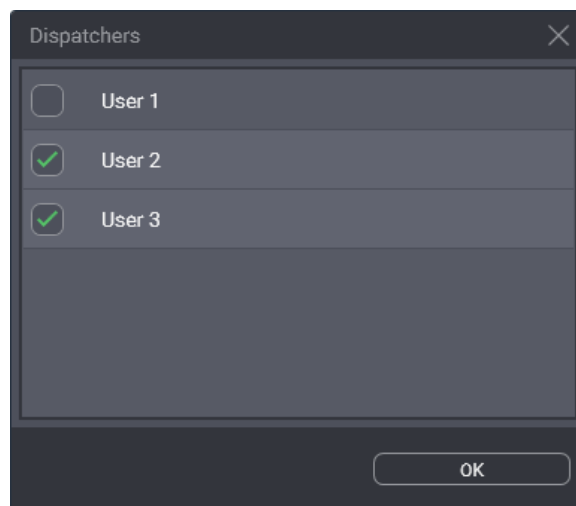The window provides the list of SmartPTT Express users to manage their access to the layout.

Figure 47: List of Dispatch Position Users

In the window, the following settings are available:

☑ **{User Name}**

Grants/denies user access to the layout in Dispatch Position. The selected check box means that the user is able to load the layout. Cleared check box means that the user is unable to load the layout except he/she owns the layout. For details, see Layouts on page 74.

OK

Accepts changes and closes the window.

A.10 Digital Audio Recording

The tab provides the limited amount of settings for the voice record database. All other parameters are determined in the SmartPTT Express Server and cannot be changed.
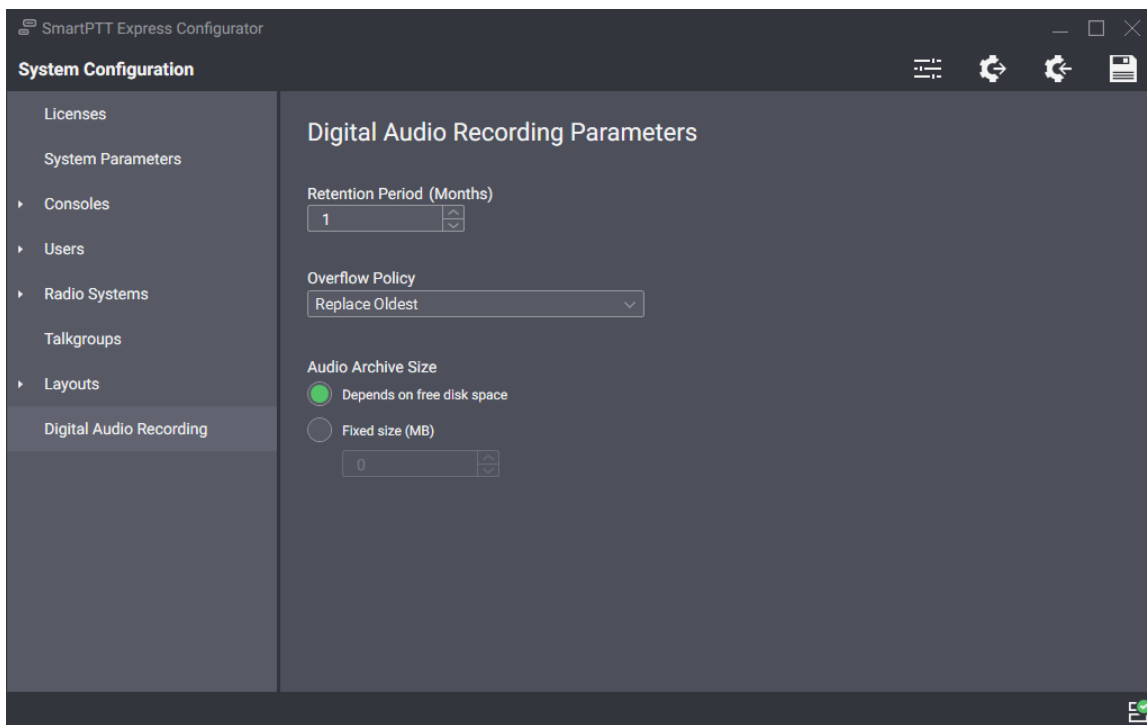
Figure 48: Digital Audio Recording Parameters

In the right pane, the following settings are available:

Retention Period

Duration of voice record storage in Audio Archive. When the retention period expires, records are deleted. Ranges are the following: minimum value is **1**, maximum value is **12**; increment is **1**; default value is **1**.

 Notice:

If you edit the parameter and save changes, it applies on the next calendar day only. To apply changes immediately, you must restart the SmartPTT Express Server.

Overflow Policy

SmartPTT Express behavior when the maximum size of the Audio Archive is reached. To delete older records in favor of new records, the **Replace Oldest** option must be selected. To discard new records in favor of older records, the **Discard New** option must be selected.

The **Audio Archive Size** area provides the following elements:

◉ **Depends on free disk space**

Manages the Audio Archive size increase with respect to the free disk space on the **C:** drive of the computer. When the free disk space comprises 20%, Audio Archive stops growing and the overflow policy is activated. The policy keeps active until more the 20% of the disk space is free. The disk space is checked every 30 minutes.

> **Important:**
> Free disk space can be changed by the operating system (due to events logging, space buffering, updates downloading, etc.) and a third-party software installed on the computer.

◉ **Fixed Size (option)**

Sets the fixed size of the Audio Archive and requires to specify its value in the **Fixed Size** field.

Fixed Size (field)

Size of the Audio Archive specified in megabytes determined by the Microsoft Windows convention (can be different from another conventions). Ranges are the following: minimum value is **0** (zero); increment is **1** (one); default value is **0** (zero).

Editing the parameters in the tab and saving changes does not reset all the counters and does not imply the immediate application of changes. For this, SmartPTT Express Server restart is required.

A.11 Status Bar

The bar appears at the bottom of the Server Configurator main window. It informs about the connection to the SmartPTT Express Server using the following indication:

Connected 🖳

The icon appears if the connection to the SmartPTT Express Server is established successfully.

Disconnected 🖳

The icon appears while the connection to the SmartPTT Express Server fails.

Successful connection is required to authorize administrators and edit SmartPTT Express Server settings. When the connection is lost, user automatically logs off from the Server Configurator and all its changes are lost.

Contact Information

SmartPTT Express is developed and released by Elcomplus. For more information on the product, visit https://smartptt.com/products/smartptt-express/.

Technical Support

Support of the SmartPTT Express product is provided by the SmartPTT Technical Support Center. The official web page of the center is support.smartptt.com.

To contact a technical support engineer, use the following information:

Email address	support@smartptt.com
Request support online	https://support.smartptt.com/hc/en-us/requests/new
Phone/fax number	+7 38-22 522-511 (dial now)

By default, phone calls are answered by the Russian-speaking operator. Ask him/her to redirect your call to English-speaking operator.

When your request is being handled, you may receive an additional contact information that includes engineer phone numbers, Skype contacts, and more.

Technical Support Disclaimer

SmartPTT Technical Support Center does **not** resolve issues in Motorola's hardware and/or software. If the hardware and software is improperly configured or occurs inoperable, contact the Motorola Solutions representative in your region.

Technical Support Center does **not** resolve issues occurred after attempts to use any undocumented SmartPTT Express features until those that were used by the Elcomplus technical support engineer or other Elcomplus representative. Please inform technical support engineers if the undocumented features and configurations were used.

Sales & Marketing

If you have any questions related to the SmartPTT Express sales and marketing, use the following information:

Email address	sales@smartptt.com
Online email	https://smartptt.com/contacts/

Documentation

To increase the information completeness and availability, Elcomplus appreciates any feedback on this document. Please send your comments, suggestions, and report documentation issues to support@smartptt.com.

Glossary

In the document, the following terms are used:

DIMETRA Console User

    User whose account is created and configured in DIMETRA as the API-type console user. Can be referred to as "DIMETRA user". Do not confuse the term with "radio user" or "Dispatch Position user".

Dispatch Position User

    User whose account is authenticated by SmartPTT Express Server and associated with DIMETRA console user account.

Dispatch Console

    Computer-based device used to install and host Dispatch Position.

Radio User

    User whose account is created and configured in DIMETRA as a user of the mobile/portable radio. Can be referred to as "subscriber" or "DIMETRA radio user".

Retention Policy

    Rules of information management in the limited-size storage when the maximum size is reached.

Transmission

    Continuous voice/data stream over the provided radio channel. Can be interrupted by another transmission.

Voice Call

    Series of voice transmissions where at least one party does not change. Can be interrupted by another transmission and call.

User ID

    Unique personal identifier of the DIMETRA user. Can be referred to as "individual short subscriber identity" (ISSI). Includes Radio IDs and Console User IDs.

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