

Installation & Administration of Konftel 800

ENGLISH





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Konftel AB hereby declares that this conference phone is in conformity with all the essential requirements and other relevant provisions of Directive 1999/5/EC.

Please visit www.konftel.com to view the complete declaration of conformity.



Warning!

Do not expose the Konftel 800 to water or moisture.



Warning!

Do not open the casing of the Konftel 800.

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INTRODUCTION

PURPOSE

This document provides checklists and procedures for installing, configuring, and administering Konftel 800. It is intended primarily for implementation engineers and administrators.

CHANGE HISTORY

Issue	Date	Summary of changes
Release 1.0.2	August 2020	 Added Sleep mode on page 29. Added Voice quality monitoring on page 42. Added Bluetooth connection on page 71. Added LDAP settings on page 45. Updated Configuration file structure on page 77 with new parameters.
Release 1.0.1	March 2020	 Updated the Media settings description on page 39 with SRTP disablement. Added Firmware upgrade and downgrade on page 76. Added Validation and migration of configuration on page 93 to the Maintenance chapter. Added Upgrading multiple devices on page 102. Added Remote syslog server on page 104 to the Device Management section.

PHONE OVERVIEW

Konftel 800 is a SIP conference phone that you can use to make calls and hold conferences with a great audio quality. It provides an improved user experience and ensures an easier connection to audio conference bridges. The phone is based on a multi-connectivity platform to leverage the "Bring your own device" approach.

The features of the conference phone include a simple-to-use 4.3 inch graphical LCD with a backlight and volume control and mute buttons. Two more mute key buttons are located along the perimeter of the device. You can attach additional expansion microphones or cascade three Konftel 800 devices in a daisy chain to expand the audio distribution and pickup in the room.

SAFETY GUIDELINES

Ensure that you are familiar with the following safety guidelines before using, installing, configuring, and administering Konftel 800.

- This conference phone is not designed for making emergency telephone calls when the power fails. Make alternative arrangements for access to emergency services.
- Read, understand, and follow all the instructions.
- Do not place this phone on an unstable cart, stand, or table. If the phone falls, serious damages can be caused to the device.
- Do not drop, knock, or shake the phone. Rough handling can break internal circuit boards.
- Ensure that the power cord or plug is not damaged.
- Do not overload wall outlets and extension cords as this can result in the risk
 of fire or electric shock.
- Avoid wetting the device to prevent fire or electrical shock hazard.
- Unplug the device from the wall outlet before cleaning. Do not use liquid or aerosol cleaners, harsh chemicals, cleaning solvents, or strong detergents to clean the device. Use a damp cloth for cleaning.
- Avoid exposing the phone to high temperatures above 40°C (104°F), low temperatures below 0°C (32°F), or high humidity.
- Do not block or cover slots and openings of the phone. These openings are provided for ventilation, to protect the phone from overheating.

- Never push objects of any kind into this phone through cabinet slots as they
 might touch dangerous voltage points or short out parts that could result in a
 risk of fire or electric shock.
- Do not disassemble this product to reduce the risk of electric shock. Opening
 or removing covers may expose you to dangerous voltages or other risks.
 Incorrect reassembly can cause electric shock during subsequent use.
- Do not use the phone to report a gas leak in the vicinity of the leak.
- Do not use the phone near intensive care medical equipment or close to persons with pacemakers.
- Do not place the phone too close to electrical equipment such as answering machines, TV sets, radios, computers, and microwave ovens to avoid interference.
- ① In case Konftel 800 and the corresponding accessories are damaged, the device does not operate normally or exhibits a distinct change in performance, refer for servicing to the qualified service personnel.

PHYSICAL LAYOUT



Figure 1: Front view of Konftel 800

The following table lists the buttons and the other elements of Konftel 800.

Callout number	Description
1	Mute buttons
2	Volume down button

Callout number	Description
3	Volume up button
4	NFC tag
5	Touch screen
6	LED status indicators

CONNECTION LAYOUT

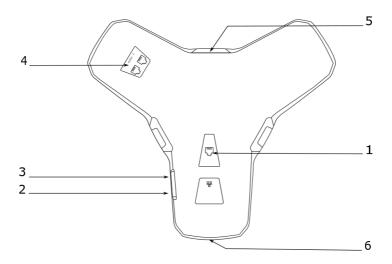


Figure 2: Connection layout of Konftel 800

The following table lists the sockets and ports available on Konftel 800 for connection.

Callout number	Description
1	PoE/Ethernet connection socket
2	USB Type A
3	Micro-USB Type B
4	Audio expansion ports
5	Kensington® security lock port
6	NFC tag for Bluetooth

DIMENSIONS

The following table shows the dimensions of Konftel 800.

Parameter	Dimension
Width	326.41 mm
Length	369.87 mm
Height	74.7 mm

ICONS

Icons on the home screen of Konftel 800

Icon	Name	Description
<u>-</u>	Recent	To check the call list. The phone provides the following information about the calls:
		Number. You can view the phone number of the contact.

Icon	Name	Description
		 Date. You can view the information when the phone received the call. This applies only to the calls preceding the current day. Time. For the current day, the phone shows the time of the call in hh: mm format. Direction. You can view the incoming, outgoing and missed calls.
Ŋ	Unite	To access the Konftel Unite settings.
)	Call	To dial phone numbers and codes for telephone operations or Konftel Unite connection.
(2)	Settings	To check and configure the settings from the phone. You can view the phone status and reach the menu.
1/2	Microphone Muted	To mute and unmute the phone.
۵))	Volume Up	To increase the phone volume level.
(۵	Volume Down	To decrease the phone volume level.
	NFC	To indicate the built-in NFC tag.

Other icons of Konftel 800

Icon	Name	Description
9	Make Call or Answer	To indicate the phone off-hook status and answer an incoming call.

lcon	Name	Description
^	Hang Up	To indicate the phone on-hook status and end a call.
y	Incoming	To show an incoming call.
y	Outgoing	To show an outgoing call.
^	Missed	To indicate a missed call.
_	Hold or On Hold	To put a call on hold or to indicate that a call is on hold.
> ►	Conference	To arrange a conference call.
> •	Split	To split a conference call into several separate calls.
+2	Add Participant	To add a participant to a conference call.
A)	Talk Private	To arrange a private discussion with a participant of a conference call.
±	Caps	To type in capital letters.
X	Delete	To delete an unneeded number or letter.
0	Visibility	To mark whether the characters must stay visible to the user, for example, when logging in with the password.

Icon	Name	Description
Ø	Invisibility	To mark whether the characters must stay invisible to the user, for example, when logging in with the password.
f	Logged In	To indicate that the user logged in as the administrator.
1/2	Microphone Muted	To indicate that the phone is in muted state.
~	Enter	To confirm the input of information.
✓	Confirm	To confirm the information.
X	Reject	To discard the information.
V	Arrow Down	To move to the sections below.
^	Arrow Up	To move to the sections above.
<	Arrow Left	To return to the previous page.
>	Arrow Right	To move to subsections of a section.
	USB Connected	To indicate an active USB connection.
Ŋ	Konftel Unite connected	To show the connection of the phone to Konftel Unite.

Icon	Name	Description
~°°	Daisy Chain Mode	To indicate that the phone is in a daisy chain mode.
1	Loading	To show that the phone is loading the new version of the firmware.
<u>[8</u>]	Contacts	To show that the LDAP external phone book is available.
*	Bluetooth connection	To indicate an active Bluetooth Classic connection.

PREREQUISITES

Konftel 800 is based on a multi-connectivity platform to support the "Bring your own device" use case. You can connect your Konftel 800 to a SIP server using the Ethernet.

The following table describes the tasks you must perform before setting up your Konftel 800:

No.	Task	Notes
1	Review prerequisite information.	If you do not have all the required software and hardware, Konftel 800 might not function as expected.
2	Gather pre- installation data.	Pre-installation data is required to perform initial parameter setup and to create user accounts for Konftel 800.
3	Ensure that the Konftel 800 package contains all the required components and accessories.	You can connect optional components and accessories to Konftel 800. Perform this task if you want to use the optional components and accessories with your device.

No.	Task	Notes	~
4	Connect Konftel 800 to a power supply and to the network.		

Software and hardware prerequisites

Install and configure:

- · A DHCP server for providing dynamic IP addresses
- A file server, an HTTP/HTTPS for downloading software distribution packages and the settings file
- · Konftel Unite

Konftel 800 requires the current version of Konftel Unite to be installed.

Server configuration checklist

The following table describes the tasks related to server configuration that you must perform for the initial installation of Konftel 800.

No.	Task	Notes 🗸
1.		Contact your server software vendors to obtain information about server licensing.
2.	Ensure that a DHCP server is installed and configured.	Contact your DHCP server vendor to obtain installation documentation.
3.	Ensure that a file server is installed and configured.	Contact your file server vendor to receive installation documentation.

Power supply connectivity

Konftel 800 uses 10/100/1000 Mbit Ethernet and supports PoE Type 1 and Type 2 power supply, which means either 15W or 30W at the power distribution unit.

Operation modes:

- PoE 802.3af 15W
- PoE 802.3at 30W
- If your LAN does not support the PoE 802.3af 15W/PoE 802.3at 30W specification, you can use the AC power adapter, which can be purchased with the device.

Connection to other devices

Konftel 800 is based on a multi-connectivity platform and uses the following features and ports to connect to devices such as a personal computer, expansion microphones, and another Konftel 800:

- · Bluetooth Classic
- Bluetooth LE
- Built-in NFC tag
- · USB Type A
- Micro-USB Type B
- · Audio expansion ports

SPECIFICATIONS

Konftel 800 supports the following specifications:

Name	Description
Power	PoE 802.3afPoE 802.3atPoE injector available as an accessory
Connectivity	 Ethernet RJ45 10/100/1000 Mbps, PoE 802.3af, and PoE 802.3at USB 3.0 device Built-in Bluetooth LE and NFC Bluetooth Classic (HFP, A2DP) Daisy Chain (audio) ports (6-pin RJ-type)
Screen	Graphical touch screen with a resolution of approximately 480 x 800 and size of 4.3"

Name	Description
Acoustics	 3 symmetrically placed MEMS microphones Full range speaker in the sealed enclosure
Music	 PoE 802.3at: 91 dB and bass boost PoE 802.3af: 87 dB Daisy Chain: 91 dB
Speech	PoE 802.3at: 91 dBPoE 802.3af: 87 dBDaisy Chain: 91 dB
USB	Micro USB 3.0 device Type B
Bluetooth	Bluetooth LE Bluetooth Classic (HFP, A2DP)
Accessories	You can additionally purchase the following accessories: Konftel PoE kit Konftel Smart Microphones Konftel Daisy Chain kit
User interface	 Simplified user interface Functional keypad and dial pad LED indicators for call and connectivity status
Mobile app	Konftel Unite. With the app, you can access your mobile phone contact book and calendar. The app is available for free at AppStore and Google Play

CONFIGURATION OF KONFTEL 800

You can configure Konftel 800 directly from the phone or adjust the settings through the web interface. You can use the web browser of a PC connected to the same network to conduct the initial setup of the phone, its registration in the network, and settings in Konftel 800. Through the web interface, you can view logs, update software, and create configuration files.

(i) Konftel 800 officially supports only the Google Chrome browser.

The administrator can always change the administrator password. By default, the administrator password is not set. You must set it when you first activate Konftel 800 or after you reset the phone to the factory settings.

You must enter correct administrator password to change configuration of the phone. For that, you must always remember your password.

Setting the password for Konftel 800

Use this procedure to set the password for your Konftel 800 when you first activate the phone or after a reset to the factory settings.

Connect the PoE cable to ensure the phone power supply.

⇒ Wait for the following message to appear on the phone screen:

```
For full functionality, please set administration password.
```

- ⇒ Tap **Yes** to set the password.
- ⇒ Optional: Tap Skip to avoid setting the password.

In this case, Konftel 800 will be functioning in the administration mode, and you will be able to configure settings on the phone. However, you will not be able to access the web interface.

⇒ Using the keyboard on the phone screen, type your password. It can contain letters, numbers, and special characters.

The password must contain at least 4 characters. As you enter the password, the phone informs if the password has acceptable length.

- ⇒ Type the password again to confirm it.
- ⇒ Tap the < icon three times to return to the home screen.

The phone reboots.

Setting up a DHCP server

Konftel 800 supports any DHCP server software as long as the software is correctly configured.

Contact your server software vendor to obtain server software installation and configuration instructions.

- Install the DHCP server software according to the server software vendor's instructions.
- ⇒ Configure the IP address for the phone.

You must configure the required DHCP options to connect to the network with DHCP.

Related concepts

Network settings description on page 31

Connecting to a network with DHCP

Use this procedure to connect to a network with DHCP from your phone or through the web interface.

- To connect to the network with DHCP from Konftel 800, do the following:
 - a) Log in as the administrator.
 - b) Tap **Network**.
 - c) Enable DHCP.
 - d) Tap the < icon twice to return to the home screen.

The phone reboots.

- To connect to the network with DHCP through the web interface, do the following:
 - a) On the web interface, click Network.
 - b) Enable **DHCP**.
 - c) Click Save.

The phone reboots.

Viewing the IP address

Use this procedure to view the IP address of your Konftel 800. You can use this address to log into the web interface of the conference phone and manage the settings in the device through the web browser.

On the phone screen, tap Settings.

⇒ Tap Status or the > icon.

The phone displays the following hardware details:

- IP address
- MAC Address
- Bluetooth MAC Address
- Hardware Revision
- Software Version
- Smart Mic 1 Version
- Smart Mic 2 Version
- ⇒ Tap the

 ✓ icon twice to return to the home screen.

Setting a static IP address

Use this procedure to connect to the network using a static IP address, and not with DHCP.

Disable DHCP.

Obtain the IP address, netmask, gateway, DNS 1, and DNS 2.

- · To set the static IP address from the phone, do the following:
 - a) Log in as the administrator and tap **Network**. If the administrator password is not set for the phone, on the phone screen, tap **Settings > Network**.
 - b) Tap Static IP, and enter the following:
 - IP address
 - Netmask
 - Gateway
 - c) Return to the home screen to save the changes.
- To set the static IP address through the web interface, do the following:
 - a) On the web interface, click Network.
 - b) In the Static IP section, enter the following:
 - IP address
 - Network mask
 - Gateway
 - c) Click Save.

The phone reboots.

Logging in to the web interface of Konftel 800

Use this procedure to log in to the web interface of your Konftel 800. You can access the web interface only if you set the administrator password for your phone.

(i) Konftel 800 officially supports only the Google Chrome browser. The phone supports only HTTPS communication protocol.

Obtain the IP address and the administrator password for the phone.

 \Rightarrow On the web browser, type the IP address of your phone in the following format:

```
https://111.222.33.44/.
```

⇒ Enter password in the **Password** field.

The password is the administrator password for your phone.

⇒ Click **Login** to log in to the web server of your Konftel 800.

Logging out from Konftel 800

Use this procedure to log out from the web server of your Konftel 800 from your web browser.

You must be logged in to the web interface of your conference phone.

On the web browser, click **Logout**.

You are forwarded to the Login page and see the prompt that you are not logged in.

Registering an account on the phone

Use this procedure to register an account on the phone.

Konftel 800 supports three accounts: the primary account, the secondary account and the fallback account. The phone uses the primary account to make and receive calls. You can register the secondary account simultaneously with the primary account but the phone uses it only to receive calls. The secondary account can be used to make call if the phone fails to register to the primary account. You must register the fallback account only if the phone fails to register to both primary and secondary accounts.

You must have access to the account information and all necessary settings that the SIP PBX requires.

⇒ Log in as the administrator and tap SIP. If the administrator is not set for the phone, tap Settings > SIP.

- □ ⇒ Tap Primary Account, and enter information in the following fields:
 - Account Name: The name that the phone shows on the screen. You can set it based on your corporate standards.
 - User: The account name. The phone uses the content of this field to construct the user Universal Resource Identifier (URI). Note that if User is not specified, the phone is not able to make a registration request.
 - Registrar Address: The IP address or the public name of the SIP server
 where the account is registered. It can be in 10.10.1.100 format for a
 local SIP server or in sip.company.net format for a public VoIP service
 provider.
 - Proxy: The proxy server the company uses for Internet communication.
 This field can be left blank.
- ⇒ Enable Keep Alive.

This will ensure a persistent connection for this account.

- ⇒ Tap Credentials, and enter information in the following fields:
 - Realm. Realm is a protection domain where the SIP authentication name and password is valid.
 - Authentication Name. If this parameter is not specified, the phone uses the content of the User field to authenticate.
 - Password. The phone uses this password for the Realm authentication.
- ⇒ Tap the < icon to return to the account registration menu.
- ⇒ Optional: Enter Registration Timeout value in seconds.

This is a request to the SIP server that specifies when the registration must expire. Konftel 800 automatically renews the registration within the set period if the phone is still on and connected to the server. By default, it is 300 seconds.

⇒ Tap the < icon to return to the SIP menu.

Repeat Steps above for the secondary and fallback accounts.

Registering an account through the web interface

Use this procedure to register an account for Konftel 800 through the web interface.

You must have access to the account information and all necessary settings that the SIP PBX requires.

- ⇒ On the web interface, click SIP.
- ⇒ In the **Primary Account** section, enter information in the following fields:
 - Account Name

- User
- Registrar
- Proxy: This field can be left blank.
- · Registration Timeout
- Realm: A protection domain where the SIP authentication name and password is valid.

The realm is usually the same as the registrar. If you enter an asterisk (*), the phone responds to any realm. If there is a specific realm, the phone responds only to that realm when asked for credentials.

- Authentication Name
- Password: The password for the Realm authentication.
- ⇒ Enable **Keep Alive**.
- ⇒ Optional: Repeat Steps above for the secondary and fallback accounts.

CONFIGURATION OF SETTINGS ON KONFTEL 800

You can configure almost all settings directly on your Konftel 800. For that you need to navigate through the menu and select the options you need. Using the web interface makes the settings configuration easier. This guide explains both options for you to choose the more convenient one.

The basic settings, such as the phone name, language, and ring level, can be modified by any user. To configure other settings you must log in as the Administrator.

BASIC SETTINGS

You can configure the basic settings during the installation of Konftel 800 or any time after it. The basic settings include the following:

- Phone Name
- Language
- Ring Level
- Key Tone
- Reboot Device
- Webapp Debug
- Daisy Chain Mode
- Factory Reset
- Security
- · Time and Region

Related concepts

Basic settings description on page 25

Configuring the basic settings on the phone

Use this procedure to configure the basic settings on the phone.

- ⇒ On the phone screen, tap Settings > Phone.
- Choose the parameter that you want to configure and proceed to the options available.

You must log in as the administrator to change the password, set time settings, choose the Daisy Chain mode or reset the phone to factory settings.

⇒ After you made the choices, return to the home screen.

Depending on what parameters you change, the phone restarts the application or reboots.

Configuring the settings through the web interface

Use this procedure to configure the settings through the web interface of your Konftel 800. Note that only administrator can configure all the settings.

- ⇒ Log in to the web interface.
- Choose the parameter that you want to configure and proceed to the options available.

Basic settings description

The following are the basic settings of Konftel 800 available through the web interface in the **Basic** tab or on the phone in **Settings** > **Phone** and **Settings** > **Admin Login** > **Time**.

Name	Description
Phone	
Name	To specify the name of the phone, which is visible on the home screen when the phone is in a stand-by or on-hook mode. The default name is Conference Phone .

Name	Description
Language	To select the language. The options are:
	English. This is the default setting.
	SwedishDanish
	Norwegian
	• Finnish
	• Italian
	German
	• French
	SpanishPortuguese
	Dutch
	Simplified Chinese
	The characters on the Konftel 800 keyboard match the selected language for all languages except Simplified Chinese. For Simplified Chinese, Konftel 800 uses English keyboard layout.
Security	To change the administrator password.
	You can configure this parameter if you logged in with the administrator password.
	For security reasons, you can change the administrator password only on the phone.
Ring Level	To choose from six volume levels and a Silent mode. The default setting is Level 4 .
	If you select the Silent mode, only the green LEDs on the phone flash when a call is received.
Key Tone	To enable or disable the key click sound as you tap the phone screen buttons.
	By default, the key tone is on.

Name	Description
Reboot Device	To reboot the phone when needed.
	You can use this function only through the web interface.
Webapp debug	To enable or disable the debugging function for the web application. It activates the web application logging available in the System Logs tab. By default, Webapp Debug is off.
	You can use this function only through the web interface.
Daisy Chain	To choose a mode, in which your Konftel 800 operates in case of a daisy chain arrangement. The options are:
	Master. This is the default setting.Slave
	 You can configure this parameter if you logged in with the administrator password.
Factory Reset	To reset the phone to its factory settings. By resetting the phone to its factory settings, you remove all the configurations set, imported and installed in course of the phone use.
	You can do the factory reset only if you log in with the administrator password and only on the phone.
Time	
Enable NTP	To enable or disable the Network Time Protocol (NTP). By default, NTP is enabled.
	You can configure this parameter if you logged in with the administrator password.

Name	Description
NTP Server	To specify the NTP server when NTP is enabled. By default the phone uses the following NTP server: 0.pool.ntp.org.
	You can configure this parameter if you logged in with the administrator password.
Date	To set the current date.
	You can use this function only through the web interface.
	 You can set the current date manually only if NTP is in disabled state.
	The date is set in the $mm/dd/yyyy$ format. You can specify the date by doing the following:
	 Manually enter the date in the field by clicking the day, month, and year to change the value. Select a date from the date picker.
Time	To set the current time.
	You can use this function only through the web interface.
	 You can set the time manually only if NTP is in disabled state.
	The time is set in the hh:mm:ss format. You can see the time on the home screen of the phone.
	The interface provides the time using the 12-hour clock approach, that is you see an AM or PM abbreviation to specify the time.
	You can set the time by doing the following:
	 Manually enter the time value in the field by clicking the hours, minutes, and seconds to change the value. Select the time from the time picker.

Name	Description
Geo Timezone (auto DST)	To enable or disable the Daylight Saving Time (DST) mode based on the selected geographical timezone.
	By default, DST is disabled.
	You can use this function only through the web interface.
Timezone	To select a timezone from a drop-down list. The available timezone is based on Geo Timezone (auto DST) being enabled or disabled. With Geo Timezone (auto DST) disabled, the phone sets the time as a difference with the Coordinated Universal Time (UTC). With Geo Timezone (auto DST) enabled, the phone specifies the timezone based on the country and the city observing the DST.
	The default setting is UTC.
	You can use this function only through the web interface.

After you click **Save** in the web interface, the phone saves the changes and restarts the application or reboots, depending on what parameters you changed. To save changes on the phone, you must return to the home screen, and the phone restarts the application or reboots to apply them.

Sleep mode

Konftel 800 supports the sleep mode feature, which saves power by turning the screen off after a specified period of inactivity. By default, the sleep mode is in disabled state. The phone administrator can enable the sleep mode and configure the time-out value.

The phone wakes up from the sleep mode when you do any of the following:

- Touch the screen
- Connect or disconnect the USB cable
- Connect or disconnect a daisy chain Slave device
- Connect or disconnect the Bluetooth Classic

The phone also wakes up from the sleep mode in case of screen activity, such as an incoming call, Konftel Unite connection, or error prompts.

The phone cannot enter the sleep mode during an active call or when it is in the music streaming mode.

Enabling the sleep mode

As the administrator, you can enable the sleep mode and configure the time-out value using the .xml configuration file. The default value is 0, which means that the feature is disabled. To enable the sleep mode and to specify the time-out in minutes, you can set the value in the range from 1 to 500.

Obtain the .xml configuration file for Konftel 800.

- ⇒ In the configuration file, go to the <phone> section.
- ⇒ Set the <sleep_mode_timeout> parameter to a value in the range from 1 to 500.
- ⇒ Save the configuration file.

Upload the configuration file to the Device Management server, or import the configuration file to the phone using the web interface.

Related concepts

Configuration file on page 77

Related tasks

Importing the configuration file on page 92

Configuring Device Management settings through the web interface on page 96 Exporting the configuration file on page 92

NETWORK SETTINGS

The network settings of Konftel 800 include the following:

- DHCP
- Hostname
- Domain
- Static IP
- DNS1
- DNS2
- VLAN
- VI AN ID
- LLDP
- 802.1x
- SIP DiffServ

Media DiffServ

You can configure the network settings on the phone or through the web interface of Konftel 800.

Related concepts

Network settings description on page 31

Configuring the network settings on the phone

Use this procedure to configure the network settings of your Konftel 800 on the phone.

Log in as the administrator.

- ⇒ In the Settings menu, tap Network.
- Choose the parameter that you want to configure and proceed to the options available.
- ⇒ Tap the

 icon twice to return to the home screen.

The phone reboots to apply the changes.

Configuring the Network settings through the web interface

Use this procedure to configure the Network settings of your Konftel 800 through the web interface.

- ⇒ Log in to the web interface.
- Click Network.
- Choose the parameter that you want to configure and proceed to the options available.
- ⇒ Click Save.

The phone reboots to apply the changes.

Network settings description

The following are the network settings of Konftel 800 available through the web interface in the **Network** tab or on the phone in **Settings** > **Network**.

Name	Description	
Network		

Name	Description
DHCP	To enable or disable Dynamic Host Configuration Protocol (DHCP) on your phone. DHCP is used by network devices to obtain the parameters necessary for operation in the IP network. You must enable DHCP if no other specific information is given.
	① When DHCP option is enabled, all other information on this page is set automatically.
Hostname	To specify the hostname of your phone in the network. By default, it is set to konftel800. You can change it to another name.
Domain	To specify the domain where the device is located.
	You can leave this field blank.
Static IP	
IP	To specify the IP address of the phone if DHCP is disabled. In this case, the address is provided by the network administrator or the service provider.
Netmask	To specify the network mask for your phone. Usually it is set to 255.255.255.0 to limit network traffic to the subnet.
Gateway	To specify the gateway for your phone. The gateway is the address of the device or server used for Internet communication.
DNS 1	To specify the address to the primary Domain Name System (DNS) server.
	① Leave the field blank for DHCP default settings.
DNS 2	To specify the address to an optional secondary DNS server.
	① Leave the field blank for DHCP default settings.

To enable or disable the Virtual Local Area Network (VLAN). By enabling this option, all communication to and from Konftel 800 goes through the specified VLAN. ① The phone also uses this VLAN to communicate through the web interface. VLAN ID To specify the ID number to be used for all IP telephony communication through VLAN on your phone. SIP DiffServ To specify a value in the range from 0 to 63 to prioritize the SIP messages as part of quality of service (QoS) mechanism. ① You can configure this setting only through the web interface. Media DiffServ To specify a value in the range from 0 to 63 to prioritize the media packets (voice) as part of quality of service (QoS) mechanism. ① You can configure this setting only through the web interface. LLDP Enable To enable and disable specification of the phone location settings. Konftel 800 uses Link Layer Discovery Protocol—Media Endpoint Discovery (LLDP-MED) as a data link protocol to send information about itself and receive data about other devices in the same network. You can specify a part of the parameters if some information is unavailable. By default, LLDP is enabled after the first boot, factory reset, and configuration reset. ① You can configure LLDP settings only through the web interface.	Name	Description	
through the web interface. VLAN ID To specify the ID number to be used for all IP telephony communication through VLAN on your phone. SIP DiffServ To specify a value in the range from 0 to 63 to prioritize the SIP messages as part of quality of service (QoS) mechanism. ① You can configure this setting only through the web interface. Media DiffServ To specify a value in the range from 0 to 63 to prioritize the media packets (voice) as part of quality of service (QoS) mechanism. ① You can configure this setting only through the web interface. LLDP Enable To enable and disable specification of the phone location settings. Konftel 800 uses Link Layer Discovery Protocol—Media Endpoint Discovery (LLDP-MED) as a data link protocol to send information about itself and receive data about other devices in the same network. You can specify a part of the parameters if some information is unavailable. By default, LLDP is enabled after the first boot, factory reset, and configure LLDP settings only through the web	VLAN	By enabling this option, all communication to and from	
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reset, and configuration reset. (i) You can configure LLDP settings only through the web		Endpoint Discovery (LLDP-MED) as a data link protocol to send information about itself and receive data about other devices in the same network. You can specify a part of the	
1			
Country Code To specify the country.	Country Code	To specify the country.	

Name	Description		
Country Subdivision	To specify the part of the country.		
County	To specify the county, parish, district, or other applicable administrative division.		
City	To specify the city.		
City Division	To specify the city district or area.		
Block	To specify the block within the city district.		
Street	To specify the street.		
Direction	To specify the direction of moving along the street.		
Trailing Street Suffix	To specify the trailing street suffix.		
Street Suffix	To specify the street suffix.		
Number	To specify the house number.		
Number Suffix	To specify the house number suffix.		
Landmark	To specify the reference point for the location.		
Additional	To specify additional reference points.		
Name	To specify the name of the company.		
Zip	To specify the ZIP-code of the location.		
Building	To specify the name or number of the building.		
Unit	To specify the unit within the building.		
Floor	To specify the floor of the building.		

Name	Description		
Room	To specify the room in the building.		
Place Type	To specify the type of setting, for example, office.		
Script	To specify the script.		
ELIN	To specify Emergency Location Identification Number (ELIN).		
802.1.x			
802.1x slider	To enable or disable 802.1x . When enabled, Konftel 800 asks an authentication server for permission when connected to the LAN.		
Authentication Name	To specify your name in the network.		
EAP MD5	To enable or disable Extensible Authentication Protocol (EAP) MD5 method.		
EAP TLS	To enable or disable the EAP Transport Layer Security (TLS) method.		
EAP MD5			
EAP-MD5	To set EAP password.		
Password	This parameter is available in the web interface if you enable EAP MD5.		
EAP TLS			
① This section is a	available in the web interface if you enable EAP TLS .		
Certificate	To specify the certificate for the phone to use for authentication in case of TLS applied.		

Name	Description	
CA Certificate	To specify the public key in the root certificate which the phone uses to verify other certificates in case of TLS applied. Root certificate is also known as the Certificate Authority (CA) certificate.	
Private Key	To specify the private key which the phone uses to verify other certificates in case of TLS applied.	
Private Key Password	To specify the password for encryption of the private key when using TLS.	

LLDP Data Units

When Konftel 800 uses LLDP, it sends the information as LLDP Data Units. Each LLDP Data Unit is a sequence of Time-Length-Value (TLV) strings.

The phone supports LLDP on primary Ethernet interfaces. The following table lists the TLVs typical for Konftel 800:

Category	TLV Name	String length	TLV String Value
BASIC MANDATORY	CHASSIS ID	7	MAC ADDRESS OF THE PHONE
BASIC MANDATORY	PORT ID	7	IP ADDRESS OF THE PHONE
BASIC MANDATORY	TIME TO LIVE	2	LLDP_TTL
BASIC OPTIONAL	SYSTEM NAME	22	LLDP_SYSTEM_NAME
BASIC OPTIONAL	SYSTEM DESCRIPTION	28	VENDOR INFORMATION AND FIRMWARE VERSION
BASIC OPTIONAL	SYSTEM CAPABILITIES	4	THE PHONE IS WITHIN THE SYSTEM CAPABILITIES

Category	TLV Name	String length	TLV String Value
			OCTET. IF THE PHONE IS REGISTERED, BIT 5 THAT IS EQUAL TO THE PHONE IS WITHIN THE ENABLED CAPABILITIES OCTET.
BASIC OPTIONAL	MANAGEMENT ADDRESS	12	MGMT ADDR STRING LENGTH = 5; MGMT ADDRESS SUBTYPE = 01; (IPV4) MGMT ADDRESS = IPADD; INTERFACE NUMBER SUBTYPE = 2; INTERFACE NUMBER = 3
ORGANIZATIO N SPECIFIC	IEEE - VLAN NAME	11	OUC = 00-80-C2; IEEE 802.1 SUBTYPE = 3; VLAN IDENTIFIER = VLAN ID; VLAN NAME LENGTH = LENGTH OF VLAN NAME; VLAN NAME = NAME OF VLAN
ORGANIZATIO N SPECIFIC	IEEE 802.3 - LINK AGGREGATIO N	9	OUC = 00-12-0F; IEEE 802.3 SUBTYPE = LINK AGGREGATION 3; AGGREGATION STATUS = 1; AGGREGATED PORT ID = 0
ORGANIZATIO N SPECIFIC IEEE 802.3	MAC/PHY/ CONFIGURATI ON STATUS	9	802.3 OUC = 00-12-0F (HEX); 802.3 SUBTYPE = 1; AUTONEGOTIATION SUPPORT/ STATUS = VALUE SENT DURING AUTO- NEGOTIATION; OPTIONAL MAU TYPE = LLDP_MAU
TIA LLDP MED	LLDP-MED CAPABILITIES	7	TIA OUC = 00-12-BB (HEX); LLDP CAPABILITIES SUBTYPE = 1; LLDP-MED CAPABILITIES = 00-3F (MED

Category	TLV Name	String length	TLV String Value
			CAPS, NETWORK POLICY, LOCATION ID, EXTENDED POWER, INVENTORY); LLDP- MED DEVICE TYPE = 3 (CLASS III)
ORGANIZATIO N SPECIFIC	CIVIC LOCATION IDENTIFICATIO N	63	TIA OUC = 00-12-BB; LOCATION DATA FORMAT = CIVIC ADDRESS LCI
ORGANIZATIO N SPECIFIC	ELIN LOCATION IDENTIFICATIO N	5	TIA OUC = 00-12-BB; LOCATION DATA FORMAT = ECS ELIN
TIA LLDP MED	NETWORK POLICY - VOICE	8	TIA OUC = 00-12-BB (HEX); NETWORK POLICY SUBTYPE = 2; APPLICATION TYPE = 1 (VOICE) U = 0 (NETWORK POLICY IS DEFINED) T = TAGGING X = 0 (RESERVED BIT) VLAN ID = VLAN_IN_USE
TIA LLDP MED	INVENTORY - SOFTWARE REVISION	5–36	TIA OUC = 00-12-BB (HEX); SOFTWARE REVISION SUBTYPE = 7; SOFTWARE REVISION = VALUE
ORGANIZATIO N SPECIFIC	EXTENDED POWER-VIA- MDI	7	OUC = 00-12-BB; AVAILABLE PARAMETERS = POWER TYPE, POWER SOURCE, POWER PRIORITY, POWER VALUE
BASIC MANDATORY	END-OF- LLDPU	0	NA

MEDIA SETTINGS

You can configure the media settings during the installation of Konftel 800 or any time after it. The media settings include the following:

- Security
- Audio codecs

Related concepts

Media settings description on page 39

Configuring the media settings on the phone

Use this procedure to configure the media settings of your Konftel 800 on the phone.

Log in as the administrator.

- ⇒ In the Settings menu, tap Media.
- Choose the parameter that you want to configure and proceed to the options available.
- ⇒ Tap the < icon twice to return to the home screen.

The phone restarts the application to apply the changes.

Configuring the media settings through the web interface

Use this procedure to configure the media settings of your Konftel 800 through the web interface.

- ⇒ Log in to the web interface.
- ⇒ Click Media.
- Choose the parameter that you want to configure and proceed to the options available.
- ⇒ Click Save.

The phone restarts the application to apply the changes.

Media settings description

The following are the media settings of Konftel 800 available through the web interface in the **Media** tab or on the phone in **Settings > Media**.

Starting from Release 1.0.1, the SRTP, SRTCP, and Capability Negotiation settings are not supported on Konftel 800 phones sold in Russia, Belarus,

Kazakhstan, Kyrgyzstan, and Armenia to meet local restrictions on the use of encryption. On such phones, the settings related to **SRTP**, **SRTCP**, and **Capability Negotiation** are excluded both from the phone interface and the web interface, and you, as the administrator, cannot enable these settings.

Name	Description	
Security		
SRTP	To select Secure Real-time Transport Protocol (SRTP) parameters to provide encryption, message authentication, and integrity for the audio and video streams. The options are:	
	 Disabled: Konftel 800 does not use SRTP. Optional: If selected, the phone uses SRTP if other devices support it. Mandatory: The call is not connected if other devices do not support SRTP. 	
	By default, SRTP is disabled.	
SRTCP	To enable or disable the Secure Real Time Control Protocol (SRTCP). Enabled SRTCP means using the encrypted protocol.	
	By default, SRTCP is disabled.	
Capability Negotiation	To enable or disable the Session Description Protocol (SDP) capability negotiation. If Capability Negotiation is enabled, the phone can negotiate transport protocols and attributes.	
	By default, Capability Negotiation is disabled.	
Codec		
Codec	To set the priorities to your codec preferences, where 6 is high, 1 is low, and 0 is also possible.	

iLBC Priority	This is a high-complexity speech codec suitable for robust voice communication over IP. ILBC is designed for narrow band speech. It uses a block-independent linear-predictive coding algorithm and has support for two basic frame lengths: 20 ms at 15.2 kbit/s and 30 ms at 13.33 kbit/s.
	By default it is set to 0.
OPUS Priority	This is an audio coding format used in interactive real- time applications on the Internet. It can switch between various codecs depending on the bandwidth available. OPUS adapts to low bit-rate, narrowband speech and to high-quality stereo music.
	By default it is set to 0.
PCMU Priority	This is an ITU-T standard codec with U-law compression algorithm also known as G711 U-law. It is used in North America and Japan.
	By default it is set to 4.
PCMA Priority	This is an ITU-T standard codec with A-law compression algorithm also known as G711 A-law. It is used in Europe and the rest of the world, except North America and Japan. Companding algorithms reduce the dynamic range of an audio signal. In analog systems, this can increase the signal-to-noise ratio achieved during transmission, and in the digital domain, it can reduce the quantization error.
	By default it is set to 5.
G722 Priority	This is an ITU-T standard codec that provides 7 kHz wideband audio at a data rate within 64 kbit/s. It offers an improved speech quality but requires a high quality network connection between the devices.
	By default it is set to 6.

Name	Description
G729 Priority	This is an ITU-T standard codec that operates at 8 kbit/s. It is mostly used in VoIP applications with low bandwidth requirement.
	By default it is set to 3.
Voice Quality Monitor	
Enable RTCP XR	To enable or disable the sending of the Real Time Control Protocol Extended Report (RTCP XR). If enabled, the quality parameters are sent as SIP PUBLISH messages to the specified report collector.
	By default, this option is disabled.
RTCP XR Collector URI	To specify the report collector.

After you click **Save**, the phone saves the changes and restarts application.

Voice quality monitoring

You can configure Konftel 800 to generate quality metrics which you can use to troubleshoot various quality aspects of a phone call.

RTCP XR as voice quality monitoring report

If you enable the voice quality monitoring feature, the phone collects the metrics, generates Real Time Control Protocol Extended Report (RTCP XR), and sends RTCP XR as a SIP PUBLISH message to the specified report collector.

The phone collects the metrics in the following cases:

- One of the call parties ends the call.
- Call parameters, such as codec and far-end IP address or port, change.

RTCP XR parameters

The RTCP XR contains the following parameters:

Parameter	Description
CallId	Party leg identifier
Localld	Reporting device for the media session
Remoteld	Remote device of the media session
OrigID	Device that originated the session
LocalGroup	Identification for the purposes of aggregation for the local phone
LocalAddr	Address information, including an IP address, a port number, and SSRC of the phone that receives the information.
LocalMAC	The Media Access Control (MAC) address of the local phone
RemoteAddr	Address information, including an IP address, a port number, and SSRC of the phone that is the source of information
Timestamps	Call start and call end in Coordinated Universal Time (UTC)
SessionDesc	A shortened version of the media session including codecs (ILBC, Opus, PCMU, PCMA, G722, or G729), silence suppression status (on or off), number of packets per second, and other details.
JitterBuffer	Jitter Buffer metric definitions
PacketLoss	Packet loss percentage and Jitter buffer discard rate percentage
BurstGapLoss	Burst-to-Gap loss metric
Delay	Network delay between the call parties

Configuring RTCP XR

By default, the voice quality monitoring feature on Konftel 800 is in the disabled state. To use this feature, you need to enable it and specify the Uniform Resource

Identifier (URI) of the RTCP XR collector. You can do this either on the phone, through the phone web interface, or by using the configuration .xml file.

The acceptable formats for the collector URI are as follows:

- hostname
- hostname:port
- · user@hostname
- user@hostname:port

Obtain the RTCP XR collector URI from your service provider.

- To configure RTCP XR from the phone interface, do the following:
 - a) Log in as the administrator.
 - b) Navigate to Media > Voice Quality Monitor, and move the Enable RTCP XR slider to the right to activate RTCP XR.
 - c) In the RTCP XR Collector URI field, specify the RTCP XR collector URI.

```
For example, rtcpxr@rtcpxr.ringcentral.com.
```

d) Tap the < icon three times to return to the home screen.

The phone restarts the application to apply the changes.

- · To configure RTCP XR from the web interface, do the following:
 - a) Log in to the phone web interface.
 - b) On the Media tab, in the Voice Quality Monitor section, move the Enable RTCP XR slider to the right to activate RTCP XR.
 - c) In the RTCP XR Collector URI field, specify the RTCP XR collector URI.

For example, rtcpxr@rtcpxr.ringcentral.com.

d) Click Save.

The phone restarts the application to apply the changes.

- To configure the RTCP XR by using the configuration file, do the following:
 - a) Obtain the configuration .xml file.

```
You can find the RTCP XR settings under the <voice quality monitor> section.
```

- b) In the <enable rtcp xr> tag, specify true to enable RTCP XR.
- c) In the $< rtcp_xr_collector_uri> tag, specify the collector URI.$

For example, rtcpxr@rtcpxr.ringcentral.com.

- d) Save the configuration file.
- e) Import the configuration file either to the phone through the web interface or to the provisioning server to configure several phones simultaneously.

Related concepts

Device Management on page 94

Related tasks

Exporting the configuration file on page 92

LDAP SETTINGS

Konftel 800 supports connection to an external phone book using the Lightweight Directory Access Protocol (LDAP). When the LDAP feature is in the enabled state, you can browse and use the contact information stored in a remote company directory. The LDAP phone book is available in the **Dialpad** view of the phone interface.

An LDAP database can contain thousands of contacts. To facilitate the search through the directory server, Konftel 800 has a built-in search function, which filters the content from the LDAP database, based on the search parameters that you enter.

To make the LDAP phone book available, you must activate the LDAP feature by specifying the LDAP server to connect to and the search parameters. You can configure the LDAP settings during or after the installation of Konftel 800.

Configuring the LDAP settings

You can configure the LDAP settings through the web interface of your Konftel 800.

- ⇒ Log in to the web interface.
- ⇒ Navigate to the LDAP tab.
- Choose the parameter that you want to configure and proceed to the options available.
- ⇒ Click Save.

The phone restarts the application to apply the changes.

LDAP settings description

Parameter	Description
Connection	

Parameter	Description
Enable	To specify if the LDAP feature is enabled. By default it is disabled.
URL	To specify the URL of the LDAP server host. The phone supports LDAP and LDAP over SSL (LDAPS). URL also can contain the port that the phone connects to.
Certificate	To upload a certificate to the phone. This certificate is used for authentication on the LDAP server.
CA Certificate	To upload a root certificate. It contains a public key, which is used to verify other certificates when using LDAP.
Private Key	To upload a private key. It is used for authentication when using LDAP.
Username	To specify the username if the LDAP server requires one.
	Leave this field blank if the LDAP server does not require a username.
Password	To specify the password if the LDAP server requires one.
	Leave this field blank if the LDAP server does not require a password.
Search options	
Search base	To specify the distinguished name (DN) of the search base.
	Example: dc=domain, dc=com.

Parameter	Description
Name filter	To define how the phone applies the entered search characters. The filter complies with the string representation of LDAP search filters described in RFC2254. The search character entered by the user replaces % in the filter string.
	Example:
	($(sn=\%*)$ $(cn=\%*)$): the phone displays to the user all entries with the search characters in the beginning of the sn or cn attribute.
Display name	To specify how the phone displays the search hits.
	Example: %cn shows the cn attribute.
	%givenName %sn shows the givenName attribute and the sn attribute with a space in between.
Sort results	To specify if the phone sorts the search hits based on the Display name.
	By default, this setting is enabled.
Max hits	To specify the maximum number of hits to return for each LDAP search.
	The default value is 20.

Parameter	Description	
Number attributes	To define the attributes that the phone displays for a selected search hit. The phone receives the displayed information from the LDAP server.	
	The number of the Number attribute tags inside the Number attributes tag may be $0-30$.	
	Each Number attribute consists of an identifier <code><id></id></code> and its value <code><value></value></code> . The identifier is the number attribute in the form in which the LDAP directory stores it. The <code><id></id></code> tag can not be empty. The value is the short description or the label that the user sees on the phone screen for a specific number attribute. You can use the same label for several ids.	
	There are default and custom labels. The default labels are the following:	
	PHONENUMBERMOBILEHOMEWORKOTHER	
	The Custom label are the labels that the user defines.	
	The phone translates each label from the default list to the language specified for the device. The phone does not translate the custom labels and displays them as user sets.	
	A custom label can be empty. In this case the phone gives it a default PHONENUMBER label and translates to the device language.	
	Example: the identifier mobile2 with the value MOBILE shows the second mobile phone number and the label on separate rows for the selected contact.	
	There are maximum 30 labels of the Number attributes in the web UI.	
Dial options		

Parameter	Description
Country code	To specify the country code where the phone is located. In case the country code in any phone number attribute is identical to that code, the phone ignores it.
Area code	To specify the area code where the phone is located. In case the area code in any phone number attribute is identical to that code, the phone ignores it.
External prefix	To specify a special prefix for dialing external numbers.
	Example: 0 to get a dialing tone in some cases.
Min length for external prefix	To restrict the external prefix that the phone adds only if the phone number is longer than the minimum length. This allows to use short internal numbers.
	The default setting is 0.
Exact length for no external prefix	To specify that the phone must not add the external prefix if the phone number is exactly of the entered length.
	The default setting is 0.
Number prefix for no external prefix	To specify the initial number for the phone numbers in case of using which the phone adds no external prefix. All numbers that start with this number will not have the external prefix added. You can use this option if all internal numbers start with a certain number.
	The default setting is 0.

If complete information is unavailable, you can configure only the known parameters.

Configuring the LDAP number attributes through the web interface

You can configure the LDAP number attributes through the web interface of your Konftel 800.

- ⇒ Log in to the web interface.
- ⇒ Navigate to the **LDAP** tab.
- ⇒ Scroll down to the Number attributes section.

- ⇒ Fill in the title for a number attribute in the **Attribute** field.
- ⇒ Choose the description label from the Localized labels dropdown list.

Note that if the label stays empty, it uses the localized default label.

⇒ Optional: Enable the **Customs** control element to edit the label.

The **Customs** control element is in the enabled state automatically if the attribute is not in the list of the approved attributes.

- ⇒ Optional: You can also do one of the following:
 - Add a number attribute entity by clicking the Add attribute label button. The
 default ID of the number attribute entity is telephoneNumber and the
 value is PHONENUMBER.

Note that there can be maximum 30 number attribute labels in the web UI.

 Delete a number attribute entity by clicking the Delete button next to the respective number attribute.

The phone restarts the application to apply the changes.

The order of the configured number attributes depends on the order of attributes defined on the LDAP server.

Configuring the LDAP number attributes using a configuration file

You can configure the LDAP number attributes by using a configuration file for your Konftel 800.

To configure the LDAP number attributes you need to do the following:

- Make sure that the LDAP feature is in the enabled state and the external phone book is available.
- Prepare the configuration file with the needed LDAP parameters.

The number attributes in the configuration file can contain the following information:

- · work phone number
- home phone number
- mobile 1 and mobile 2 phone numbers
- fax number
- · other details
- ⇒ On the phone screen, tap the Call icon.

The Dialpad view opens.

⇒ Tap the Contacts icon.

You can open a contact card to make sure that it is empty and contains only a person's name.

- ⇒ Import the configuration file using the web interface.

The phone restarts the application to apply the changes.

The order of the configured number attributes depends on the order of attributes defined on the LDAP server.

Related tasks

Importing the configuration file on page 92

SIP SETTINGS

The SIP settings can be configured during the installation of Konftel 800. The SIP settings include the following:

- Primary account
- · Secondary account
- · Fallback account
- · Source port
- · Transport protocol
- Transport Layer Security (TLS)
- · Advanced SIP settings
- DTMF
- NAT Traversal

The SIP settings can be configured on the phone or through the web interface of Konftel 800.

Configuring the SIP settings on the phone

Use this procedure to configure the SIP settings of your Konftel 800 on the phone.

Log in as the administrator.

- ⇒ In the Settings menu, tap SIP.
- Choose the parameter that you want to configure and proceed to the options available.
- ⇒ Tap the < icon to return to the home screen.

The phone restarts the application to apply the changes.

Configuring the SIP settings through the web interface

Use this procedure to configure the SIP settings of your Konftel 800 through the web interface.

- ⇒ Log in to the web interface.
- ⇒ Click SIP.
- ⇒ Choose the parameter that you want to configure and proceed to the options available.
- ⇒ Click Save.

The phone restarts the application to apply the changes.

SIP settings description

The following are the SIP setting of Konftel 800 available through the web interface in the **SIP** tab or on the phone in **Settings** > **SIP**.

Name	Description
Transport	
Transport Protocol	 To choose one of the following protocols: UDP. This is the default setting. TCP TLS SIPS ⑤ Even if you choose TLS, Konftel 800 still accepts incoming UDP or TCP signalling.
Source port	To specify the local User Datagram Protocol (UDP) port to ensure stable bidirectional traffic.
TLS ① This section is a transport protocol	available in the web interface if you choose TLS or SIPS col.

Name	Description		
TLS Method	To choose the security methods to be applied. The options are:		
	 TLSv1.1 TLSv1.2. This is the default setting. 		
Verify Client	To enable or disable Verify Client . The options are:		
	 Yes: The phone activates peer verification for incoming secure SIP connections. No. This is the default setting. 		
Verify Server	To enable or disable Verify Server . The options are:		
	 Yes: When Konftel 800 is acting as a client for outgoing connections with secure SIP, it always receives a certificate from the peer. If you select this, the phone ends the connection in case of a non-valid server certificate. No. This is the default setting. 		
Require Client Certificate	To enable or disable client certificate verification. The options are:		
	 Yes: The phone rejects incoming secure SIP connections if the client does not have a valid certificate. No. This is the default setting. 		
TLS Negotiation	To specify the time-out for the TLS settings negotiation during a call setup. You must define the time in seconds in this field. If this negotiation is not successful within the specified time, the phone stops the negotiation. You can disable the time-out by entering 0. The default setting is 0 seconds.		

Name	Description		
Certificate	To upload a certificate for TLS or SIPS communication. A certificate is a file that combines a public key with information about the owner of the public key, signed by a trusted third party. If you trust the third party, then you can be sure that the public key belongs to the person named in that file. You can also be sure that everything you decrypt with that public key is encrypted by the person named in the certificate.		
	This setting is available only through the web interface in the SIP section.		
CA Certificate	To upload a certificate for TLS or SIPS communication received from a Certificate Authority (CA). You can use it to verify other certificates. You need the CA certificate if you have Verify Server or Verify Client enabled.		
	This setting is available only through the web interface in the SIP section.		
Private Key	To upload a private key for TLS or SIPS communication. A private key is one of the keys in a key pair in asymmetric cryptography. Messages encrypted using the public key can only be decrypted using the private key.		
	This setting is available only through the web interface in the SIP section.		
Password	To specify the password used for encryption of the private key if it is encrypted.		
Primary Account			
Account Name	To set the name for the primary account displayed on the screen according to the existing corporate standards.		
User	To set the account or customer name for the primary account.		

Name	Description		
Registrar	To specify the IP address or the public name of the SIP server where the primary account is registered. For example, use the 10.10.1.100 format for a local SIP server or the sip.company.net format for a public VoIP service provider.		
Proxy	To specify the Universal Resource Identifier (URI) of the proxy server used by the primary account.		
Keep Alive	To make the phone maintain an active connection to the network. The options are:		
	 Yes: If you select this, the phone renews the connection of the phone primary account to the network. No. This is the default setting. 		
Realm	To specify the protection domain where the SIP authentication of the primary account with the name and password is valid. If the field is left blank, or marked with an asterisk (*), the phone responds to any realm. If specified, the phone only responds to the specific realm when asked for credentials.		
Authentication Name	To specify the number that is assigned to the user in the primary account.		
Password	To define the password for the Realm authentication in the primary account.		
	On the phone, the password can be configured in Settings > SIP > Primary Account > Credentials		
Registration Timeout	To specify the time when the registration of the primary account expires and the SIP server is sent a corresponding request. Konftel 800 automatically renews the registration within the time interval if the phone is still on and connected to the server. The default value is 300 seconds.		
Secondary Accou	nt		

Name	Description		
Account Name	To set the name for the secondary account displayed on the screen according to the existing corporate standards.		
User	To set the account or customer name for the secondary account.		
Registrar	To specify the IP address or the public name of the SIP server where the secondary account is registered.		
Proxy	To specify the URI of the proxy server used by the secondary account.		
Keep Alive	To make the phone maintain an active connection to the network with the secondary account.		
Realm	To specify the protection domain where the SIP authentication of the secondary account with the name and password is valid.		
Authentication Name	To specify the number that is assigned to the user in the secondary account.		
Password	To define the password for the Realm authentication in the secondary account.		
	On the phone, the password can be configured in Settings > SIP > Secondary Account > Credentials		
Registration Timeout	To specify the time when the registration of the secondary account expires and the SIP server is sent a corresponding request. The default value is 300 seconds.		
Fallback Account			
Account Name	To set the name for the fallback account displayed on the screen according to the existing corporate standards.		
User	To set the account or customer name for the fallback account.		

Name	Description		
Registrar	To specify the IP address or the public name of the SIP server where the fallback account is registered.		
Proxy	To specify the URI of the proxy server used by the fallback account.		
Keep Alive	To make the phone maintain an active connection to the network with the fallback account.		
Realm	To specify the protection domain where the SIP authentication of the fallback account with the name and password is valid.		
Authentication Name	To specify the number that is assigned to the user in the fallback account.		
Password	To define the password for the Realm authentication in the fallback account.		
	On the phone, the password can be configured in Settings > SIP > Fallback Account > Credentials		
Registration Timeout	To specify the time when the registration of the fallback account expires and the SIP server is sent a corresponding request. The default value is 300 seconds.		
DTMF			

Name	Description		
DTMF Method	To define the Dual-tone multi-frequency (DTMF) signalling method. The options are:		
	 RFC 4733. With this method, DTMF signals are carried in RTP packets by using a separate RTP payload format. It is set by default. SIP Info. With this method, the DTMF signals are sent as SIP requests. The SIP switch creates the tones if the call is transferred to the PSTN. In-band. With this method, the phone itself generates the tones and sends them in the voice frequency band. 		
	① Use RFC 4733 or SIP Info as the preferred methods because they are more consistent with other tones available. Switch to In-band only when your SIP server does not support other DTMF signalling methods.		
	When RFC 4733 is configured as the DTMF method on Konftel 800, but other party does not accept such method, the phone falls back into using the In-band method.		
RFC 4733 Payload Type	To specify the type of audio traffic. By default it is 101.		
Advanced			
Disable 'rport'	To enable or disable remote port forwarding. By default, the setting is disabled.		
Session Timers	To set a time-related mechanism to disconnect the sessions that the phone establishes. The options are:		
	Disabled. This is the default setting.OptionalMandatory		
Session Expiration	To specify the session expiration time in seconds. The default setting is 1800 seconds.		

Name	Description		
Outbound Proxy	To specify the IP address of the outbound proxy, if available.		
Enable SIP Traces	To enable or disable provision of key information for troubleshooting. By default, the setting is disabled.		
Allow Contact Rewrite	To enable or disable storing the IP address from the response of the register request. If a change is detected, the phone unregisters the available SIP URI (contact), and updates it with the new address.		
	By default, the setting is in the enabled state.		
Enable SIP Replaces	To enable or disable the SIP Replaces header.		
NAT Traversal			
Enable ICE	To enable or disable the Interactive Connectivity Establishment (ICE) that provides various techniques to allow SIP-based VoIP devices to successfully traverse the variety of firewalls that might exist between the devices. The protocol provides a mechanism for the endpoints to identify the most optimal path for the media traffic to follow.		
	By default, the setting is in the disabled state.		

Name	Description		
Enable STUN	To enable or disable the Simple Traversal of UDP through the NAT (STUN) is a protocol that assists devices behind a NAT firewall or router with their packet routing. STUN is commonly used in real-time voice, video, messaging, and other interactive IP communication applications. The protocol allows applications operating through the NAT to discover the presence and specific type of the NAT and obtain a public IP address (NAT address) and port number that the NAT allocated for the application User Datagram Protocol (UDP) connections to remote hosts. You must enable STUN if an external SIP server cannot connect to the phone behind a firewall NAT function and the SIP server supports STUN.		
	By default, the setting is in the disabled state.		
	① Another definition of STUN is the Session Traversal Utilities for NAT.		
STUN Server	To enter the IP address or the public name of the STUN server.		
Enable TURN	To enable or disable the Traversal Using Relay NAT (TURN). TURN is an extension of the TURN protocol that enables NAT traversal when both endpoints are behind symmetric NAT. With TURN, media traffic for the session will have to go to a relay server. Since relaying is expensive, in terms of bandwidth that must be provided by the provider, and additional delay for the media traffic, you must use TURN as a last resort when endpoints cannot communicate directly.		
	By default, the setting is in the disabled state.		
	① To enable TURN, you must enable ICE.		
TURN Server	To enter the IP address or the public name of the TURN server.		
User	To specify the user authentication name on the TURN server.		

Name	Description	
Password	To enter the user authentication password on the TURN server.	

After you click **Save**, the phone saves the changes and restarts application.

CERTIFICATES APPLICATION

You can use certificates to authenticate Konftel 800 using TLS. You can apply certificates manually when configuring the advanced settings of your phone, or the phone can automatically download the certificates from the provisioning server if you enabled Device Management.

The application of a certificate involves the following:

- Download of the root certificate from the Certificate Server
- Creation of the server certificate from the Certificate Server
- Generation of the private key
- Conversion of the certificates and the private key to .PEM format
- · Import of the .PEM files to the phone

Related concepts

Provisioning on Konftel 800 on page 76

Downloading the root certificate

Use this procedure to download the root certificate that the phone will apply for authentication by using TLS/SIPS and EAP-TLS.

Connect to Microsoft Server Certification Authority.

- On the Microsoft Server Certification Authority page, click Download a CA certificate, certificate chain, or CRL.

Creating the server certificate

Use this procedure to create the server certificate that the phone will apply for authentication by using TLS/SIPS and EAP-TLS.

Connect to Microsoft Server Certification Authority.

- On the Microsoft Server Certification Authority page, click Request a certificate.
- ⇒ Click Advanced certificate request.
- ⇒ Enter the following information:
 - a) In Identifying information, specify the name, email, company name, department, and city, state, and country of your location.
 - b) In Type of Certificate Needed, click Client Authentication Certificate.
 - c) In Key option, click Create new key set.
 - d) In CSP, select Microsoft Enhansed Cryptographic Provider v 1.0.
 - e) In Key usage, select Both.
 - f) In Key Size, specify 1024.
 - g) Select Automatic key container name.
 - h) Select Mark keys as exportable.
 - Select Enable strong private key protection.
 - j) In Request Format, select PKCS10.
 - k) In Hash Algorithm, select SHA-1 from the list.
 - I) Enter the short name of the phone.

The system saves the certificate to the location specified while creating the CA.

Installing the certificate

Use this procedure to install the certificate that the phone will apply for authentication using TLS/SIPS and EAP-TLS. You can do it from your regular web browser. Here you can find the procedure for Google Chrome. For information about other web browser applications, see the instructions provided by the software manufacturers.

Open your web browser.

- □ Click Settings > Advanced > Privacy and security > Manage certificates.
- ⇒ In the Certificates window, click Import.
- ⇒ In the Certificate Export Wizard window, click Next to proceed.
- Specify the file you want to import and click Next.
- ⇔ Choose the key store for the certificate and click Next
- ⇒ Click Finish.

Exporting the private key

Use this procedure to export the private key that the phone will apply for authentication using TLS/SIPS and EAP-TLS. You can use your regular web browser. Here you can find the procedure for Google Chrome. For information about other web browser applications, see the instructions provided by the software manufacturers.

Open your web browser.

- ⇒ In the Certificates window, select the certificate to export and click Export.
- ⇒ In the Certificate Export Wizard window, click Next to proceed.
- ⇒ Click **Yes** to export the private key.
- Select the format in which you want to export the private key file and click Next.
- Specify the file name, choose the location to export the certificate, and click Next

Converting the certificates to .PEM format

Use this procedure to convert the certificates for the phone to .PEM format. Konftel 800 supports certificates in the .PEM format only.

- ⇒ Use the following OpenssI commands to convert the files:
 - a) From .DER to .PEM:

openssl x509 -inform der -in certificate.cer -out certificate.pem

b) From .PFX to .PEM:

openssl pkcs12 -in certificate.pfx -out certificate.cer -nodes

On the web interface, browse to the .PEM files to use TLS mode of authentication.

KONFTEL UNITE

You can manage your Konftel 800 from a mobile phone or a tablet if you have Konftel Unite installed on the device. You can download and install Konftel Unite free from App Store and Google Play like any other application. You can use the NFC tag to easily start downloading the application. For that, you must bring the mobile device with the NFC enabled to the NFC tag on the conference phone, and the web browser on the mobile device opens the web page with the application in App Store or Google Play.

With Konftel Unite, you can call contacts from your local address book, create conference groups, and control a call. For example, you can answer and hang up the call, mute and unmute the microphone, dial a number, adjust the volume level, and hold and resume the call.

The mobile device with Konftel Unite is connected to the phone over the built-in Bluetooth LE. Konftel 800 is always discoverable for this connection.

You can configure Konftel Unite parameters on the phone and from the mobile device with the application installed.

Pairing and connecting devices

Use this procedure to pair your Konftel 800 with Konftel Unite on your mobile device the first time when you use them together. After that, they connect with one touch when you run the application near the conference phone.

The connection range is up to 20 meters. The connection breaks if this range is exceeded. You see a request to reconnect when Konftel Unite is within the range of Konftel 800. Reconnection requires only one touch.

You can pair up to 100 mobile phones or tablets with your Konftel 800. But only one user connection is active at a time.

Install Konftel Unite on your mobile device.

- ⇒ On your mobile device, open Konftel Unite.
 - The mobile phone displays the closest Konftel 800.
- ⇒ To select the phone you want to connect, perform one of the following actions:
 - If your mobile device displays Konftel 800 you want to connect, tap
 Connect on the mobile device screen.

 If your mobile device does not display Konftel 800 you want to connect, tap Skip and then tap the connection symbol in the upper left corner of your mobile device screen.

The mobile device displays the list of available conference phones.

The mobile phone displays a pairing code for about 30 seconds.

- ⇒ Enter the code with the keypad on the conference phone.
- ⇒ Tap Enter on the conference phone to start pairing.

When the devices are paired, both Konftel Unite and Konftel 800 display the connection symbol.

The conference phone and Konftel Unite remain paired while they are close to one another.

You cannot connect Konftel 800 to a Bluetooth device for call handling or audio streaming while the Konftel Unite connection is active.

Disconnecting devices

Use this procedure to disconnect your Konftel 800 from the mobile device with Konftel Unite installed.

Ensure that Konftel 800 is connected to a mobile device with Konftel Unite installed.

- To disconnect from the mobile device, do the following:
 - a) In Konftel Unite, tap the connection symbol in the upper left corner of the screen.
 - Optional: Under Change device, select another conference phone to connect to.

You can do it if there are other conference phones available nearby.

The application starts connecting to the selected conference phone.

- c) Tap the **Disconnect** button near the highlighted connected device name.
 - The connection symbol in the upper left corner of the screen becomes inactive
- To disconnect from Konftel 800, do one of the following:
 - Tap Konftel Unite > Disconnect Device.
 - Tap Settings > Konftel Unite > Disconnect Device.

The phone displays the following question: Disconnect device Perice Name

To confirm, tap Ok.

The phone shows the Konftel Unite icon and informs that the application is disconnected.

Deleting pairing

Use this procedure to delete the pairing between the conference phone and the mobile device. You can delete the paring only from the conference phone.

Pair Konftel 800 with a mobile device with Konftel Unite.

- ⇒ To delete the pairing from the conference phone, on the home screen, do one of the following:
 - Tap Konftel Unite.
 - Tap Settings > Konftel Unite.
- ⇒ Tap Remove Bonding Information.
- ⇒ Tap **Ok** to confirm removal of all bonding information from the device.

This function both disconnects the current connection and deletes the pairing. You must start a new pairing process the next time you want to connect to the phone.

Configuring the Konftel Unite settings

Use this procedure to configure the Konftel Unite settings from the application installed on a mobile device.

- Run Konftel Unite on your mobile device.
- ⇒ Optional: Connect to Konftel 800.

The phone displays a connection symbol on the screen.

⇒ Tap **Settings** and proceed with configuration.

Konftel Unite settings

You can set the following parameters for Konftel 800 from the Konftel Unite interface:

Name	Description		
Connection	To enable or disable the connection to Konftel 800. The options are:		
	 On: The default option. Off: To use Konftel Unite without connection to any Konftel 800. You can use the conferencing application from your mobile device within your mobile phone subscription. 		
Moderator code	To join the scheduled conference calls as a moderator. You must enter respective codes in the following fields:		
	 Use moderator code: To host conference calls over a bridge service. For every call you join, Konftel Unite uses your moderator code instead of your guest code. Instead of guest code: To specify the guest code instead of which Konftel Unite uses your moderator code. 		
Dial prefix	To enter the prefix digits in the Use prefix field.		
My bridge	To enter the phone number and optional PIN code of the most frequently used conference service. You can use the My bridge button to join the conference call.		
	The My bridge button appears in the calendar view.		
Meeting notification	To set a reminder about a call. The options are:		
	5 minutes before 10 minutes before		
	15 minutes beforeNever		
Calendars to show	To select the calendars in the mobile phone from which you want Konftel Unite to take the information.		

Name	Description		
Tell a colleague	To share information about Konftel Unite with a person that you want. You can do it by using an email application.		
	After you confirm that Konftel Unite can access your email application, you see a message created. Along with the description of the application, it contains links to Konftel Unite in App Store and Google Play so that the person can easily start the download.		
Read more about Konftel Unite	To get additional information about Konftel Unite. The application forwards you to the web site with the corresponding information.		
Feedback and support	To share your experience of using the application and request for support. The options are:		
	 A messenger, for example, Viber, WhatsApp, Telegram, and so on. An email application. Connection by Bluetooth. 		
Diagnostics	To select a log of the events for Konftel Unite.		
	You can send the created log by tapping Send through an email application. The log can be used in troubleshooting.		
	You can also delete the logs from the application by tapping Clear .		
Show tutorial	To read information about Konftel Unite features.		
About Konftel Unite	To check the version of the application installed on your mobile device.		

EXPANSION OF THE PHONE COVERAGE

You can use your Konftel 800 on larger conference tables or when the number of a meeting participants is greater than 10. In this case you can ensure high-level quality of audio signal by expanding the phone coverage in the room without a PA system. You can do it by connecting Smart Mic expansion microphones to the phone or by cascading several Konftel 800 devices in a daisy chain.

Expansion of the phone coverage helps to improve the audio quality in large rooms. The conference phone and two Smart Mics increase the capture range from 30 square meters to up to 70 square meters. Three phones in a daisy chain increase the range from 30 square meters to up to 90 square meters.

Expansion coverage arrangement

You can arrange a daisy chain with your conference phone and another Konftel 800 or connect Smart Mic expansion microphones. The maximum number of devices connected in a daisy chain is 3. One Konftel 800 phone acts as a central device (a "master") and one or two other units act as expansion devices ("slaves").

The typical arrangements when the phone's coverage is expanded are the following:

- · Master phone Slave phone
- Slave phone Master phone Slave phone
- Master phone Expansion microphone
- Expansion microphone Master phone Expansion microphone
- Expansion microphone Master phone Slave phone

Functions of the Master and Slave devices

When Konftel 800 acts as a master, it performs all its configured functions.

When Konftel 800 is in a subordinate position (a "slave"), it performs the following functions:

- Play audio received from the master device. The master phone defines the audio characteristics.
- Send its microphone audio to the master device.
- Receive and indicate mute state changes made on the master device.
- Send information to the master device, when you tap Microphone Muted.
- · Send information to the master device when you adjust the volume on it.
- 1 You cannot make calls between the Master and the Slave devices.

In a daisy chain, the Slave device follows the signal from the Master device to enter the sleep mode or the active mode.

In a daisy chain, each phone is powered by its own PoE injector. The phone powers the Smart Mics when these are connected. The power available from each port is around 5 W.

Arranging a daisy chain

Use this procedure to arrange a daisy chain of one master Konftel 800 phone and one or two slave conference phones or expansion microphones.

If you arrange the daisy chain made of several conference phones, prepare the connection cables. The cables in the Daisy Chain kit are 5 and 10 meters long. You can purchase the Daisy Chain kit as an accessory.

The cable of the Smart Mic is 3 m long.

⇒ Connect the cable to the audio expansion port on the phone.

There are 2 audio expansion ports on Konftel 800.

⇒ Connect the other end of the cable to the audio expansion port of the other phone.

In case of expansion microphones, the other end of the cable is fixed in the device.

Defining the mode of the phone

Use this procedure to define the mode of your Konftel 800 in a daisy chain.

- To define the mode of your Konftel 800 on the phone, do the following:
 - a) Log in as the administrator.
 - b) In the Settings menu, tap Phone > Daisy Chain.
 - c) Select the required mode.

The options are:

- Master
- Slave
- d) Tap < three times to return to the home screen.

The phone restarts the application to apply the changes.

- To define the mode of your Konftel 800 through the web interface, do the following:
 - a) On the web interface, click Basic.
 - b) In Daisy Chain Mode, select the required mode from the drop-down list.

The options are:

- Master. This is the default mode.
- Slave
- c) Click Save.

The slave unit displays the **Daisy Chain Mode** icon and the following message: Daisy Chain. This message remains for the period when the phone is in the slave mode within the daisy chain arrangement.

Disabling the daisy chain mode

You can disable the Daisy Chain mode through the web interface or from the phone.

Ensure that the phone displays the Daisy Chain icon.

- To disable the Daisy Chain mode from the web interface, do the following:
 - a) On the web interface, click Basic.
 - b) In Daisy Chain Mode, select Master.
 - c) Click Save.
- To disable the Daisy Chain mode from the phone, do the following:
 - a) Touch the phone screen and enter the administrator password.
 - b) Tap Phone > Daisy Chain.
 - c) Select the Master mode.
 - d) Tap the < icon three times to return to the home screen.

Application restarts and restores the Master status.

Upgrading Smart Expansion Microphone

You can upgrade the Smart Expansion Microphone when an update for the microphone is available. If the update is available, the phone shows the following message during boot after a factory reset or firmware upgrade: An update for your Smart Microphone is available. See user manual.

⇒ Hold the Microphone Muted button on the Smart Expansion Microphone while you connect the microphone cable, and keep holding the button for 5 seconds after you inserted the cable.

When you release the button, it flashes red one time and then starts flashing green to indicate that the upgrade process has started. The upgrade process takes about 7 minutes. When the upgrade is completed, the microphone LEDs turn off.

- Check the microphone version by doing one of the following:
 - On the phone screen, tap Settings > Status.
 - · On the web interface, go to the Status tab.

BLUETOOTH CONNECTION

Konftel 800 can establish wireless communication over Bluetooth with devices equipped with Bluetooth connectivity, such as mobile phones, tablets, or

computers. With Bluetooth, you can use the phone as a speakerphone for call handling, or as an audio receiver for audio streaming.

Konftel 800 supports the following Bluetooth technologies:

Bluetooth technology	Konftel 800 icon	Functionality
Bluetooth LE	Ŋ	To connect to a mobile device with Konftel Unite application installed on it. For more information, see Konftel Unite on page 64. This is the default mode.
Bluetooth Classic	*	To connect to Bluetooth devices, such as mobile phones, tablets, and personal computers, for call handling or audio streaming.

You cannot use Bluetooth LE and Bluetooth Classic connection simultaneously.

If you connect Konftel 800 to a Bluetooth device, you cannot connect it to a mobile device with the Konftel Unite application until you end the connection to the Bluetooth device.

If you connect Konftel 800 to a mobile device using the Konftel Unite application, you cannot connect it to another Bluetooth device until you end the connection to Konftel Unite.

Switching between the Bluetooth modes

Bluetooth I F is the default mode.

To switch to Bluetooth Classic, you must pair and connect Konftel 800 to a Bluetooth device as described in Pairing and connecting Bluetooth devices on page 73.

Konftel 800 restores the Bluetooth LE mode when you end the Bluetooth Classic connection

Bluetooth Classic profiles

The following table describes the Bluetooth Classic profiles that Konftel 800 supports:

FEATURES AND ACCESSORIES

Bluetooth profile	Konftel 800 role	Functionality description
Hands-Free Profile (HFP)	Speakerphone	When Konftel 800 is paired with a Bluetooth device, and the two devices are connected, the phone acts as a speakerphone. You can use the phone to handle Bluetooth calls. Konftel 800 synchronizes the volume level with the volume level of the Bluetooth device, and you can control the volume from both devices.
Advanced Audio Distribution Profile (A2DP)	Audio receiver	When Konftel 800 is paired with a Bluetooth device, and the two devices are connected, Konftel 800 acts as an audio receiver. You can use the phone to stream multimedia audio from the Bluetooth device. ① You cannot activate A2DP during SIP or USB calls.

To use the Bluetooth Classic functionality on Konftel 800, your Bluetooth device must support HFP or A2DP or both.

Pairing and connecting Bluetooth devices

To enable Bluetooth communication between Konftel 800 and another Bluetooth device, you must pair the two devices and ensure that they are in a connected state. The devices stay in a paired state until you remove the pairing.

- (i) You can connect only one device supporting Bluetooth at a time.
- ⇒ On the Konftel 800 screen, tap **Settings** > **Bluetooth** > **Pair with device**.

The LEDs start flashing blue, and the phone displays the following message: This phone is now discoverable as "<Phone Name>".

The time-out value for discoverable mode is 120 seconds.

- Tap Cancel to cancel pairing, for example, if you do not want to make the phone discoverable. In this case, you return to the Bluetooth menu.
- On your Bluetooth device, find Konftel 800 in the list of devices available for Bluetooth connection and tap the phone name.

FEATURES AND ACCESSORIES

Konftel 800 establishes the connection with the Bluetooth device and displays the Bluetooth icon and one of the following messages:

- If Konftel 800 retrieves the device name from your Bluetooth device, it displays Connected to <your Bluetooth device name>. For example, Connected to My Smartphone.
- ① Konftel 800 is not visible in the Konftel Unite application while the conference phone and the Bluetooth device are in the connected state.

Related concepts

Basic settings description on page 25

Removing Bluetooth pairing

You can remove the pairing between Konftel 800 and your other Bluetooth device to delete unwanted pairings.

also deletes the Bluetooth pairing information when you reset the phone to factory settings or perform system recovery.

The procedure below describes how you can delete Bluetooth pairing from Konftel 800.

Removing Bluetooth pairing as described below does not affect Konftel Unite pairing information.

Ensure that Konftel 800 and the Bluetooth device are in the paired state.

⇒ Tap Settings > Bluetooth > Remove pairing.

The phone displays the following question: Do you want to remove all Bluetooth pairing information from the phone?

⇒ To confirm that you want to delete the Bluetooth pairing information, tap **Ok**.

The phone restarts the application to apply the changes.

Related tasks

Logging in to the web interface of Konftel 800 on page 21 Setting the password for Konftel 800 on page 18

FEATURES AND ACCESSORIES

Connection between paired Bluetooth devices

Connection

After you pair Konftel 800 and your Bluetooth device, the two devices establish the connection.

Disconnection

The connection ends if you manually disconnect Konftel 800 from the Bluetooth device or if the distance between the devices does not allow to maintain the communication.

When the Bluetooth device ends the connection, Konftel 800 displays the following message: Disconnected and then stops displaying the Bluetooth icon.

Reconnection

You can reconnect your Bluetooth device to Konftel 800 if the two devices are in a paired state. You can reconnect Konftel 800 to the paired Bluetooth device only from the paired Bluetooth device.

PROVISIONING ON KONFTEL 800

To ensure effective operation of your Konftel 800, you can upload to the phone the latest firmware version with the software update packages and configuration file with the necessary settings. You can upgrade and configure a single phone or multiple phones simultaneously.

Provisioning option	Upgrade and configuration description
Single phone	Use the phone web interface to upload a firmware file as well as to export and import a configuration file to Konftel 800.
Multiple phones	Use the Device Management feature to upgrade and configure multiple Konftel 800 phones simultaneously over a provisioning server.
	The Device Management settings are available both on the phone and through the web interface.

Firmware upgrade and downgrade

Starting from Release 1.0.1, you can both upgrade and downgrade the firmware of Konftel 800 using the Device Management. The phone application installs the firmware whenever the firmware version found in the firmware file downloaded from the provisioning server differs from the version of the currently running firmware.

The downgrade causes a factory reset and sets all user settings, configurations, and data to factory default.

Uploading a firmware file

You can upgrade or downgrade your Konftel 800 using a firmware file stored on the local hard disk. When the phone starts to install the firmware file you uploaded, it identifies the firmware version and follows the upgrade or downgrade scenario based on the firmware version

Download the appropriate firmware file and save it in a specified location on your personal computer.

- ⇒ On the web interface, click **Provisioning**.
- ⇒ In the Firmware section, click the Choose file button.
- ⇒ Locate and select the downloaded firmware file.

You can see the name of the chosen file near the **Choose file** button.

⇒ Click Save.

The system displays the upgrade in the browser window and on the screen of Konftel 800.

Note that the phone must be in the idle state. If the phone is not in the idle state, you see the following message on the web interface: Phone is currently in "Busy" state, please retry later.

If DHCP is used in the network, the IP address might change. If the web browser loses contact with Konftel 800, check the IP address on the phone.

Related tasks

Viewing the IP address on page 19

Configuration file

You can create an .xml configuration file on Konftel 800. This file contains information about all the settings that were configured on the phone as of the moment of the file creation.

The configuration file can be used as:

- Backup. This is applicable if the system has been reset to factory default.
- Configuration interface. Some settings are not configured through the web interface.
- Management tool. You can export, edit, and import settings to several phones instead of configuring the settings on each phone.
- Configuration file for Device Management.
- ① You can export and import a configuration file only through the web interface.

Related concepts

Device Management on page 94

Configuration file structure

The table below shows the default structure of the .xml file:

String	Description
<xml></xml>	To specify the number of the phone configuration version and encoding.
<kt800></kt800>	To specify the model of the conference phone.
<time></time>	To specify the time and region parameters.
<timezone></timezone>	To specify the type of the time zone set for the phone. If you set the string value to the name of a time zone, for example, to Europe/Amsterdam, it automatically enables the Geo Timezone (auto DST) parameter on the phone web UI.
<ntp></ntp>	To specify whether NTP is applied.
<server></server>	To specify the server which the phone uses to set the time.
<enable></enable>	To specify whether NTP is enabled. The default setting is true.
<media></media>	To specify the media settings.
<security></security>	To specify the means of encryption configured for the phone.
<srtp></srtp>	To specify the SRTP parameters that the phone uses.
<srtcp></srtcp>	To specify whether SRTCP is enabled.
<capneg></capneg>	To specify whether Capability Negotiation is enabled.
<codec></codec>	To specify the codec settings.

String	Description
<ilbc></ilbc>	To specify the internet Low Bitrate Codec (iLBC) codec settings.
<pri><prio></prio></pri>	To specify the codec priority (0–6).
<mode></mode>	To specify the frame length in ms.
<opus></opus>	To specify the OPUS codec settings.
<pri><prio></prio></pri>	To specify the codec priority (0–6).
<pcmu></pcmu>	To specify the PCMU codec settings.
<pri><prio></prio></pri>	To specify the codec priority (0–6).
<pcma></pcma>	To specify the PCMA codec settings.
<pri><prio></prio></pri>	To specify the codec priority (0–6).
<g722></g722>	To specify the G722 codec settings.
<pri><prio></prio></pri>	To specify the codec priority (0–6).
<g729></g729>	To specify the G729 codec settings.
<pri><prio></prio></pri>	To specify the codec priority (0–6).
<rtp_pt_98_ilbc></rtp_pt_98_ilbc>	To specify that the server gets iLBC packets as payload type 98.
<voice_quality_monitor></voice_quality_monitor>	To specify the Voice Quality Monitor settings.
<enable_rtcp_xr></enable_rtcp_xr>	To specify whether the sending of RTCP RX is enabled.
<rtcp_xr_collector_uri></rtcp_xr_collector_uri>	To specify the Uniform Resource Identifier (URI) of the RTCP XR collector.

String	Description
<sip></sip>	To specify SIP settings.
<pre><pre><pre><pre><pre><pre><pre><pre></pre></pre></pre></pre></pre></pre></pre></pre>	To specify the primary account settings.
<name></name>	To specify the name of the account.
<user></user>	To specify the user-defined name of the account.
<registrar></registrar>	To specify the request URI for registration.
<pre><pre><pre><pre><pre><pre><pre><pre></pre></pre></pre></pre></pre></pre></pre></pre>	To specify the optional URI of the proxy to visit for all outgoing requests from the account.
<keep_alive></keep_alive>	To specify whether the keep-alive transmission for the account is enabled.
<cred></cred>	To specify the array of credentials. In case of registration, at least one credential must be available to successfully authenticate the service provider. If you want proxies to challenge the requests in the route set, you must specify more credentials.
<realm></realm>	To specify the realm.
<username></username>	To specify an authentication name.
<password></password>	To specify the password used for the account.
<reg_timeout></reg_timeout>	To specify the optional interval for registration in seconds. If zero, the phone uses the default interval. The default setting is 300.
<secondary_account></secondary_account>	To specify the secondary account settings.

String	Description
<name></name>	To specify the name of the account.
<user></user>	To specify the user-defined name of the account.
<registrar></registrar>	To specify the request URI for registration.
<pre><pre><pre><pre><pre><pre><pre><pre></pre></pre></pre></pre></pre></pre></pre></pre>	To specify the optional URI of the proxy to visit for all outgoing requests from the account.
<keep_alive></keep_alive>	To specify whether the keep-alive transmission for the account is enabled.
<cred></cred>	To specify the array of credentials. In case of registration, at least one credential must be available to successfully authenticate the service provider. If you want proxies to challenge the requests in the route set, you must specify more credentials.
<realm></realm>	To specify the realm.
<username></username>	To specify an authentication name.
<password></password>	To specify the password used for the account.
<reg_timeout></reg_timeout>	To specify the optional interval for registration in seconds. If zero, the phone uses the default interval. The default setting is 300.
<fallback_account></fallback_account>	To specify the fallback account settings.
<name></name>	To specify the name of the account.

String	Description
<user></user>	To specify the user-defined name of the account.
<registrar></registrar>	To specify the request URI for registration.
<pre><pre><pre><pre><pre><pre><pre><pre></pre></pre></pre></pre></pre></pre></pre></pre>	To specify the optional URI of the proxy to visit for all outgoing requests from the account.
<keep_alive></keep_alive>	To specify whether the keep-alive transmission for the account is enabled.
<cred></cred>	To specify the array of credentials. In case of registration, at least one credential must be available to successfully authenticate the service provider. If you want proxies to challenge the requests in the route set, you must specify more credentials.
<realm></realm>	To specify the realm.
<username></username>	To specify an authentication name.
<password></password>	To specify the password used for the account.
<reg_timeout></reg_timeout>	To specify the optional interval for registration in seconds. If zero, the phone uses the default interval. The default setting is 300.
<source_port></source_port>	To specify the source port to listen to.
<transport_protocol></transport_protocol>	To specify the transport protocol which the phone must use.

String	Description
<tls></tls>	To specify that TLS is selected as the transport protocol. This is followed by the corresponding transport protocol settings.
<tls_method></tls_method>	To specify the TLS protocol method.
<tls_neg_timeout></tls_neg_timeout>	To specify the TLS negotiation time-out in seconds for both outgoing and incoming connections. If zero, the phone uses no time-out.
<tls_password></tls_password>	To specify the password for the private key.
<verify_client></verify_client>	To specify whether the phone must verify the client.
<verify_server></verify_server>	To specify whether the phone must verify the server.
<require_client_cert></require_client_cert>	To specify whether the phone requires the client certificate.
<advanced></advanced>	To specify the configured advanced SIP settings.
<disable_rport></disable_rport>	To specify whether the remote port forwarding is enabled. The default setting is disabled.
<session_timers></session_timers>	To specify the chosen time-related mechanism to disconnect the sessions.
<session_expiration_minimum></session_expiration_minimum>	To specify the minimum session expiration value in seconds. The default value is 90 seconds.

String	Description
<session_expiration></session_expiration>	To specify the session expiration value in seconds. The default setting is 1800 seconds.
<outbound_proxy></outbound_proxy>	To specify the IP address of the outbound proxy.
<enable_sip_traces></enable_sip_traces>	To specify whether the provision of key information for troubleshooting is enabled. The default setting is disabled.
<allow_contact_rewrite></allow_contact_rewrite>	To specify whether the storing of the IP address from the response of the register request is enabled.
<enable_sip_replaces></enable_sip_replaces>	To specify whether the SIP Replaces header must be used.
<pre><contact_use_src_port_even_wit h_dns=""></contact_use_src_port_even_wit></pre>	To specify whether the SIP stack should continue to retrieve the local ephemeral port even if the stack is configured with DNS.
<enable_lock_codec></enable_lock_codec>	To specify whether the lock codec feature is enabled.
<dtmf></dtmf>	To specify DTMF signalling settings.
<method></method>	To specify the DTMF signalling method.
<rfc4733_payload_type></rfc4733_payload_type>	To specify the type of audio traffic.
<nat_traversal></nat_traversal>	To specify the configured NAT traversal settings.
<ice></ice>	To specify whether ICE is configured for the phone.
<enable></enable>	To specify whether ICE is enabled.

String	Description
<stun></stun>	To specify whether STUN is configured for the phone.
<enable></enable>	To specify whether STUN is enabled.
<server></server>	To specify the IP address or the public name of the STUN server.
<turn></turn>	To specify whether TURN is configured for the phone.
<enable></enable>	To specify whether TURN is enabled.
<server></server>	To specify the IP address or the public name of the TURN server.
<user></user>	To specify the user authentication name on the TURN server.
<password></password>	To specify whether the user authentication password on the TURN server is set.
<phone></phone>	To specify the configured basic settings of the phone.
<name></name>	To specify the name of the phone.
<language></language>	To specify the language selected.
<password></password>	To specify the password used.
<ringlevel></ringlevel>	To specify the volume level configured.
<key_tone></key_tone>	To specify whether the key tone is enabled.
<is_daisy_chain_slave></is_daisy_chain_slave>	To specify the mode of the phone in case of a daisy chain arrangement.

String	Description
<phone_status_api></phone_status_api>	To specify whether the phone status API feature is enabled.
<sleep_mode_timeout></sleep_mode_timeout>	To specify the time-out value in minutes.
<network></network>	To specify the network parameters.
<dhcp></dhcp>	To specify whether the phone uses DHCP to obtain network settings.
<hostname></hostname>	To specify the hostname of the phone.
<domain></domain>	To specify the domain name of the phone.
<dns1></dns1>	To specify Domain Name Server (DNS) 1 of the phone.
<dns2></dns2>	To specify DNS 2 of the phone. You can use maximum two DNS.
<static_ip></static_ip>	To specify the static IP settings.
<ip></ip>	To specify the IP address of the phone if DHCP is disabled.
<netmask></netmask>	To specify the network mask for your phone.
<gateway></gateway>	To specify the gateway for the phone.
<vlan></vlan>	To specify whether VLAN is enabled. The default setting is disabled.
<vlanid></vlanid>	To specify the ID number that the phone uses for all IP telephony communication through VLAN.
<ieee_8021x></ieee_8021x>	To specify IEEE 802.1x parameters.

String	Description
<enable></enable>	To specify whether IEEE 802.1x is enabled. It is disabled by default.
<username></username>	To specify the phone username if IEEE 802.1x is enabled.
<eap_md5></eap_md5>	To specify whether the phone uses MD5 EAP method.
<enable></enable>	To specify whether MD5 EAP method is enabled.
<password></password>	To specify the password for MD5 EAP method.
<eap_tls></eap_tls>	To specify whether the phone uses TLS EAP method.
<enable></enable>	To specify whether TLS EAP method is enabled.
<password></password>	To specify the password for the TLS EAP method.
<ld>></ld>	To specify the LLDP settings.
<enable></enable>	To specify whether the LLDP settings are enabled. These settings are disabled by default.
<country></country>	To specify the country of the phone location.
<country_subdivision></country_subdivision>	To specify the region of the country of the phone location.
<county></county>	To specify the county, parish, district, or other applicable administrative division.

String	Description
<city></city>	To specify the city of the phone location.
<city_division></city_division>	To specify the city district or area of the phone location.
<blook></blook>	To specify the block within the city district.
<street></street>	To specify the street of the building where the phone is located.
<direction></direction>	To specify the direction of moving towards the location of the phone.
<trailing_street_suffix></trailing_street_suffix>	To specify the trailing street suffix.
<street_suffix></street_suffix>	To specify the street suffix.
<number></number>	To specify the number of the building where the phone is located.
<number_suffix></number_suffix>	To specify the building number suffix.
<landmark></landmark>	To specify the reference point for the location of the phone.
<additional></additional>	To specify any additional information related to the phone location.
<name></name>	To specify the name of the company that owns the phone.
<zip></zip>	To specify the ZIP-code of the phone location.
<building></building>	To specify the name or number of the building of the phone location.

String	Description
<unit></unit>	To specify the unit within the building where the phone is located.
<floor></floor>	To specify the floor of the building for the location of the phone.
<room></room>	To specify the room in the building where the phone is located.
<place_type></place_type>	To specify the type of setting, for example, office.
<script></td><td>To specify the script.</td></tr><tr><td><elin></td><td>To specify Emergency Location Identification Number (ELIN).</td></tr><tr><td><qos></td><td>To specify the quality of service (QoS) parameters.</td></tr><tr><td><dscp_sip></td><td>To specify a value in the range from 0 to 63 to prioritize the SIP messages.</td></tr><tr><td><dscp_media></td><td>To specify a value in the range from 0 to 63 to prioritize the media packets.</td></tr><tr><td><device_management></td><td>To specify the Device Management settings.</td></tr><tr><td><enable></td><td>To specify whether Device Management is enabled.</td></tr><tr><td><update_interval></td><td>To specify the update interval in the range from 1 minute to 21,000 minutes. The default setting is 60 minutes.</td></tr><tr><td><update_max_wait></td><td>To specify the maximum time in seconds the phone waits for the update.</td></tr></tbody></table></script>	

String	Description
<server></server>	To specify the Device Management server address if it is not provided by the DHCP option.
<check_server_certificate></check_server_certificate>	To specify whether the Check certificate is enabled.
<lowest_tls_version></lowest_tls_version>	To specify the lowest TLS version for the phone.
<dhcp_option></dhcp_option>	To select the DHCP option used for the Device Management server address.
<logging></logging>	To specify the syslog settings.
<remote_syslog_enable></remote_syslog_enable>	To specify whether the remote syslog feature is enabled.
<remote_syslog_host></remote_syslog_host>	To specify the IP address or the host of the remote syslog server.
<ldap></ldap>	To configure the LDAP options.
<enable></enable>	To enable the LDAP feature. By default it is disabled.
<name_filter></name_filter>	To define how the phone applies the entered search characters.
<server_url></server_url>	To specify the URL of the LDAP server host. It includes the protocol (LDAP/LDAPS) and the port number.
<search_base></search_base>	To specify the distinguished name of the search base.
<user_name></user_name>	To specify the username for the LDAP server.

String	Description
<password></password>	To specify the password for the LDAP server.
<max_hits></max_hits>	To specify the maximum number of hits to return for each LDAP search.
<country_code></country_code>	To specify the country code of the phone location.
<area_code></area_code>	To specify the area code of the phone location.
<external_prefix></external_prefix>	To specify a special prefix for dialing external numbers.
<min_length_for_ext_prefix></min_length_for_ext_prefix>	To restrict the external prefix that the phone adds only if the phone number is longer than the minimum length.
<number_prefix_for_no_ext_prefix></number_prefix_for_no_ext_prefix>	To specify the initial number for the phone numbers in case of using which the phone adds no external prefix.
<pre><exact_length_for_no_ext_prefix></exact_length_for_no_ext_prefix></pre>	To specify the exact length for the phone numbers if the phone adds no external prefix.
<number_attributes></number_attributes>	To specify if there are configured number attributes.
<number_attribute></number_attribute>	To define the attributes that the phone displays if it receives them from the server.
<id></id>	To define the identifier of the number attribute in the form in which the LDAP directory stores it.
<value></value>	To define the label that the user sees on the phone screen for a specific number attribute.

String	Description
<display_name></display_name>	To specify how the phone displays the name it searched for.
<sort_results></sort_results>	To specify if the phone sorts the search hits based on the Display name.
<use_dm_certificates_for_ldaps></use_dm_certificates_for_ldaps>	To specify if the phone uses any device management certificates for LDAPS.
<httpd></httpd>	To configure the web server options.
<min_allowed_tls_version></min_allowed_tls_version>	To specify the minimum allowed TLS version. The default setting is 1.2.
	To enable support of TLS v.1.0 and TLS v.1.1, set the value to all.

Exporting the configuration file

Use this procedure to export the configuration file from your Konftel 800.

Decide where the exported configuration file will be saved. By default, it is saved in the folder for downloaded files on your PC.

- ⇒ On the web interface, click **Provisioning**.
- ⇒ In the Configuration section, click Export Configuration button.

The web browser shows the configuration file.

- ⇒ Save the page in an .xml format in the dedicated folder.
- ⇒ Optional: Edit the .xml file in a suitable application.

Importing the configuration file

Use this procedure to import the previously saved configuration file to your Konftel 800.

- ⇒ On the web interface, click **Provisioning**.
- Go to the Configuration section.
- ⇒ In Import Configuration, click the Choose file button.
- ⇒ Locate the configuration file in the folder where it is stored.

⇒ Select the file in an .xml format and open it.

You can see the name of the chosen file near the **Choose file** button.

The phone reboots or restarts to import the configuration if the configuration file application requires this reboot or restart.

Validation and migration of configuration

Starting from Release 1.0.1, Konftel 800 validates and migrates the phone configuration to ensure consistency of the configuration file with the firmware version. With this feature, the phone provides reliable automatic migration of the configuration file to match the newer firmware version if necessary.

Configuration validation

Konftel 800 validates compatibility of the configuration with the firmware against an xml schema file based on the configuration file version.

Starting from Release 1.0.1, a configuration file has a version number attribute. The phone application compares the configuration file version to the firmware version running on the phone to determine the migration steps required to make the configuration file consistent with the firmware.

All the configuration files that Konftel 800 generated before Release 1.0.1 acquire the $<\!\!\mathrm{KT800}$ version="0"> attribute in the xml root element. The configuration files generated with Release 1.0.1 acquire the $<\!\!\mathrm{KT800}$ version="1"> attribute. With each new release, the configuration service increases the configuration file version number by one leaving the incompatible configuration changes attributed to previous file versions.

① The phone does not support downgrade of a configuration file.



To avoid failure of the configuration file import or automatic provisioning, ensure that you do not change the version number in a configuration file manually.

Configuration migration

The migration feature ensures seamless import of the configuration data in the following cases:

- During the phone boot
- During the configuration file import using the web interface
- · During automatic provisioning of the phone using Device Management

Configuration import can fail if the configuration file does not match the xml schema file. In this case, you see the following message on the phone web interface: Failed to migrate configuration file.

Device Management

The Device Management feature facilitates upgrade and configuration of multiple conference phones. To use this feature, you must configure it. By default, Device Management is enabled.

Konftel 800 upgrades and sets configuration by using the Device Management files. The necessary files must be available on a server reachable from all the phones. This server is called the provisioning server. The service provider is in charge of uploading the necessary files to the provisioning server.

The device controls the configuration and firmware download with a frequency of 1 hour.

Files on the provisioning server

The following files must be available on the provisioning server:

- Firmware file
- Firmware metadata file
- · Global configuration file
- Device-specific configuration file (optional)
- Global certificate configuration file
- Device-specific certificate configuration file (optional)

Configuration priorities

The following table describes the priorities for files downloaded to the phone during the Device Management configuration upgrade:

File type	Description
Configuration	The global configuration file has the highest priority.
file	If the device-specific configuration file is present on the provisioning server, the phone downloads it after the global configuration file.
	If the new configuration file contains the same parameters as already configured by the user, all user configurations are overridden during the Device Management update.

File type	Description
Certificate configuration file	The device-specific certificate configuration file has the highest priority.
	The phone downloads the global configuration file only after it tried to download the device-specific configuration file.
	The certificates the phone downloads from the provisioning server overwrite any certificates you downloaded manually using the phone web interface.

Konftel Zero Touch Installation

Zero Touch Installation (ZTI) is an add-in for automatic provisioning that Konftel 800 supports. It provides for the remote configuration of the phone by using a data file with settings. The phone downloads the file from a Device Management server. The user can apply ZTI when centrally upgrading the phone software.

Related concepts

Certificate configuration files on page 100 Configuration file on page 77

Registration with the ZTI device management service

Use this procedure to register the phone with the device management service and receive the provisioning settings.

Connect the phone to the data network and start it.

- ⇒ In the web browser, enter https://www.konftel.com/zti-access.
- Register the phone with Konftel ZTI by entering its MAC address and serial number.

The device management service provides the phone with the address of the provisioning server where the user can download the configuration file in .xml format

Confirm your choice.

The phone restarts and goes to the appropriate server to download the configuration file.

Configuring Device Management settings on the phone

Use this procedure to configure the Device Management settings on the phone.

- ⇒ On the phone screen, tap Settings > Device Management.
- Choose the parameter that you want to configure and proceed to the options available.
- ⇒ After you made the choices, return to the home screen.

The phone reboots to apply the changes.

Configuring Device Management settings through the web interface

Use this procedure to configure the Device Management settings through the web interface.

- ⇒ Log in as the administrator.
- ⇒ On the web interface, click **Provisioning**.
- ⇒ Make the appropriate configurations.
- ⇒ Click Save.

The phone reboots to apply the changes.

Device Management settings

The following are the Device Management settings of Konftel 800 available through the web interface in the **Provisioning** tab in the **Device Management** section or on the phone in **Settings > Device Management**.

Name	Description
Enable	 To enable or disable Device Management. The options are: On: Device Management is enabled. This is the default setting. Off: Device Management is disabled.
Update interval	To specify the update interval in minutes the phone waits to re-sync with the provisioning server. The default value is 60 minutes.
	The phone accepts values in the range from 1 to 21,000.
	① You can configure this parameter through the web interface or through the .xml configuration file.

Name	Description
Maximum time to wait to update	To specify the maximum time in seconds the phone waits for the update. By default, it is 1 minute.
	This time-out is not used during the first start of Device Management. Device Management starts for the first time as soon as the network is configured. After that, Device Management starts at the intervals you specified using the Update interval parameter and uses the Maximum time to wait to update value.
	You can configure this parameter through the web interface or through the .xml configuration file.
Provisioning Server	To specify the Device Management server address if it is not provided by the DHCP option.
Check Server Certificate	To enable or disable the verification of the authentication with a certificate. The options are:
	 On: Server certificates are checked. Off: Server certificates are not checked. This is the default setting.
Lowest TLS Version	To specify the lowest TLS version for the phone. The options are:
	11.11.2

Name	Description
DHCP Option	To select the DHCP option used for the Device Management server address.
	With all DHCP options, the phone obtains the URL and directory of the server where the configuration file is located. The Device Management server then looks for kt800.xml as a global configuration file, and kt800- <mac>.xml for a device-specific file.</mac>
	The DHCP options are:
	 43: Vendor specific. 56: DHCP message. 60: Class ID. 61: Client ID. 66: Server name. 67: Bootfile name. 242: The brand-specific option. Off Auto: This is the default setting.
Certificate	To upload a certificate to the phone. This certificate is used for authentication in Device Management.
CA Certificate	To upload a root certificate. It contains a public key, which is used to verify other certificates when using Device Management.
Private Key	To upload a private key. It is used for authentication when using Device Management.

Files on the provisioning server

The following files must be available on the provisioning server:

- Firmware file
- Firmware metadata file
- · Global configuration file
- Device-specific configuration file (optional)
- · Global certificate configuration file

Device-specific certificate configuration file (optional)

Global configuration file

The global configuration file contains the basic configuration, that is, all settings that are common for all conference phones in your location. The easiest way to create this file is to configure Konftel 800 and export the configuration file, or use the built-in configuration file creator.

The default name for this file is kt800.xml.

Instead of the .xml file format, you can also use cgi, php, asp, js, or jsp file formats. Konftel 800 first searches for the configuration file in .xml format. If the phone fails to find the .xml file on the provisioning server, it searches for the configuration file in other formats specified above.

Creating the global configuration file

Use this procedure to create the global configuration file. This file contains the general information about the phone settings and must be created after you set all the basic configurations of Konftel 800.

Enable the **Device Management** option and ensure that all the required server information is filled in.

- ⇒ On the web interface, click **Provisioning**.
- ⇒ In the Configuration section, click Export Configuration.

The configuration file is created.

- ⇒ Optional: Edit the .xml file in a suitable editor.
- \Rightarrow Save the file as kt800.xml in the dedicated folder. The folder is located at the address specified in the **Provisioning Server** field.
 - ① Do not use a custom name for this file because the file name kt800 is hardcoded in Device Management configuration and it will not search for files with a different name.

Delete the local information from the global configuration file to avoid confusion in the future. Local information is information specific to the device, for example, account information

Device-specific configuration file

The device-specific configuration file contains configuration parameters that are unique for every phone. The settings in this file have priority over the settings in the global configuration file.

The default name for this file is $kt800-\mbox{MAC}>.\mbox{xml}$, where $\mbox{MAC}>$ is the MAC address of the specific phone.

Instead of the .xml file format, you can also use cgi, php, asp, js, or jsp file formats. Konftel 800 first searches for the configuration file in .xml format. If the phone cannot find the .xml file on the provisioning server, it searches for the configuration file in the other formats.

Creating the device-specific configuration file

Use this procedure to create the device-specific configuration files. They contain information about the unique settings of each Konftel 800.

Obtain MAC addresses of all your Konftel 800 phones. Ensure that you write the MAC address without colons.

- ⇒ On the web interface, click Provisioning.
- ⇒ In the Configuration section, click Export Configuration.
 - The phone creates a configuration file.
- ⇒ Edit the .xml file in a suitable editor.

The file must contain only the elements that are unique for a specific phone.

- \Rightarrow Save the file as kt800-<MAC>.xml in the dedicated folder located at the address specified in the **Provisioning Server** field.
 - ① Do not use a custom name for this file because the file name kt800-<MAC> is hardcoded in Device Management configuration and it will not search for files with a different name.

Certificate configuration files

Certificate configuration files stored on the provisioning server allow you to automatically apply the CA certificate to Konftel 800 so the phone can validate the server when configured to use TLS. The service provider can upload a global certificate configuration file and a device-specific certificate configuration file.

The default name for global configuration file is $kt800_certcfg.xml$. The default name for global configuration file is $kt800_certcfg-<MAC>.xml$, where <MAC> is the MAC address of the specific phone.

Instead of the .xml file format, the service provider can also use cgi, php, asp, js, or jsp file formats. Konftel 800 first searches for the configuration file in .xml format. If the phone fails to find the .xml file on the provisioning server, it searches for the configuration file in other formats specified above.

The certificate configuration file consists of 4 sections:

- 802.1.x
- SIP
- Provisioning
- LDAP

Each section contains the following certificate files:

- CA certificate
- Certificate
- · Private key

Firmware binary

This file contains the firmware binary that is downloaded and installed by Konftel 800 if the metadata file shows that it is newer than the currently installed version.

Firmware metadata file

Firmware metadata file is file in .xml format with information of the firmware version in the binary file. The file is used to check whether the binary file must be downloaded to the phone.

- Firmware version
- Filename
- Checksum of the firmware binary

The following is the example of the firmware binary file:

The name of this file is set as KT800_fw_version.xml. The file contains the following elements in xml format: firmware version, filename, and checksum of the firmware binary. The following is the example of the firmware binary file:

```
<firmware_version>
<version>2.3.9</version>
<filename>KT800_v2.3.9.kt</filename>
<checksum>XXXXX</checksum>
</firmware_version>
```

If the firmware binary file which is specified in the firmware metadata file is not uploaded to the provisioning server, the phone fails to upgrade and shows the following error message after reboot: Upgrade failed.

Creating firmware binary and metadata files

Use this procedure to create the firmware binary and metadata files manually. Apply them to check if a newer firmware version for your Konftel 800 is available.

Collect the information about the version, file name, and checksum of the firmware binary for the phone.

- ⇒ Place the firmware binary file on the Device Management server.
- ⇒ Create a firmware metadata file containing the version, file name, and checksum of the firmware binary.
- ⇒ Save the file as <file name>.kt in the dedicated folder located at the address specified in the Provisioning Server field.
- Optional: Add the file type .kt to the MIME settings on the server after the files creation.

Firmware upgrade using check-sync

Konftel 800 automatically starts the firmware upgrade procedure when it receives a check-sync message from your SIP system. To use this feature, you must enable Device Management on your phone.

IP Office does not support check-sync for firmware upgrades. IP Office supports check-sync only for settings file changes.

When the phone receives a check-sync message, it automatically starts the Device Management procedure which includes downloading the firmware file as soon as Konftel 800 enters the idle state. The phone is in the idle state when there are no active calls and the idle screen is active.

When the firmware upgrade is complete, Konftel 800 reboots.

Related tasks

Configuring Device Management settings on the phone on page 95 Configuring Device Management settings through the web interface on page 96

Upgrading multiple devices

You can upgrade firmware on multiple Konftel 800 devices using Device Management instead of upgrading each phone individually. For this purpose, Device Management must be enabled for the devices, the provisioning server must be specified for the devices, and the firmware binary file and the firmware metadata file must be available on the provisioning server.

Ensure that the firmware filename matches the <filename> value in the metadata file, and that the firmware version in both files is the same.

- Check if Device Management is enabled on the phones you want to upgrade and enable if necessary.
 - You can do this on the phone by logging in as an administrator and navigating to **Settings > Device Management** or through the web interface on the **Provisioning** tab in the **Device Management** section.
- Check if the provisioning server is configured for the phones you want to upgrade and configure if necessary.
 - You can do this on the phone by logging in as an administrator and navigating to **Settings > Device Management** or through the web interface on the **Provisioning** tab in the **Device Management** section.
- ⇒ Upload the binary file and the firmware metadata file to the provisioning server.

When the phones contact the provisioning server, the upgrade process starts.

You can check the firmware version from the phone by navigating to **Settings** > **Status** or through the web interface in the **Status** tab.

Related concepts

Device Management settings on page 96 Firmware metadata file on page 101 Firmware binary on page 101

Configuring multiple devices

You can configure multiple Konftel 800 devices using the configuration file as a management tool instead of configuring the settings on each phone individually. For this purpose, you need to export the configuration file, edit the settings as necessary, and then place the configuration file to the provisioning server.

Ensure that you or the service provider have configured the provisioning server for your phones.

- ⇒ Log in to the web interface.
- Export the configuration file by clicking Export Configuration on the Provisioning tab.

The phone generates the global configuration kt800.xml file.

- ⇒ Optional: Edit the configuration file using a suitable application.
 - The settings file might not contain some settings if they represent a default value. To include such settings in the configuration file, you need to change them to a non-default value using the phone interface or the web interface.
- ⇒ Upload the file to the provisioning server.

During the next Device Management configuration upgrade, the system applies the configuration file to the phones. After the phones reboot, they all have the same settings specified in the configuration file.

Related concepts

Configuration file on page 77

Device Management on page 94

Related tasks

Creating the global configuration file on page 99

Remote syslog server

Konftel 800 supports syslog protocol to allow centralized log management. You can configure the phone so that it logs to a remote server and sends the syslog messages to your own system or a third-party system.

With the remote syslog feature enabled, the phone sends the syslog messages to the syslog server and also logs them in the local log.

By default, the remote logging feature on Konftel 800 is in the disabled state.

Configuring remote syslog settings

To use the remote syslog feature, you need to do the following:

- Enable your phone to deliver syslog messages to the syslog server.
- Configure the destination server which receives the syslog events.

You can do this using the configuration file stored on the Device Management server. You can find the syslog settings under the <logging> section of the configuration file.

① The default syslog port is 514, and you cannot change this setting.

The <remote_syslog_host> tag can be missing in the <logging> section
if you use a configuration file exported from the phone application. This can
happen because the <remote_syslog_host> default value is blank, and the
phone application does not export blank tags.

Obtain the configuration .xml file for Konftel 800.

- ⇒ In the configuration file, go to the <logging> section.
- ⇒ Set the value in the <remote_syslog_enable> tag to true as shown in the following example:

```
<remote syslog enable>true</remote syslog enable>
```

⇒ Specify the host URL in the <remote_syslog_host> tag as shown in the following example:

```
<remote_syslog_host>1.2.3.4</remote_syslog_host>
```

Replace the 1.2.3.4 with the IP address or hostname of your remote syslog server.

⇒ Save the configuration file.

Upload the configuration file to the Device Management server or import the configuration file to the phone using the web interface.

The phone sends syslog messages to the syslog server after the next reboot. The phone continues sending syslog messages until you set the <remote syslog enable> parameter in the configuration file to false.

Related concepts

Configuration file on page 77

Related tasks

Importing the configuration file on page 92

Configuring Device Management settings through the web interface on page 96 Exporting the configuration file on page 92

Fall back server support

Konftel 800 registers concurrently with the primary and secondary proxy servers. The phone also supports provisioning of a third-party fall back server when a connection with the primary or secondary server cannot be established. You can configure the third-party server details by using the web interface and the configuration file.

Factory reset

If for any reason, you must restore the factory settings on your Konftel 800, you can do it by means of the factory reset. In this case the phone removes all user-specific settings and returns to the factory settings. After the procedure is completed, you can repeatedly configure the settings.

Performing factory reset

You can reset your Konftel 800 to factory default. You can do the factory reset only on the phone after you log in as the administrator.

If you need to perform the factory reset without logging in as the administrator, follow the procedure described in Performing system recovery on page 106.

- ⇒ Log in to the phone as the administrator.
- ⇒ On the phone screen, tap Settings > Phone.
- ⇒ Tap Factory Reset.

The phone shows the following message: Reset configuration to factory default. Press OK to confirm.

- ⇒ Tap Ok to confirm the reset.
- ⇒ Optional: Tap Cancel to return to the Phone settings.

System recovery

As an administrator, you can perform system recovery on Konftel 800 to return the phone to operable state, for example, after a faulty upgrade or when the phone application fails. System recovery replaces the current firmware with the previously installed operable firmware version.

You can also perform system recovery to reset the administrator password.

System recovery erases all settings including the account information.

Performing system recovery

Ensure that you save the configuration file from your Konftel 800. System recovery erases all settings.

- ⇒ Power cycle the phone to start the boot process.
- When the LEDs turn green, start tapping the Microphone Muted button on the phone and continue tapping until the LEDs turn off.
- ⇒ Tap the Microphone Muted button once again.
- ⇒ When the LEDs turn red, tap the **Volume up** button once to confirm the system recovery.

The LEDs turn off. The phone starts regular boot. After the boot up, the phone displays the following message: Upgrade the phone to complete recovery.

- If you want to cancel the system recovery, do not tap Volume up button on the phone when the LEDs turn red.
- ⇒ After the phone boots up, set the administrator password.
- ⇒ Upgrade the phone to complete system recovery.

Upload the configuration file with necessary settings.

Related concepts

Provisioning on Konftel 800 on page 76

Related tasks

Setting the password for Konftel 800 on page 18

Web interface settings

The web server in Konftel 800 supports secure connections using HTTPS. You can configure this parameter only through the web interface.

The phone supports connection to the web interface only through https.

The following web interface settings can be configured for Konftel 800 in the **Provisioning** tab:

Name	Description
Secure HTTP	
Webapp HTTPs Certificate	To upload a .PEM certificate to Konftel 800 to use HTTPS. (1) Konftel 800 supports certificates in the .PEM format only. You must convert the certificates and private keys to .PEM before using in the phone. For more information, see Converting the certificates to .PEM format on page 63

You can use the following command to generate a HTTPS web interface certificate:

```
openssl req -new -x509 -keyout https _ web _ certificate.pem -out https _ web _ certificate.pem -day <number of days>-nodes
```

DEVICE STATUS VIEW

You can view the configured settings of your Konftel 800 through the web interface and get information about the device, logs, and licenses.

You can use this information for troubleshooting.

Device status

You can find the information about Konftel 800 status, including its current settings, through the web interface. This information can be useful for troubleshooting.

The following table describes the type of the information available in each of the **Status** tab sections.

Section name	Description
General	To show the status information of Konftel 800, including the following: • Phone Name • Product Name • Build Version • HW Revision
	Serial Number
	Smart Microphone 1 VersionSmart Microphone 2 Version
Network	To show the information about the network settings of the phone. You can see the following information: IP address MAC Address Bluetooth MAC Address Hostname Network Mask Domain Gateway Primary DNS Secondary DNS
SIP	To show the information about the SIP settings of the phone. You can see the following information: • Primary Account Status • Secondary Account Status • Fallback Account Status

Section name	Description
Time and Region	To show the information about the time and region settings of the phone. You can see the following information: • NTP Status • Time • Date • Timezone

(i) You can not change settings in the Status tab.

Viewing the phone status

Use this procedure to view the status and settings of Konftel 800 through the web interface.

- ⇒ Log in to the web interface.
- ⇒ Select the Status tab.

System logs

Information about log messages is available through the web interface in the **System Logs** tab. These log types can be useful for troubleshooting.

You can select the following log types:

- All Logs. This is the default setting.
- System Logs
- PhoneApp Logs
- Linux Kernel Logs
- Bluetooth Stack Logs
- PJSIP logs
- Device Management
- SIP traces
- Device Management Debug

You can also specify custom logs type in the Custom logs type field.

(i) You can not access logs through the phone user interface.

Viewing system logs

Use this procedure to choose and form the log messages through the web interface.

- ⇒ On the web interface, click **System logs**.
- ⇒ Under Select Logs Type, select the log from a drop-down list.
- ⇒ Click the Filter button.

You can see the logs of the selected type in the field below.

- ⇒ Optional: You can do the following:
 - Click the **Download All Logs** button to download all the logs available. In this case the system downloads a .zip archive with the logs available.
 - Click the Download Selected Logs button to download the logs of a selected type. In this case, the system downloads a .txt file with the logs of the selected type.
 - Click the Clear All Logs button to clear the list of available logs.

Network logs

You can get the traces of the phone network activities through the web interface in the **Network Logs** tab. The network logs can be useful for troubleshooting.

You can get network logs only after the phone reboots into the Network logs mode.

Viewing network logs

Use this procedure to choose and form the network log messages through the web interface.

- ⇒ On the web interface, click **Network logs**.
- ⇒ You can do the following:
 - Click the Reboot Into Network Log Mode button to reboot the phone into the network log mode.
 - Click the **Download Network Logs** button to download the archive with the available network logs.

LICENSES

Some parts of the phone software are subject to open source license agreements. You can get the information about the use and redistribution conditions for the following:

- BSD. This is the Berkeley Software Distribution system for distribution of the source code to the operating system.
- GPL v2.0. This is the General Public License, version 2.0, which
 guarantees the end users the freedom to run, study, share and modify the
 software.
- LGPL v2.1. This is the Lesser General Public License, version 2.1, which is applicable to specially designated software packages of the Free Software Foundation and some other authors.
- GFDL v1.2. This is the GNU Free Documentation License, version 1.2, providing the freedom to copy and redistribute specific documentation.
- GFDL v1.3. This is the GNU Free Documentation License, version 1.3.
- ISC. This is the Internet Systems Consortium permissive free software license.
- MIT. This is the Massachusetts Institute of Technology permissive free software license.
- OpenSSL. This is the license to use OpenSSL being a software library for applications that secure network communications and help to identify the party at the other end.
- PHP v3.0. This is the license under which the PHP scripting language is released.
- Bzip2. This is the license to a free and open-source file compression software that compresses single files.
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- Libpng. This is the license which defines the terms under which the libpng software library can be distributed.
- Qt-Company-Commercial. This is the license for development of proprietary software when the source code is not to be shared with third parties or there are other inconsistencies with the terms of the LGPL license.
- TI-TSPA. This is the Texas Instruments Incorporated license to publicly available technology and software.
- Zlib. This is the license which defines the terms under which the zlib software library can be distributed.
- MPL v2.0. This is the simple copyleft Mozilla Public License (MPL) version 2.0.
- ① You can get the license information only through the web interface.

Viewing licenses

Use this procedure to view the status and settings of Konftel 800 through the web interface.

- ⇒ Log in to the web interface.
- ⇒ Select the **Licenses** tab.
- ⇒ Select the license that you want to view from the list of licenses available.

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Konftel is a leading company within collaboration endpoint solutions. Since 1988, our mission has been to help people in businesses around the world to have meetings regardless of distance. Based on our success, we know that remote collaboration is a smooth way to save time, money and at the same time contribute to a more sustainable world. Crystal clear audio and a sharp video image are essential for efficient meetings, this is why we only focus on cutting-edge technology in our Collaboration Solutions.

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