

Mitel 6900 Series IP Phones

RELEASE 1.4.1 ADMINISTRATOR GUIDE

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Mitel MiVoice 6900 Series IP Phones - Release 1.4.1 Administrator Guide

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Software License Agreement

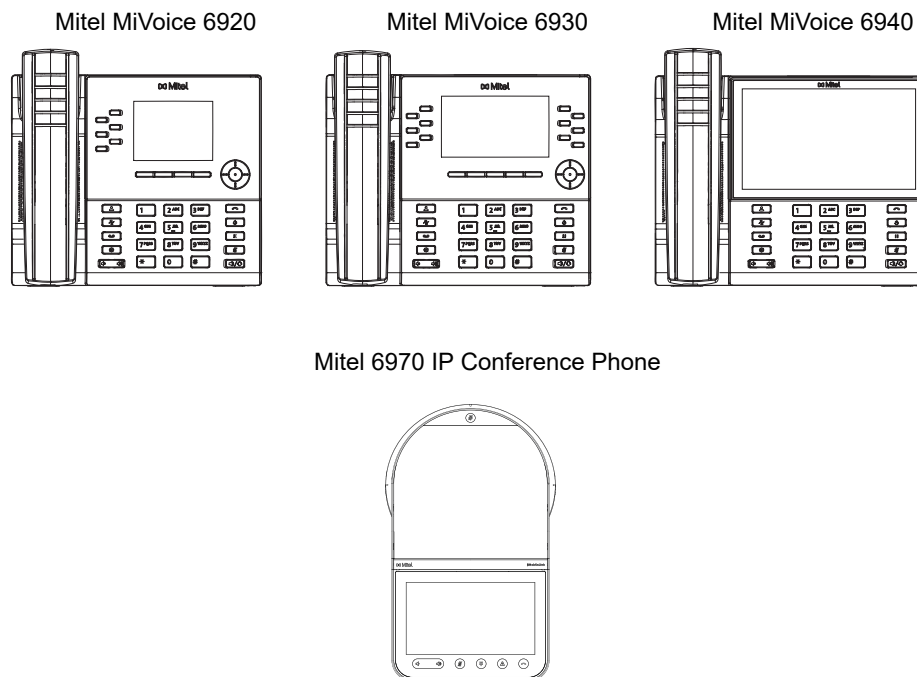
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About this guide

This guide explains how to use the administrator features of the Mitel 6900 Series IP Phones (6920, 6930, 6940, and 6970) that can be accessed through the IP phones' advanced **Settings** menu and Web UI.



This document contains information that is at a technical level, more suitable for system and network administrators. Prior knowledge of IP telephony concepts is recommended.

Supporting documentation

To access phone and system-specific documentation:

1. Log in to [Mitel MiAccess](#).
2. In the left-hand menu, click **Doc Center**.
3. Click **DEVICES AND ACCESSORIES**.
4. Select the **IP PHONES AND PERIPHERALS** category.
5. Select the **MIVoice BUSINESS** call manager.
6. Select **6900 IP SERIES**.
7. Select the **6900 IP PHONES** model.
8. Select the required document.

Getting started

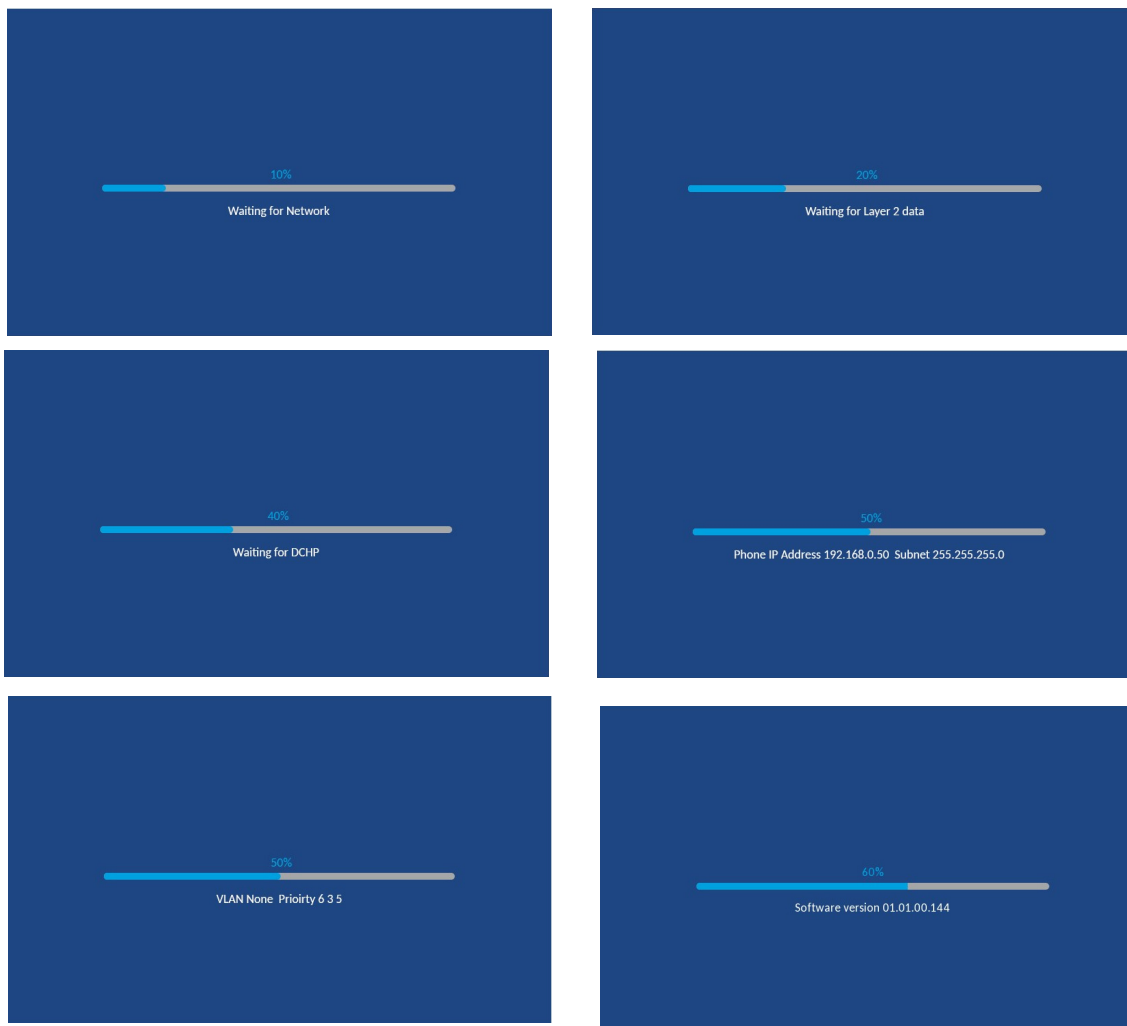
The Mitel 6900 Series IP Phones must be set up and be configured prior to its first use. This section describes phone behavior and start up screens you may see when the phone is first plugged in, or when it is restarted.

Plugging in and starting the phone

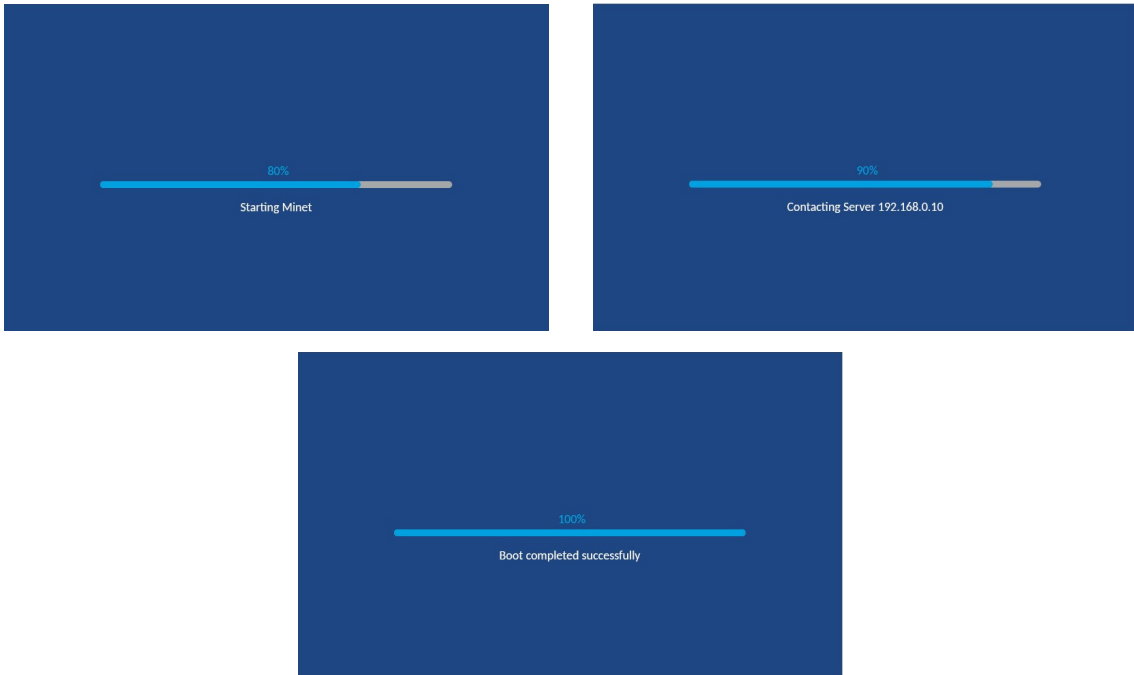
The Mitel 6900 IP Series IP phone automatically begins the start up and network discovery sequence as soon as it is connected. The phone goes through this process the first time you plug in your phone and every time you restart your phone.

WARNING: DO NOT PRESS THE SETTINGS KEY UNTIL THE NETWORK DISCOVERY SEQUENCE REACHES **20% WAITING FOR LAYER2 DATA** STAGE.

The phone displays the following startup screens:




The Mitel 6900 IP Series IP phone then contacts the call server and completes the start up process.



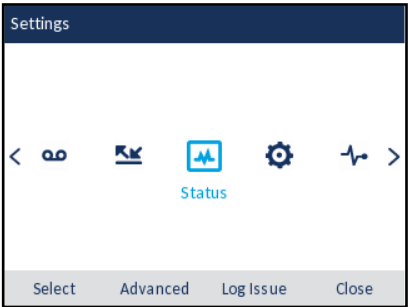
WARNING: DO NOT UNPLUG OR REMOVE POWER TO THE PHONE DURING THE START UP PROCESS.

Settings menu

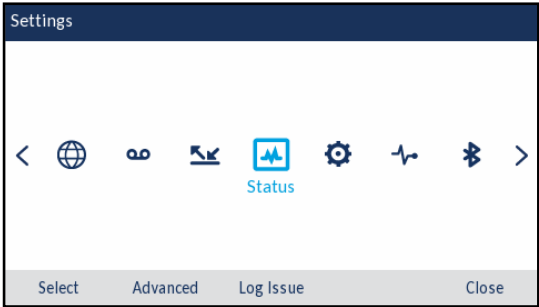
Basic menu

The  (**Settings**) key provides access to the **Settings** menu.

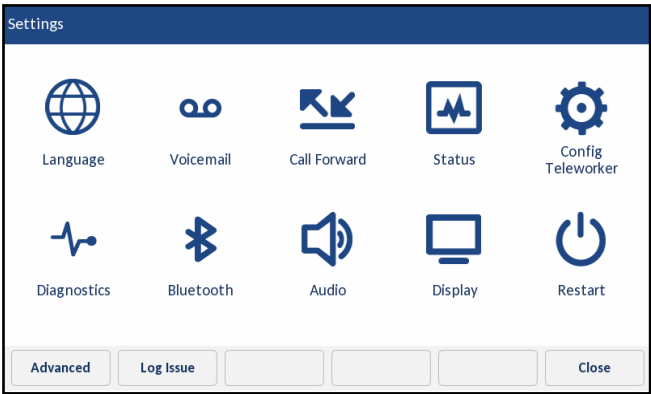
Mitel MiVoice 6920 Settings



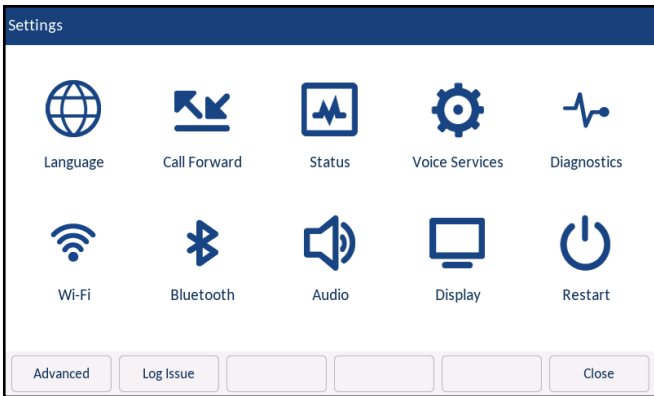
Mitel MiVoice 6930 Settings










Mitel MiVoice 6940 Settings



Mitel 6970 Settings



This menu provides a single location to access all the phone settings. The basic **Settings** menu provides access to the following user-level phone settings:

Icon	Setting
	Status
	Language
	Voicemail
	Call Forward
	Voice Services
	Diagnostics
	• Audio Diagnostics
	• Ping
	• TCP DUMP
	• DHCP Trace
	Bluetooth (6930, 6940 and 6970)
	Audio
	• Ring Tones
	• Audio Path
	Display
	Restart

Note: Aside from **Status**, all other user-level settings are outside of this document's scope. For detailed information on the remaining user-level phone settings, see the respective model's *Mitel MiVoice IP Phone User Guide*.

The basic **Settings** menu also provides a **Log Issue** softkey. When pressed, two log files are generated; *dumpstate-logissue.txt* and *dumpstate-phoneinfo.txt*.

The *dumpstate-phoneinfo.txt* log file contains Call Server revision and phone DN.

The *dumpstate-logissue.txt* log file contains the following information:

- Date and time.
- IP phone model, firmware version, firmware timestamp, and source control revision.
- Detailed memory information.
- Detailed CPU information.
- Detailed Display Message (DMESG) information.
- Detailed process information.
- Detailed file system information.
- Detailed network status information.
- Detailed kernel information.

The *dumpstate-logissue.txt* and *dumpstate-phoneinfo.txt* log files can be downloaded using the Mitel Web UI (see [“Collect/tar Logs and Get Log Files”](#) on [page 47](#)) or remotely using the MiVoice Business System Administration Tool (see [“Click Set.”](#) on [page 51](#)).

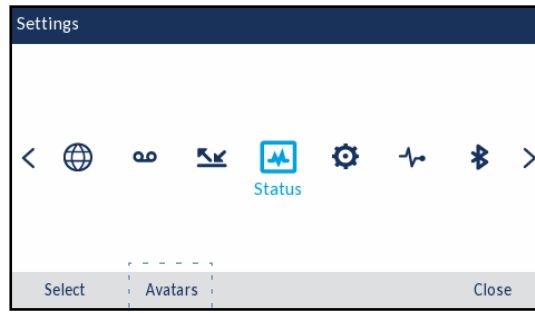
Advanced menu

By pressing or tapping the **Advanced** softkey and entering the Administrator password (default 73738) the following additional administrator-level settings are available for selection:

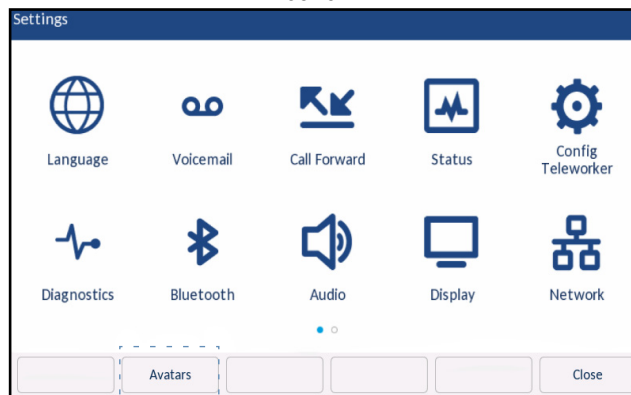
Mitel MiVoice 6920 Advanced menu



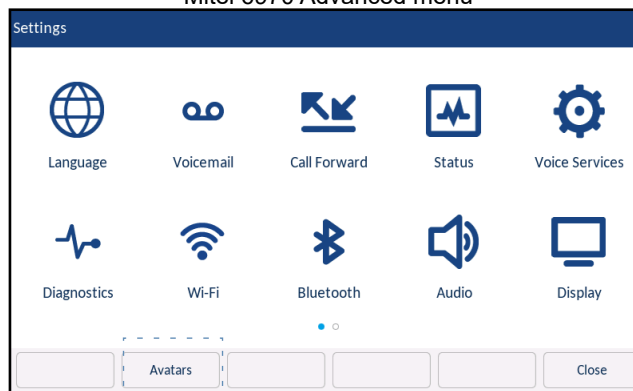
Mitel MiVoice 6930 Advanced menu



Mitel MiVoice 6940 Advanced menu













Mitel 6970 Advanced menu



Notes:

1. The **Avatars** softkey is displayed on all Mitel 6900 Series IP Phones. However, Avatars are supported only on the Mitel MiVoice 6940 IP phone and the Mitel 6970 IP Conference Phone. Pressing or tapping the **Avatars** softkey clears the cache on the Mitel 6900 Series IP Phone.
2. Avatars are updated after a preset timer duration on the System Administrator tool.
3. The 6940 IP phone and the 6970 IP Conference Phone validate new Avatars during the next call or reboot.

Icon	Setting
	Network
	<ul style="list-style-type: none">• Static Settings
	<ul style="list-style-type: none">• Ethernet Ports
	<ul style="list-style-type: none">• VLAN Settings
	<ul style="list-style-type: none">• 802.1x
	<ul style="list-style-type: none">• Network Services
	PIN
	<ul style="list-style-type: none">• Erase PIN
	<ul style="list-style-type: none">• Modify PIN
	Restore Default

The sections that follow provide information regarding the above administrator-level settings available on the Mitel 6900 Series IP Phones.

Status

The **Status** menu on the Mitel 6900 Series IP Phones is a read-only menu that displays general phone information and the current network status details. The **Status** menu is available to both users and Administrators and does not require a password to access.

Mitel MiVoice 6920 Status

Status	
Net. General I...	IP Address 10.10.158.119
Net. Persist. D...	Subnet Mask 255.255.255.128
Net. DHCP Info	Gateway 10.10.158.1
Net. QoS	
Port Info	
Phone Info	
Cancel	

Mitel MiVoice 6930 Status

Status	
Network General Info	IP Address 10.10.158.118
Network Persist. Data	Subnet Mask 255.255.252.128
Network DHCP Info	Gateway 10.10.158.1
Network QoS	
Port Info	
Cancel	

Mitel MiVoice 6940 and Mitel 6970 Status

Status		
Network General Info	IP Address	192.168.157.14
Network Persist. Data	Subnet Mask	255.255.255.0
Network DHCP Info	Gateway	192.168.157.1
Network QoS	MAC Address	08-00-0F-D9-03-9B
Port Info	Current Call Server IP Address:	192.168.152.49
Phone Info	Call Server1 IP Address	192.168.152.49
	Call Server2 IP Address	192.168.152.49
<input type="button" value="Cancel"/>		

The following table outlines the information displayed in the **Status** menu:

Item	Description
Network General Info	Displays information on the following general network parameters currently configured on the IP phone: <ul style="list-style-type: none"> • IP Address • Subnet Mask • Gateway • MAC Address • Current Call Server IP Address • Call Server1 IP Address • Call Server2 IP Address • Call Server3 IP Address • Call Server4 IP Address • TFTP Server IP Address • TFTP Server Port • File Server • IPA IP Address • Primary DNS • Secondary DNS
Network Persist. Data	Displays information regarding the IP addresses of the call servers the IP phone is currently connected to.
Network DHCP Info	Displays information regarding the current DHCP status, Renewal Time Values (T1), and Rebinding Time Values (T2).
Network QoS	Displays information regarding the current VLAN, L2P, and DSCP Quality of Service (QoS) parameters.
Port Info	Displays information on the port speeds and duplex methods that the IP phone is currently using on its LAN and PC ports.
Phone Info	Displays information regarding the model, hardware revision, main firmware version, boot version of the IP phone, and phone uptime, as well as the call server firmware revision.

Note: The Mitel 6900 Series IP Phones support DHCP Options 43 and 125.

Network

The **Network** menu allows you to configure the following network settings:


- Static Network Settings
- Ethernet Ports
- VLAN Settings
- 802.1x
 - 802.1X EAP-TLS Support
- Network Services

Static Network Settings

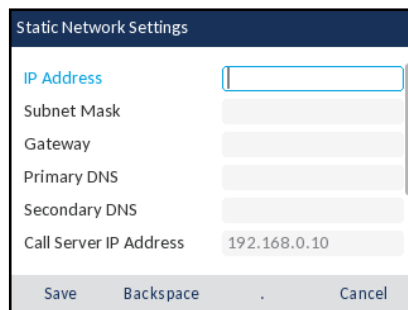
The Mitel 6900 Series IP Phones can be configured to utilize DHCP or static network settings.

The **Static Network Settings** sub-menu allows you to configure network settings on your phone manually. Configuring static network settings automatically disables DHCP functionality.

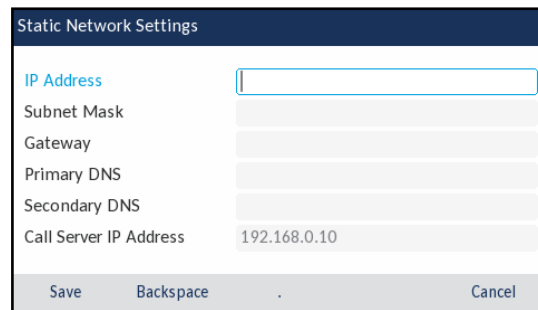
To manually configure static network settings on the Mitel MiVoice 6920/6930 IP phone:

1. Press the  (**Settings**) key on the phone to enter the **Settings** menu.
2. Press the **Advanced** softkey.
3. Input the Administrator password using the dialpad keys (default is 73738) and press the **Enter** softkey.
4. Navigate to **Network > Static Settings** using the navigation keys and press the **Select** softkey.

Mitel MiVoice 6920 Static Network Settings



Mitel MiVoice 6930 Static Network Settings




5. Navigate to the applicable parameter's input field using the navigation keys and enter in the respective values using the dialpad keys. Applicable parameters include:
 - **IP Address:**
IP address of the IP phone.
 - **Subnet Mask:**
The IP address range local to the IP phone.
 - **Gateway:**
The IP address of the network's gateway or default router IP address.
 - **Primary DNS:**
The IP address of the primary DNS server.
 - **Secondary DNS:**
The IP address of the secondary DNS server.
 - **Call Server IP Address:**
The IP address of the call server.
 - **TFTP Server IP Address:**
The IP address of the Trivial File Transfer Protocol (TFTP) server.
 - **TFTP Server Port:**
The TFTP port the TFTP server uses.

- **File Server:**
The URL of the File Server. Used for migrating Mitel 6900 Series IP Phones from MiNet to SIP. Refer to the *SIP Administrator Guide* for more information.
- **IPA IP Address:**
IP address of the IP Phone Analysis (IPA) server.

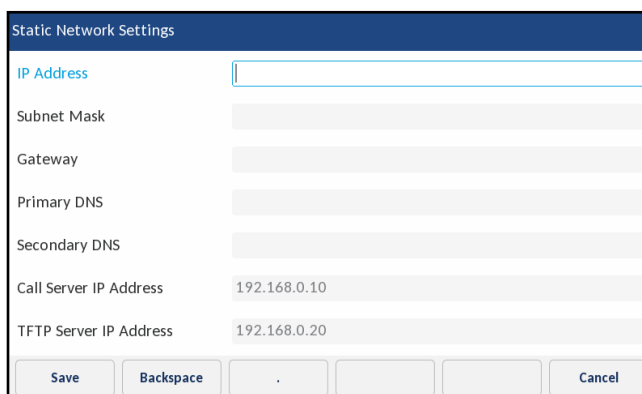
Note: The **Backspace** softkey can be used to delete the last digit/character entered and the dot (".") softkey can be used to enter a dot where applicable.

6. Press the **Save** softkey to save your changes.

To manually configure static network settings on the Mitel MiVoice 6940 IP phone:

1. Press the  (**Settings**) key on the phone to enter the **Settings** menu.
2. Tap the **Advanced** softkey.
3. Input the Administrator password using the dialpad keys (default is 73738) and tap the **Enter** softkey.
4. Tap the **Network** icon.
5. Tap the **Static Settings** icon.

Mitel MiVoice 6940 Static Network Settings




6. Tap the applicable parameter's input field and enter in the respective values using the dialpad keys. Applicable parameters include:
 - **IP Address:**
IP address of the IP phone.
 - **Subnet Mask:**
The IP address range local to the IP phone.
 - **Gateway:**
The IP address of the network's gateway or default router IP address.
 - **Primary DNS:**
The IP address of the primary DNS server.
 - **Secondary DNS:**
The IP address of the secondary DNS server.
 - **Call Server IP Address:**
The IP address of the call server.

- **TFTP Server IP Address:**
The IP address of the Trivial File Transfer Protocol (TFTP) server.
- **TFTP Server Port:**
The TFTP port the TFTP server uses.
- **File Server:**
The URL of the File Server. Used for migrating Mitel 6900 Series IP Phones from MiNet to SIP. Refer to the *SIP Administrator Guide* for more information
- **IPA IP Address:**
IP address of the IP Phone Analysis (IPA) server.

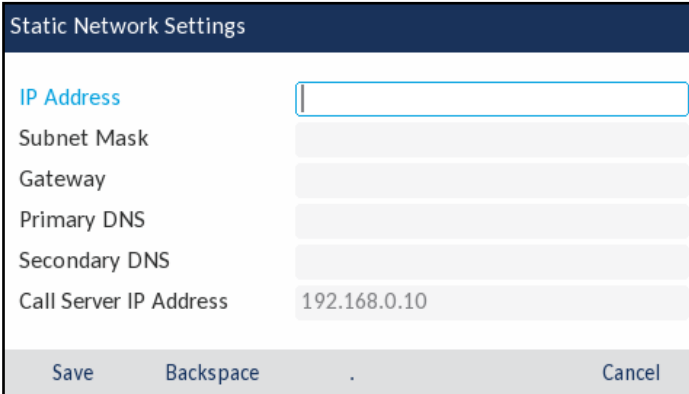
Note: The **Backspace** softkey can be used to delete the last digit/character entered and the dot (".") softkey can be used to enter a dot where applicable.

7. Tap the **Save** softkey to save your changes.

To manually configure static network settings on the Mitel 6970 IP Conference Phone:

1. Create a user in MiVoice Business (v.8 and higher) using the MAC address of your Conference Phone.
2. Download the latest version of the firmware from the TFTP server to your local PC.
3. Connect your Conference Phone to the network.
4. Press the  (**Directory**) key during the boot up of the phone. The key is active after 30% of the boot up.
5. Tap the **Settings** softkey on the screen.

Mitel 6970 Static Network Settings




6. Tap the **Advanced** softkey and enter the Admin password (default is 73738).
7. Navigate to **Network > Static Settings**.
8. In the **Call Server IP Address** field type the IP address of the MiVoice Business server.
9. In the **TFTP Server IP Address** field type the IP address of your local TFTP server with the downloaded firmware.
10. Tap the **Save** softkey.
11. Tap the **Restart** softkey and confirm the restart.

Ethernet Ports

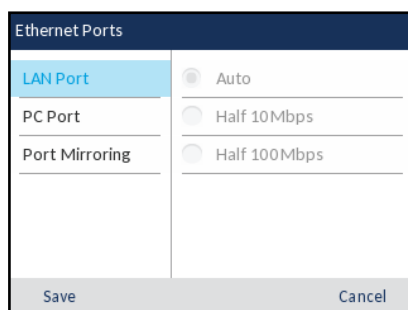
The Mitel 6900 Series IP Phones have two built-in 10/100/1000 Ethernet ports (one LAN and one PC) located on the back of the phone.

The **Ethernet Ports** sub-menu allows you to change the speed and duplex method of the IP phone's LAN and PC ports as well as enable or disable port mirroring.

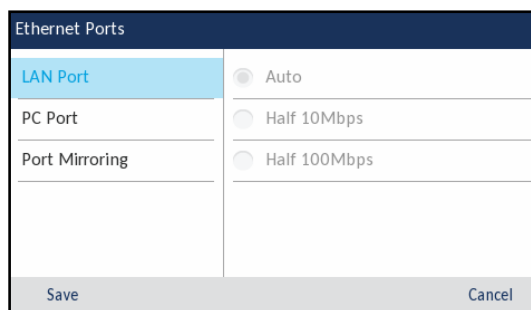
To configure Ethernet port options on the Mitel MiVoice 6920/6930 IP phone:

1. Press the  (**Settings**) key on the phone to enter the **Settings** menu.
2. Press the **Advanced** softkey.
3. Input the Administrator password using the dialpad keys (default is 73738) and press the **Enter** softkey.
4. Navigate to **Network > Ethernet Ports** using the navigation keys and press the **Select** softkey.

Mitel MiVoice 6920 Ethernet Ports




Mitel MiVoice 6930 Ethernet Ports



5. With **LAN Port** highlighted, press the right navigation key to navigate to the selection column and use the up and down navigation keys to select the desired speed and duplex method. Applicable values include:
 - **Auto** (Default):
Auto-negotiation is when two connected devices choose common transmission parameters. In the auto-negotiation process, the connected devices share their speed and duplex capabilities and connect at the highest common denominator (the highest speed being 1000Mbps and highest duplex being full). Auto-negotiation can be used by devices that are capable of different transmission rates, different duplex modes, and/or different standards at the same speed. You can set the ports on the IP phone to auto-negotiate during transmission.
 - **Half 10Mbps or Half 100Mbps:**
Half-duplex data transmission means that data can be transmitted in both directions on a signal carrier, but not at the same time. For example, on a LAN using a technology that has half-duplex transmission, one device can send data on the line and then immediately receive data on the line from the same direction in which data was just transmitted. Half-duplex transmission implies a bidirectional line (one that can carry data in both directions). On the IP phone, you can set the half-duplex transmission to transmit in 10Mbps or in 100Mbps.
6. Press the left navigation key to navigate back to the **LAN Port** options column and then press the down navigation key to highlight the **PC Port** option.

7. With **PC Port** highlighted, press the right navigation key to navigate to the selection column and use the up and down navigation keys to select the desired speed and duplex method. The PC port shares the same applicable values as the LAN port above (Auto, Half 10Mbps, and Half 100Mbps).
8. Press the left navigation key to navigate back to the **PC Port** options column and then press the down navigation key to highlight the **Port Mirroring** option.
9. With **Port Mirroring** highlighted, press the right navigation key to navigate to the selection column and use the up and down navigation keys to enable or disable (default) port mirroring. Port mirroring allows you to mirror the LAN and PC ports to and from the phone for debugging purposes.
10. Press the **Save** softkey to save your changes.

To configure Ethernet port options on the Mitel MiVoice 6940 IP phone:

1. Press the  (**Settings**) key on the phone to enter the **Settings** menu.
2. Tap the **Advanced** softkey.
3. Input the Administrator password using the dialpad keys (default is 73738) and tap the **Enter** softkey.
4. Tap the **Network** icon.
5. Tap the **Ethernet Ports** icon.

Mitel MiVoice 6940 Ethernet Ports

Ethernet Ports	
LAN Port	<input checked="" type="radio"/> Auto
PC Port	<input type="radio"/> Half 10Mbps
Port Mirroring	<input type="radio"/> Half 100Mbps
<div style="display: flex; justify-content: space-between; align-items: center;"> Save Cancel </div>	

6. With **LAN Port** highlighted, tap the desired speed and duplex method. Applicable values include:
 - **Auto (Default):**
Auto-negotiation is when two connected devices choose common transmission parameters. In the auto-negotiation process, the connected devices share their speed and duplex capabilities and connect at the highest common denominator (the highest speed being 1000Mbps and highest duplex being full). Auto-negotiation can be used by devices that are capable of different transmission rates, different duplex modes, and/or different standards at the same speed. You can set the ports on the IP phone to auto-negotiate during transmission.
 - **Half 10Mbps or Half 100Mbps:**
Half-duplex data transmission means that data can be transmitted in both directions on a signal carrier, but not at the same time. For example, on a LAN using a technology that has half-duplex transmission, one device can send data on the line and then immediately receive

data on the line from the same direction in which data was just transmitted. Half-duplex transmission implies a bidirectional line (one that can carry data in both directions). On the IP phone, you can set the half-duplex transmission to transmit in 10Mbps or in 100Mbps.

7. Tap **PC Port** located in the left column.
8. With **PC Port** highlighted, tap the desired speed and duplex method. The PC port shares the same applicable values as the LAN port above (Auto, Half 10Mbps, and Half 100Mbps).
9. Tap **Port Mirroring** located in the left column.
10. With **Port Mirroring** highlighted, tap **Enable** or **Disable** (default) to enable or disable port mirroring. Port mirroring allows you to mirror the LAN and PC ports to and from the phone for debugging purposes.
11. Tap the **Save** softkey to save your changes.

To configure Ethernet port options on the Mitel 6970 IP Conference Phone:

1. Press the **Settings** softkey on the phone to enter the **Settings** menu.
2. Tap the **Advanced** softkey.
3. Input the Administrator password using the dialpad keys (default is 73738) and tap the **Enter** softkey.
4. Tap the **Network** icon.
5. Tap the **Ethernet Ports** icon.

Mitel 6970 Ethernet Ports

Ethernet Ports	
LAN Port	<input checked="" type="radio"/> Auto
Test Modes	<input type="radio"/> Half 10Mbps
	<input type="radio"/> Half 100Mbps
<div style="display: flex; justify-content: space-between; align-items: center;"> Save Cancel </div>	

6. With **LAN Port** highlighted, tap the desired speed and duplex method. Applicable values include:
 - **Auto** (Default):
Auto-negotiation is when two connected devices choose common transmission parameters. In the auto-negotiation process, the connected devices share their speed and duplex capabilities and connect at the highest common denominator (the highest speed being 1000Mbps and highest duplex being full). Auto-negotiation can be used by devices that are capable of different transmission rates, different duplex modes, and/or different standards at the same speed. You can set the ports on the IP phone to auto-negotiate during transmission.
 - **Half 10Mbps or Half 100Mbps:**
Half-duplex data transmission means that data can be transmitted in both directions on a signal carrier, but not at the same time. For example, on a LAN using a technology that has

half-duplex transmission, one device can send data on the line and then immediately receive data on the line from the same direction in which data was just transmitted. Half-duplex transmission implies a bidirectional line (one that can carry data in both directions). On the IP phone, you can set the half-duplex transmission to transmit in 10Mbps or in 100Mbps.


7. Tap the **Save** softkey to save your changes.

VLAN Settings

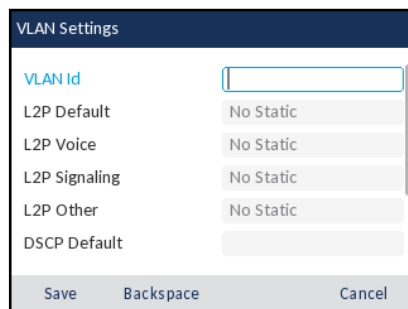
Virtual Local Area Network (VLAN) is a feature that allows for multiple logical Ethernet interfaces to send outgoing RTP packets over a single physical Ethernet. By configuring specific VLAN parameters, the Mitel 6900 Series IP Phones have the capability of adding and removing tags, and processing the ID and priority information contained within the tag.

The **VLAN Settings** sub-menu allows you to define the VLAN ID you want to associate with the Ethernet port, configure VLAN Layer 2 Protocol (L2P) priorities, and input Differentiated Services Code Point (DSCP) values.

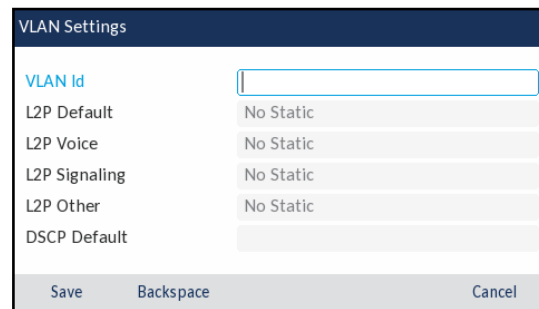
To configure VLAN settings on the Mitel MiVoice 6920/6930 IP phone:

1. Press the  (**Settings**) key on the phone to enter the **Settings** menu.
2. Press the **Advanced** softkey.
3. Input the Administrator password using the dialpad keys (default is 73738) and press the **Enter** softkey.
4. Navigate to **Network > VLAN Settings** using the navigation keys and press the **Select** softkey.

Mitel MiVoice 6920 VLAN Settings




Mitel MiVoice 6930 VLAN Settings



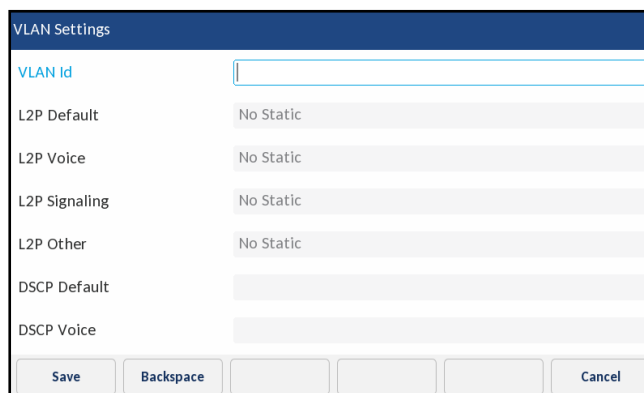
5. In the **VLAN id** input field, enter the VLAN number you want to associate with the Ethernet port using the dialpad keys.
6. Press the down navigation key to navigate to the L2P-related input fields and use the left and right navigation keys to set the desired priorities. The following L2P-related input fields are available:
 - **L2P Default:**
Specifies the default VLAN priority value for L2P voice, signaling, and other if they are not specified. The value has a range of 0 to 7.
 - **L2P Voice:**
Specifies the VLAN priority value for L2P voice traffic in the range of 0 to 7.

- **L2P Signaling:**
Specifies the VLAN priority value for L2P signaling traffic in the range of 0 to 7.
 - **L2P Other:**
Specifies the VLAN priority value for L2P other traffic in the range of 0 to 7.
7. Press the down navigation key to navigate to the DSCP-related input fields and enter the desired DSCP values using the dialpad keys. The following DSCP-related input fields are available:
 - **DSCP Default:**
Specifies the default DSCP value for voice, signaling, and other if they are not specified. The value has a range of 0 to 63.
 - **DSCP Voice:**
Specifies the DSCP value for voice traffic in the range of 0 to 63.
 - **DSCP Signaling:**
Specifies the DSCP value for signaling traffic in the range of 0 to 63.
 - **DSCP Other:**
Specifies the DSCP value for other traffic in the range of 0 to 63.
 8. Press the **Save** softkey to save your changes.

To configure VLAN settings on the Mitel MiVoice 6940 IP phone and Mitel 6970 IP Conference Phone:

1. Press the  (**Settings**) key or the **Settings** softkey on the phone to enter the **Settings** menu.
2. Tap the **Advanced** softkey.
3. Input the Administrator password using the dialpad keys (default is 73738) and tap the **Enter** softkey.
4. Tap the **Network** icon.
5. Tap the **VLAN Settings** icon.

Mitel MiVoice 6940 and Mitel 6970 VLAN Settings



VLAN Settings	
VLAN Id	<input type="text"/>
L2P Default	No Static
L2P Voice	No Static
L2P Signaling	No Static
L2P Other	No Static
DSCP Default	<input type="text"/>
DSCP Voice	<input type="text"/>
<input type="button" value="Save"/> <input type="button" value="Backspace"/> <input type="button" value=""/> <input type="button" value=""/> <input type="button" value="Cancel"/>	

6. In the **VLAN id** input field, enter the VLAN number you want to associate with the Ethernet port using the dialpad keys.
7. Tap the applicable L2P-related input field and tap the left and right arrow buttons to set the desired priorities. The following L2P-related input fields are available:


- **L2P Default:**
Specifies the default VLAN priority value for L2P voice, signaling, and other if they are not specified. The value has a range of 0 to 7.
 - **L2P Voice:**
Specifies the VLAN priority value for L2P voice traffic in the range of 0 to 7.
 - **L2P Signaling:**
Specifies the VLAN priority value for L2P signaling traffic in the range of 0 to 7.
 - **L2P Other:**
Specifies the VLAN priority value for L2P other traffic in the range of 0 to 7.
8. Tap the applicable DSCP-related input field and enter the desired DSCP values using the dialpad keys. The following DSCP-related input fields are available:
- **DSCP Default:**
Specifies the default DSCP value for voice, signaling, and other if they are not specified. The value has a range of 0 to 63.
 - **DSCP Voice:**
Specifies the DSCP value for voice traffic in the range of 0 to 63.
 - **DSCP Signaling:**
Specifies the DSCP value for signaling traffic in the range of 0 to 63.
 - **DSCP Other:**
Specifies the DSCP value for other traffic in the range of 0 to 63.
9. Tap the **Save** softkey to save your changes.

802.1X

The Mitel 6900 Series IP Phones support IEEE 802.1X and facilitates media-level access control. It offers the capability to permit or deny network connectivity, control LAN access, and apply traffic policy, based on user or endpoint identity. This feature supports both the EAP-MD5 and EAP-PEAP protocols. It also supports EAP-TLS which is configured only through staging. For details, see section "802.1X EAP-TLS Support".

The 802.1X sub-menu allows you to define the EAP authentication type as well as the identity and password used for 802.1X authentication.

To configure 802.1X settings on the Mitel MiVoice 6920/6930 IP phone:

1. Press the  (**Settings**) key on the phone to enter the **Settings** menu.
2. Press the **Advanced** softkey.
3. Input the Administrator password using the dialpad keys (default is 73738) and press the **Enter** softkey.

4. Navigate to **Network > 802.1x** using the navigation keys and press the **Select** softkey.

Mitel MiVoice 6920 802.1x

Mitel MiVoice 6930 802.1x

5. In the EAP type field, press the left and right navigation keys to enable an EAP authentication type/method (EAP-MD5 or EAP-PEAP).
6. Press the down navigation key to navigate to the **Identity** input field and enter the identity or user name used for authenticating the phone.


Note: The **Backspace** softkey can be used to delete the last digit/character entered and the ABC/abc/123 softkey can be used to switch the dialpad keys from lower to uppercase as well as from alphabetic to numeric.

7. Press the down navigation key to navigate to the **Password** input field and enter the password used for authenticating the phone.

Note: The **Backspace** softkey can be used to delete the last digit/character entered and the ABC/abc/123 softkey can be used to switch the dialpad keys from lower to uppercase as well as from alphabetic to numeric.

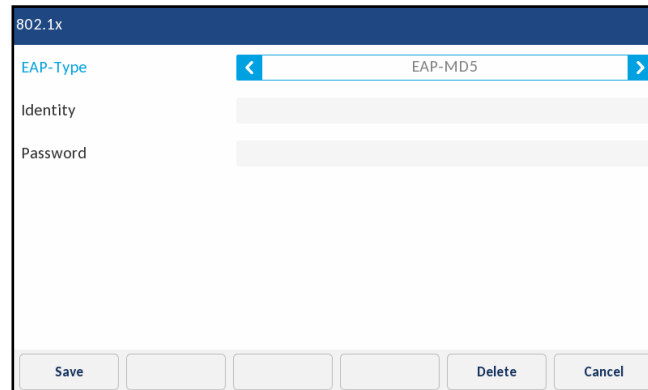
8. Press the **Save** softkey to save your changes.

To configure 802.1X settings on the Mitel MiVoice 6940 IP phone and the Mitel 6970 IP Conference Phone:

1. Press the  (**Settings**) key or the **Settings** softkey on the phone to enter the **Settings** menu.
2. Tap the **Advanced** softkey.
3. Input the Administrator password using the dialpad keys (default is 73738) and tap the **Enter** softkey.
4. Tap the **Network** icon.

5. Tap the **802.1x** icon.

Mitel MiVoice 6940 and Mitel 6970 802.1x



6. In the EAP type field, tap the left and right arrow buttons to enable an EAP authentication type/method (EAP-MD5 or EAP-PEAP).
7. Tap the **Identity** input field and enter the identity or username used for authenticating the phone using the on-screen keyboard.
8. Tap the **Password** input field and enter the password used for authenticating the phone using the on-screen keyboard.
9. Tap the **Save** softkey to save your changes.

802.1X EAP-TLS Support


The Mitel 6900 Series IP Phones support configuration and download of 802.1x EAP-TLS certificates using the startup.cfg configuration file.

Configure and Download Certificates

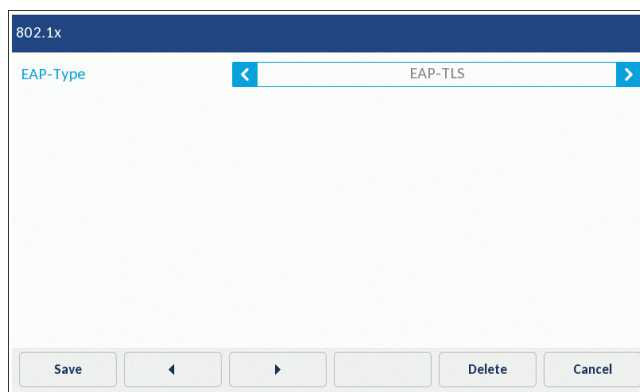
The following lists the configuration and download process for 802.1x EAP-TLS certificates:

1. At boot, the 6900 Series IP phone receives the server URL through DHCP options 43 or 66.
2. The phone downloads the startup.cfg file from the corresponding server using TFTP, FTP, HTTP, or HTTPS.
3. A "Downloading startup.cfg" message displays on the phone.
4. The phone downloads certificates using the URLs provided in startup.cfg file.
5. 802.1x settings are applied to enable EAP-TLS on the phone.
6. An "Applying 802.1x settings" message displays on the phone.
7. A phone reboot occurs.
8. After reboot, EAP-TLS appears in EAP-Type on the phone UI.

To view the configured 802.1X settings on the phone:

1. Press the  (**Settings**) key or the **Settings** softkey on the phone to enter the **Settings** menu.
2. Press the **Advanced** softkey.

3. Input the Administrator password using the dialpad keys (default is 73738) and press the **Enter** softkey.
4. Navigate to **Network > 802.1x** using the navigation keys and press the **Select** softkey.
5. EAP-TLS displays in the non-editing mode since it is applied from the configuration file.



After the 802.1x settings are applied to the phone, it can be removed from the staging LAN and connected to the target corporate LAN with 802.1x EAP-TLS authentication enabled. If staging is done on a switch with separate "staging" VLAN which has the ability to automatically redirect to the target corporate LAN, the phone re-directs to the target VLAN after successful authentication.

Note:

1. Staging only supports configuration of EAP-TLS and no support is provided for EAP-MD5/EAP-PEAP.
2. An Administrator may switch from EAP-TLS to EAP-MD5/EAP-PEAP/disable using 6900 Series IP phone GUI. However, switching from EAP-MD5/EAP-PEAP/disable to EAP-TLS is not supported on the phone GUI. This requires staging of the phone to configure EAP-TLS.
3. In startup.cfg file, ensure to provide full URLs for certificates.

Configure Option 43 in DHCP server

The server URL is provided in the **cfg_srvr_url** tag in Option 43 as shown in the following examples:

- TFTP Server URL
cfg_srvr_url=tftp://<IP | FQDN >/startup.cfg
- FTP Server URL
cfg_srvr_url=ftp://<user>:<password>@<IP | FQDN >/startup.cfg
- HTTP Server URL
cfg_srvr_url=http://<IP | FQDN>/startup.cfg
- HTTPS Server URL
cfg_srvr_url=https://<IP | FQDN >/startup.cfg

Configure Option 66 in DHCP server

The server URL is provided in Option 66 as shown in following examples:

- TFTP Server URL
tftp://<IP | FQDN >/startup.cfg
- FTP Server URL
ftp://<user>:<password>@<IP | FQDN >/startup.cfg
- HTTP Server URL
http://<IP | FQDN >/startup.cfg
- HTTPS Server URL
https://<IP | FQDN >/startup.cfg

EAP-TLS Configuration Parameters

The startup.cfg configuration file contains following parameters to configure the EAP-TLS protocol on the 6900 Series IP phone:

- **eap type** - Specifies the type of authentication to use on the IP Phone for EAP-TLS use 2
- **identity** - Specifies the identity or username used for authenticating the phone
- **802.1x local certificate** - Use 1 local certificate
- **802.1x private key** -1 private key that corresponds to local certificate
- **802.1x root and intermediate certificates** - Use 1 root and 0 or 1 intermediate certificates
- **802.1x trusted certificates** - 0 or more trusted certificates (a maximum of 2)

The following are examples of startup.cfg file using the TFTP, FTP, HTTP, and HTTPS servers:

TFTP

eap type: 2

identity: testuser

802.1x local certificate: tftp://<IP | FQDN >/ipphone.crt.pem

802.1x private key: tftp://<IP | FQDN >/ipphone.privatekey.pem

802.1x root and intermediate certificates: tftp://<IP | FQDN >/root.pem

802.1x trusted certificates: tftp://<IP | FQDN >/radius_server.crt.pem

FTP

eap type: 2

identity: testuser

802.1x local certificate: ftp://<user>:<password>@<IP | FQDN >/ipphone.crt.pem

802.1x private key: ftp://<user>:<password>@<IP | FQDN >/ipphone.privatekey.pem

802.1x root and intermediate certificates: ftp://<user>:<password>@<IP | FQDN >/root.pem

802.1x trusted certificates: ftp://<user>:<password>@<IP | FQDN >/radius_server.crt.pem

HTTP

eap type: 2

identity: testuser

802.1x local certificate: http://<IP | FQDN >/ipphone.crt.pem

802.1x private key: http://<IP | FQDN >/ipphone.privatekey.pem

802.1x root and intermediate certificates: http://<IP | FQDN >/root.pem

802.1x trusted certificates: http://<IP | FQDN >/radius_server.crt.pem

HTTPS

eap type: 2

identity: testuser

802.1x local certificate: https://<IP | FQDN >/ipphone.crt.pem

802.1x private key: https://<IP | FQDN >/ipphone.privatekey.pem

802.1x root and intermediate certificates: https://<IP | FQDN >/root.pem

802.1x trusted certificates: https://<IP | FQDN >/radius_server.crt.pem

Network Services

The following additional network services can be enabled/disabled using the **Network Services** sub-menu on the Mitel 6900 Series IP Phones:

- **LLDP Settings:**

Link Layer Discovery Protocol - Media Endpoint Discovery (LLDP-MED) allows for information sharing between the IP phones and network devices such as L2 Ethernet switches. LLDP-MED can be used to simplify the deployment of IP phones with auto-discovery. This means that IP phones can auto-discover network policy from an LLDP-MED compliant L2 switch to obtain network policy information pertaining to VLAN, L2P, and DSCP.


- **CDP Settings:**

The Mitel 6900 Series IP Phones are compatible with the Cisco Discovery Protocol (CDP). CDP can be used on the IP phones for the purpose of configuring port duplex and speed settings, port MAC identification, and auxiliary VLAN assignment.

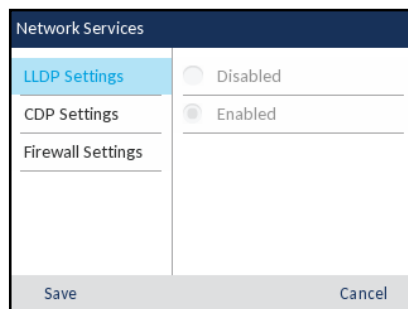
- **Firewall Settings:**

The Mitel 6900 Series IP Phones support an integrated Micro Firewall. When enabled, the Micro Firewall filters and blocks all undesirable packets sent to the phone.

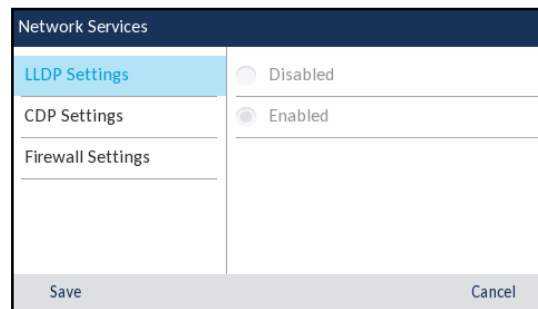
To configure additional network services on the Mitel MiVoice 6920/6930 IP phone:

1. Press the  (**Settings**) key on the phone to enter the **Settings** menu.
2. Press the **Advanced** softkey.
3. Input the Administrator password using the dialpad keys (default is 73738) and press the **Enter** softkey.
4. Navigate to **Network > Network Services** using the navigation keys and press the **Select** softkey.

Mitel MiVoice 6920 Network Services




Mitel MiVoice 6930 Network Services



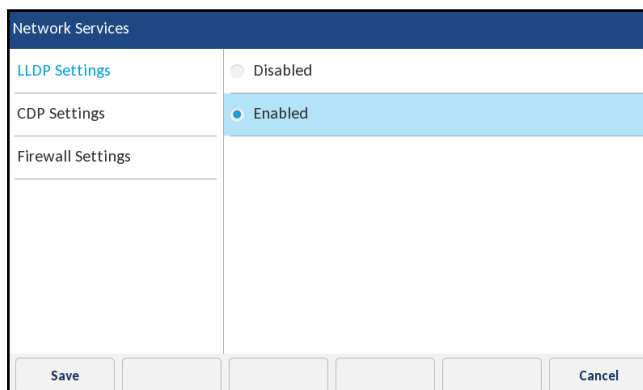
5. With **LLDP Settings** highlighted, press the right navigation key to navigate to the selection column and use the up and down navigation keys to enable or disable LLDP services.
6. Press the left navigation key to navigate back to the **LLDP** options column and then press the down navigation key to highlight the **CDP Settings** option.
7. With **CDP Settings** highlighted, press the right navigation key to navigate to the selection column and use the up and down navigation keys to enable or disable CDP services.
8. Press the left navigation key to navigate back to the **CDP Settings** options column and then press the down navigation key to highlight the **Firewall Settings** option.
9. With **Firewall Settings** highlighted, press the right navigation key to navigate to the selection column and use the up and down navigation keys to enable or disable the firewall services.
10. Press the **Save** softkey to save your changes.

To configure additional network services on the Mitel MiVoice 6940 IP phone and the Mitel 6070 IP Conference phone:

1. Press the  (**Settings**) key or the **Setting** softkey on the phone to enter the **Settings** menu.
2. Tap the **Advanced** softkey.
3. Input the Administrator password using the dialpad keys (default is 73738) and tap the **Enter** softkey.
4. Tap the **Network** icon.

5. Tap the **Network Services** icon.

Mitel MiVoice 6940 and Mitel 6970 Network Services



6. With **LLDP Settings** highlighted, tap **Enable** or **Disable** to enable or disable LLDP services.
7. Tap **CDP Settings** located in the left column.
8. With **CDP Settings** highlighted, tap **Enable** or **Disable** to enable or disable CDP services.
9. Tap **Firewall Settings** located in the left column.
10. With **Firewall Settings** highlighted, tap **Enable** or **Disable** to enable or disable firewall services.
11. Tap the **Save** softkey to save your changes.


PIN

The **PIN** menu allows you to erase and modify the registration pin. The registration pin is used to register the Mitel 6900 Series IP Phones with the MiVB database.

Erase PIN

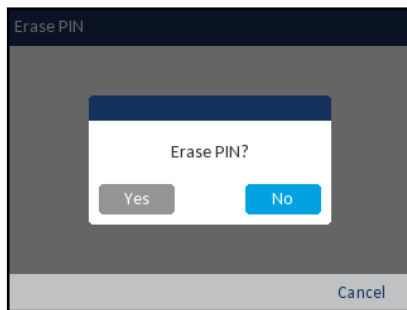
The **Erase PIN** sub-menu allows you to erase the registration pin on the IP phone.

To erase the registration pin on the Mitel MiVoice 6920/6930 IP phone:

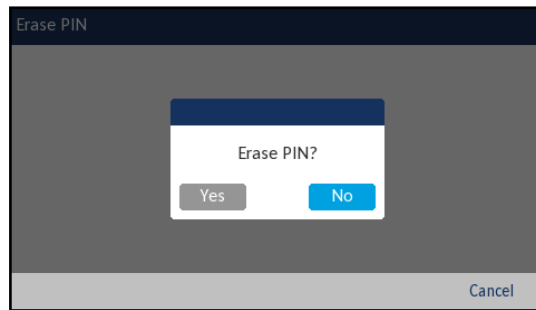
1. Press the  (**Settings**) key on the phone to enter the **Settings** menu.
2. Press the **Advanced** softkey.
3. Input the Administrator password using the dialpad keys (default is 73738) and press the **Enter** softkey.

4. Navigate to **PIN > Erase PIN** using the navigation keys and press the **Select** softkey.

Mitel MiVoice 6920 Erase PIN




Mitel MiVoice 6930 Erase PIN



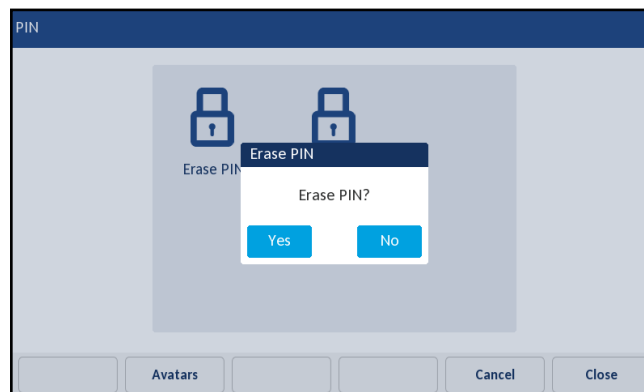
5. Use the left navigation key to select **Yes** and press the select button (middle button in the navigation cluster).

Note: Navigate to **No** and press the select button (middle button in the navigation cluster) to cancel the request.

To erase the registration pin on the Mitel MiVoice 6940 IP phone and Mitel 6970 IP Conference Phone:

1. Press the  (**Settings**) key or the **Settings** softkey on the phone to enter the **Settings** menu.
2. Tap the **Advanced** softkey.
3. Input the Administrator password using the dialpad keys (default is 73738) and tap the **Enter** softkey.
4. Tap the **PIN** icon.
5. Tap the **Erase PIN** icon.

Mitel MiVoice 6940 and Mitel 6970 Erase PIN




6. Tap **Yes**.

Note: Tap **No** to cancel the request.

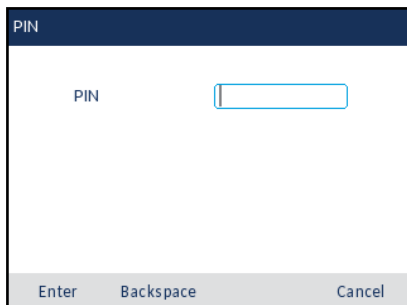
Modify PIN

The **Modify PIN** sub-menu allows you to modify the registration pin on the IP phone.

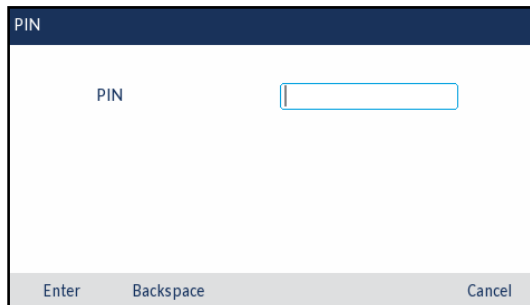
To modify the registration pin on the Mitel MiVoice 6920/6930 IP phone:

1. Press the  (**Settings**) key on the phone to enter the **Settings** menu.
2. Press the **Advanced** softkey.
3. Input the Administrator password using the dialpad keys (default is 73738) and press the **Enter** softkey.
4. Navigate to **PIN > Modify PIN** using the navigation keys and press the **Select** softkey.

Mitel MiVoice 6920 Modify PIN



Mitel MiVoice 6930 Modify PIN




5. Enter the new pin using the dialpad keys.

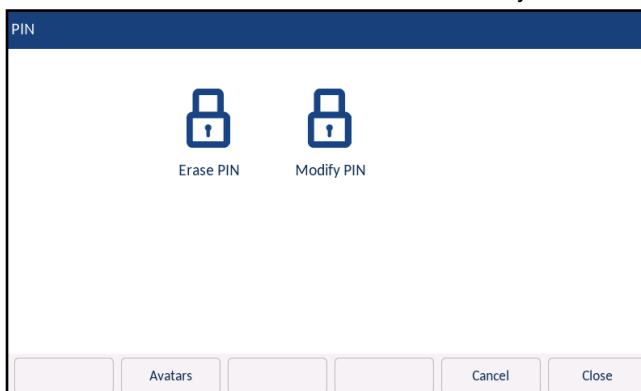
Note: The **Backspace** softkey can be used to delete the last digit entered.

6. Press the **Enter** softkey to save your changes.

To modify the registration pin on the Mitel MiVoice 6940 IP phone and Mitel 6070 IP Conference phone:

1. Press the  (**Settings**) key or the **Settings** softkey on the phone to enter the **Settings** menu.
2. Tap the **Advanced** softkey.
3. Input the Administrator password using the dialpad keys (default is 73738) and tap the **Enter** softkey.
4. Tap the **PIN** icon.
5. Tap the **Modify PIN** icon.

Mitel MiVoice 6940 and Mitel 6970 Modify PIN



6. Enter the new pin using the dialpad keys.

Note: The **Backspace** softkey can be used to delete the last digit entered.

7. Tap the **Enter** softkey to save your changes.

Diagnostics


The **Diagnostics** menu allows you to perform the following diagnostic routines:

- Audio Diagnostics
- Ping
- TCP DUMP
- DHCP Trace

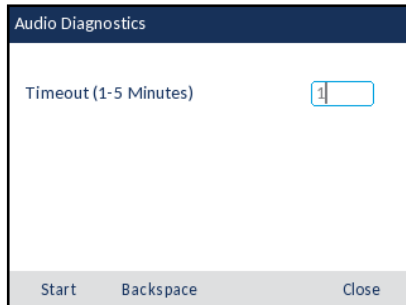
Audio Diagnostics

The **Audio Diagnostics** sub-menu allows you to collect up to 5 minutes of audio log files that can help to debug audio issues on the Mitel 6900 Series IP Phones.

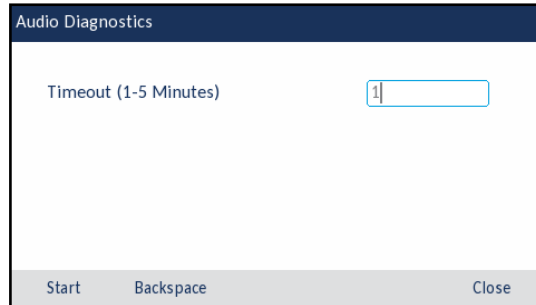
To capture audio diagnostic logs on the Mitel MiVoice 6920/6930 IP phone:

1. Press the  (**Settings**) key on the phone to enter the **Settings** menu.
2. Navigate to **Diagnostics > Audio Diagnostics** using the navigation keys and press the **Select** softkey.

Mitel MiVoice 6920 Audio Diagnostics



Mitel MiVoice 6930 Audio Diagnostics




3. In the **Timeout** input field, enter the amount of time (in minutes from 1 to 5) you would like to run the audio diagnostic tool for, using the dialpad keys.
The IP phone displays "Capturing" and when the timeout elapses, "Collecting Logs" is displayed. When all the logs have been collected, a "Complete" message is displayed.

Note:

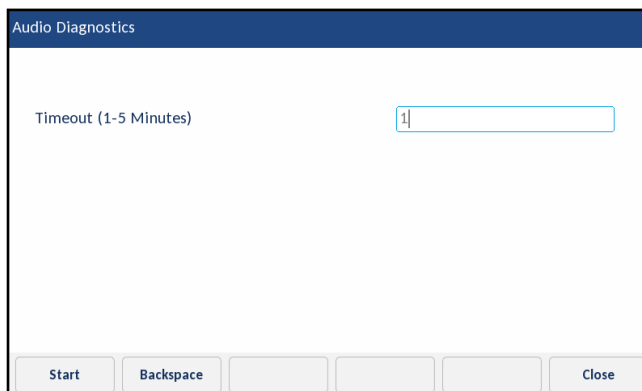
1. Press the **Stop** softkey at any time to stop capturing the audio diagnostic logs.
2. A "log issue" is issued only after the completion of an audio diagnostics run.

CAUTION: Do not change the audio device when you run the audio diagnostics tool.

To capture audio diagnostic logs on the Mitel MiVoice 6940 IP phone and Mitel 6970 IP Conference Phone:

1. Press the  (**Settings**) key or the **Settings** softkey on the phone to enter the **Settings** menu.
2. Tap the **Diagnostics** icon.
3. Tap the **Audio Diagnostics** icon.

Mitel MiVoice 6940 and Mitel 6970 Audio Diagnostics



4. In the **Timeout** input field, enter the amount of time (in minutes from 1 to 5) you would like to run the audio diagnostic tool for using the dialpad keys.
The IP phone displays "Capturing..." and when the timeout elapses, "Collecting Logs..." is displayed. When all the logs have been collected, a "Complete..." message is displayed.

Note:

1. Tap the **Stop** softkey at any time to stop capturing the audio diagnostic logs.
2. A "log issue" is issued only after the completion of an audio diagnostics run.

CAUTION: Do not change the audio device when you run the audio diagnostics tool.

To save the audio diagnostic logs to your PC using the Mitel Web UI:

1. Open your web browser and enter the phone's IP address or host name into the address bar.
2. Enter your username and password and click **OK/Login**.
The status window displays for the IP phone you are accessing.

Note: The default username is "root" and the default password is "73738".

3. Click **Diagnostics**.

4. Click the **Download Audio Log Files** link beside **Get Log Files**.


5. Save the file to the desired location on your computer.

Note: For more information on Mitel Web UI features, see [“Web UI Features”](#) on [page 43](#).

Ping

The **Ping** sub-menu allows you to ping a host name or IP address directly from the Mitel 6900 Series IP Phone. This tool can be used to verify whether or not network connections between the Mitel 6900 Series IP Phone and other network endpoints are intact.

To use the ping tool on the Mitel MiVoice 6920/6930 IP phone:

1. Press the  (**Settings**) key on the phone to enter the **Settings** menu.
2. Navigate to **Diagnostics > Ping** using the navigation keys and press the **Select** softkey.

Mitel MiVoice 6920 Ping


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3. In the input field, enter the host name or IP address of the network endpoint you want to ping using the dialpad keys.

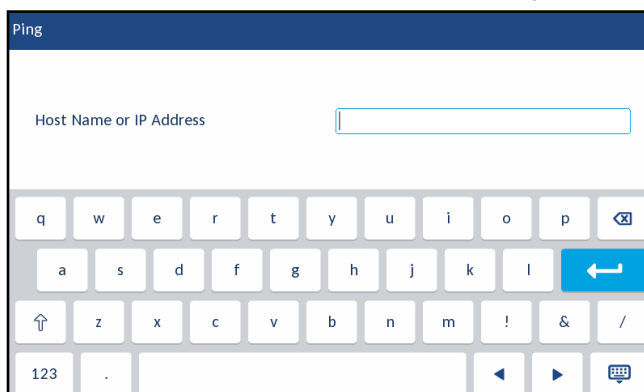
Note: The **Backspace** softkey can be used to delete the last digit/character entered, the dot (".") softkey can be used to enter a dot where applicable, and the abc/123 softkey can be used to switch the dialpad keys from alphabetic to numeric.

4. Press the **Ping** softkey to begin.
The IP phone displays the number of packets sent, the number of packets received, and the Round-Trip Time (RTT) min/avg/max in milliseconds.

To use the ping tool on the Mitel MiVoice 6940 IP phone and the Mitel 6970 IP Conference Phone:

1. Press the  (**Settings**) key or the **Settings** softkey on the phone to enter the **Settings** menu.
2. Tap the **Diagnostics** icon.
3. Tap the **Ping** icon.

Mitel MiVoice 6940 and Mitel 6970 Ping




4. In the input field, enter the host name or IP address of the network endpoint you want to ping using the on-screen keyboard.
5. Tap the **Ping** softkey to begin.
The IP phone displays the number of packets sent, the number of packets received, and the Round-Trip Time (RTT) min/avg/max in milliseconds.

TCP DUMP

The **TCP DUMP** sub-menu allows you to capture TCP network packets for up to 1440 minutes that can in turn be used to help debug and troubleshoot various issues.

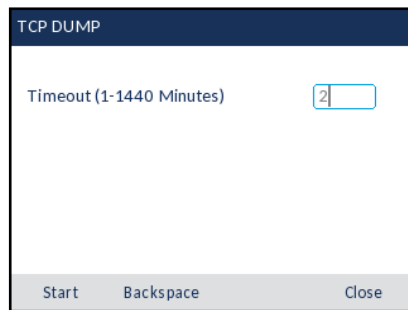
Note: During a TCP DUMP network packet capture, only the most recent 20 MB of the capture is retained.

To capture TCP network packets on the Mitel MiVoice 6920/6930 IP phone:

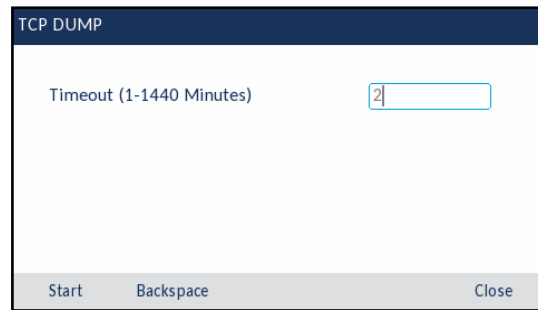
1. Press the  (**Settings**) key on the phone to enter the **Settings** menu.

2. Navigate to **Diagnostics > TCP DUMP** using the navigation keys and press the **Select** softkey.

Mitel MiVoice 6920 TCP DUMP




Mitel MiVoice 6930 TCP DUMP



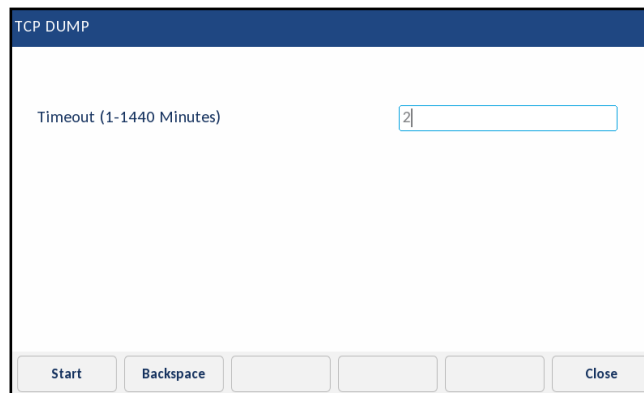
3. In the **Timeout** input field, enter the amount of time (in minutes from 1 to 1440) you would like to capture TCP network packet data using the dialpad keys.
The IP phone displays "Capturing..." and when the timeout elapses, "Complete..." is displayed.

Note: Press the **Stop** softkey at any time to stop capturing the TCP DUMP logs.

To capture TCP network packets on the Mitel MiVoice 6940 IP phone and the Mitel 6970 IP Conference Phone:

1. Press the  (**Settings**) key or the **Settings** softkey on the phone to enter the **Settings** menu.
2. Tap the **Diagnostics** icon.
3. Tap the **TCP DUMP** icon.

Mitel MiVoice 6940 and Mitel 6970 TCP DUMP



4. In the **Timeout** input field, enter the amount of time (in minutes from 1 to 1440) you would like to capture TCP network packet data using the dialpad keys.
The IP phone displays "Capturing..." and when the timeout elapses, "Complete..." is displayed.

Note: Tap the **Stop** softkey at any time to stop capturing the TCP DUMP logs.

To save the TCP network packet logs to your PC using the Mitel Web UI:

1. Open your web browser and enter the phone's IP address or host name into the address bar.

2. Enter your username and password and click **OK/Login**.
The status window displays for the IP phone you are accessing.

Note: The default username is "root" and the default password is "73738".

3. Click **Diagnostics**.

4. Click the **Download Log Files** link beside **Get Log Files**.


5. Save the file to the desired location on your computer.

Note: For more information on Mitel Web UI features, see [“Web UI Features”](#) on [page 43](#).

DHCP Trace

The **DHCP Trace** sub-menu allows you to perform a DHCP trace request. You can then review the parameters that the DHCP trace returns. After you have reviewed the trace information, the DHCP Lease is released.

To perform a DHCP trace on the on the Mitel MiVoice 6920/6930 IP phone:

1. Press the  (**Settings**) key on the phone to enter the **Settings** menu.

2. Navigate to **Diagnostics > DHCP Trace** using the navigation keys and press the **Select** softkey.

Mitel MiVoice 6920 DHCP Trace

DHCP Trace	
mac_addr:	08:00:0f:9f:9c:ec
ip addr:	10.30.100.105
netmask:	255.255.255.0
gateway:	10.30.100.1
dns:	10.72.2.26
Cancel	


Mitel MiVoice 6930 DHCP Trace

DHCP Trace	
mac_addr:	08:00:0f:9f:a0:6e
ip addr:	10.30.100.107
netmask:	255.255.255.0
gateway:	10.30.100.1
dns:	10.72.2.26
Cancel	

The following parameters and associated values are displayed:

- **mac_addr:**
The MAC address of the IP phone.
- **ip addr:**
The IP address of the IP phone.
- **netmask:**
The IP address range local to the IP phone.
- **gateway:**
The IP address of the network's gateway or default router IP address.
- **dns:**
The IP address of the primary DNS server.
- **icp:**
The IP address of the call server.
- **tftp:**
The IP address of the TFTP server.
- **http:**
The IP address of the HTTP server.
- **ipa:**
The IP address of the IPA server.
- **VLAN:**
The VLAN id of the IP phone.
- **l2p:**
L2P priorities for default, voice, signaling, and other.
- **dscp:**
DSCP values for default, voice, signaling, and other.

To perform a DHCP trace on the on the Mitel MiVoice 6940 IP phone and the Mitel 6970 IP Conference Phone:

1. Press the  (**Settings**) key or the **Settings** softkey on the phone to enter the **Settings** menu.
2. Tap the **Advanced** softkey.

3. Input the Administrator password using the dialpad keys (default is 73738) and tap the **Enter** softkey.
4. Tap the **Diagnostics** icon.
5. Tap the **DHCP Trace** icon.

Mitel MiVoice 6940 and Mitel 6070 DHCP Trace

DHCP Trace	
dhcp_server:	192.168.90.10
mac_addr:	08:00:0f:d9:13:1d
ip addr:	192.168.157.22
netmask:	255.255.255.0
gateway:	192.168.157.1
dns:	192.168.90.10
icp:	
<input type="button" value="Back"/> <input type="button" value="Forward"/> <input type="button" value="Refresh"/> <input type="button" value="Clear"/> <input type="button" value="Cancel"/>	

The following parameters and associated values are displayed:

- **dhcp_server:**
The IP address of the DHCP server.
- **mac_addr:**
The MAC address of the IP phone.
- **ip addr:**
The IP address of the IP phone.
- **netmask:**
The IP address range local to the IP phone.
- **gateway:**
The IP address of the network's gateway or default router IP address.
- **dns:**
The IP address of the primary DNS server.
- **icp:**
The IP address of the call server.
- **tftp:**
The IP address of the TFTP server.
- **http:**
The IP address of the HTTP server.
- **ipa:**
The IP address of the IPA server.
- **VLAN:**
The VLAN id of the IP phone.
- **l2p:**
L2P priorities for default, voice, signaling, and other.


- **dscp:**
DSCP values for default, voice, signaling, and other.

Restore Default

The **Restore Default** option allows you to restore the Mitel 6900 Series IP Phone to its factory default settings.

Note: Note: Performing a factory default is only applicable to the phone settings and does not affect the firmware version loaded on the phone.

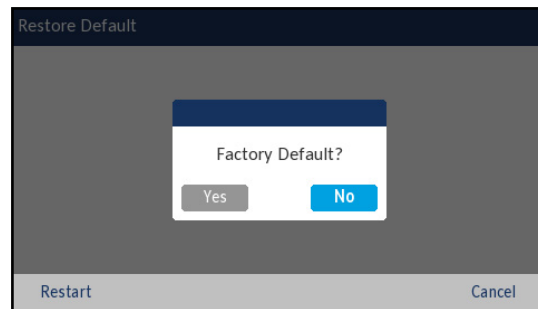
To perform a factory default on the Mitel MiVoice 6920/6930 IP phone:

1. Press the  (**Settings**) key on the phone to enter the **Settings** menu.
2. Press the **Advanced** softkey.
3. Input the Administrator password using the dialpad keys (default is 73738) and press the **Enter** softkey.
4. Navigate to **Restore Default** using the navigation keys and press the **Select** softkey.

Mitel MiVoice 6920 Restore Default




Mitel MiVoice 6930 Restore Default



5. Use the left navigation key to select **Yes** and press the select button (middle button in the navigation cluster).

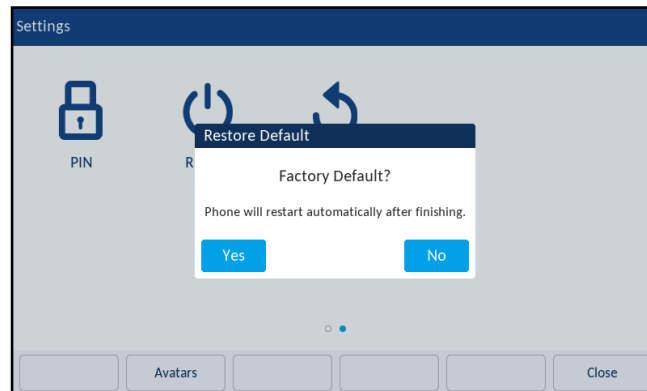
Note: Navigate to **No** and press the select button (middle button in the navigation cluster) to cancel the request.

To perform a factory default on the Mitel MiVoice 6940 IP phone and the Mitel 6970 IP Conference Phone:

1. Press the  (**Settings**) key or the **Settings** softkey on the phone to enter the **Settings** menu.
2. Tap the **Advanced** softkey.
3. Input the Administrator password using the dialpad keys (default is 73738) and tap the **Enter** softkey.
4. Swipe left on the screen to change to the second page of settings.

5. Tap the **Restore Default** icon.

Mitel MiVoice 6940 and Mitel 6070 Restore Default

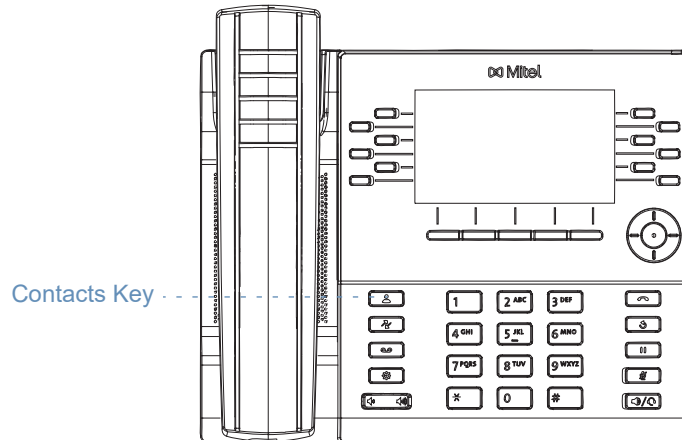


6. Tap **Yes**.

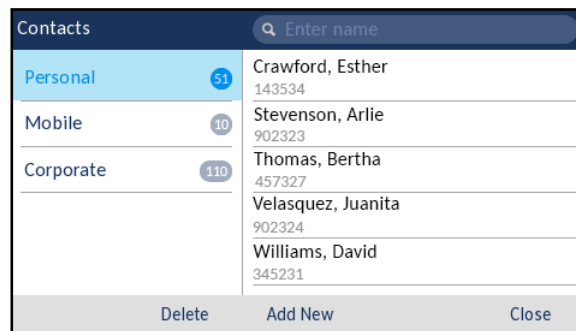
Note: Tap **No** to cancel the request.

LDAP (Corporate) Directory Contacts

The **Contacts** application is your personal phone book and directory, conveniently stored within your phone. The Mitel 6900 Series IP Phones support a localized **Personal** contact folder as well as enhanced functionality allowing for interoperability with LDAP (**Corporate**) directories. The Administrator must set up access to the LDAP (**Corporate**) directory.



The number of **Corporate** contacts displayed on the phone is the number of contacts configured on the LDAP (**Corporate**) directory. For example, if the LDAP (**Corporate**) directory is configured with 110 contacts, then the phone displays **110** for **Corporate** in the **Contacts** application.



Note:

1. The Administrator can configure up to 10,000 contacts on the LDAP (**Corporate**) directory.
2. The Mitel 6900 Series IP Phones now support LDAP in teleworker mode. Refer to the *Mitel IP Sets Engineering Guidelines* for details on configuration requirements.

Web UI Features

Administrators have the ability to perform the following by accessing and using the Mitel 6900 Series IP Phone's Web UI:

- Reboot the IP phone.
- Manually upgrade the IP phone software.
- Upload a file to the IP phone.
- Capture and download debug logs as well as enable automatic uploading of crash reports.
- Capture a screen shot of what is currently being displayed on the IP phone's screen.

Ensure to enable the Web UI from the MiVoice Business maintenance command line and add the following commands:

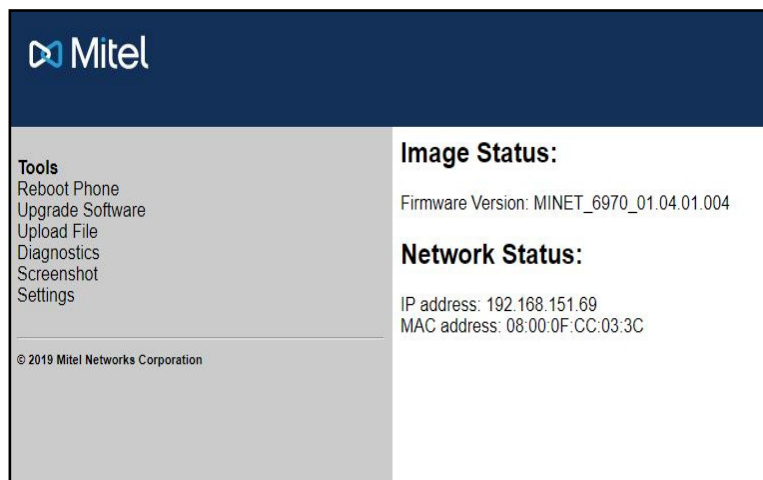
- `pd send <extension> enable_web`
- `pd send <extension> disable_web`

Note: Ensure to clear the **Enable AutoComplete** check box before running the commands.

The Mitel Web UI supports all major web browsers such as Internet Explorer, Mozilla Firefox, Google Chrome, and Apple Safari.

To access the IP phone's Mitel Web UI:

1. Open your web browser and enter the phone's IP address or host name into the address bar.
2. Enter your username and password and click **OK/Login**.
The status window displays for the IP phone you are accessing.



Note: The default username is "root" and the default password is "73738".

Meeting Center Integration for the Mitel 6970 IP Conference Phone in a Conference Room

You can enable Meeting Center Application on the Mitel 6970 IP Conference Phone if the following requirements are fulfilled:

1. Each Conference room requires a MiCollab account created.
2. Calendar integration enabled. You need to log into MiCollab account to configure this setting.

Note: Some servers use Impersonation mod and an impersonation account. In this case, MiCollab account associated to the Conference Room should be enabled for impersonation.
3. Meetings soft key programmed on the set. Please note that only Programmable Key #96 will trigger the Meeting soft key when programmed with Meeting Center URL.
4. Meeting Center server configuration completed on server as per MiCollab Client Administration guide.

Firmware upgrade

Firmware upgrade with MiVoice Business 8.0

1. Rename **mitel-phoneloads-6970-x.x.x.x** to **mitel-phoneloads-6970.tar**.
2. Put **update-6970** (**update-6970-80UR** for MiVB 8.0 UR) and **mitel-phoneloads-6970.tar** to the **/var/service/tenant0/mn3300/partition1/db** folder on the Configuration Server with SCP client (e.g. WinSCP).
3. Connect to the Configuration Server using SSH and start **mcd-debug-console**.
4. For MiVB 8.0, enter the following commands:
 - `cd "/db"`
 - `executeCommands "update-6970"`
5. For MiVB 8.0 UR, enter the following commands:
 - `cd "/db"`
 - `executeCommands "update-6970`
 - `-80UR"`
6. Reboot the Mitel 6970 IP Conference Phone manually. Firmware upgrade starts during the boot up process.

Firmware upgrade with MiVoice Business 9.0 and Mitel Border Gateway

1. Download the **mitel-phoneloads-6970-xxx.noarch.rpm** rpm package for the Mitel 6970 IP Conference Phone.
2. Connect to your MiVB (MBG) server using SCP client on your PC (e.g. WinSCP). Select SFTP as the protocol.
3. Copy the .rpm file from your PC to /tmp directory on the server.
4. Connect to MiVB (MBG) using SSH client on your PC.

5. Enter the following command to stop current TFTP services in SSH terminal:
 - `systemctl stop xftftpservice`
6. Update the .rpm package with following commands:
 - `cd /tmp`
 - `rpm -Uvh mitel-phoneloads-6970- xxx.noarch.rpm`
7. Verify the correct installation of .rpm package with the following command:
 - `rpm -qa | grep mitel-phoneloads-6970`

The specified mitel-phoneloads-6970- xxx.noarch.rpm file should be present in the output list.

8. Enter the following command to activate new firmware and run TFTP service
 - `mcdDebug`
9. Enter the following parameters on the new lines:
 - `MPVClearMappings`
 - `MPVReadDataFile`
10. Press Ctrl + C.
11. In case of upgrading from MBG reboot the MBG server. Open WEB UI in your browser. Enter MBG IP address. Go to “Administration-Shutdown or reconfigure”, select “Reboot” and then press “Perform” button.
12. Reboot the Mitel 6970 IP Phone.

Note: TFTP server must not be specified in Network settings.

Reboot Phone

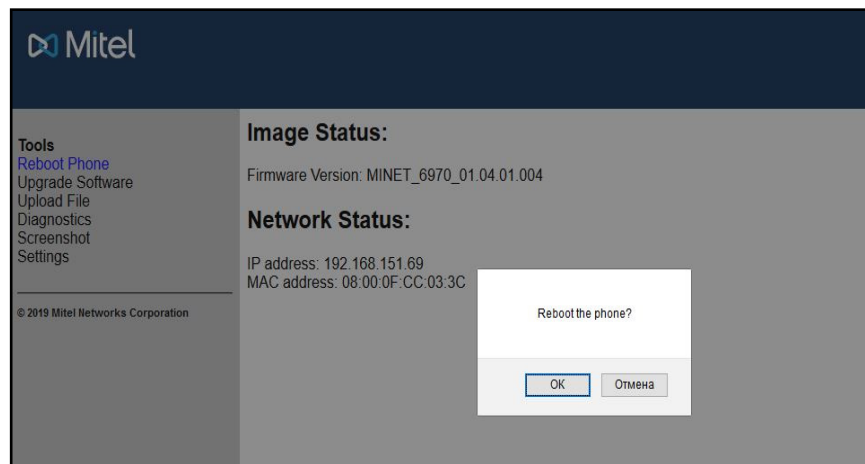
The **Reboot Phone** option on the Mitel Web UI allows you to remotely reboot the respective Mitel 6900 Series IP Phone.

To reboot the respective IP phone:

1. Open your web browser and enter the phone's IP address or host name into the address bar.
2. Enter your username and password and click **OK/Login**.
The status window displays for the IP phone you are accessing.

Note: The default username is "root" and the default password is "73738".

3. Click **Reboot Phone**.



4. Click **OK**.
The IP phone reboots.

Upgrade Software

The Mitel 6900 Series IP Phone software can be upgraded through the TFTP server in accordance with the MiVB platform.

Note: The software upgrade through the Mitel Web UI is for Mitel Technical Support personnel use only.

To upgrade the software of the respective IP phone:

1. Open your web browser and enter the phone's IP address or host name into the address bar.
2. Enter your username and password and click **OK/Login**.
The status window displays for the IP phone you are accessing.

Note: The default username is "root" and the default password is "73738".

3. Click **Upgrade Software**.

4. Click the **Browse** button beside **New Image** and select the software file you want to upgrade to.
5. Ensure a checkmark is in the checkbox beside **Reboot after successful upgrade**, otherwise click the checkbox to enable the reboot option.
6. Click **Upgrade**.
The phone upgrades and reboots when the upgrade has been completed

Upload File

Although the **Upload File** option on the Mitel Web UI allows you to upload a file to a defined folder on the Mitel 6900 Series IP Phone, it is recommended that files are not uploaded to your IP phone.

Note: The **Upload File** option is for Mitel Technical Support personnel use only.

Diagnostics

The **Diagnostics > Capture** option allows you to capture TCP network packets for up to 1440 minutes as well as various logs that can in turn be used to help debug and troubleshoot various issues.

Note: The capturing of TCP network packets can be initiated on the IP phone's native UI as well. For more information, see "TCP DUMP" on [page 35](#).

The **Diagnostics > Collect** option allows you to collect the captured logs, download the captured logs and reports, and also enable/disable automatic uploading of crash reports to an IPA TFTP server.

Capture

To capture TCP network packets and logs using the Mitel Web UI:

1. Open your web browser and enter the phone's IP address or host name into the address bar.
2. Enter your username and password and click **OK/Login**.
The status window displays for the IP phone you are accessing.

Note: The default username is "root" and the default password is "73738".

3. Click **Diagnostics**.
4. In the **Timeout** input field, enter the amount of time (in minutes from 1 to 1440) you would like to capture TCP network packet data using the dialpad keys.
5. Click **Start**.

Note: Click **Stop** at any time to stop capturing the TCP packet data.

Collect Logs

Collect/tar Logs and Get Log Files

To save the logs to your PC using the Mitel Web UI:

1. Open your web browser and enter the phone's IP address or host name into the address bar.
2. Enter your username and password and click **OK/Login**.
The status window displays for the IP phone you are accessing.

Note: The default username is "root" and the default password is "73738".

3. Click **Diagnostics**.

4. Click the **Erase** button beside **Erase Logs** to erase the old **.tar** file.
5. If the capture was initiated using the Mitel Web UI, click the **Collect** button beside **Collect/tar Logs**.
6. Click the **Download Log Files** link beside **Get Log Files**.

Note: The Download Log Files link also allows you to download log files that have been captured through the **Diagnostics** menu on the 6900 IP Series phones. For more information, see “[Diagnostics](#)” on [page 32](#).

7. Save the file to the desired location on your computer.

Note: This menu can also be used to save audio diagnostic log files and logs captured via the **Log Issue** softkey. For details, see “[Audio Diagnostics](#)” on [page 32](#) and “[Basic menu](#)” on [page 7](#).

Automatic upload

Enabling the automatic upload feature using the Mitel 6900 Series IP Phone’s Web UI allows crash reports to be sent automatically to the IPA TFTP server upon detection of a phone failure.

Note: The automatic upload feature must be used under the direction of the Mitel Technical Support personnel only.

Before enabling this feature, the IP address of the IPA server must be defined on the phone in the **Network > Static Network Settings** sub-menu. Additionally, a TFTP server must be installed and running on the PC/server where the IPA server is running. The reports will be collected on and can be accessed via the TFTP server.

Note: For details on how to define static network settings, see “[Static Network Settings](#)” on [page 14](#).

To enable this feature using the Mitel Web UI:

1. Open your web browser and enter the phone's IP address or host name into the address bar.
2. Enter your username and password and click **OK/Login**.
The status window displays for the IP phone you are accessing.

Note: The default username is "root" and the default password is "73738".

3. Click **Diagnostics**.



4. Click the **Enable** button beside **Automatic upload**.

Set syslog level

To set the syslog (system log) level:

1. In the **Syslog Level** drop-down list, select the log level.
2. Click the **Save** button.

Note: The log collected through external application, for example IP Phone Analyzer (IPA), is based on the log level selected in the **Syslog Level** drop-down list. For example, if the **Syslog Level** is set to **TRACE**, then the IPA can set the log level to TRACE, WARN and so on, and receive logs based on the set log level. If the **Syslog Level** is set to **WARN**, then the highest log level IPA can set is WARN. TRACE level logs will not be available.

Screenshot

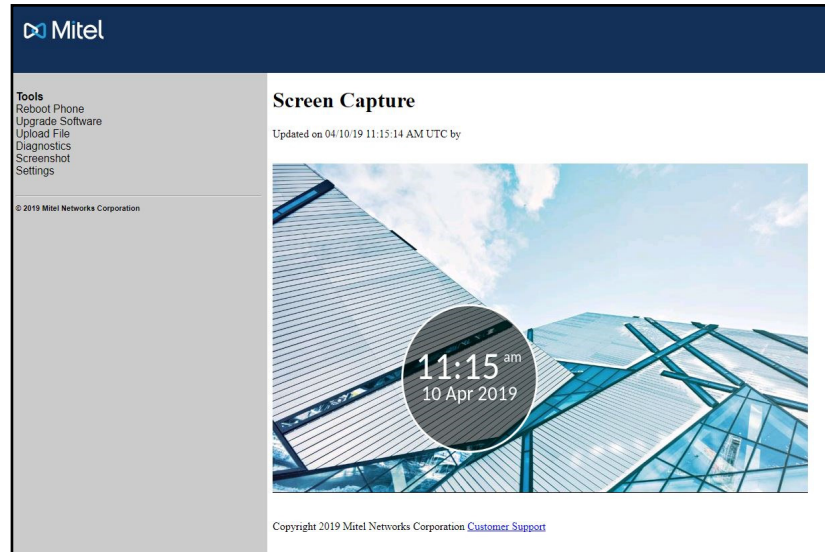
The **Screenshot** option allows you to capture a screenshot image of what is currently displayed on the respective IP phone's LCD screen in PNG format. This can be used to help document the procedures leading up to an issue or help in identifying issues with the UI.

To take a screenshot:

1. Open your web browser and enter the phone's IP address or host name into the address bar.
2. Enter your username and password and click **OK/Login**.
The status window displays for the IP phone you are accessing.

Note: The default username is "root" and the default password is "73738".

3. Click **Screenshot**.



4. Right click the image to save the image to a desired location on your PC.

Settings

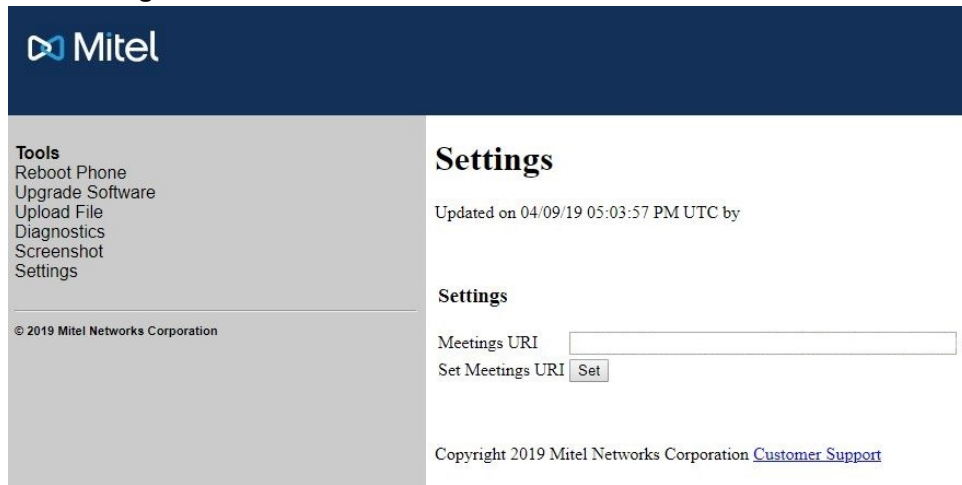
The **Settings** option allows you to configure the Meetings button.

To configure the Meetings button:

1. Open your web browser and enter the phone's IP address or host name into the address bar.
2. Enter your username and password and click **OK/Login**.
The status window displays for the IP phone you are accessing.

Note: The default username is "root" and the default password is "73738".

3. Click **Settings**.



The screenshot shows the Mitel 6900 Series IP Phone Settings page. The page has a dark blue header with the Mitel logo. Below the header, there is a left sidebar with a 'Tools' section containing links for Reboot Phone, Upgrade Software, Upload File, Diagnostics, Screenshot, and Settings. The main content area is titled 'Settings' and shows a timestamp 'Updated on 04/09/19 05:03:57 PM UTC by'. Below this, there is a 'Settings' section with a 'Meetings URI' field and a 'Set Meetings URI' button. At the bottom, there is a copyright notice for 2019 Mitel Networks Corporation and a link to Customer Support.

Mitel

Tools
Reboot Phone
Upgrade Software
Upload File
Diagnostics
Screenshot
Settings

© 2019 Mitel Networks Corporation

Settings

Updated on 04/09/19 05:03:57 PM UTC by

Settings

Meetings URI

Set Meetings URI

Copyright 2019 Mitel Networks Corporation [Customer Support](#)

4. In the **Meetings URI** field, enter the URI of the resource you use for meetings.
5. Click **Set**.

Remote collection of log files

You can press the **Log Issue** softkey in the 6900 Series IP Phone to upload the *dumpstate-logissue.txt* and *dumpstate-phoneinfo.txt* log files to a server using the MiVoice Business System Administration Tool.

To remotely collect log files using the MiVoice Business System Administration Tool:

1. Log in to the MiVoice Business System Administration Tool.
2. Navigate to the **Maintenance and Diagnostics > Maintenance Commands** form.
3. Clear the **Enable AutoComplete** check box.
4. In the **Command** field, do one of the following:
 1. To upload log files to a server using HTTP(S) that requires no user authentication, enter the `pd send <extension> log_upload_http(s)://<IP address>|<FQDN>:<portno>/<upload_dir>` command, where
 - extension is the directory number of the phone
 - IP address is the IP address of the server
 - FQDN is the Fully Qualified Domain Name of the server
 - portno (optional) is port number to which log file is uploaded. If no port number is specified, the system uploads the log files to the default port 80 for HTTP and 443 for HTTPS.
 - upload_dir (optional) is the directory where you want to upload the log file. Ensure that the specified directory path does not contain the character #. If an upload directory is not specified, then the system uploads the log files to the root of the directory.
 2. To upload log files to a server using HTTP(S) that requires user authentication, enter the `pd send <extension> log_upload_http(s)://<username>:<password>@<IP address>|<FQDN>:<portno>/<upload_dir>` command, where
 - extension is the directory number of the phone
 - username and password is the user credentials for the server
 - IP address is the IP address of the server
 - FQDN is the Fully Qualified Domain Name of the server
 - portno (optional) is port number to which log file is uploaded. If no port number is specified, the system uploads the log files to the default port 80 for HTTP and 443 for HTTPS.
 - upload_dir (optional) is the directory where you want to upload the log file. Ensure that the specified directory path does not contain the character #. If an upload directory is not specified, then the system uploads the log files to the root of the directory.
 3. To upload log files to a server using FTP that requires no user authentication, enter the `pd send <extension> log_upload_ftp://<IP address>|<FQDN>:<portno>/<upload_dir>` command, where
 - extension is the directory number of the phone
 - IP address is the IP address of the server
 - FQDN is the Fully Qualified Domain Name of the server
 - portno (optional) is port number to which log file is uploaded. If no port number is specified, the system uploads the log files to the default port 21.

- upload_dir (optional) is the directory where you want to upload the log file. Ensure that the specified directory path does not contain the character #. If an upload directory is not specified, then the system uploads the log files to the root of the directory.
4. To upload log files to a server using FTP that requires user authentication, enter the `pd send <extension> log_upload_ftp://<username>:<password>@<IP address>|<FQDN>:<portno>/<upload_dir>` command, where
 - extension is the directory number of the phone
 - username and password is the user credentials for the server
 - IP address is the IP address of the server
 - FQDN is the Fully Qualified Domain Name of the server
 - portno (optional) is port number to which log file is uploaded. If no port number is specified, the system uploads the log files to the default port 21.
 - upload_dir (optional) is the directory where you want to upload the log file. Ensure that the specified directory path does not contain the character #. If an upload directory is not specified, then the system uploads the log files to the root of the directory.
 5. To upload log files to the server using TFTP, enter the `pd send extension log_upload_tftp://<IP address>|<FQDN>:<portno>` command, where
 - extension is the directory number of the phone
 - IP address is the IP address of the server
 - FQDN is the Fully Qualified Domain Name of the server
 - portno (optional) is port number to which log file is uploaded. If no port number is specified, the system uploads the log files to the default port 69.
5. Press **Enter**.
The system compresses the log files to *DebugLogs_<MAC>_<date_time>.tar* file and uploads the *DebugLogs_<MAC>_<date_time>.tar* file to the specified location on the server, where MAC is the MAC address of the IP phone.

Notes:

1. The 6900 IP Series Phones support only PUT method for uploading log files to a server using HTTP or HTTPS.
2. The *dumpstate-remote_collect.txt* log file is generated when the command in step 4 is executed. This log file contains the same information as in the *dumpstate-logissue.txt* log file.
3. The upload process can take a maximum of 10 minutes to complete. Check the server location for the *DebugLogs_<MAC>_<date_time>.tar* file. If the file is missing, then the upload has failed. Re-run the command to upload the log files.
4. The system ignores the upload command when the upload is in progress.
5. If the client fails to upload the log files, then when you execute the command next time, the *DebugLogs_<MAC>_<date_time>.tar* file will include the *OldDebugLogs_<MAC>_<date_time>.tar* file, which contains previously collected remote log files. If two consecutive uploads fail, the system deletes the *OldDebugLogs_<MAC>_<date_time>.tar* file, and subsequent uploads will not contain the old logs tar file.

Limited warranty

Mitel warrants this product against defects and malfunctions in accordance with Mitel's authorized, written functional specification relating to such products during a one (1) year period from the date of original purchase ("Warranty Period"). If there is a defect or malfunction, Mitel shall, at its option, and as the exclusive remedy, either repair or replace the product at no charge, if returned within the Warranty Period. If replacement parts are used in making repairs, these parts may be refurbished, or may contain refurbished materials. If it is necessary to replace the product, it may be replaced with a refurbished product of the same design and color. If it should become necessary to repair or replace a defective or malfunctioning product under this warranty, the provisions of this warranty shall apply to the repaired or replaced product until the expiration of ninety (90) days from the date of pick up, or the date of shipment to you, of the repaired or replacement product, or until the end of the original Warranty Period, whichever is later. Proof of the original purchase date is to be provided with all products returned for warranty repairs.

Exclusions

Mitel does not warrant its products to be compatible with the equipment of any particular telephone company. This warranty does not extend to damage to products resulting from improper installation or operation, alteration, accident, neglect, abuse, misuse, fire or natural causes such as storms or floods, after the product is in your possession. Mitel will not accept liability for any damages and/or long distance charges, which result from unauthorized and/or unlawful use.

Mitel shall not be liable for any incidental or consequential damages, including, but not limited to, loss, damage or expense directly or indirectly arising from the customer's use of or inability to use this product, either separately or in combination with other equipment. This paragraph, however, shall not apply to consequential damages for injury to the person in the case of products used or bought for use primarily for personal, family or household purposes.

This warranty sets forth the entire liability and obligations of Mitel with respect to breach of warranty, and the warranties set forth or limited herein are the sole warranties and are in lieu of all other warranties, expressed or implied, including warranties or fitness for particular purpose and merchantability.

Warranty repair services

Should the product fail during the Warranty Period;

- **In North America**, please call 1-800-574-1611 for further information.
- **Outside North America**, contact your sales representative for return instructions.

You will be responsible for shipping charges, if any. When you return this product for warranty service, you must present proof of purchase.

After warranty service

Mitel offers ongoing repair and support for this product. This service provides repair or replacement of your Mitel product, at Mitel's option, for a fixed charge. You are responsible for all shipping charges. For further information and shipping instructions:

- **In North America**, contact our service information number: 1-800-574-1611.
- **Outside North America**, contact your sales representative.

Note: Repairs to this product may be made only by the manufacturer and its authorized agents, or by others who are legally authorized. This restriction applies during and after the Warranty Period. Unauthorized repair will void the warranty.

