Installing and Maintaining Avaya E129 SIP Deskphone

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- Consult the dealer or an experienced radio/TV technician for help.

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This device complies with the FCC's and Industry Canada's RF radiation exposure limits set forth for the general population (uncontrolled environment) and must not be co-located or operated in conjunction with any other antenna or transmitter.

Warning

The handset receiver contains magnetic devices that can attract small metallic objects. Care should be taken to avoid personal injury.

The service related to human safety is not allowed because this device may have the possibility of radio interference.

Power over Ethernet (PoE) warning

This equipment must be connected to PoE networks without routing to the outside plant.

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Chapter 1: Introduction

Purpose

This document provides installation instructions for Avaya E129 SIP Deskphone. The document also describes the initial configuration for the deskphone.

Intended audience

The primary audience for this document is anyone who is installing and configuring the Avaya E129 SIP deskphone. These people can include implementation engineers, Avaya BusinessPartners, solution providers, and sometimes the customers themselves.

Related resources

Documentation

Document number	Title	Use this document to:	Audience
Using			
16–604369	Administering Avaya E129 SIP Deskphone	Administer configurations and settings for the Avaya E129 SIP Deskphone.	Administrators
16–604368	Using Avaya E129 SIP Deskphone	See the capabilities of Avaya E129 SIP deskphone and to learn about how various features work.	Users and administrators

Document number	Title	Use this document to:	Audience
16–604373	Avaya E129 SIP Deskphone Quick Reference	See frequently used tasks.	Users and administrators

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Chapter 2: Getting started

Feature description

Avaya E129 SIP Deskphone is a SIP-based IP phone that small-to-medium businesses can use for communication.

Physical specifications

- Two call appearances
- A 128 x 40 graphical LCD
- Three softkeys
- Dual network ports with integrated Power over Ethernet (PoE)
- Electronic Hook Switch (EHS) with a Plantronics headset

Feature specifications

- Call forwarding
- Call transferring
- Three-way conferencing
- Voice mail
- Deskphone customization
- Do not Disturb

Packaged components

Ensure that the package contains the following deskphone parts that you must assemble before you install the deskphone. Each component is one in number:

- Deskphone body
- Handset
- Deskphone cord

- Ethernet cable
- Deskphone stand

Connection ports

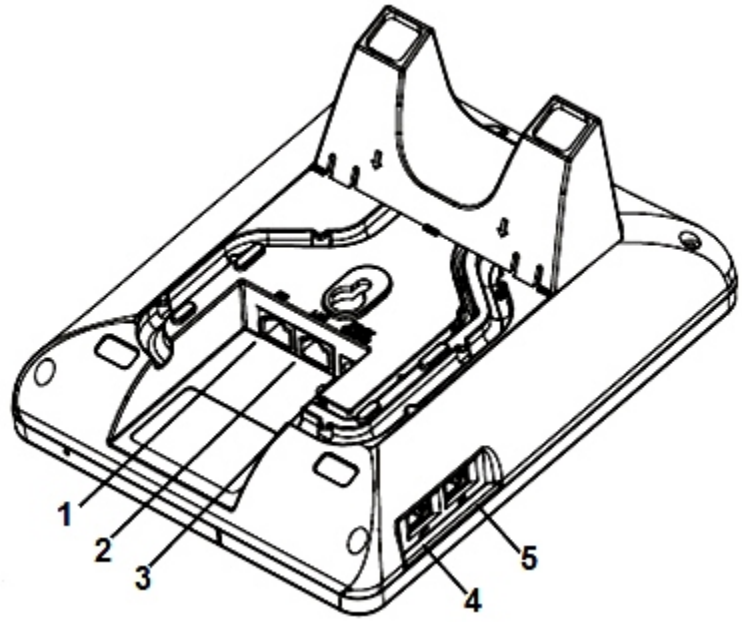


Figure 1: Connection ports at the back of the deskphone

Number	Port name	Description
1	PC	A 10/100–Mbps RJ45 port to connect to a personal computer or a mobile computer
2	LAN	A 10/100–Mbps RJ45 port to connect to PoE-supported Ethernet
3	Power	A 5–V DC port to connect to the power supply
4	Handset	An RJ9 port to connect the handset
5	Headset	An EHS-suported RJ9 port to connect to a Plantronics headset

Chapter 3: Deskphone installation in the IP Office environment

Installation methods

To install Avaya E129 SIP Deskphone, you can select any of the following methods:

1. Configuration 1 on page 11 - DHCP server on IP Office: You can enable the DHCP server on IP Office. The DHCP server returns the DHCP option 66 to Avaya E129 SIP Deskphone that provides the firmware and configuration server details to the deskphone.
2. Configuration 2 on page 12 - Third-party DHCP server configured with the DHCP option 66: You can use a third-party DHCP server and configure the DHCP option 66. The DHCP option 66 provides the firmware and configuration server details to deskphones.
3. Configuration 3 on page 13 - Third-party DHCP server without configuring the DHCP option 66: You can use a third-party DHCP server and provide the firmware and configuration server details to the deskphone through the deskphone interface.
4. Configuration 4 on page 13 - Static IP configuration: You can configure all the IP parameters and the firmware and configuration server details through the deskphone interface.

Configuration 1 checklist

No.	Task	Reference	✔
1.	Check preinstallation requirements.	See Preinstallation requirements on page 14.	
2.	Create deskphone users.	See Create deskphone users on page 16.	
3.	Check the required licenses.	See Licenses on page 18.	

No.	Task	Reference	✔
4.	Prepare the IP Office system for SIP telephony.	See Prepare the IP Office system for SIP telephony on page 19.	
5.	Enable DHCP on IP Office server.	See Enabling DHCP on the IP Office system on page 21.	
6.	Connect deskphone to the network.	See Connecting deskphone to the network on page 23.	
7.	Secure deskphone administration control.	See Secure deskphone administration control on page 33.	

Configuration 2 checklist

No.	Task	Reference	✔
1.	Check preinstallation requirements.	See Preinstallation requirements on page 14.	
2.	Create deskphone users.	See Create deskphone users on page 16.	
3.	Check the required licenses.	See Licenses on page 18.	
4.	Prepare the IP Office system for SIP telephony.	See Prepare the IP Office system for SIP telephony on page 19.	
5.	Set the DHCP option 66.	See Setting the DHCP option 66 on page 22	
6.	Connect deskphone to the network.	See Connecting deskphone to the network on page 23.	
7.	Secure deskphone administration control.	See Secure deskphone administration control on page 33.	

Configuration 3 checklist

No.	Task	Reference	✔
1.	Check preinstallation requirements.	See Preinstallation requirements on page 14.	
2.	Create deskphone users.	See Create deskphone users on page 16.	
3.	Check the required licenses.	See Licenses on page 18.	
4.	Prepare the IP Office system for SIP telephony.	See Prepare the IP Office system for SIP telephony on page 19.	
5.	Provide power to the deskphone without connecting the deskphone to the network and let the deskphone start.		
6.	Provide firmware and configuration server details to the deskphone.	See Providing firmware and configuration server details to the deskphone on page 23.	
7.	Connect deskphone to the network.	See Connecting deskphone to the network on page 23.	
8.	Secure deskphone administration control.	See Secure deskphone administration control on page 33.	

Configuration 4 checklist

No.	Task	Reference	✔
1.	Check preinstallation requirements.	See Preinstallation requirements on page 14.	
2.	Create deskphone users.	See Create deskphone users on page 16.	
3.	Check the required licenses.	See Licenses on page 18.	

No.	Task	Reference	✔
4.	Prepare the IP Office system for SIP telephony.	See Prepare the IP Office system for SIP telephony on page 19.	
5.	Provide power to the deskphone without connecting the deskphone to the network and let the deskphone start.		
6.	Provide IP details to the deskphone.	See Providing IP details to the deskphone on page 22.	
7.	Provide firmware and configuration server details to the deskphone.	See Providing firmware and configuration server details to the deskphone on page 23.	
8.	Connect deskphone to the network.	See Connecting deskphone to the network on page 23.	
9.	Secure deskphone administration control.	See Secure deskphone administration control on page 33.	

Preinstallation requirements

To install the Avaya E129 SIP Deskphone in an IP Office environment, ensure that you have the following provisions:

- IP Office system on page 14
- Telephone power on page 15
- DHCP server on page 15
- File server on page 16
- Avaya IP endpoint licenses on page 16

IP Office requirements

The IP Office system must:

- Be upgraded to IP Office Release 9.0.3.
- Be running in any IP Office mode other than Basic Edition.

- Include unused Avaya IP endpoint licenses.
- Have Voice Compression Modules (VCM) in the control unit of IP500 and IP500 V2 based systems.

The IP Office system must have voice compression channels, also known as VCM channels. VCM is required:

- During incoming or outgoing call setup with the system.
- During any call to or from a non-IP trunk or phone.
- During any call to or from an IP trunk or phone that is using a different codec than the telephone.

For IP500 and IP500 V2 systems, you can add VCM to the system through a combination of the following options.

- IP500 VCM Base Cards: For IP500 and IP500v2 systems, installation of up to 2 IP500 VCM base cards. There are 2 types of card are available, the IP500 VCM 32 and the IP500 VCM 64, each providing 32 and 64 VCM channels respectively. Note that each IP500 VCM card also enables 12 Avaya IP endpoints without requiring licenses
- IP500 Combination Cards: For IP500v2 systems only, installation of up to 2 IP500 Combination cards. These cards provide a mix of digital extension ports, analog trunk ports and trunk ports. Each card also provides 10 voice compression channels. These cards do not enable any unlicensed Avaya IP endpoints.
- IP400 VCM Cards: For IP500 and IP500v2 systems, installation of up to 2 legacy IP400 VCM cards using an IP500 Legacy Card Carrier. The IP400 VCM cards supported 4, 8, 16, 24, or 30 voice compression channels.

For Linux based IP Office systems no additional hardware is required.

Telephone power requirements

Each Avaya E129 SIP Deskphone requires a power supply. You can provide the power through:

- A PoE (Power over Ethernet) network.
- A 5V DC power supply unit that requires each phone to have access to a mains power outlet.

DHCP server requirements

Avaya recommends using a DHCP server because of the ease that the DHCP server provides for installation and maintenance procedures. The DHCP server provides following information to the deskphone:

- The IP address of the deskphone
- The IP address of the file server where the firmware and the configuration files reside.

You can provide DHCP support in two ways:

- DHCP on IP Office : You can enable DHCP on an IP Officesystem. In this case you need not configure the DHCP option 66 because the IP Office system provides the firmware and the configuration server details to the deskphone.
- Third-party DHCP: You can configure a separate server as a DHCP server and configure the DHCP option 66 to provide the firmware and the configuration server details to the deskphone.

File server requirements

The IP Office system performs the role of a file server to provide the configuration and firmware files that the deskphone requires.

To operate with the IP Office system, the Avaya E129 SIP Deskphone must download specific firmware and configuration files at the time of start-up. The deskphone requests the firmware and configuration files from a file server. The deskphone uses the HTTP file server address to request for the files.

Avaya IP endpoint licenses requirements

Each IP endpoint that the telephone system supports requires a license, either an Avaya IP Endpoint license or a third-party IP Endpoint license. Avaya E129 SIP Deskphone uses the Avaya IP Endpoint licenses.

The system automatically assigns the licenses to deskphones in order of deskphone registration. However, you can configure existing extensions to reserve a license. The license reservation ensures that the deskphones do not become unlicensed when newly added extensions manage to register first following a system reboot.

For IP500 and IP500 V2 systems, each IP500 VCM 32 and IP500 VCM 64 card installed in the system supports 12 Avaya IP endpoints without licenses.

Create deskphone users

For each deskphone, you must create a user entry and an extension entry in the system configuration.

You must create users and extensions prior to connecting the deskphones to the network.

Adding and configuring deskphone users

Procedure

1. Receive the configuration from the system through IP Office Manager.
2. Select **User**.
3. Click **Create a New Record** and select **User**.
4. Select the **User** tab.
5. In the **Name** field, enter the account name.
6. In the **Extension** field, enter an extension number. It is the user name that the deskphone requests when the deskphone connects to the IP Office system.
7. Select the **Telephony** > **Supervisor Settings** tab.
8. In the **Login Code** field, enter a login code of at least 4 digits. It is the password that the deskphone requests when the deskphone connects to the IP Office system.
9. Click **OK**.
10. If IP Office Manager prompts to create an extension, select **SIP Extension**, and click **OK**.
11. Repeat Step 1 to Step 10 to add more users.

Next steps

Add user extensions in the IP Office configuration.

Configuring user extensions

About this task

You must create a matching extension entry for each user that you create in the system

Procedure

1. Using IP Office Manager, receive the configuration from the system.
2. Select **Extensions**.
3. Locate the SIP extension that you created for the user. Otherwise, click **Create a New Record** and select **Extension**.
4. Select the **Extn** tab.

5. In the **Base Extension** field, enter the base extension. This should match the **Extension** setting of the SIP user.
6. Set the **Force Authorization** field to on. This setting forces the phone registration to be validated against the IP Office user setting.
7. Select the **VoIP** tab.
8. In the **Codec Selection** field, click the codec. If the **Codec Selection** is **System Default**, the extension uses the system codec preferences. In most cases this is preferred and any changes required should be made at the system level to ensure consistency for all IP trunks and extensions. However, if required, the **Codec Selection** of each individual trunk and extension can be adjusted to differ from the system defaults.
9. In the **Reserve License** field, enter the reserve license. Each non-Avaya IP phones requires an **Avaya IP Endpoint** license. Normally the available licenses are issued in the order that devices register. This option allows an extension to be pre-licensed before the device has registered by selecting the option **Reserve Avaya IP endpoint license**.
10. Repeat Step 1 to Step 9 for each user that you created.

Licenses

All IP telephones connecting to the IP Office system require a license. The type of license varies depending on the type of phone. Each Avaya E129 SIP Deskphone uses an Avaya IP Endpoint license.

Checking the IP Office serial number

About this task

Licenses are issued against a unique feature key or dongle serial number. For IP500 V2 control units that number is unique to the System SD card fitted to the system. For IP500 control units that number is unique to the smart media card inserted in the back of the control unit.

Procedure

1. Using IP Office Manager, receive the configuration from the telephone system.
2. Select **System**.
3. Select the **System** tab.

4. For IP500 and IP500 v2 systems, the feature key serial number is shown by the **Dongle Serial Number** field. For Server Edition systems, the feature key serial number is shown by the **System Identification** field

Adding licenses

About this task

Multiple licenses can be added for a cumulative number of license instances.

Procedure

1. Using IP Office Manager, receive the configuration from the telephone system.
2. Select **License**.
   The system displays the current licenses.
3. To add a license, click **Add**.
4. Select **ADI**, and click **OK**.
5. Enter your license, and click **OK**.
6. The system displays the type of the license but with its **License Status** set to **Unknown**. If the system does not recognize the **License Type**, check that you entered the license correctly.
7. Save the configuration back to the system and then receive the configuration from the system again.
8. The **License Status** should now show **Valid**.

Preparing the IP Office system for SIP telephony

You must prepare the IP Office system to support the SIP telephony.

Enabling the SIP telephones support

Before you begin

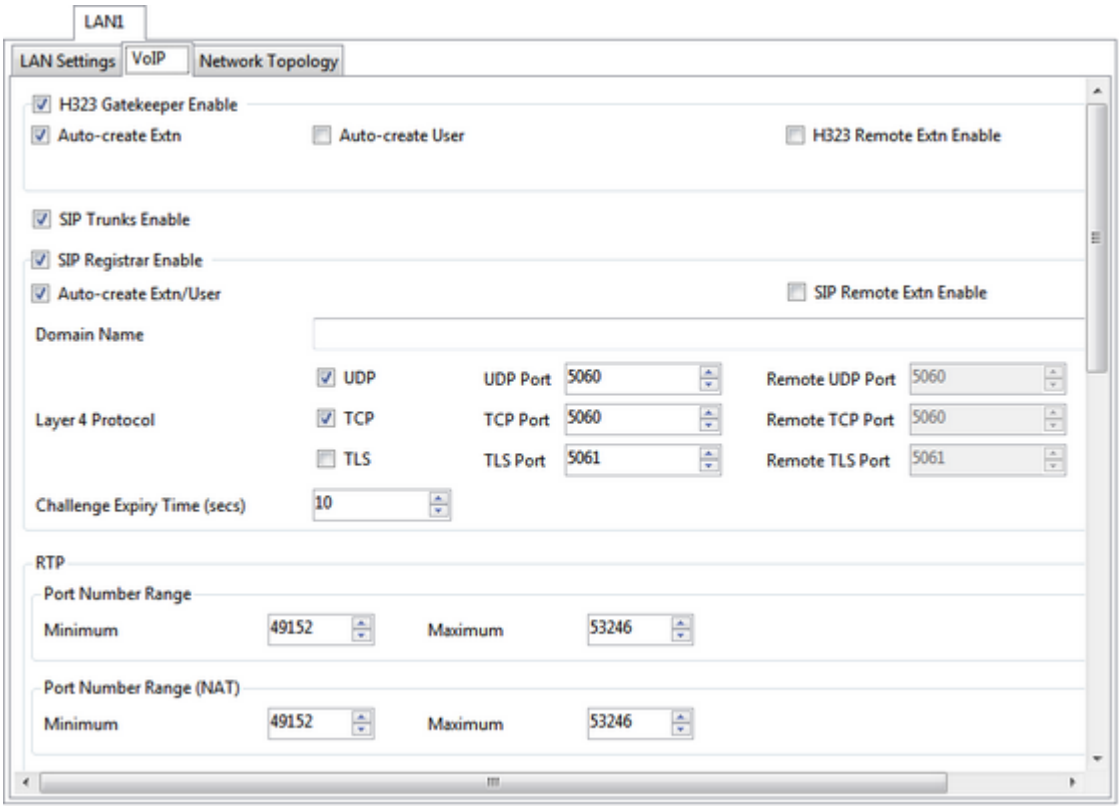
IP Office support for SIP extensions is enabled.

About this task

IP Office system has two LAN interfaces, LAN1 and LAN2. On IP500 and IP500 V2 systems these match the LAN and WAN ports respectively on the back of the control units. You can use both LAN1 and LAN2 to support SIP telephones.

Procedure

1. Receive the configuration from the system through IP Office Manager.
2. Select **System**.
3. Select the **LAN1** or **LAN2** tab depending on which of the LAN interfaces you want to use to support SIP extensions. Note the **IP Address** settings for the LAN.
4. Select the **VoIP** tab.



5. Enter the required details and click **OK**.

SIP telephones support field descriptions

Name	Description
SIP Registrar Enable	Enables the SIP registrar. You must enable this option.
Domain Name	The local SIP registrar domain name that SIP devices use to register with IP Office. If this field is blank, the SIP devices use the LAN IP address to register. The default value is blank.
Layer 4 Protocol	The transport protocol for SIP traffic between the IP Office and SIP extension devices. You can use both TCP and UDP. The default value is both TCP and UDP.
TCP Port	The SIP port to use if you select TCP. The default value is 5060.
UDP Port	The UDP port to use if you select UDP. The default value is 5060.
Challenge Expiry Time (sec)	The challenge expiry time that is used during SIP extension registration. When a device registers, the IP Office SIP Registrar sends a challenge back to the device and waits for an appropriate response. If the response is not received within this timeout the registration fails. The default value is 10.
Auto-create Extn/User	When this option is selected, the IP Office can automatically create new user and extension entries in its configuration when a SIP phone registers with the system. If this method is used for installation, it is important to check that the settings created match the SIP device. It is also important to deselect this option after installation of the SIP extension devices. The default value is off.

Enabling DHCP on the IP Office system

About this task

You can configure theIP Office system to be used as the DHCP server.

Procedure

1. Receive the configuration from the system throughIP Office Manager.
2. Select **System**.

3. Select the **LAN1** or **LAN2** tab based on the system LAN interface that you want to use for supporting SIP extensions.
4. Change the **DHCP Mode** to **Server**.
5. Click **Advanced**. The **DHCP Pools** tab displays the start address and number of IP addresses , the pool size, that the IP Office system will issue. If required, click **Edit** to adjust these settings.
6. Click **OK**.
7. If you have made any changes, click **OK** and save the configuration back to the system.

Setting the DHCP option 66

Before you begin

You must have the IP address of the IP Office server.

Procedure

Set the option 66 to the IP address of the IP Office server.

Provide the IP address in the dotted decimal format along with the string http://.

Providing IP details to the deskphone

Procedure

1. Press **Menu** > **Network Config** > **IP Setting** and provide the IP details.
2. Select **Static IP** and press **Menu**.
   The deskphone gets set to use a static IP address.
3. Select **IP** and press **Menu**.
4. Enter the deskphone IP address and press the **OK** softkey.
5. Select **Netmask** and press **Menu**.
6. Enter the subnet mask and press the **OK** softkey.
7. Select **Gateway** and press **Menu**.
8. Enter the network default gateway address and press the **OK** softkey.

9. Select the **Back** softkey and press **Menu**.
   The deskphone displays the prompt to reboot.
10. Press the **No** softkey.

Providing firmware and configuration server details to the deskphone

Before you begin

You must obtain the IP address of the IP Office server.

Procedure

1. Press **Menu** > **Config** > **Upgrade** > **Firmware Server**.
2. Enter the URL of the IP Office IP address.
3. Press **OK**.
4. When the deskphone displays a prompt to reboot, press the **No** softkey .
5. Select **Config Server** and press **Menu**.
6. Enter the URL of the IP Office IP address.
7. Press **OK**.
   The deskphone displays the prompt to reboot.
8. Press the **Yes** softkey .

Connecting deskphones to the system

Procedure

1. Connect the handset and the main case with the deskphone cord.
2. Connect the LAN port of the deskphone to the RJ45 socket of a hub, a switch, or a router with the Ethernet cable and press the cable in the groove.
3. Attach the deskphone stand to the back of the deskphone.
4. If the switch to which you connected the deskphone is not a PoE switch, connect the 5-V DC output plug to the power port on the deskphone and plug the power adapter into an electrical outlet.

The deskphone screen displays various messages as the deskphone starts.

5. When the deskphone displays **Username**, enter the user name that you created, and press **OK**.
6. When the deskphone displays **Password**, enter the password for the user, press **OK**.
   The deskphone displays `Processing login` message.
7. If the details are correct, the deskphone displays the normal idle display with **NextScr** and **Headset** buttons.

   If the deskphone does not recognize the details, the deskphone displays login failed message and displays the Login screen again.

Next steps

When installation and testing of the deskphone is complete, you must restrict the configuration options to prevent users from making changes that can affect the deskphone operation.

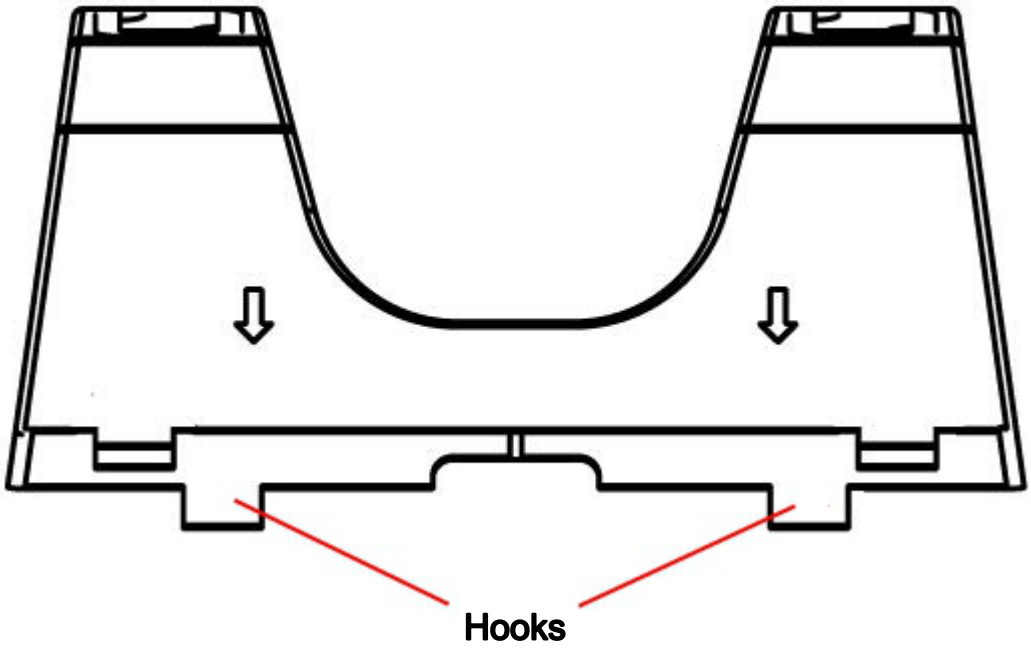
Related topics:

Secure deskphone administration control on page 33

Deskphone stand

You can either wall mount your deskphone or attach the stand that Avaya provides.

The stand includes four hooks that fit into four slots in the rear of the deskphone.



Attaching the stand

Procedure

1. Hold the stand with the arrows facing down and towards the side of the LAN and PC ports.
2. Insert the hooks on the side that does not have arrow marks into the upper two slots.
3. On the arrow-marked side, press the hooks and push down into the lower two slots.
   The stand fits into the back of the deskphone.

Detaching the stand

Procedure

On the arrow-marked side, press the hooks, and pull up from the lower two slots. The hooks in the upper two slots detach simultaneously.

Chapter 4: Deskphone installation in the Avaya Aura environment

Preinstallation checklist

No.	Task	References	✔
1.	Check the prerequisites	See Prerequisites on page 27	
2.	Configure the DHCP server	See DHCP server configuration on page 28	
3.	Create the deskphone users	See Creating the deskphone users on page 30	
4.	Connect all the deskphones	See Connecting deskphones to the system on page 30	
5.	Secure the deskphone administration control	See Secure deskphone administration control on page 33	

Preinstallation requirements

Software requirements

The Avaya E129 SIP Deskphone is supported on:

- Avaya Aura® Communication Manager 6.3.2 or later with Avaya Aura® Session Manager 6.3.2 or later and with Avaya Aura® System Manager 6.3.2 or later
- Avaya Aura® Conferencing 7.2 or later (supports only MeetMe conference)
- Avaya Aura® Messaging 6.2 or later
- Avaya Session Border Controller for Enterprise 6.2 is the minimum version to support remote E129 SIP Deskphones
- Avaya Aura® Solution for Midsize Enterprise 6.2 or later

Ensure that you own licenses to use the Dynamic Host Configuration Protocol (DHCP) and HTTP or HTTPS server software. You can install the DHCP and HTTP or HTTPS server software on the same machine.

DHCP server configuration

DHCP minimizes maintenance for Avaya E129 SIP Deskphone by removing the need to individually assign and maintain IP addresses and other parameters for each deskphone on the network. Depending on administration, the DHCP server provides the following information to the deskphones:

- IP address of the deskphone
- IP address of the HTTP or HTTPS file server where the firmware and the configuration files reside.
- IP address of the subnet mask
- IP address of the router
- IP address of DNS

Administer the LAN so that each SIP deskphone can access a DHCP server that contains the IP addresses and subnet mask.

The IP address reuse capability allows the deskphone to reuse its previous IP address and parameter settings even if the DHCP server is temporarily unavailable. A user can manually assign a different IP address to an IP deskphone. If the user assigns the IP address manually, the deskphone does not search for a DHCP server unless the static IP address is, subsequently, unassigned manually.

Since manual entry of an IP address is an error-prone process, you must ensure the following:

- A minimum of two DHCP servers are available for reliability.
- A DHCP server is available when the IP deskphone reboots.
- A DHCP server is available at remote sites if WAN failures isolate IP deskphones from the central site DHCP servers.

We can provide the configuration file that the deskphone require through an HTTP or HTTPS file server.

Setting the DHCP server

About this task

This section is limited to describing a generic administration that works with Avaya E129 SIP Deskphone. Three DHCP software alternatives are common to Windows operating systems:

- Windows NT® 4.0 DHCP Server
- Windows 2000® DHCP Server
- Windows 2003® DHCP Server
- Windows 2008® DHCP Server

Procedure

1. Install the DHCP server software according to the vendor instructions.
2. Configure the range of IP address available to the deskphones.
3. Configure the DHCP options.

DHCP options

DHCP option	Description
Option 3	Specifies the gateway or router IP addresses. If using more than one address, the total list can contain up to 127 total ASCII characters. You must separate IP Addresses with commas with no intervening spaces.
Option 6	Specifies the DNS servers address list. If using more than one address, the total list can contain up to 255 total ASCII characters. You must separate IP Addresses with commas with no intervening spaces. At least one address in Option 6 must be a valid, nonzero, dotted decimal address.
Option 15	Specifies the DNS domain name. This string contains the domain name to be used when DNS names in system parameters are resolved into IP addresses. This domain name is appended to the DNS name before the deskphones attempt to resolve the DNS address. Option 15 is necessary if you want to use a DNS name for the HTTP server.

DHCP option	Description
Option 66	Specifies the TFTP, HTTP, or HTTPS server link. You must provide the IP address in a dotted decimal format along with the string http://. For example, http://148.147.171.196. Ensure that: • The firmware and configuration files are on the specified IP address. • The configuration file must not contain the IP address of the TFTP, HTTP, or HTTPS server or the firmware server. • The configuration file must contain the IP address of SIP proxy server and other parameters.

Creating deskphone users

Procedure

1. In a Web browser, enter the System Manager IP address and press **Enter**.
2. Log in to the application with your credentials.
3. Click **User Management** > **Manage Users**.
4. Click **New**.
5. On the **Identity** tab, enter the user details.
6. Click the **Communication Profile** tab.
7. Enter details for **Communication Address**, **Session Manager Profile**, **CM Endpoint Profile**, and **Messaging Profile**. Configure the phone type as 9630SIP, such that the default template is Default_9630SIP_CM_6_3.
8. Press **Commit & Continue**.

Connecting deskphones to the system

Procedure

1. Connect the handset and the main case with the deskphone cord.
2. Connect the LAN port of the deskphone to the RJ45 socket of a hub, a switch, or a router with the Ethernet cable and press the cable in the groove.
3. Attach the deskphone stand to the back of the deskphone.

4. If the switch to which you connected the deskphone is not a PoE switch, connect the 5-V DC output plug to the power port on the deskphone and plug the power adapter into an electrical outlet.
   The deskphone screen displays various messages as the deskphone starts.
5. When the deskphone displays **Username**, enter the user name that you created, and press **OK**.
6. When the deskphone displays **Password**, enter the password for the user, press **OK**.
   The deskphone displays `Processing login` message.
7. If the details are correct, the deskphone displays the normal idle display with **NextScr** and **Headset** buttons.

   If the deskphone does not recognize the details, the deskphone displays login failed message and displays the Login screen again.

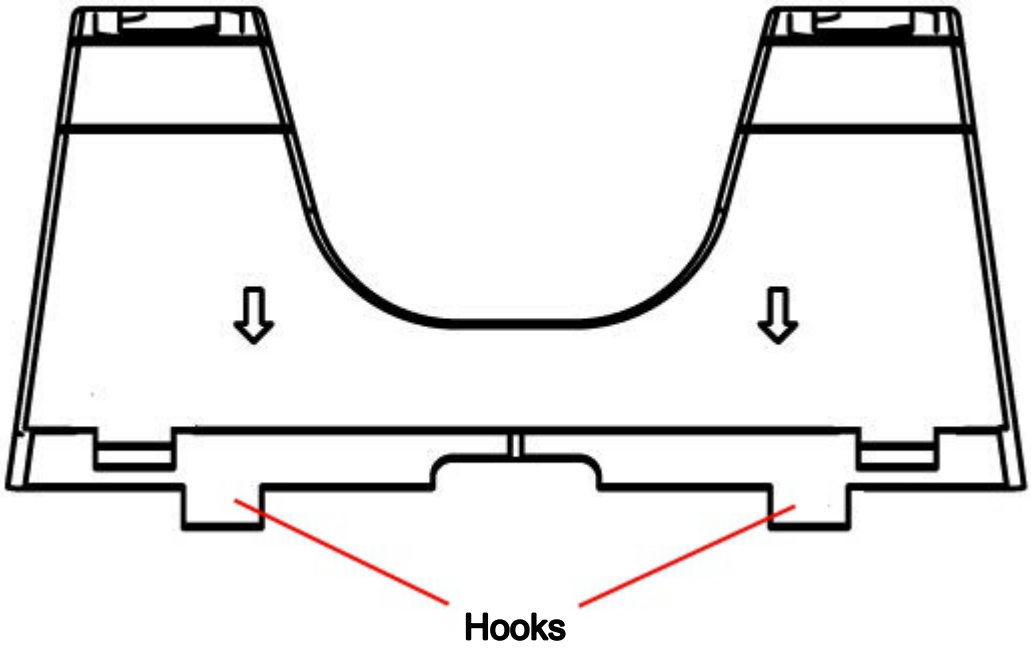
Next steps

When installation and testing of the deskphone is complete, secure the deskphone administration control.

Deskphone stand

You can either wall mount your deskphone or attach the stand that Avaya provides.

The stand includes four hooks that fit into four slots in the rear of the deskphone.



Attaching the stand

Procedure

1. Hold the stand with the arrows facing down and towards the side of the LAN and PC ports.
2. Insert the hooks on the side that does not have arrow marks into the upper two slots.
3. On the arrow-marked side, press the hooks and push down into the lower two slots.
   The stand fits into the back of the deskphone.

Detaching the stand

Procedure

On the arrow-marked side, press the hooks, and pull up from the lower two slots. The hooks in the upper two slots detach simultaneously.

Chapter 5: Secure deskphone administration control

After you installed the deskphone, you must restrict the configuration options to prevent users from making changes that can affect the deskphone operation.

You can secure the deskphone administration control through:

- The configuration file parameters
- The Web GUI

Administration control through the configuration file

You can administer control of the deskphone centrally through the configuration file that Avaya provides with E129 deskphones. The configuration file resides on the configuration server and is a binary or an XML file that contains configuration parameters. Each parameter corresponds to a feature that you configure through the Web interface. To configure a feature, you can assign the required value to the parameter of that feature.

When the deskphone starts or restarts, the deskphone makes a TFTP, HTTP, or HTTPS request to the configuration server for configuration files. The deskphone requests for an XML file named cfgxxxxxxxxxxxx.xml followed by a file named cfgxxxxxxxxxxx, where xxxxxxxxxxx is the MAC address of the deskphone. For example, cfg000b820102ab.xml and cfg000b820102ab. If these files are unavailable, the deskphone downloads a generic configuration file, cfg.xml. The configuration file name must be in lowercase.

Set the following parameters in the configuration file.

Parameter	Default value	Description
P196	-	Specifies user password.
P2	-	Specifies administrator password.

Parameter	Default value	Description
P1357	0	Specifies the access control for keypad Menu settings. Assign any of the following values: • 0: Unrestricted. Displays all menu options on the deskphone. • 1: Basic settings only. Hides the **Config** menu option on the deskphone. • 2: Constraint mode. Hides the **Config**, **Factory Functions**, and **Network Config** menu options on the deskphone. You can view these menu options on the deskphones if you login using the **Admin Login** option that the deskphone displays in this mode.

Administration control through the Web GUI

Obtaining the deskphone IP address

Procedure

1. On the Home screen, press **NextScr**.
   The deskphone displays the current IP address. Note this IP address to gain access to the deskphone Web GUI.
2. Press **NextScr** again. The deskphone displays the account name.
3. Press **NextScr** again to return the Home screen.

Changing the web access password

About this task

There are two levels of browser access to the deskphone, user access and full administrator access. You must change the administrator password to prevent users from making administration related changes to the deskphone.

Procedure

1. Enter the IP address of the deskphone in a browser to gain access to the deskphone web GUI.
2. On the Login page, enter the deskphone current password for full administration access. The default password is **admin** for full administration access.
3. Click **Maintenance** > **Web Access**.
4. Under the **Admin Password** label, enter and confirm the new password that the administrator must use.
5. Click **Save and Apply**.

Hiding the deskphone configuration menus

About this task

You can hide the menus on the deskphone that relate to the deskphone configuration.

Procedure

1. Enter the IP address of the deskphone in a browser to gain access to the deskphone web GUI.
2. On the Login page, enter the deskphone current password for full administration access. The default password is admin for full administration access.
3. Click **Maintenance** > **Security**.
4. In the **Configuration via Keypad Menu** field, click to select the level of configuration access that should be allowed from the deskphone.
5. Click **Save and Apply**.

Deskphone configuration menus field descriptions

The **Configuration via Keypad Menu** field provides the following options for different access levels for menu on the deskphone.

Name	Description
Unrestricted	Displays all menu options on the deskphone.

Name	Description
Basic settings only	Hides the **Config** menu option on the deskphone.
Constraint Mode	Hides the **Config** , **Network Config**, and **Factory Functions** menu options on the deskphone. You can view these menu options on the deskphones if you login using the **Admin Login** option that the deskphone displays in this mode.

Chapter 6: Upgrading the deskphone

Automatic upgrade

You can choose to automatically upgrade the deskphone by setting the option from the Web GUI. During automatic upgrade:

- The deskphone restarts three times. It takes close to 15 minutes for the process to complete.
- You must not power down the deskphone, disconnect the deskphone from the network or restart the deskphone from SSA.
- In some very rare circumstances if the deskphone is reset and disconnected from the network during the upgrade procedure, the deskphone might fail to upgrade even after subsequent resets. In this case, to recover the deskphone and allow the upgrade to proceed, you must set the deskphone to factory settings.

Manual upgrade

Downloading the firmware

Procedure

1. Go to the Avaya Support website.
2. In the **Enter Your Product Here** field, enter `E129`.
3. In the **Choose Release** field, click the required release number.
4. Select **Downloads**.
5. Press `Enter`.
   The system displays a list of software that you can download.
6. Click the required version.
   The system displays the Downloads & Documents page.
7. In the **File** field, click the zipped file and save the file on your system.

8. Unzip the file that you downloaded at the appropriate location on the firmware server.

Upgrading deskphones

Before you begin

Ensure that you have the latest version of the firmware on the file server.

About this task

Use the following procedure to perform bulk upgrade of the deskphones. During the upgrade, if the deskphone receives a call, the deskphone starts ringing. If the user does not answer the call, the deskphone continues to ring till the upgrade completes. Therefore, you must plan the upgrade during the off hours.

Procedure

1. Set the DHCP option 66 to the file server that contains the latest firmware.
2. Reboot the deskphones.

Upgrading a deskphone through the deskphone interface

Before you begin

Ensure that you have the latest version of the firmware on the file server.

Procedure

1. Press **Menu** > **Config** > **Upgrade** > **Upgrade Via**.
2. Select one of the following options:
   - **TFTP**
   - **HTTP**
   - **HTTPS**
3. Press **Firmware Server**.
4. Enter the URL or IP address of the firmware server.
5. Press **OK**.
   The deskphone displays the prompt to reboot.
6. Press the **Yes** softkey.

The deskphone screen displays the firmware upgrade information.

Upgrading a deskphone through the Web GUI

Before you begin

Ensure that you have the latest version of the firmware on the file server.

Procedure

1. Enter the IP address of the deskphone in a browser, and press `Enter`.
   The system displays the Login page of the Web GUI.
2. Login to the Web GUI.
3. Click **Maintenance** > **Upgrade and Provisioning**.
   The system displays the Upgrade and Provisioning page.
4. Enter the required details for each field.
5. Click **Save**.
6. Click **Reboot** at the upper-right corner of the Web GUI.

Related topics:

Upgrading and provisioning settings field descriptions on page 39

Upgrading and provisioning settings field descriptions

Name	Description
Firmware Upgrade and Provisioning	Specifies whether the deskphone checks and installs a new firmware every time the deskphone boots up: The options are: • **Always Check for New Firmware**: The deskphone always checks for a new firmware. • **Check New Firmware Only When F/W pre/suffix Changes**: The deskphone always checks for a change in the prefix or suffix of the firmware file. • **Always Skip the Firmware Check**: The deskphone does not check for a new firmware.

Name	Description
XML Config File Password	Specifies the password that the deskphone uses to decrypt the encrypted XML configuration file.
HTTP/HTTPS User Name	Specifies the user name to login to the HTTP and HTTPS server.
HTTP/HTTPS Password	Specifies the password to login to the HTTP and HTTPS server.
Upgrade via	Specifies the firmware upgrade method. The options are: • **TFTP** • **HTTP** • **HTTPS**
Firmware Server Path	Specifies the server path for the firmware.
Config Server Path	Specifies the sever path for the configuration file.
Firmware File Prefix	Specifies the prefix for the firmware file. The deskphone downloads the firmware file only if the prefix matches the one that you specified.
Firmware File Postfix	Specifies the postfix for the firmware file. The deskphone downloads the configuration file only if the postfix matches the one that you specified.
Config File Prefix	Specifies the prefix for the configuration file. The deskphone downloads the configuration file only if the prefix matches the one that you specified.
Config File Postfix	Specifies the postfix for configuration file. The deskphone downloads the configuration file only if the postfix matches the one that you specified.
Allow DHCP Option 43 and Option 66 to Override Server	Specifies whether the DHCP option 66 overrides the configuration server. If you enable the DHCP option 66, the system can redirect the HTTP/TFTP server. The options are: • **No** • **Yes**

Name	Description
Allow DHCP Option 120 to Override SIP Server	Specifies whether the DHCP Option 120 from local server overrides the SIP server. The options are: • **No** • **Yes** **Note:** You must use the configuration file to enter the SIP server list as the DHCP Option 120 has certain limitations.
Automatic Upgrade	Specifies whether the deskphone checks and installs a new firmware. The options are: • **No**: The deskphone does not check for a new firmware. • **Yes, check for upgrade every x minute(s)**: The deskphone checks for a new firmware after every x minutes. • **Yes, check for upgrade every day**: The deskphone checks for a new firmware every day. • **Yes, check for upgrade every week**: The deskphone checks for a new firmware every week. Enabling the automatic upgrade is a preferred option as the deskphone gets a firmware upgrade without you rebooting the deskphone for an upgrade.
Hour of the Day(0-23)	Specifies the hour of the day when the deskphone checks the HTTP/TFTP server for a firmware upgrade or configuration file changes.
Day of the Week (0-6)	Specifies the day of the week when the deskphone checks the HTTP/TFTP server for a firmware upgrade or configuration file changes.
Authenticate Conf File	Specifies whether the deskphone authenticates the configuration file before accepting the file. The options are: • **No** • **Yes**

Chapter 7: Troubleshooting

You can install a deskphone through the Web GUI if you face issues while providing firmware and configuration server details through the deskphone interface. You can also use the Web GUI to override the settings provided by the IP Office system.

Prerequisites

To install the deskphone through the Web GUI, obtain the following information.

Requirement	Value	Notes
User login extension and password		See the following: • For the IP Office environment : Adding and configuring deskphone users on page 17 and Adding user extensions on page 17 • For the Avaya Aura environment: Creating deskphone users on page 30
IP address for the deskphone		—
Subnet mask		—
Gateway address		—
SIP outbound proxy server IP address		—
SIP user ID		—
SIP authentication ID		—
SIP password		—
SIP transport protocol		—
Firmware server IP address		The IP address of the HTTP server where the firmware is located.
Configuration file server IP address		The IP address and the directory of the server where the configuration file is located.

Installing deskphones through the Web GUI

Procedure

1. Connect the handset and the main case with the deskphone cord.
2. Connect the LAN port of the deskphone to the RJ45 socket of a hub, a switch, or a router with the Ethernet cable and press the cable in the groove.
3. Attach the deskphone stand to the back of the deskphone.
4. If the switch to which you connected the deskphone is not a PoE switch, connect the 5-V DC output plug to the power port on the deskphone and plug the power adapter into an electrical outlet.
   The deskphone screen displays various messages as the deskphone starts.
5. Press **Menu** > **Network Config** when the deskphone displays the `Network Down` message and provide the IP details. For more information about providing IP details, see Providing IP details to the deskphone on page 22.
6. When the deskphone displays the prompt to reboot, press the **Yes** softkey.
   The deskphone displays **Username**.
7. Press **Conference** and note the IP address that the deskphone displays.
8. Enter the IP address of the deskphone in a web browser and press `Enter`.
9. Enter the administration password and click **Login**.
10. Click **Accounts** > **Account 1** > **General Settings**.
11. Enter appropriate values in the **SIP Server**, **SIP User ID**, and **Authenticate Password** fields.
12. Click **Save and Apply**.
13. Click **Maintenance** > **Upgrade and Provisioning**.
14. Enter appropriate values for the **Firmware Server Path** and **Config Server Path** fields.
15. Click **Save and Apply**.

Result

The deskphone restarts and displays various messages.

Next steps

Make a test call to another extension.

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