Avaya CallPilot® 1005r Server Hardware Installation

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The following applies to server models 1006r, 1005r, 703t, and 1002rp:



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Chapter 1: Customer service

Visit the Avaya Web site to access the complete range of services and support that Avaya provides. Go to www.avaya.com or go to one of the pages listed in the following sections.

Navigation

- Getting technical documentation on page 7
- Getting product training on page 7
- Getting help from a distributor or reseller on page 7
- Getting technical support from the Avaya Web site on page 8

Getting technical documentation

To download and print selected technical publications and release notes directly from the Internet, go to www.avaya.com/support.

Getting product training

Ongoing product training is available. For more information or to register, you can access the Web site at www.avaya.com/support. From this Web site, you can locate the Training contacts link on the left-hand navigation pane.

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Getting technical support from the Avaya Web site

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Chapter 2: 1005r server description

In this chapter

1005r Server features on page 9

Valid PCI card configurations on page 15

Network connectivity on page 16

Supported peripheral devices on page 20

1005r Server features

Introduction

The 1005r Avaya CallPilot® server is a long life industrial server in a standard rack-mount 2U form factor. It utilizes dual Xeon technology and proven, reliable SCSI hard-drive technology.

This section provides a general overview of the 1005r server features.

RoHS compliance

The 1005r server meets the requirements of the Restriction of Hazardous Substances Directive 2002/95/EC, applicable in countries affected by the EUED (European Union Environmental Directives). RoHS requirements impose restrictions on the type and quantity of materials used in the manufacturing and construction of Electronic and Electrical Equipment (EEE).

To comply with the RoHS directive, some of the part numbers now contain an E5 or E6 suffix. For example, part number NTRH2014 is now NTRH2014E6. The part numbers in this guide do not contain the suffix.

Server dimensions and weight

Height	87.6 mm (3.45 in.)
Width	435.3 mm (17.4 in.)
Depth (distance from front to back)	508 mm (20 in.)
Weight of fully loaded system	20 kg (44 lb)

Environmental specifications

Environmental condition	Specification
Operating temperature	5°C to 35°C (41°F to 95°F) Maximum rate of change must not exceed 10°C (50°F) per hour.
Non operating (storage) temperature	-40°C to +70°C (-40°F to +158°F)
Non operating humidity	95% @ 23 to 40°C
Altitude	< 1 829 m (6 000 ft)
Electrostatic discharge	<= 15 kV
Acoustic noise	< 55 dBA
Handling drop (storage)	18 in free-fall (when packaged)
Handling drop	2g 11 mS
Front clearance	50.8 mm (2 in.)
Side clearance	25 mm (1 in.)
Rear clearance	92 mm (3.6 in.)

Front panel controls and features

The following diagram shows the front view of the 1005r server chassis with the bezel cover removed. When the bezel cover is on, only the DVD and USB connections, controls, alarm LEDs, and status LEDs are visible. With the bezel cover removed, both hard drives, the

peripheral DVD/CD/CDRW drive, the anti-static connection, and the front serial port are accessible.

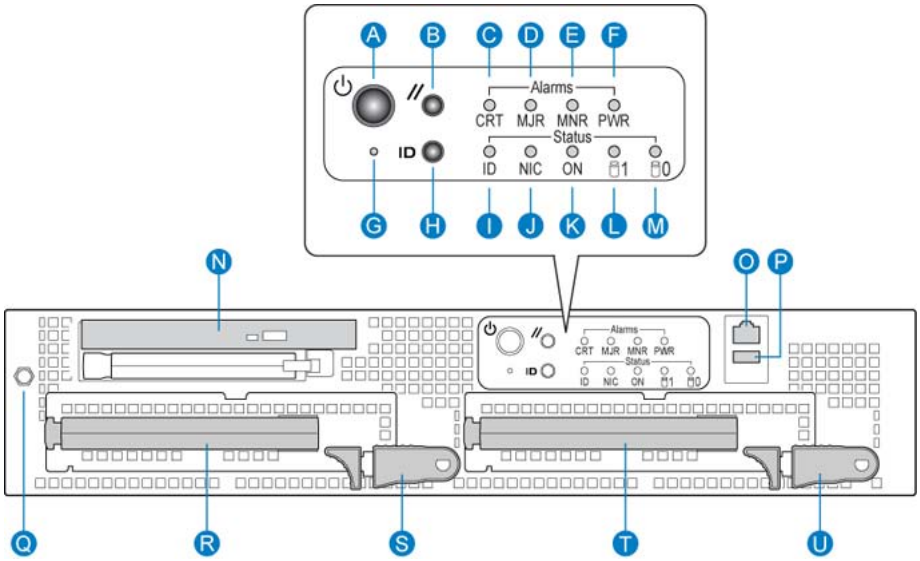


Figure 1: Front panel controls

Label	Control or feature	Label	Control or feature
A	Power switch	L	HDD1 activity
B	Reset switch	M	HDD0 activity
C	Critical alarm LED	N	DVD/CD/CDRW LED and eject button
D	Major alarm LED	O	Front serial port
E	Minor Alarm LED	P	USB 2
F	Power Alarm LED	Q	Electrostatic Discharge (ESD) connection
G	NMI switch (not used)	R	Hard drive 1 pull handle
H	ID switch	S	Hard drive 1 release lever
I	ID LED	T	Hard drive 0 pull handle
J	NIC activity LED	U	Hard drive 0 release lever
K	Status LED		

Back panel controls and features

The following diagram shows the back panel controls and features. On the right are the AC power supply banks. The PCI card brackets are in the middle of the back panel while the connectors and ports are along the bottom and left side.

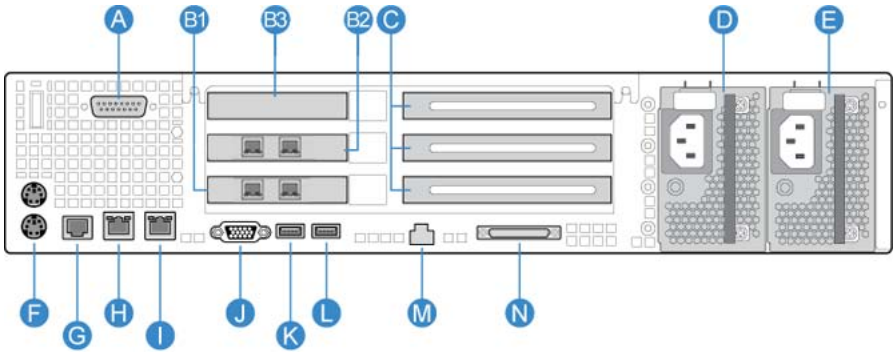


Figure 2: Back panel controls and features

Label	Control or feature	Label	Control or feature
A	DB15 Telco alarm connector (not used)	G	Rear connection to Comm 2 serial port
B1	PCI card #3 dual NIC for High Availability (HA) configuration. For more information about HA, see High Availability: Installation and Configuration (NN44200-311).	H	RJ45 NIC 1 connector
B2	PCI card #2 dual NIC for HA configuration. For more information about HA, see High Availability: Installation and Configuration (NN44200-311).	I	RJ45 NIC 2 connector
B3	RAID	J	Video connector
C	PCI full-size card brackets. Numbered (1, 2, 3) from top to bottom.	K	USB 1
D	Power Supply 1	L	USB 0
E	Power Supply 2	M	Server management LAN port
F	PS/2 mouse and keyboard connectors	N	External SCSI tape drive

PCI riser assembly

The PCI riser assembly holds the PCI add-in cards; MPB96, RAID and dual Network Interface Card (NIC). For more information about your configuration, see Valid PCI card configurations on page 15. The following diagram shows the PCI riser held above the server.

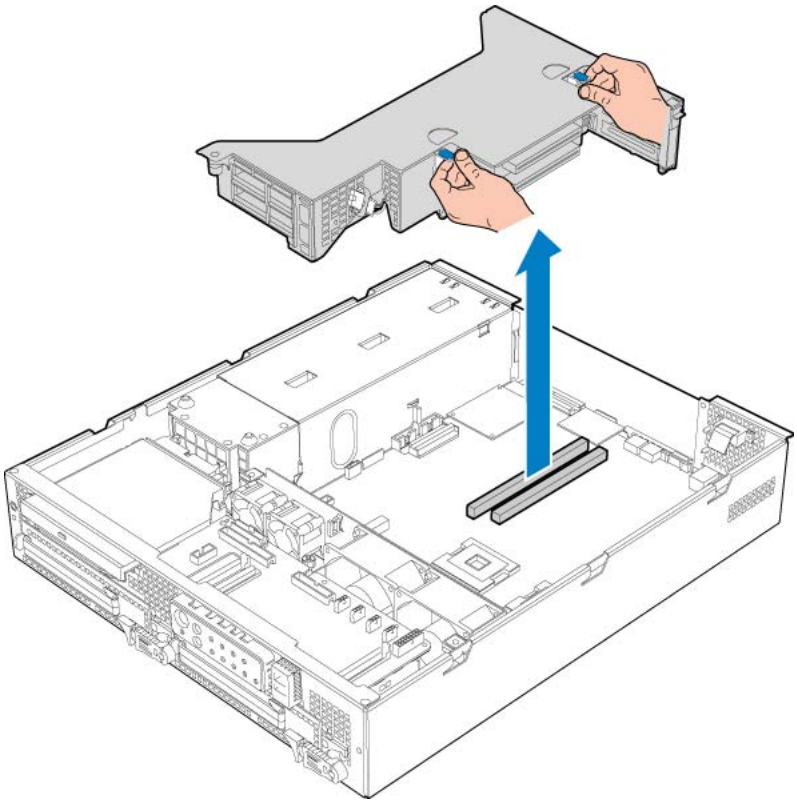


Figure 3: PCI riser card

The following picture shows the PCI riser assembly when removed from the 1005r chassis. The PCI riser assembly is shown turned over with low-profile and full-size cards installed.

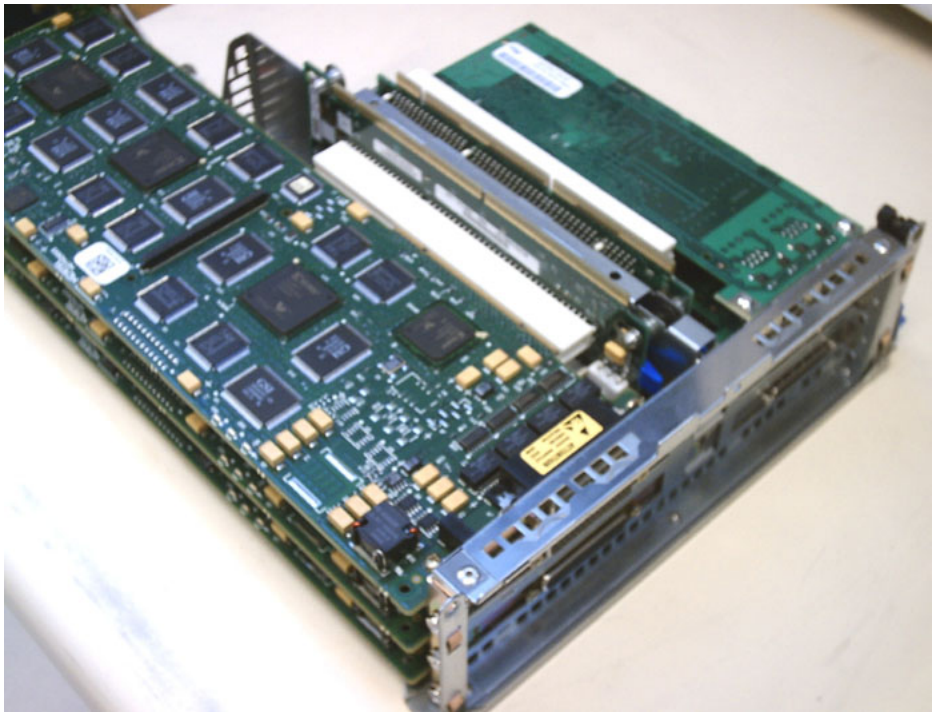


Figure 4: PCI riser card (turned over)

Caution:

Risk of physical equipment damage

Remove the 1005r from the rack, and place it on a solid surface when replacing or adding cards. The PCI riser assembly requires considerable force when inserting it into the connector, and physical damage can result if the assembly is not properly aligned.

When you place the server on a solid surface such as a workbench, you have a better view of the card alignment, and you can exert the necessary force when inserting the assembly into the connector.

Important:

If The PCI riser assembly must be fully seated to avoid server malfunction.

Valid PCI card configurations

Introduction

There are six PCI card slots; three low-profile and three full-size. Valid configurations of low-profile and full-size cards are shown in the table Table 1: 1005r PCI card slot configurations on page 16.

Note:

Your server configuration depends on what was ordered from Avaya. Therefore, your server may not have all of the slots populated.

When looking at the server from the rear (see Back panel controls and features on page 12), both full-size and low-profile cards are numbered from the top down.

Note:

There are two MPB96 board versions; the NTRH40AA, and NTRH40CA. The following table compares the two boards.

Version	Description
NTRH40AA	Has a single DB-44 connector on its faceplate Connects to the CS 1000 or Meridian 1 with an NTRH2014 DS30X cable
NTRH40CA	Has three RJ-45 connectors on its faceplate Connects to the Avaya CS 1000 or Meridian 1 with three standard RJ-45 connectorized Ethernet cables For more information about these cables and connecting the NTRH40CA MPB96 board to MGate cards, see *Communication Server and CallPilot Server Configuration*(NN44200-312) or *Meridian 1 and CallPilot Server Configuration*(NN44200-302).

Important:

If you have an NTRH40AA MPB96 board, you must connect the DS30X-1 cable to an MGate card to receive the clock source for the MPB96 board. Failure to connect the DS30X-1 cable to an MGate card can result in noise interference on the remaining voice channels. This restriction does not apply to the NTRH40CA MPB96 board, as it can receive clock source from any of the three DS30 ports.

Table 1: 1005r PCI card slot configurations

Configuration	Card slot type	Slot number	Position	Card type	Meridian 1*/ Avaya CS* 1000
Single MPB96	Full size	FS_PCI-1	top	MPB96	MGate 1, 2, 3
		FS_PCI-2	middle	Not used	
		FS_PCI-3	bottom	Not used	
	Low profile	LP_PCI-1	top	RAID	
		LP_PCI-2	middle	Dual NIC	
		LP_PCI-3	bottom	Dual NIC	
	Note: When cabling to MGate cards, the RJ-45 connectors are numbered from 1 to 3 on the NTRH40CA MPB96 board starting from the right side of the back panel (next to the power supplies).				
Three MPB96 (High Capacity)	Full size	FS_PCI-1	top	MPB96	MGate 1, 2, 3
		FS_PCI-2	middle	MPB96	MGate 4, 5, 6
		FS_PCI-3	bottom	MPB96	
	Note: 3 Mgate cards connect to 1 MPB96 When cabling to MGate cards, the RJ-45 connectors are numbered from 1 to 3 on the top NTRH40CA MPB96 board and from 4 to 6 on the middle NTRH40CA MPB96 board starting from the right side of the back panel (next to the power supplies)				
	Low profile	LP_PCI-1	top	RAID	
		LP_PCI-2	middle	Dual NIC	
		LP_PCI-3	bottom	Dual NIC	

Network connectivity

Introduction

This section describes how the 1005r server can be integrated into your network. The integration depends on the type of switch you are using.

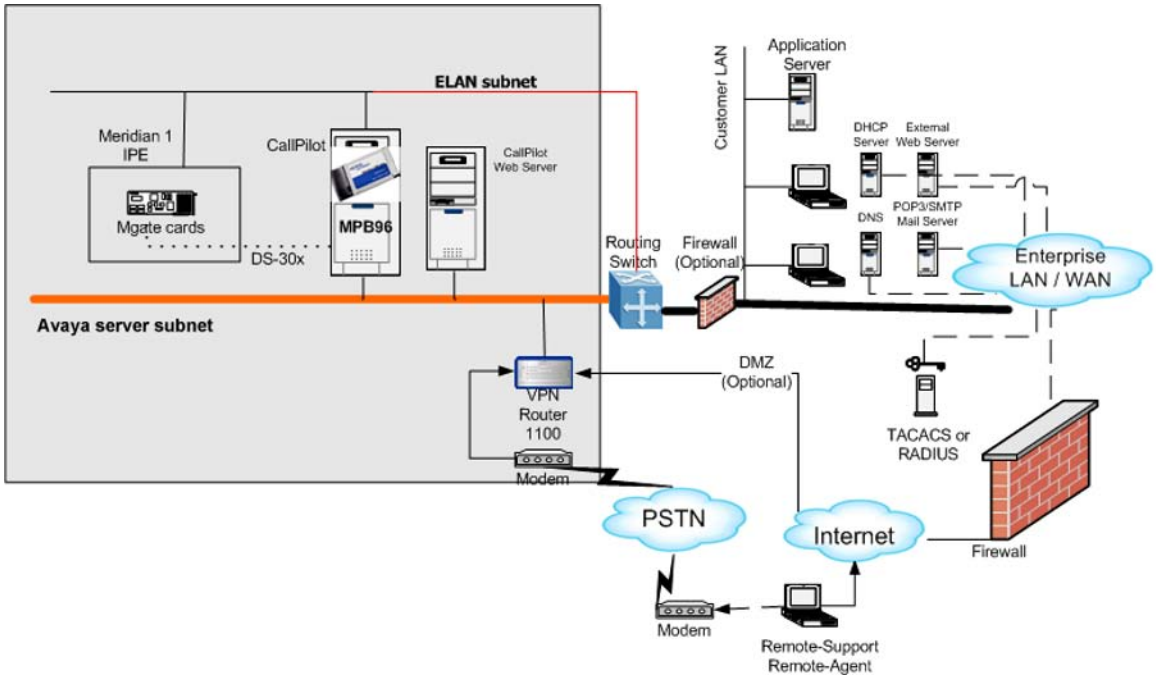
Important:

To secure the Avaya CallPilot server from unauthorized access, ensure that the CallPilot network is inside your organization's firewall.

Sample network setup: Meridian 1

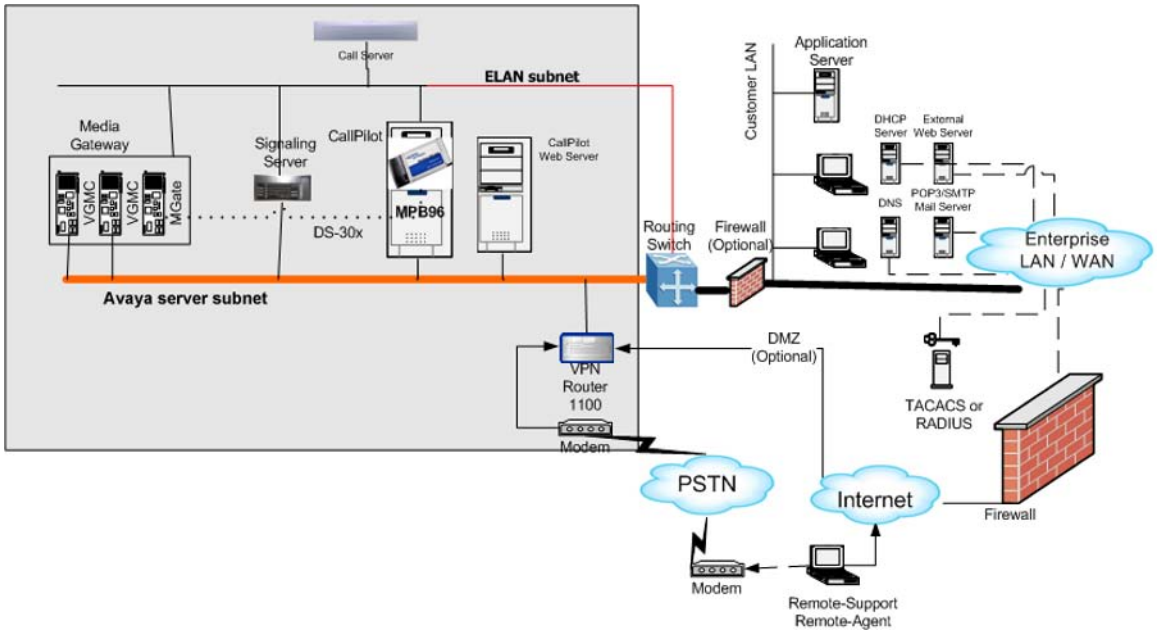
The following diagram shows a CallPilot server sample network setup with a Meridian 1 switch. The Meridian 1 switch can be one of the following:

- Option 11C or Option 11C Mini
- Option 51C
- Option 61C
- Options 81 and 81C



Sample network setup: Communication Server 1000

The following diagram shows a CallPilot server network setup with a Communication Server 1000 (CS 1000) system.



In the previous illustration, the telephony LAN (TLAN subnet) provides IP connectivity between the CS 1000 system and the i2004 Internet phonesets. The connection between the call server and media gateway can be point-to-point (or through the LAN), if the system is installed in a distributed data network.

For information about the CS 1000 system and i2004 Internet phoneset bandwidth and network requirements, refer to the Communication Server for Enterprise 1000 Planning and Installation Guide (553-3023-210).

Switch connectivity

For more details about how the 1005r server and switch connection is established, refer to the Installation and Configuration Task List (NN44200-306).

CallPilot ELAN subnet and Avaya server subnet setup

The 1005r server provides 10/100/1000Base-T Ethernet connectivity through NICs installed in the server. The function of the NIC varies based on switch connectivity, as follows:

Meridian 1 or Avaya Communication Server 1000 systems

- One NIC provides connectivity to the ELAN subnet. Connect the NIC labeled NIC2-NickP on the back of the server to the ELAN subnet.

  For information about the purpose and requirements of the ELAN subnet, see the *Planning and Engineering Guide* (NN44200-200).

- The second NIC, labeled NIC1-NickP can be connected to the Avaya server subnet.

  This optional NIC is required only for Meridian 1 or Avaya Communication Server 1000 systems that require a Avaya server subnet connection (in addition to the ELAN subnet connection). The Avaya server subnet provides data connectivity between desktop and Web messaging clients, Web-enabled administrative PCs, and the CallPilot server.

Network requirements

Appropriate networking equipment must be available for both the Avaya server subnet and ELAN subnet.

The Avaya server subnet and ELAN subnet must be properly configured for correct CallPilot operation. To ensure correct configuration, Avaya recommends that you consult a network specialist.

Remote access connectivity

Use one of the USB connectors on the rear of the 1005r server to connect to an external plug-and-play modem. The modem is used for remote administration and technical support.

RRAS is used to establish the remote access connection to the server. Use either RDC or pcAnywhere to communicate with the CallPilot server.

Supported peripheral devices

Introduction

This section identifies external devices that are supported by the 1005r server.

Device	Description
Modem	Use a 56-Kb/s external modem to provide remote access to the 1005r server. The modem connects to one of the USB connectors on the rear of the server. You cannot use a serial port modem.
Ethernet switch or hub	A 10Base-T Ethernet switch or hub provides the ELAN subnet connection between the 1005r server and the Meridian 1 switch or CS 1000 system. The customer can supply an Ethernet hub or switch from third-party vendors or from Avaya. Since the Ethernet switch or hub is an external device, it requires an AC power source. **Important:** To comply with EMC radiation requirements, a Class A Ethernet hub or switch must be located 10 m (33 ft) away from the 1005r server. Shielded Ethernet cables must be used.
Monitor, keyboard, and mouse	• VGA Monitor with Male DB-15 connector (customer supplied) Since the monitor is an external device, it requires its own AC power source. • Keyboard: (customer supplied) • Mouse: (customer supplied)
Tape drive	Use an external SCSI tape drive to back up your system. The Tandberg SLR 75 can be ordered with your system.

Customer Documentation Map

The following diagram shows the overall organization and content of the CallPilot documentation suite.

Table 2: CallPilot Customer Documentation Map

- Fundamentals
  - Avaya CallPilot® Fundamentals Guide (NN44200-100)
  - Avaya CallPilot® Library Listing (NN44200-117)
- Planning and Engineering
  - Avaya CallPilot® Planning and Engineering Guide (NN44200-200)
  - Avaya CallPilot® Network Planning Guide (NN44200-201)
  - Avaya Communication Server 1000 Converging the Data Network with VoIP Fundamentals (NN43001-260)
  - Solution Integration Guide for Avaya Communication Server 1000/CallPilot®/NES Contact Center/Telephony Manager (NN49000-300)
- Installation and Configuration
  - Avaya CallPilot® Upgrade and Platform Migration Guide (NN44200-400)
  - Avaya CallPilot® High Availability: Installation and Configuration (NN44200-311)
  - Avaya CallPilot® Geographic Redundancy Application Guide (NN44200-322)
  - Avaya CallPilot® Installation and Configuration Task List Guide (NN44200-306)
  - Avaya CallPilot® Quickstart Guide (NN44200-313)
  - Avaya CallPilot® Installer Roadmap (NN44200-314)
  - Server Installation Guides
    - Avaya CallPilot® 201i Server Hardware Installation Guide (NN44200-301)
    - Avaya CallPilot® 202i Server Hardware Installation Guide (NN44200-317)
    - Avaya CallPilot® 202i Installer Roadmap (NN44200-319)
    - Avaya CallPilot® 703t Server Hardware Installation Guide (NN44200-304)
    - Avaya CallPilot® 1002rp Server Hardware Installation Guide (NN44200-300)
    - Avaya CallPilot® 1002rp System Evaluation (NN44200-318)
    - Avaya CallPilot® 1005r Server Hardware Installation Guide (NN44200-308)
    - Avaya CallPilot® 1005r System Evaluation (NN44200-316)
    - Avaya CallPilot® 1006r Server Hardware Installation Guide (NN44200-320)
    - Avaya CallPilot® 600r Server Hardware Installation Guide (NN44200-307)
    - Avaya CallPilot® 600r System Evaluation (NN44200-315)

- Configuration and Testing Guides
  - Avaya Meridian 1 and Avaya CallPilot® Server Configuration Guide (NN44200-302)
  - Avaya T1/SMDI and Avaya CallPilot® Server Configuration Guide (NN44200-303)
  - Avaya Communication Server 1000 System and Avaya CallPilot® Server Configuration Guide (NN44200-312)
- Unified Messaging Software Installation
  - Avaya CallPilot® Desktop Messaging and My CallPilot Installation and Administration Guide (NN44200-305)

Administration

- Avaya CallPilot® Administrator Guide (NN44200-601)
- Avaya CallPilot® Software Administration and Maintenance Guide (NN44200-600)
- Avaya Meridian Mail to Avaya CallPilot® Migration Utility Guide (NN44200-502)
- Avaya CallPilot® Application Builder Guide (NN44200-102)
- Avaya CallPilot® Reporter Guide (NN44200-603)

Maintenance

- Avaya CallPilot® Troubleshooting Reference Guide (NN44200-700)
- Avaya CallPilot® Preventative Maintenance Guide (NN44200-505)
- Server Maintenance and Diagnostics
  - Avaya CallPilot® 201i Server Maintenance and Diagnostics Guide (NN44200-705)
  - Avaya CallPilot® 202i Server Maintenance and Diagnostics Guide (NN44200-708)
  - Avaya CallPilot® 703t Server Maintenance and Diagnostics Guide (NN44200-702)
  - Avaya CallPilot® 1002rp Server Maintenance and Diagnostics Guide (NN44200-701)
  - Avaya CallPilot® 1005r Server Maintenance and Diagnostics Guide (NN44200-704)
  - Avaya CallPilot® 1006r Server Maintenance and Diagnostics Guide (NN44200-709)
  - Avaya CallPilot® 600r Server Maintenance and Diagnostics Guide (NN44200-703)
  - Avaya NES Contact Center Manager Communication Server 1000/ Meridian 1 & Voice Processing Guide (297-2183-931)

End User Information

End User Cards

- Avaya CallPilot® Unified Messaging Quick Reference Card (NN44200-111)
- Avaya CallPilot® Unified Messaging Wallet Card (NN44200-112)
- Avaya CallPilot® A-Style Command Comparison Card (NN44200-113)
- Avaya CallPilot® S-Style Command Comparison Card (NN44200-114)
- Avaya CallPilot® Menu Interface Quick Reference Card (NN44200-115)
- Avaya CallPilot® Alternate Command Interface Quick Reference Card (NN44200-116)
- Avaya CallPilot® Multimedia Messaging User Guide (NN44200-106)
- Avaya CallPilot® Speech Activated Messaging User Guide (NN44200-107)
- Avaya CallPilot® Desktop Messaging User Guide for Microsoft Outlook (NN44200-103)
- Avaya CallPilot® Desktop Messaging User Guide for Lotus Notes (NN44200-104)
- Avaya CallPilot® Desktop Messaging User Guide for Novell Groupwise (NN44200-105)
- Avaya CallPilot® Desktop Messaging User Guide for Internet Clients (NN44200-108)
- Avaya CallPilot® Desktop Messaging User Guide for My CallPilot (NN44200-109)
- Avaya CallPilot® Voice Forms Transcriber User Guide (NN44200-110)

The Map was created to facilitate navigation through the suite by showing the main task groups and the documents contained in each category. It appears near the beginning of each guide, showing that guide's location within the suite.

Chapter 3: Preparing for installation

In this chapter

- Installation overview on page 25
- Unpacking the 1005r server on page 28
- Removing the front bezel on page 29

Installation overview

Introduction

This section provides an overview of the steps required to install the 1005r server and peripheral devices.

Installation checklist

The following checklist identifies the tasks that must be performed when installing the Avaya CallPilot® server. For detailed instructions, see Installing the server on page 31 When you are finished with the installation, continue with the *Installation and Configuration Task List* (NN44200-306).

Note:

If you are installing a High Availability system, follow this checklist for each server, with the exceptions listed on Installing a High Availability system on page 32

Step	Description	Check
1	Review the "Installing the Avaya CallPilot server" section in the *Installation and Configuration Task List* (NN44200-306), and completed stage 1 of the "Installation checklist."	☐
2	Unpack the server, and ensure you have all the items you need (see Unpacking the 1005r server on page 28). Complete the following checklists that are provided in the *Installation and Configuration Task List* (NN44200-306): • "CallPilot software media and documentation checklist" • "CallPilot server hardware checklist"	☐
3	Remove the front bezel and inspect the front panel (see pages Removing the front bezel on page 29).	☐
4	Place the 1005r server in the chosen location (see Installing the server on page 31).	☐
5	Replace the front bezel (see page To replace the front bezel on page 32).	☐
6	Connect the 1005r server and devices as follows:	
	Connect the monitor, keyboard, and mouse (see Connecting peripherals to the server on page 34).	☐
	Connect the modem (see To connect the modem to the server on page 35).	☐
	Connect the 1005r server to the ELAN Ethernet switch or hub (Meridian 1 or CS 1000 only) (see Connecting the server to the ELAN subnet on page 37). **Important:** To comply with EMC radiation requirements, a Class A Ethernet switch or hub must be located 10 m (33 ft.) away from the 1005r server. Shielded Ethernet cables must be used.	☐
	Note: If you are connecting the optional Avaya server subnet, do not power up unless your antivirus programs and Avaya security updates are installed first. Connect the 1005r server to the Avaya server subnet Ethernet switch or hub (optional) (see Connecting the server to the Avaya server subnet (optional) on page 38). **Important:** To comply with EMC radiation requirements, a Class A Ethernet switch or hub must be located 10 m (33 ft.) away	☐

Step	Description	Check
	from the 1005r server. Shielded Ethernet cables must be used.	
	Install the software feature dongle (see Installing the Avaya software feature dongle on page 39).	☐
	Connect the power cords for all devices, and then power them up.	☐
7	Start the 1005r server (see To start the server on page 46).	☐

Conventions for warnings

You could encounter the following types of warnings in this guide. Do not ignore them.

Voltage:

Risk of electric shock

Warns you of an immediate electrical hazard which, if not avoided, can result in shock, serious injury, or death.

Warning:

Risk of personal injury

Warns you of a situation in which you can be injured if instructions are not followed exactly as stated.

Caution:

Risk of equipment damage

Alerts you to situations where data can be lost or damaged, equipment can be damaged, actions can result in service interruption, and productive time can be lost.

Important:

Provides information that is essential to the completion of a task.

Unpacking the 1005r server

Introduction

Follow this procedure to unpack the server and peripherals.

Warning:
Risk of personal injury

The 1005r CallPilot server weighs approximately 20 kg (44 lb) when it is shipped from manufacturing. To prevent personal injury, have someone help you to unpack and position the server.

To unpack the equipment

1. **Important:**
   As you unpack each item, check it off against the packing list, as well as against the following checklists provided in the *Installation and Configuration Task List* (NN44200-306):
   - "CallPilot software media and documentation checklist"
   - "CallPilot server hardware checklist"

   Open the cardboard carton containing the server.
2. Remove the server from the carton; set it on a secure surface.
3. Open the cartons containing the monitor, keyboard, mouse, modem, and ELAN Ethernet switch or hub (if supplied), and set the peripherals aside.
4. Remove the dongle from the box and set it aside
5. Put all manuals, DVDs or CDs, operating system disks, and any disks for peripherals in a safe place.
6. Save all packing materials and cartons in case you must return any equipment to the carrier.

What is next?

Remove the front bezel cover so that you can inspect the front panel of the server. See Removing the front bezel on page 29.

Removing the front bezel

Introduction

To access the hard drives on the front panel, you must remove the front bezel.

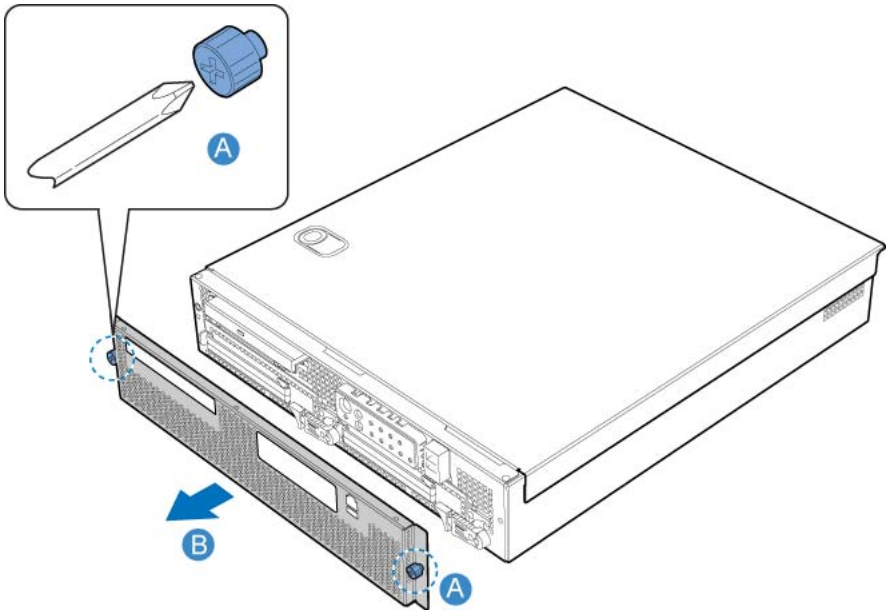
The front bezel covers the electrostatic discharge (ESD) connection, both hard drives, and the DVD/CD/CDRW drive pull handle. The control panel, USB port 2, and the front comm 2 serial port connection are not covered by the front bezel.

To remove the front bezel

1. **Caution:**
   Risk of equipment damage

   Do not attempt to move or lift the server before removing the front bezel; the server can disengage from the bezel and fall.

   Loosen the two black captive fasteners on either side of the front bezel.
2. Pull the front bezel off the front panel by the captive fasteners.



3. Do not touch components on the front panel without ESD protection. Attach an ESD strap to your wrist and connect it to a single point ground connection.

What is next?

Continue with Connecting the server to power on page 43.

Chapter 4: Installing the server and peripheral devices

In this chapter

Installing the server on page 31

Installing a High Availability system on page 32

Inspecting the modem on page 33

Connecting peripherals to the server on page 34

Connecting the server to the ELAN subnet on page 37

Connecting the server to the Avaya server subnet (optional) on page 38

Installing the Avaya software feature dongle on page 39

Installing the server

Introduction

Before you install the 1005r server, ensure that the chosen location meets the requirements identified on the "Site inspection checklist" provided in the *Installation and Configuration Task List* (NN44200-306).

To install the server

Place the 1005r server in its chosen location. If you are installing the server in a rack cabinet, follow the instructions provided with the slide rails.

Warning:

Do not connect the server to the power yet.

Important:

The 1005r server is supplied with industry standard 48.3 cm (19 in.) rack rails that can accommodate racks with a maximum depth of 61 cm (24 in.) between the mounting posts. Check the rack you are using and ensure that the Avaya supplied server rack rails are suitable for your specific installation requirements. For depths greater than 61 cm (24 in.), Avaya recommends that you purchase a third-party rack shelf that can safely hold up to 34 kg (75 lb.).

To replace the front bezel

When the Avaya CallPilot® server is in its final location, replace the front bezel.

1. Align the front bezel with the captive fasteners on either side of the front bezel with the threaded holes in the front panel.
2. Tighten the captive fasteners by hand.

What is next?

Connect peripheral devices as described in the remainder of this chapter.

Installing a High Availability system

The High Availability configuration is only supported on the 1005r platform.

In a High Availability configuration, a pair of peer Avaya CallPilot 1005r servers is used in the place of a single server. Both servers are connected to the same switch and are configured so that one CallPilot server is active (that is, processing calls) and the other is standing by, ready to take over for the first server if the active server fails due to a pre-determined failure condition. The High Availability feature supports both automatic failovers, where the software detects an error condition and triggers a failover to the standby server, and manual failovers which are administrator initiated.

For a High availability system, Avaya recommends that you install both servers on the same rack, preferably one server directly below the other. This allows for greater ease in administration. Clearly label each server for easy identification.

Follow the installation procedures in this document for each server, with the following exceptions:

- Do not connect the server to the Avaya Server Subnet, or the ELAN subnet until directed to do so in the Server and Switch Configuration guide.
- The two servers are delivered with only one dongle. It does not matter which server you connect the dongle to until you configure the servers.

For more information about the High Availability feature, see *High Availability: Installation and Configuration* (NN44200-311).

Inspecting the modem

Introduction

You require a modem to support remote dial-up access to the CallPilot server. Avaya technical support also connects to your CallPilot server for troubleshooting purposes. Avaya connects to your server only when you request technical assistance.

Required equipment

To install the modem, you need the following equipment:

- USB modem
- RJ-11 analog phone cord
- USB cable (supplied with the modem)
- analog line jack

Serial port modems with RS-232 connections are not supported on the 1005r.

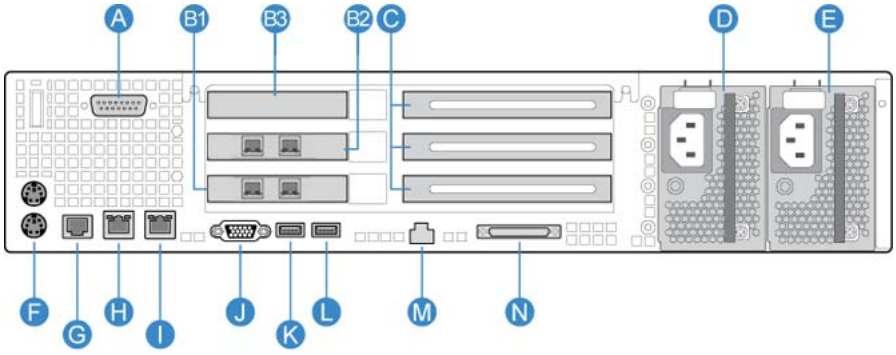
What is next?

Continue with Connecting peripherals to the server on page 34.

Connecting peripherals to the server

Rear panel connectors

The following diagram shows the connectors on the rear panel.



Label	Control or feature	Label	Control or feature
A	DB15 Telco alarm connector (not used)	G	Rear connection to Comm 2 serial port
B1	PCI card #3 dual NIC for HA configuration. For more information about HA, see High Availability: Installation and Configuration (NN44200-311).	H	RJ45 NIC 1 connector
B2	PCI card #2 dual NIC for High Availability (HA) configuration. For more information about HA, see High Availability: Installation and Configuration (NN44200-311).	I	RJ45 NIC 2 connector
B3	RAID	J	Video connector
C	PCI full-size card brackets. Numbered (1, 2, 3) from top to bottom.	K	USB 1
D	Power Supply 1	L	USB 0
E	Power Supply 2	M	Server management LAN port
F	PS/2 mouse and keyboard connectors	N	External SCSI tape drive

To connect the mouse, keyboard, and monitor to the server

1. Place the monitor, keyboard, and mouse in the same location as the server.
2. Plug the keyboard and mouse cables into the PS/2 connectors on the rear panel (see Rear panel connectors).
3. Plug the monitor into the video connector on the rear panel. Tighten the screws on the connector.
4. Ensure that a single-point ground reference is available for all the power outlets serving the CallPilot server and its peripherals. Before the CallPilot server installation, a qualified electrician must implement the single-point ground reference requirement between the power outlets of the CallPilot server and the power outlets of the switch.
5. Connect the power cord to the monitor and plug the other end into a wall receptacle or power bar.
6. Turn on the monitor.

To connect the modem to the server

1. Connect one end of the telephone cable to the modem RJ-11 jack labeled LINE.
2. Connect the other end of the telephone cable to the RJ-11 jack in the wall.
3. Connect one end of the USB cable into the modem.
4. Connect the other end of the USB cable into either USB port 1 on the rear panel (long term) or USB port 2 on the front panel (short term).

To connect the external SCSI tape drive

Note : The external SCSI tape drive is a plug and play device. For a High availability system you may wish to share one tape drive between the two servers.

1. Set the SCSI ID dial switch on the tape drive to SCSI ID 6.
2. With the power switch off, connect the external SCSI tape drive to the port labeled N on the rear panel. See Rear panel connectors.
3. Plug the tape drive into the same single-point ground and A/C power as the rest of the system.
4. Make sure the SCSI terminator is connected to the tape drive before powering on the tape drive.
5. Power on the tape unit.

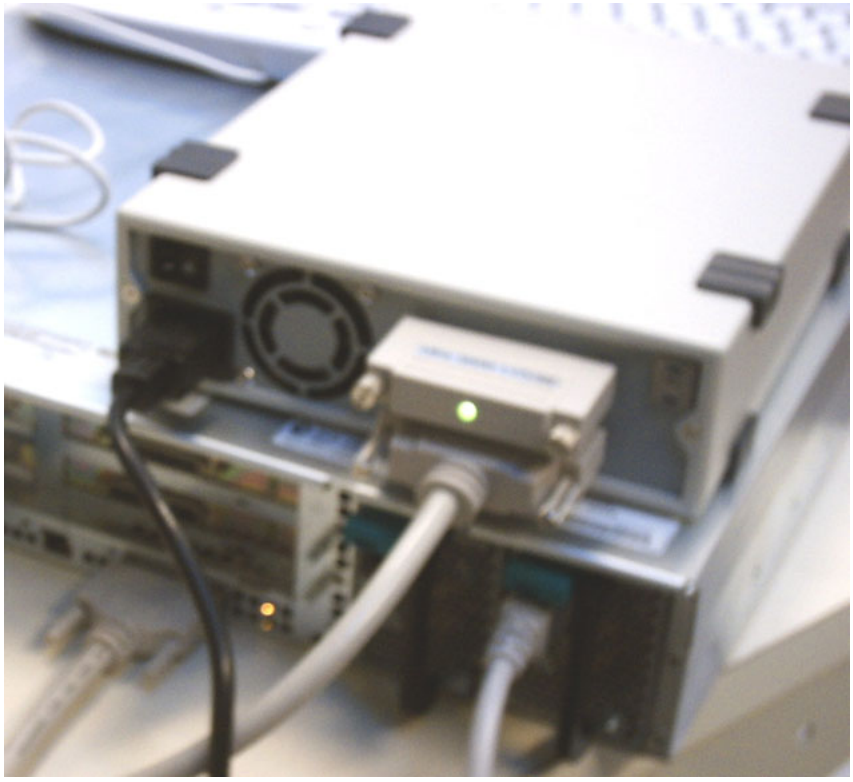


Figure 5: SLR75 tape drive installed on 1005r

6. The tape drive is plug-and-play and the required drivers are already installed on your system.
7. You must run the device scan initiation in device manager to detect the drive.
    a. Choose Start ? My Computer ?Properties ?Hardware ? Device Manager from the desktop.
    b. Select Action ? Scan for Hardware changes.
8. The tape drive is ready for use.

What is next?

Continue with Connecting the server to the ELAN subnet on page 37.

Connecting the server to the ELAN subnet

Introduction

Connect the CallPilot server to the Meridian 1 switch or Avaya Communication Server 1000 system using the ELAN subnet.

Note:

If you are installing a High Availability system, do not connect either sever to the ELAN subnet. The connection to the ELAN subnet is made when you configure the system.

Important:

For important considerations about using the ELAN subnet in your network, see the *Planning and Engineering Guide* (NN44200-200).

Important:

To comply with EMC radiation requirements, a Class A Ethernet switch or hub must be located 10 m (33 ft.) away from the 1005r server. You must use shielded Ethernet cables.

To connect the server to the ELAN subnet

1. See the diagram on page Rear panel connectors on page 34 to locate the ELAN Ethernet connector.
2. Connect an RJ-45 network cable from the ELAN Ethernet switch or hub to the ELAN connector on the server.

   Note:

   The ELAN Ethernet switch or hub is optional if you use a cross-over network cable to make a direct point-to-point connection from the server to the switch. However, if you choose to establish a direct point-to-point ELAN connection, no other device can connect to the ELAN subnet.
3. At the switch, connect the ELAN network cable to the ELAN Ethernet interface. Complete the connection from the transceiver to the switch.

   Danger:

   Risk of fire hazard

   Do not install a Media Access Unit (MAU) in ducts, plenums, or other spaces used for environmental air. Do not install a MAU above a false ceiling or below a

raised floor, unless you can confirm that these spaces are not used to convey environmental air.

What is next?

IF the server is	THEN
connected to an Avaya server subnet	continue with Connecting the server to the Avaya server subnet (optional) on page 38.
not connected to an Avaya server subnet	continue with installing the software feature dongle. See Installing the Avaya software feature dongle on page 39.

Connecting the server to the Avaya server subnet (optional)

Introduction

This section provides instructions to connect the server to the Avaya server subnet.

Note:

The Avaya server subnet is optional. However, it is required to support desktop and Web messaging users.

Note:

If you are installing a High Availability system, do not connect either sever to the Avaya Server Subnet. The connection to the Avaya Server Subnet is made when you configure the system.

Important:

To comply with EMC radiation requirements, a Class A Ethernet switch or hub must be located 10 m (33 ft.) away from the 1005r server. Shielded Ethernet cables must be used.

To connect the server to the Avaya server subnet

1. See the diagram on page Rear panel connectors on page 34 to locate the CLAN connection.
2. Connect an RJ-45 network cable from the Avaya server subnet Ethernet switch or hub to the CLAN connector.

What is next?

Continue with Installing the Avaya software feature dongle on page 39.

Installing the Avaya software feature dongle

Introduction

The software feature key is a security device that stores the unique serial number of the server. The feature key is embedded in the Avaya software feature dongle, which plugs into USB port 0 on the rear panel.

Note:
Only one dongle is shipped with a pair of High Availability servers. It doesn't matter which server you install the dongle in until you configure the servers later on.

The following diagram shows the dongle plugged into the back panel of the server:



Figure 6: Dongle installed on the server.

To install the software feature dongle

1. Ensure that there is nothing plugged into USB port 0 on the rear panel.
2. If the software feature key is not preinstalled in the dongle, insert it into the software feature slot on the dongle. Insert the software feature key with the data contact facing down and away from the embossed i. See Figure 8: Installing the. feature key. on page 41.



Figure 7: Dongle without feature key

3. To eject a software feature key, insert a straightened paper clip into the side access hole.

   Push the paper clip in the direction of the software feature key.

   Note:

   In the following figure, label 1 is the data contact, and label 2 is the ground.

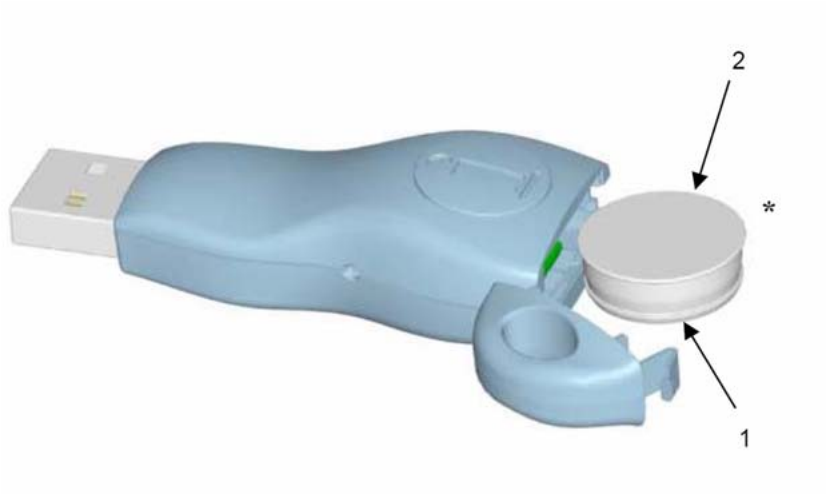


Figure 8: Installing the. feature key.

4. Plug the dongle into USB port 0 on the rear panel of the server.

Note:

Due to system driver allocations, the dongle must be installed in USB port 0.

What is next?

Continue with Connecting the server to power on page 43.

Chapter 5: Connecting the server to power

In this chapter

- Safety precautions on page 43
- Locating the power supply modules on page 44
- About the power supply module on page 44
- Connecting the server to power on page 45

Safety precautions

Equipment handling guidelines

External power equipment, such as an uninterruptible power supply (UPS), is usually very heavy. This equipment requires special handling procedures and additional personnel for unloading and installation. Be aware of weight distribution, and prevent the equipment room floor from being overly stressed.

Safety information



Voltage:

Risk of electric shock

Procedures involving electrical connections must only be performed by qualified personnel.

Ensure that you obey all displayed warning notices on power equipment and connections.

Locating the power supply modules

Introduction

Both AC power supply modules are installed prior to shipping. The following diagram shows the location of the power supply modules in the rear panel (D and E):

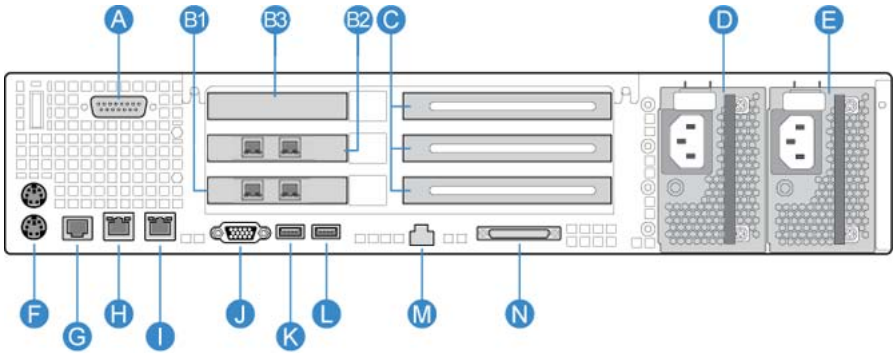


Figure 9: 1005r rear panel

About the power supply module

After you power up the server (later in this guide), the power supply module LED indicates its status.

A green LED on each power supply module indicates that the modules are working properly. If the LEDs are unlit or red, the module is failing or has failed. A problem with a power supply module is also indicated if the PWR or MJR LED on the front of the server turns red.

Rack power and grounding

To ensure a complete power and grounding installation:

- In rack-mount server installations, ensure the Avaya CallPilot® server chassis and equipment racks are isolated from other foreign sources of ground. Acceptable isolation

methods include: isolation pads, grommeted washers, chassis side-rail strips, and nonconducting washers.

- In rack-mount server installations where other equipment is also installed in the same rack, ensure that all equipment derives ground from the same service panel as Avaya CallPilot and the switch.

Connecting the server to power

Before you begin

Ensure that proper power and grounding are available for all the power outlets serving the CallPilot server and its associated peripherals. Power for these devices must be wired and fused independently of all other receptacles, and referenced to the same ground as the PBX system.

A qualified electrician must implement the single-point ground reference as required between the power outlets of the CallPilot server and the power outlets of the switch.

Provide a sufficient number of properly grounded power outlets or power bars for all equipment. For more information, refer to grounding and power requirements in this document and in the Planning and Engineering Guide (NN44200-200).

The single-point ground (SPG) required by the system can be an isolated ground (IG) bus or AC equipment ground (ACEG) bus in the service panel or transformer. The system must be connected to safety ground or protective earth in accordance with NEC requirements. For international use, the system must be connected to safety ground/protective earth in accordance with Paragraph 2.5 of EN60950/IEC950.

Note:

See Large System: Planning and Engineering (553-3021-120) for a complete description of approved ground sources and methods. Insulated ground wire must be used for system grounding.

Before you connect the server to the power source, review the following diagram to ensure that all peripheral hardware devices are in place.

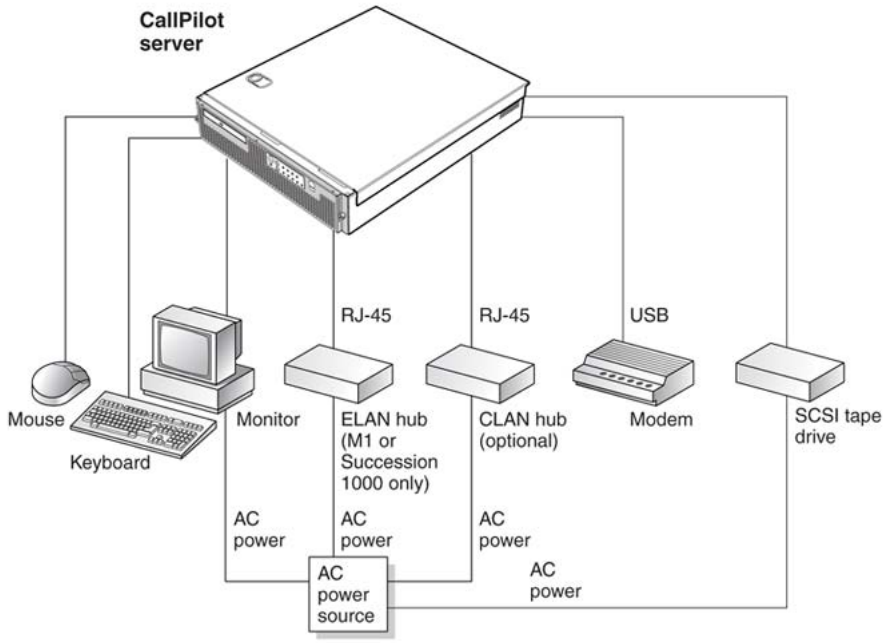


Figure 10: 1005r server in a network.

To connect the 1005r AC server to power

1. **Warning:**

   Risk of personal injury, risk of hardware failure

   The power outlets used by the CallPilot server and its peripheral devices must be connected to the same single-point ground reference as the one used by the switch with MGate cards connected to the CallPilot server. If this requirement is not met, power transients can cause personal injury, hardware failure, or both. See the Installation and Configuration Task List (NN44200-306) for more information about single-point grounding requirements.

   Plug the server AC power cords into the server rear panel.

2. Plug the other ends into an approved wall receptacle or power bar.

To start the server

1. Press the server power switch to start the server.
2. Observe the Power-On Self Test (POST) and initialization messages on the monitor.
3. Let the mini-setup sequence run until you are prompted to log on to the operating system.

   Note:

   The system can perform multiple reboots. This is normal.

4. Ensure that the operating system logon window appears on the monitor.

Note:

If the logon window does not appear, see the 1005r Server Maintenance and Diagnostics (NN44200-704) guide for troubleshooting instructions.

5. Log into Windows.
6. CallPilot Manager wizard starts automatically.
7. Use the wizard to configure your system. For further details, see the Installation and Configuration Task List (NN44200-306).

Chapter 6: EMC emission level protection for the 1005r Server

To lower the EMC emission level, ferrite cores are installed with one loop (see the following diagram) on the following external cables:

Ferrite Core (TDK and part number ZCAT3035-1330)—for the triple DS30X I/O cable (Avaya and part number NTRH2014E6). There are three ferrite cores at each end of the cable.

Caution:

Risk of equipment damage

The ferrite cores are preinstalled on the provided cables. It is not your responsibility to attach these ferrite cores to these cables. However, you must ensure that these ferrite cores are in place to keep the EMC emission levels low.

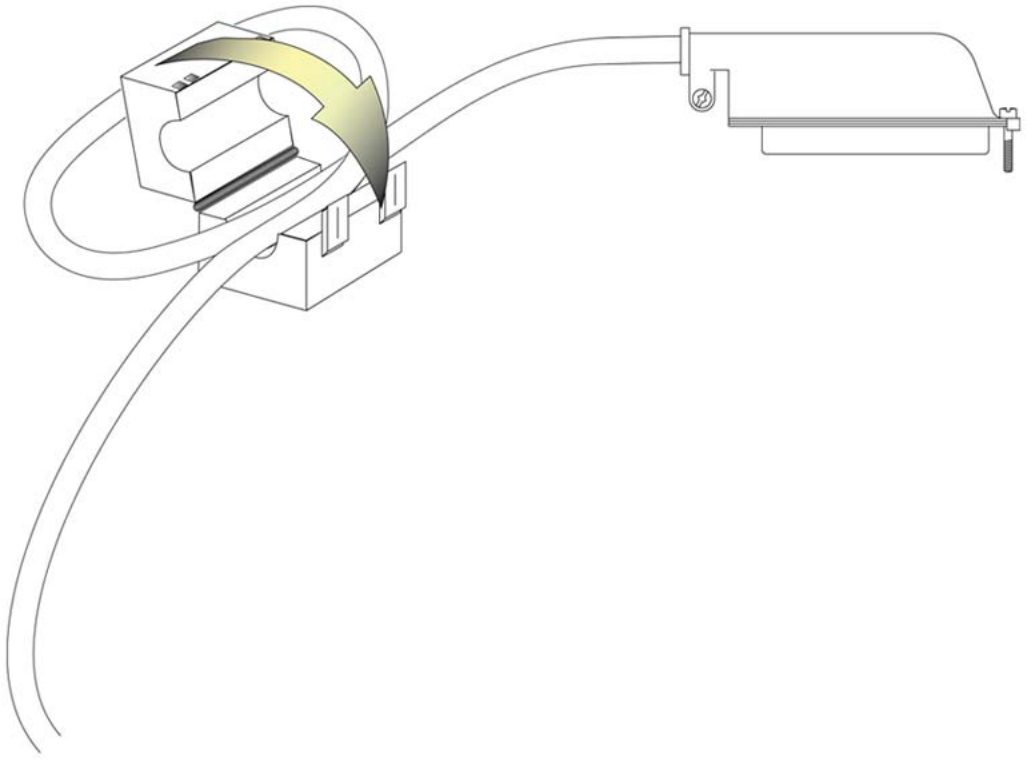


Figure 11: Ferrite cores secured to an external cable

The ferrite cores are secured to the appropriate cable with plastic enclosure clips. Tie wraps are added to the cable loop.

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