



# **Maintaining and Troubleshooting the Dell™ PowerEdge™ R610 Server**

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# Chapter 1: Maintaining and Troubleshooting the Dell™ PowerEdge™ R610 Server

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## Introduction

The Avaya Common Servers category includes the Dell™ PowerEdge™ R610 1U server that supports several Avaya software solutions, some requiring additional hardware and memory requirements beyond the standard configuration. This book covers the standard configuration only—consult specific Avaya product documentation for application-specific or solution-specific server configurations.

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## How to use this document

This guide contains information for maintaining and troubleshooting the Dell R610 Server as part of an Avaya deployment and provides:

- Instructions for how to find the appropriate online server documentation from Dell
- References to specific topics in standard Dell documentation
- Suggested changes, details, and notes to assist the user in interpreting the manufacturer's documentation and to clarify Avaya's recommended implementation of the equipment
- Additional topics not covered in standard Dell documentation but which are necessary for maintaining and troubleshooting the Avaya installation

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## Downloading Dell documentation

Use this procedure to find and download the Dell™ PowerEdge™ R610 documentation from Dell.

- 
1. Open a browser and go to <http://www.support.dell.com/>.
  2. On the Welcome to Dell Support page click on the `Start Here` button in the Support for Enterprise IT section.
  3. On the Welcome to Enterprise IT Support click on `Select a product` in the Product Support section.
  4. On the next page click on `Select Model` in the Choose a Model section.
  5. On the Select Product by Model page, click on `Servers, Storage, Networking`.
  6. On the Select Product by Model > Server, Storage, Networking page use the scroll bar in the Select Your Product Line column and click on `PowerEdge Server`.
  7. On the Select Product by Model > Server, Storage, Networking > PowerEdge Server page, use the scroll bar in the Select Your Product Model column and click on `R610`.
  8. On the Select Product by Model > Server, Storage, Networking > PowerEdge Server > R610 page, click on the `Confirm` button in the Confirm your selection section.
  9. On the Product Support for PowerEdge R610 page click on `Manuals and Documentation`.
  10. On the Dell™ PowerEdge™ R610 System page, click the `Download` link that corresponds to the document that you want to download.
  11. Download the documents in the *Dell R610 document set* > *Documents to download* section below.
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## Dell R610 documentation set

Refer to the documents listed below for Dell R610 server installation information and procedures.

 **Note:**

Download the documents listed in the *Documents to download* section below. Printed copies of the documents listed in the *Documents included in the shipping container* section below ship with the server.



## Documents to download

Abbreviation	Title	Part number
CMAI	Cable Management Arm Installation	0F880KA00
GS	Getting Started With Your System	R465D
HOM	Hardware Owner's Manual	No number
RI-SR	Rack Installation (Sliding Rails)	0J171KA00

### Note:

If you want to locate and download an individual document:

- Go to <http://www.dell.com/>.
- Type R610 plus the keywords of the document title in the Search field in the upper-right corner and press **Enter**.

Examples:

- Type R610 `Technical Guidebook` to search for the *Technical Guidebook* document.
- Type R610 `Getting Started` to search for the *Getting Started with your System* document.


## Documents included in the shipping container




Abbreviation	Title	Part number
PS	Product Safety, EMC & Environmental Datasheet	No number
TG	Technical Guidebook	No number

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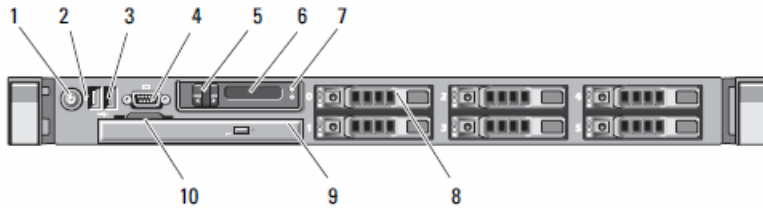
## General troubleshooting

The references listed below contain general troubleshooting information.


Topic	Reference	Avaya recommendation
System features and diagnostics that are accessible during startup	HOM: <i>Access System Features During Startup</i>	 <b>Caution:</b> Only performed when requested by Avaya Support personnel.





Topic	Reference	Avaya recommendation
		 <b>Note:</b> Keyboard, monitor, and mouse are required.
LCD panel	HOM: <i>LCD Panel Features</i>	
LCD status messages	HOM: <i>LCD Status Messages</i>	See <i>LCD status message explanations</i> in this document for recommended resolutions.
System messages	HOM: <i>System Messages</i>	 <b>Caution:</b> For advanced troubleshooting only—consult Avaya Services.   <b>Note:</b> Keyboard, monitor, and mouse are required.

## Front panel troubleshooting indicators



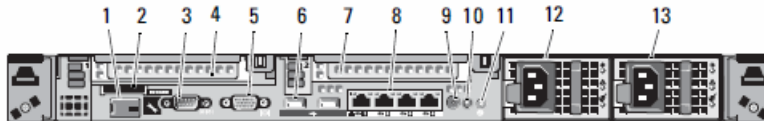
Use the front panel indicators listed to troubleshoot server components:

No.	Description	Avaya recommendation
1	Power-on indicator, power button	Indicates when the system power is on. The power button controls the DC power supply output to the system.   <b>Note:</b> Consult individual application/solution documentation for detailed shutdown procedures.

No.	Description	Avaya recommendation
		<p> <b>Note:</b> To force an ungraceful shutdown, press and hold the power button for five (5) seconds.</p> <p> <b>Caution:</b> Not recommended for products/solutions that use System Platform.</p>
2	NMI button	<p>Used to troubleshoot software and device driver errors when using certain operating system. This button can be pressed using the end of a paper clip.</p> <p> <b>Caution:</b> Not recommended for products/solutions that use System Platform. Use this button only if directed to do so by qualified support personnel.</p>
3	USB connectors (2)	
4	Video connector	
5	LCD menu buttons	Allows you to navigate to the control panel LCD menu.
6	LCD Panel	<p>Provides system ID, status information, and system error messages. LCD background color indicates these conditions:</p> <ul style="list-style-type: none"> <li>• <b>Blue:</b> normal system operation</li> <li>• <b>Amber:</b> system needs attention</li> </ul> <p>LCD panel displays errors codes and descriptive tests.</p>
7	System identification button	<p>Turns the system ID modes on and off. The identification buttons on the front and back panels can be used to locate a particular system within a rack. When one of these buttons is pushed, the LCD panel on the front and the system status indicator on the chassis back panel flash blue until one of the buttons is pushed again.</p> <p> <b>Note:</b> Some applications/solutions use this light for additional functionality.</p>


No.	Description	Avaya recommendation
8	Hard drives	Servers ship with two or more hard disk drives, depending upon product requirements.
9	Optical drive	
10	System identification panel	A slide-out panel for system information including the Express Service tag, embedded NIC MAC address, and iDRAC6 Express card MAC address. Space is provided for an additional label.

## Rear panel troubleshooting indicators



Use the rear panel indicators listed to troubleshoot server components:

No.	Description	Avaya recommendation
1	iDRAC6 Enterprise/Express port (optional)	Dedicated management port for the optical iDRAC6 Enterprise/Express card.
2	VFlash media slot (optional)	Connects an external SD memory card for the optional iDRAC6 Enterprise/Express card.
3	Serial connector	
4	PCIe slot 1	Consult application/solution documentation for specific behavior of the optional card in this slot.
5	Video connector	
6	USB connectors (2)	
7	PCIe slot 2	Consult application/solution documentation for specific behavior of the optional card in this slot.
8	Ethernet connectors (4)	
9	System status indicator connector	
10	System status indicator	Provides a power on indicator for the back of the system.

No.	Description	Avaya recommendation
11	System identification button	<p>Turns the system ID modes on and off. The identification buttons on the front and back panels can be used to locate a particular system within a rack. When one of these buttons is pushed, the LCD panel on the front and the system status indicator on the chassis back panel flash blue until one of the buttons is pushed again.</p> <p> <b>Note:</b> Some applications/solutions use this light for additional functionality.</p>
12	Power supply 1 (PS1)	
13	Power supply 2 (PS2)	

## Troubleshooting external server components

Use the checklist below to troubleshoot any of the following external server components:

Part number	Description	Hot-swappable?
700501316	R610 SRVR 146GB 10K SAS 2.5" HDD	Y
700501317	R610 SRVR 146GB 15K SAS 2.5" HDD	Y
700501315	R610 SRVR 300GB 10K SAS 2.5" HDD	Y
700501421	R610 SRVR 600GB 10K SAS 2.5" HDD	Y
700501183	R610 SRVR AC PWR SUP 502W ES	Y, if redundant
700501311	R610 SRVR AC PWR SUP 717W	Y, if redundant

No.	Task	Reference	Avaya recommendation	✓
1	Visually check for hardware LED fault indicators:			
	<ul style="list-style-type: none"> <li>• R610 SRVR 146GB 10K SAS 2.5" HDD</li> <li>• R610 SRVR 146GB 15K SAS 2.5" HDD</li> </ul>	HOM: <i>Hard Drive Indicator Patterns for RAID</i> TG: <i>Storage</i>	If the HDD LED indicates a problem, consult the appropriate troubleshooting information.	

No.	Task	Reference	Avaya recommendation	✓
	<ul style="list-style-type: none"> <li>• R610 SRVR 300GB 10K SAS 2.5" HDD</li> <li>• R610 SRVR 600GB 10K SAS 2.5" HDD</li> </ul>			
	<ul style="list-style-type: none"> <li>• R610 SRVR AC PWR SUP 502W ES</li> <li>• R610 SRVR AC PWR SUP 717W</li> </ul>	HOM: <i>Power Indicator Codes</i> TG: <i>Power Supply Indicators</i>	If the LEDs indicate a problem, consult the appropriate troubleshooting information.	
2	If the hardware LED indicates a problem, consult the appropriate troubleshooting information:			
	<ul style="list-style-type: none"> <li>• R610 SRVR 146GB 10K SAS 2.5" HDD</li> <li>• R610 SRVR 146GB 15K SAS 2.5" HDD</li> <li>• R610 SRVR 300GB 10K SAS 2.5" HDD</li> <li>• R610 SRVR 600GB 10K SAS 2.5" HDD</li> </ul>	HOM: <i>Troubleshooting Hard Drives</i>	<ul style="list-style-type: none"> <li>• Inspect LEDs and LCD display output.</li> <li>• If the LED flashes green, then amber, then off (in that order), replace the HDD.</li> <li>• If the LED blinks amber, replace the HDD.</li> </ul>	
	<ul style="list-style-type: none"> <li>• R610 SRVR AC PWR SUP 502W ES</li> <li>• R610 SRVR AC PWR SUP 717W</li> </ul>	HOM: <i>Troubleshooting Power Supplies</i>		
3	If the part is defective, see <i>Replacing external server components</i> .			

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## Troubleshooting internal server components

Use the checklist below to troubleshoot any of the following internal server components:

Part number	Description
700501323	R610 SRVR DUAL PORT 1GB NIC
700501422	R610 SRVR DVD-RW DRIVE W/ BRKT
700501423	R610 SRVR FAN FRU
700501320	R610 SRVR 2GB MEMORY DIMM
700501320	R610 SRVR 4GB MEMORY DIMM
700501325	R610 SRVR RAID BATTERY

No.	Task	Reference	Avaya recommendation	✓
1	Visually check for hardware LED fault indicators:			
	• R610 SRVR DUAL PORT 1GB NIC	TG: <i>NIC Indicators</i>	If the hardware LED indicates a problem, consult the appropriate troubleshooting information.	
	• R610 SRVR DVD-RW DRIVE W/ BRK	HOM: <i>Optical Drive</i>		
	• R610 SRVR FAN FRU	HOM: <i>Cooling Fans</i>		
	• R610 SRVR 2GB MEMORY DIMM • R610 SRVR 4GB MEMORY DIMM	HOM: <i>System Memory</i>		
	• R610 SRVR RAID BATTERY	HOM: <i>RAID Battery</i>		
2	If the hardware LED indicates a problem, consult the appropriate troubleshooting information:			
	• R610 SRVR DUAL PORT 1GB NIC	HOM: <i>Troubleshooting a NIC</i>	Check NIC indicator LEDs. If problem persists, order replacement NIC.	
	• R610 SRVR DVD-RW DRIVE W/ BRK	HOM: <i>Troubleshooting an Optical Drive</i>	If problem persists, order replacement drive.	
	• R610 SRVR FAN FRU	HOM: <i>Troubleshooting a Fan</i>	If problem persists, order replacement fan.	

No.	Task	Reference	Avaya recommendation	✓
	<ul style="list-style-type: none"> <li>• R610 SRVR 2GB MEMORY DIMM</li> <li>• R610 SRVR 4GB MEMORY DIMM</li> </ul>	HOM: <i>Troubleshooting System Memory</i>	If problem persists, order replacement memory.	
	• R610 SRVR RAID BATTERY	HOM: <i>RAID Battery</i>	Keyboard, monitor, and mouse required for advanced troubleshooting.	
3	If the part is defective, see <i>Replacing internal server components</i> .			

## Replacing external components

Use the checklist below to replace any of the following external server components:

Part number	Description	Hot-swappable?
700501316	R610 SRVR 146GB 10K SAS 2.5" HDD	Y
700501317	R610 SRVR 146GB 15K SAS 2.5" HDD	Y
700501315	R610 SRVR 300GB 10K SAS 2.5" HDD	Y
700501421	R610 SRVR 600GB 10K SAS 2.5" HDD	Y
700501183	R610 SRVR AC PWR SUP 502W ES	Y, if redundant
700501311	R610 SRVR AC PWR SUP 717W	Y, if redundant

 **Note:**

Hard disk drives and redundant power supplies are hot-swappable; you do not have to power down the server. Replacing a power supply usually does not require removing the server from the rack unless cables or other obstructions prevent removing and replacing the power supply.

No.	Task	Reference	Avaya recommendation	✓
1	Power down server (if necessary)		Determine whether the replaceable component is hot-swappable.	



No.	Task	Reference	Avaya recommendation	✓
2	Slide the server out of the rack (if necessary)	RI-SR CMAI: <i>Moving the CMA Away from the CMA Tray</i>	Ensure that the Cable Management Arm (if present) moves freely out of the way of rear panel components.	
3	Replace the component:			
	<ul style="list-style-type: none"> <li>• R610 SRVR 146GB 10K SAS 2.5" HDD</li> <li>• R610 SRVR 146GB 15K SAS 2.5" HDD</li> <li>• R610 SRVR 300GB 10K SAS 2.5" HDD</li> <li>• R610 SRVR 600GB 10K SAS 2.5" HDD</li> </ul>	HOM: <i>Hard drives</i>		
	<ul style="list-style-type: none"> <li>• R610 SRVR AC PWR SUP 502W ES</li> <li>• R610 SRVR AC PWR SUP 717W</li> </ul>	HOM: <i>Power supplies</i>	Ensure that the replacement power supply matches the specifications of the defective power supply.	
4	Slide the server into the rack (if necessary)	RI-SR	Ensure that the Cable Management Arm (if present) moves freely out of the way of rear panel components.	
5	Connect the power cable(s) to the power supply (if necessary)	GS: <i>Connecting the Power Cables</i> GS: <i>Securing the Power Cord</i>		
6	Power up the server (if necessary)	GS: <i>Turning on the System</i>		

## Replacing internal components


Use the checklist below to replace any of these internal server components:



Part number	Description
700501323	R610 SRVR DUAL PORT 1GB NIC

Part number	Description
700501422	R610 SRVR DVD-RW DRIVE W/ BRKT
700501423	R610 SRVR FAN FRU
700501320	R610 SRVR 2GB MEMORY DIMM
700501320	R610 SRVR 4GB MEMORY DIMM
700501325	R610 SRVR RAID BATTERY

 **Note:**

Although not used frequently, Avaya customers are required to have a monitor, keyboard, and mouse available for use by installation and/or servicing technicians.

No.	Task	Reference	Avaya recommendation	✓
1	Have the proper tools	HOM: <i>Recommended Tools</i>		
2	Observe safety warnings	HOM: <i>Safety First—For You and Your System</i>		
3	Power down server			
4	Slide the server out of the rack	RI-SR		
5	Remove the cover	HOM: <i>Opening and Closing the System</i>	 <b>Electrostatic alert:</b> Ensure that you are properly grounded before handling internal components.	
6	Replace the component:			
	• R610 SRVR DUAL PORT 1GB NIC	HOM: <i>Expansion Cards</i>	Mark any external cables connected to the NIC and reconnect to the same ports after the NIC is replaced.	
	• R610 SRVR DVD-RW DRIVE W/ BRKT	HOM: <i>Optical Drive</i>	In the <i>Removing an Optical Drive</i> section perform steps 2–5 only. In the <i>Installing an Optical Drive</i> section	

No.	Task	Reference	Avaya recommendation	✓
			perform steps 2–6, 8, and 10 only.	
	• R610 SRVR FAN FRU	HOM: <i>Cooling Fans</i>	 <b>Caution:</b> Do not attempt to hot-swap a fan.	
	• R610 SRVR 2GB MEMORY DIMM • R610 SRVR 4GB MEMORY DIMM	HOM: <i>System Memory</i>	Consult server cover label for memory placement. Consult application/solution documentation for specific procedures.	
	• R610 SRVR RAID BATTERY	HOM: <i>RAID Battery</i>	Remove the battery from the cable. Do not replace the battery cable unless it is defective.   <b>Note:</b> Monitor, keyboard, and mouse might be necessary for server reboot.	
7	Replace the cover	HOM: <i>Opening and Closing the System</i>		
8	Slide the server into the rack	RI-SR	Ensure that the Cable Management Arm (if present) moves freely out of the way of rear panel components.	
9	Connect and secure the power cords	GS: <i>Connecting the Power Cables</i> GS: <i>Securing the Power Cord</i>		
10	Power up the server	GS: <i>Turning on the System</i>		


## LCD status message explanations

LCD status codes, the associated text, the likely cause(s) for the error code, and the corrective action are listed below. When escalation is the corrective action, contact Avaya if you have a maintenance contract with Avaya or contact the Avaya business partner from whom you purchased the server. If the escalation requires replacing a field replaceable unit (FRU), see:

- *Replacing external server components*
- *Replacing internal server components*

Code	Text	Causes	Corrective action
N/A	AVAYA	AVAYA displays when: <ul style="list-style-type: none"> <li>• The system is powered on.</li> <li>• The power is off and active POST errors are displayed.</li> </ul>	This message is for information only.
E1000	FAILSAFE, Call Support		Escalate for possible server replacement.
E1114	Temp Ambient	Ambient system temperature is out of acceptable range.	Check room temperature and external air flow. If both are within acceptable limits, then escalate for possible server replacement.
E1116	Temp Memory	Memory has exceeded acceptable temperature and has been disabled to prevent damage to the components.	Check room temperature and external air flow. If both are within acceptable limits, then escalate for possible server replacement.
E12nn	xx PwrGd	Specified voltage regulator has failed.	Escalate for possible server replacement.
E1210	CMOS Batt	CMOS battery is missing, or the voltage is out of acceptable range.	Shut down server for 1 hour and disconnect the power supply. If problem continues, escalate for possible server replacement.
E1211	ROMB Batt	RAID battery is either missing, bad, or unable to recharge due to thermal issues.	Check room temperature and external air flow. If both are within acceptable limits, then escalate for possible server replacement.

Code	Text	Causes	Corrective action
E1216	3.3V Regulator failure	3.3V voltage regulator has failed.	See HOM: <i>Troubleshooting Expansion Cards</i> . Turn off the system and attached peripherals. Power down system and unplug power cord. Open system and ensure that expansion card riser and expansion card are firmly seated. Close system, power up. If trouble persists, replace card.
E1229	CPU # VCORE	Processor # VCORE voltage regulator has failed.	Escalate for possible server replacement.
E122A	CPU # VTT Regulator failure	Specified processor VTT voltage regulator has failed	Replace the server.
E122C	CPU Power Fault	A power fault was detected when powering up the processor(s).	Remove AC power to the system for 10 seconds and restart the system.
E122D	Memory Regulator # Failed	One of the memory regulators has failed.	Reseat the memory modules.
E122E	On-board regulator failed.	One of the on-board voltage regulators failed.	Remove AC power to the system for 10 seconds and restart the system.
E1310	RPM Fan ##	RPM of specified cooling fan is out of acceptable operating range.	Check room temperature and external air flow. If both are within acceptable limits, then escalate for possible server replacement.
E1311	RPM Fan Mod #x	RPM of fan x in the # module is out of acceptable operating range.	Check room temperature and external air flow. If both are within acceptable limits, then escalate for possible server replacement.
E1313	Fan Redundancy	The system is no longer fan-redundant. Another fan failure will put the system at risk of over-heating.	Check room temperature and external air flow. If both are within acceptable limits, then escalate for possible server replacement. Check control panel LCD for additional scrolling messages.

Code	Text	Causes	Corrective action
E1410	CPU # IERR	Specified microprocessor is reporting an internal error.	Escalate for possible server replacement.
E1414	CPU # Thermtrip	Specified microprocessor is out of acceptable temperature range and has halted operation.	<p>Check room temperature and external air flow. If both are within acceptable limits, then escalate for possible server replacement.</p> <p> <b>Note:</b> The LCD continues to display this message until the system's power cord is disconnected and reconnected to the AC power source.</p>
E1418	CPU # Presence	Specified processor is missing or bad, and the system is in an unsupported configuration.	Escalate for possible server replacement.
E141C	CPU Mismatch	Processors are in an unsupported configuration.	Run server diagnostics. This requires a keyboard and monitor.
E141F	CPU Protocol	The system BIOS has reported a processor protocol error.	Escalate for possible server replacement.
E1420	CPU Bus PERR	The system BIOS has reported a processor bus parity error.	Escalate for possible server replacement.
E1422	CPU Machine Chk	The system BIOS has reported a machine check error.	Escalate for possible server replacement.
E1610	PS # Missing	No power is available from the specified power supply; specified power supply is improperly installed or faulty.	Escalate for possible power supply replacement.
E1614	PS # Status	No power is available from the specified power supply; specified power supply is improperly installed or faulty.	Escalate for possible power supply replacement.

Code	Text	Causes	Corrective action
E1618	PS # Predictive	Power supply voltage is out of acceptable range; specified power supply is improperly installed or faulty.	Escalate for possible power supply replacement.
E161C	PS # Input Lost	Power source for specified power supply is unavailable, or out of acceptable range.	Check the AC power source for the specified power supply. Escalate for possible power supply replacement.
E1620	PS # Input Range	Power source for specified power supply is unavailable, or out of acceptable range.	Escalate for possible power supply replacement.
E1624	PS Redundancy	The power supply subsystem is no longer redundant. If the last supply fails, the system will go down.	Escalate for possible power supply replacement.
E1626	Power Supply Mismatch	The power supplies in the system are not the same wattage.	Ensure that power supplies with matching wattage are installed.
E1629	Power required > PSU wattage.	The system configuration requires more power than the power supplies can provide, even with throttling.	Turn off power to the system, reduce the hardware configuration or install higher-wattage power supplies, and then restart the system.
E1710	I/O Channel Chk	The system BIOS has reported an I/O channel check.	Escalate for possible server replacement.
E1711	PCI PERR B## D## F##	reported a PCI parity error on a component that resides in PCI configuration space at bus ##, device ##, function ##.	Escalate for possible server replacement.
	PCI PERR Slot #	The system BIOS has reported a PCI parity error on a component that resides in the specified PCI slot.	
E1712	PCI SERR B## D## F##	The system BIOS has reported a PCI system error on a component	Escalate for possible server replacement.

Code	Text	Causes	Corrective action
		that resides in PCI configuration space at bus ##, device ##, function ##.	
	PCI SERR Slot #	The system BIOS has reported a PCI system error on a component that resides in the specified slot.	
E1714	Unknown Err	The system BIOS has determined that there has been an error in the system, but is unable to determine its origin.	Escalate for possible server replacement.
E1715	Fatal I/O error.	The system BIOS has determined there has been an error in the system.	Call Avaya Services.
E1716	Chipset IERR Bus ## Dev ## Function ##.	The system BIOS has reported a chipset internal error that resides in bus ##, device ##, function ##.	Call Avaya Services.
E1717	CPU ## internal error.	The system BIOS has determined that the specified processor has had an internal error.	Call Avaya Services.
E171F	PCIe Fatal Err B## D## F##	The system BIOS has reported a PCIe fatal error on a component that resides in PCI configuration space at bus ##, device ##, function ##.	Reseat all PCIe cards, then reboot the system. If the problem persists, escalate for possible server replacement.
	PCIe Fatal Err Slot #	The system BIOS has reported a PCIe fatal error on a component that resides in the specified slot.	
E1810	HDD ## Fault	The SAS subsystem has determined that hard drive ## has experienced a fault.	Remove the front bezel and check the top LED on the hard drives. If LED is off or flashing green, then amber, then off or flashing amber 4 times per second, the hard drive is



Code	Text	Causes	Corrective action
E1811	HDD ## Rbld Abrt	The specified hard drive has experienced a rebuild abort.	probably failing. Escalate for possible hard drive replacement.
E1812	HDD ## Removed	The specified hard drive has been removed from the system.	Information only.
E1A11	PCI Riser hardware & configuration mismatch	PCIe risers are not configured correctly. Some invalid configurations prevent the system from powering on.	Reinstall the expansion-card riser. Reseat the NIC. If problem persists, replace the server.
E1A12	PCI Riser not detected	One or all of the PCIe risers is missing. The prevents the system from powering on.	Reinstall the missing riser card(s).
E1A14	SAS Cable A	SAS cable A is missing or bad.	Escalate for possible server replacement.
E1A15	SAS Cable B	SAS cable B is missing or bad.	Escalate for possible server replacement.
E1A1D	Control panel USB cable not detected.	USB cable to the control panel is missing or bad.	Reseat the cable. If the problem persists, escalate for possible server replacement.
E2010	No Memory	No memory is installed in the system.	Escalate for possible memory or server replacement.
E2011	Mem Config Err	Memory detected, but is not configurable. Error detected during memory configuration.	Escalate for possible server replacement.
E2012	Unusable Memory	Memory is configured, but not usable. Memory subsystem failure.	Escalate for possible memory or server replacement.
E2013	Shadow BIOS Fail	The system BIOS failed to copy its flash image into memory.	Escalate for possible memory or server replacement.
E2014	CMOS Fail	CMOS failure. CMOS RAM not functioning properly.	Escalate for possible server replacement.
E2015	DMA Controller	DMA controller failure.	Escalate for possible server replacement.
E2016	Int Controller	Interrupt controller failure.	Escalate for possible server replacement.

Code	Text	Causes	Corrective action
E2017	Timer Fail	Timer refresh failure.	Escalate for possible server replacement.
E2018	Prog Timer	Programmable interval timer error.	Escalate for possible server replacement.
E2019	Parity Error	Parity error.	Escalate for possible server replacement.
E201A	SIO Err	SIO failure.	Escalate for possible server replacement.
E201B	Kybd Controller	Keyboard controller failure.	Escalate for possible server replacement.
E201C	SMI Init	System management interrupt (SMI) initialization failure.	Escalate for possible server replacement.
E201D	Shutdown Test	BIOS shutdown test failure.	Escalate for possible server replacement.
E201E	POST Mem Test	BIOS POST memory test failure.	Escalate for possible server replacement.
E2020	CPU Config	CPU configuration failure.	Check for specific error messages.
E2021	Memory Population	Incorrect memory configuration. Memory population order incorrect.	Check for specific error messages. Escalate for possible memory or server replacement.
E2022	POST Fail	General failure after video.	Check for specific error messages.
E2110	MBE Crd # DIMM ## & ##	One of the DIMMs in the set implicated by "## & ##" has had a memory multi-bit error (MBE). If no memory card is present, the "Crd #" string is left out of the message.	Escalate for possible memory or server replacement.
E2111	SBE Log Disable Crd # DIMM ##	The system BIOS has disabled memory single-bit error (SBE) logging, and will not resume logging further SBEs until the system is rebooted. "##" represents the DIMM implicated by the BIOS.	Escalate for possible server replacement.

Code	Text	Causes	Corrective action
		If no memory riser card is present, the "Crd #" string is left out of the message.	
E2113	Mem Mirror Crd # DIMM ## & ##	The system BIOS has disabled memory mirroring because it has determined that one half of the mirror has had too many errors. "## & ##" represents the DIMM pair implicated by the BIOS. If no memory card is present, the "Crd #" string is left out of the message.	Escalate for possible memory or server replacement.
I1910	Intrusion	System cover removed.	Information only.
I1911	>3 ERRs Chk Log	LCD overflow message. A maximum of three error messages can display sequentially on the LCD. The fourth message displays as the standard overflow message.	Information only.
I1912	SEL Full	System Event Log is full of events, and is unable to log any more events.	Clear the log by deleting event entries.
W1228	ROMB Batt < 24hr	Warns predictively that the RAID battery has less than 24 hours of charge left.	Information only.
W1627	Power required > PSU wattage.	The system configuration requires more power than what the power supply can provide.	Turn off power to the system, reduce the hardware configuration or install higher-wattage power supplies, and then restart the system.
W1628	Performance degraded.	The system configuration requires more power than what the power supply can provide, but it can boot if throttled.	Turn off power to the system, reduce the hardware configuration or install higher-wattage power supplies, and then restart the system.

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## Contacting Avaya Services

Avaya provides a telephone number to report problems or to ask questions about your product:

- The support telephone number is 1–800–242–2121 in the United States.
- For additional support telephone numbers, see the Avaya Website: <http://www.avaya.com/support>.

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