Oracle® Communications Diameter Signaling Router Hardware Documentation Roadmap Reference





Oracle Communications Diameter Signaling Router Hardware Documentation Roadmap Reference, Release 8.5.1

F51145-01

Copyright © 2015, 2021, Oracle and/or its affiliates.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, then the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs (including any operating system, integrated software, any programs embedded, installed or activated on delivered hardware, and modifications of such programs) and Oracle computer documentation or other Oracle data delivered to or accessed by U.S. Government end users are "commercial computer software" or "commercial computer software documentation" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, reproduction, duplication, release, display, disclosure, modification, preparation of derivative works, and/or adaptation of i) Oracle programs (including any operating system, integrated software, any programs embedded, installed or activated on delivered hardware, and modifications of such programs), ii) Oracle computer documentation and/or iii) other Oracle data, is subject to the rights and limitations specified in the license contained in the applicable contract. The terms governing the U.S. Government's use of Oracle cloud services are defined by the applicable contract for such services. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle, Java, and MySQL are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Inside are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Epyc, and the AMD logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information about content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services unless otherwise set forth in an applicable agreement between you and Oracle. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services, except as set forth in an applicable agreement between you and Oracle.

Contents

4	 		<u>ا</u>		.4:	
	 m	\mathbf{r}	иш	111	.11	on

Т						
	Overview	1-1				
	Scope and Audience	1-1				
	Manual Organization	1-1				
	My Oracle Support	1-1				
2	Roadmap					
	Introduction	2-1				
	General Descriptions and Hardware Features	2-1				
	User Operations - LEDs	2-3				
	FRU Procedures	2-6				



1

Introduction

Overview

This document is an aid to navigate the respective manufacturer online documentation. This document provides links to typical hardware-related user information. The referenced documentation includes hardware descriptions and operation information.

The included hardware utilizes the HP ProLiant G6/G7/Gen8/Gen9 or Oracle X5-2/X6-2 line of servers mounted in a cabinet. Dependent upon customer order and system configuration delivered, the cabinet may be powered by either an AC or DC input from the customer site. There are separate cabinet assemblies for AC or DC installations.

The individual customer ordered system configuration dictates the components installed in the cabinet.

Scope and Audience



All personnel must be aware of and conform to the safety information provided throughout the documentation included with this product.

Testing, system software, or applications software are not discussed in this manual.

Manual Organization

This manual is organized into the following chapters:

- Introduction provides information about the manual and installation support.
- Roadmap points to the respective manufacturer documentation for typical user information.

My Oracle Support

My Oracle Support (https://support.oracle.com) is your initial point of contact for all product support and training needs. A representative at Customer Access Support can assist you with My Oracle Support registration.

Call the Customer Access Support main number at 1-800-223-1711 (toll-free in the US), or call the Oracle Support hotline for your local country from the list at http://www.oracle.com/us/support/contact/index.html. When calling, make the selections in the sequence shown below on the Support telephone menu:

1. Select 2 for New Service Request

- 2. Select **3** for Hardware, Networking and Solaris Operating System Support
- **3.** Select one of the following options:
 - For Technical issues such as creating a new Service Request (SR), select 1
 - For Non-technical issues such as registration or assistance with My Oracle Support, select 2

You are connected to a live agent who can assist you with My Oracle Support registration and opening a support ticket.

My Oracle Support is available 24 hours a day, 7 days a week, 365 days a year.



2

Roadmap

Introduction

This chapter contains links as an aid to navigate the respective manufacturer online documentation.



Viewing the user online documentation requires Internet access. For the most current user documentation, always reference the latest manufacturer online documentation.

Not all components, features, or documents referenced in this aid may be installed or used. For any questions related to available components or hardware features, contact your Sales representative. For assistance with the content of the referenced user documentation or help with procedures, contact My Oracle Support

General Descriptions and Hardware Features

This category directs you to the manufacturer online documentation that provides general descriptions of equipment including hardware features available.

Note:

Not all features presented in the manufacturer documentation may be supported by this configuration. Contact My Oracle Support for additional information.

- HP BladeSystem c-Class architecture technology brief provides a general explanation of c-Class architecture and describes how the components within BladeSystem c-Class work together.
- Oracle Server X5-2 System Architecture provides a general explanation of Oracle's X5-2 architecture and describes how the components within it function.
- Oracle Server X6-2 System Architecture provides a general explanation of Oracle's X6-2 architecture and describes how the components within it function.
- Important Safety Information For Server, Storage, Power, Networking, and Rack Products contains important safety information concerning Server, Storage, Power, Networking, and Rack Products.
- The HP 10000 G2 Series Racks User Guide provides additional installation information for the HP 10000 G2 Series Racks.

- The HP Intelligent Rack Family User Guide provides additional installation information for the HP642 series cabinet.
- Best practices for HP 10000 Series and HP 10000 G2 Series Racks outlines recommended practices for configuring, installing, transporting, and establishing a work environment for the HP 10000 and HP 10000 Generation 2 (G2) Series Racks.
- HP ProLiant Intel-based 300-series G6 and G7 servers describes the key technologies implemented in Intel-based HP ProLiant 300-series G6 and G7 servers.
- HP BladeSystem Onboard Administrator User Guide describes the HP BladeSystem c7000 Enclosure.
- HP ProLiant BL460c G6 Server Blade User Guide describes the ProLiant BL460c blade server.
- HP ProLiant BL460c Gen8 Server Blade User Guide describes the ProLiant BL460c Gen8 blade server.
- HP ProLiant BL460c Gen9 Server Blade User Guide describes the ProLiant BL460c Gen9 blade server.
- HP ProLiant BL620c G7 Server Blade User Guide describes the ProLiant BL620c blade server.
- HP ProLiant DL360 G6 Server User Guide describes the HP ProLiant DL360 G6 Server system features and components.
- HP ProLiant DL360p Gen8 Server User Guide describes the HP ProLiant DL360p Gen8 Server system features and components.
- HP ProLiant DL380 G6 Server User Guide describes the HP ProLiant DL380 G6 Server system features and components.
- Hp ProLiant DL380 Gen8 Server User Guide describes the HP ProLiant DL380p Gen8 Server system features and components.
- HP ProLiant DL360 Gen9 Server User Guide describes the HP ProLiant DL360 Gen9 Server system features and components.
- HP ProLiant DL380 Gen9 Server User Guide describes the HP ProLiant DL380 Gen9 Server system features and components
- Oracle X5 Series Servers Administration Guide describes the Oracle X5-2 Server system features and components.
- Oracle X6 Series Servers Administration Guide describes the Oracle Server X6-2 system features and components.
- Cisco Catalyst Blade Switch 3020 for HP Hardware Installation Guide describes the Catalyst 3020 switch, as well as system features and components.
- ProCurve Series 6120 Blade Switches Installation and Getting Started Guide describes the HP ProCurve 6120XG switch, as well as system features and components.
- Cisco Catalyst 3560 Switch Hardware Installation Guide describes the Catalyst 3560 switch, as well as system features and components.
- Catalyst 4900 Series Switch Installation Guide describes the Cisco Catalyst 4900 series switches, as well as system features and components.



- Catalyst 4948E and Catalyst 4948E-F Switch Installation Guide describes the Cisco Catalyst 4948E and 4948E-F switches, as well as system features and components.
- Panduit Air Duct Installation Guide describes the Panduit Air Duct necessary for the Catalyst 4948E-F Switch
- Brocade 8Gb SAN Switch for HP BladeSystem c-Class describes the Brocade SAN switch, as well as system features and components.
- HP 6125G/XG Ethernet Blade Switch describes the HP 6125G/XG Ethernet Blade switch, as well as system features and components.
- HP 6125XLG Ethernet Blade Switch describes the HP 6125XLG Ethernet Blade switch, as well as system features and components.
- HPE 5900 Switch Series, HPE FlexFabric 5900 Switch Series, and HPE FlexFabric Switch Series Storage Solutions Configuration Guide describe the HPE 5900 Switch Series, as well as system features and components.
- HP StorageWorks D2600/D2700 Disk Enclosure User Guide describes the HP D2700 storage array.
- HP StorageWorks 2012i Modular Smart Array User Guide describes the HP MSA2012 storage array.
- HP StorageWorks P2000 G3 MSA System FC/iSCSI User Guide describes the HP P2000 storage array.
- 1Gb Ethernet Pass-Thru Module describes the 1Gb Ethernet Pass-Thru Module.
- HP Integrated Lights-Out 2 User Guide describes the HP iLO 2 for ProLiant G6 Servers setup.
- HP Integrated Lights-Out 3 User Guide describes the HP iLO 3 for ProLiant G7 Servers setup.
- HP Integrated Lights-Out 4 User Guide describes the HP iLO 4 for ProLiant Gen8 / Gen9 Servers setup.
- Oracle Integrated Lights Out Manager (ILOM) 3.1 User's Guide describes the Oracle ILOM.
- Westell 07005-PDP-M3 describes the DC Power Distribution Panel.
- Telect 125A 8-Position Demarcation panel ±24V/-48V describes the Telect 125A 8-Position Demarcation panel, ±24V/-48V
- Telect 150A Dual-feed 4/4 TPA/GMT, -48V describes the Telect 150A Dual-feed 4/4 TPA/GMT. -48V.
- HP 252663 Modular Power Distribution Unit describes the AC Power Distribution Unit.

User Operations - LEDs

This category directs you to specific sections of the manufacturer online documentation on LED indicators for the specified equipment.



warning:

Customers do not perform installation procedures; these procedures are performed by authorized personnel. Contact My Oracle Support for assistance with any procedure.

warning:

Performing any procedure not authorized or approved by Oracle may void any or all Oracle warranties. Contact My Oracle Support for assistance with any procedure.

- The section Interpreting LED activity in the Brocade 8Gb SAN Switch for HP BladeSystem c-Class provides information describing LED functions of the Brocade SAN switch.
- Information describing LED functions of the 3020 switch can be found in this document: Cisco Catalyst Blade Switch 3020 for HP Hardware Installation Guide.
- See the section LEDs in the Cisco Catalyst 3560 Switch Hardware Installation Guide for information describing LED functions of the 3560 switch.
- The LED functions of the Cisco Catalyst 4900 Series Switch can be found in this document: Catalyst 4900 Series Switch Installation Guide.
- The LED functions of the Cisco Catalyst 4948E/4948E-F Switches can be found in this document: Catalyst 4948E and Catalyst 4948E-F Switch Installation Guide.
- The LED functions of the HP ProCurve 6120XG switch can be found in this document: ProCurve Series 6120 Blade Switches Installation and Getting Started Guide.
- HP 6125G/XG Ethernet Blade Switch describes the HP 6125G/XG Ethernet Blade switch, as well as system features and components.
- HP 6125XLG Ethernet Blade Switch describes the HP 6125XLG Ethernet Blade switch, as well as system features and components.
- Panduit Air Duct Installation Guide describes the Panduit Air Duct necessary for the Catalyst 4948E-F Switch
- HPE 5900 Switch Series, HPE FlexFabric 5900 Switch Series, and HPE FlexFabric Switch Series Storage Solutions Configuration Guide describe the HPE 5900 Switch Series, as well as system features and components.
- HP ProLiant DL360 G6 Server User Guide provides information describing LED functions of the DL 360 G6 server.
- HP ProLiant DL360p Gen8 Server User Guide provides information describing LED functions of the DL 360p Gen8 server.
- HP ProLiant DL380 G6 Server User Guide provides information describing LED functions of the DL 380 G6 server.
- Hp ProLiant DL380 Gen8 Server User Guide provides information describing LED functions of the DL 380p Gen8 server.



- HP ProLiant DL360 Gen9 Server User Guide provides information describing LED functions of the DL360 Gen9 Server system features and components.
- HP ProLiant DL380 Gen9 Server User Guide provides information describing LED functions of the DL 380p Gen9 server.
- See the HP ProLiant BL460c G6 Server Blade User Guide for information describing LED functions of the BL460c G6 server.
- See the HP ProLiant BL460c Gen8 Server Blade User Guide for information describing LED functions of the BL460c Gen8 server.
- See the HP ProLiant BL460c Gen9 Server Blade User Guide for information describing LED functions of the BL460c Gen9 server.
- HP ProLiant DL320e Generation 8 v2 User Guide describes the HP ProLiant DL320e Gen8 v2 Server system features and components.
- Oracle X5 Series Servers Administration Guide describes the Oracle Server X5-2 system features and components.
- Oracle Server X5-2 Installation Guide provides information describing LED Functions on the Oracle Server X5-2.
- Oracle X6 Series Servers Administration Guide describes the Oracle Server X6-2 system features and components.
- Oracle Server X6-2 Installation Guide provides information describing LED Functions on the Oracle Server X6-2.
- The HP Integrated Lights-Out 2 User Guide provides information describing LED functions of the HP iLO 2 for ProLiant G6 Servers.
- The HP Integrated Lights-Out 3 User Guide provides information describing LED functions of the HP iLO 3 for ProLiant G7 Servers.
- The HP Integrated Lights-Out 4 User Guide provides information describing LED functions of the HP iLO 4 for ProLiant Gen8 / Gen9 Servers.
- The Oracle Integrated Lights Out Manager (ILOM) 3.1 User's Guide describes the Oracle ILOM.
- The section Front status and UID module in the HP StorageWorks D2600/D2700 Disk Enclosure User Guide provides information describing LED functions of the HP D2700 storage array.
- See the section Controller Components and LEDs in the HP StorageWorks 2012i Modular Smart Array User Guide for information describing LED functions of the HP MSA2012 storage array.
- The section LED descriptions in the HP StorageWorks P2000 G3 MSA System FC/iSCSI User Guide provides information describing LED functions of the HP P2000 storage array.
- Telect 125A 8-Position Demarcation panel ±24V/-48V describes the Telect 125A 8-Position Demarcation panel, ±24V/-48V
- Telect 150A Dual-feed 4/4 TPA/GMT, -48V describes the Telect 150A Dual-feed 4/4 TPA/GMT, -48V.



FRU Procedures



Caution:

The procedures presented are for informational purposes only. Contact the appropriate hardware vendor for replacement of any FRUs.

warning:

FRU procedures should only be performed by authorized personnel. Performing any procedure not authorized or approved by Oracle may void any or all Oracle warranties.

- Hot-plug SAS hard drive removal and replacement of the HP ProLiant DL360 G6 Server Maintenance and Service Guide
- Hot-plug SAS hard drive removal and replacement of the HP ProLiant DL380 G6 Server Maintenance and Service Guide
- Hot-plug power supply removal and replacement of the HP ProLiant DL360 G6 Server Maintenance and Service Guide
- Hot-plug power supply removal and replacement of the HP ProLiant DL380 G6 Server Maintenance and Service Guide
- Hot-plug power supply removal and replacement of the HP BladeSystem c7000 Enclosure Maintenance and Service Guide
- Hot-plug SAS hard drive removal and replacement of the HP ProLiant DL360p Gen8 Server Maintenance and Service Guide
- Hot-plug SAS hard drive removal and replacement of the HP ProLiant DL380p Gen8 Server Maintenance and Service Guide
- Hot-plug power supply removal and replacement of the HP ProLiant DL360p Gen8
 Server Maintenance and Service Guide
- Hot-plug power supply removal and replacement of the HP ProLiant DL380p Gen8
 Server Maintenance and Service Guide
- Hot-plug SAS hard drive removal and replacement of the HP ProLiant DL360 Gen9 Server Maintenance and Service Guide
- Hot-plug SAS hard drive removal and replacement of the HP ProLiant DL380 Gen9 Server Maintenance and Service Guide
- Hot-plug power supply removal and replacement of the HP ProLiant DL360 Gen9 Server Maintenance and Service Guide
- Hot-plug power supply removal and replacement of the HP ProLiant DL380 Gen9 Server Maintenance and Service Guide
- To remove the ProLiant DL360 G6 Server from the rack, use HP ProLiant DL360 G6 Server Maintenance and Service Guide.



- To remove the ProLiant DL380 G6 Server from the rack, use HP ProLiant DL380 G6 Server Maintenance and Service Guide.
- To remove the ProLiant DL360 Gen8 Server from the rack, use of HP ProLiant DL360 Gen8 Server Maintenance and Service Guide.
- To remove the ProLiant DL380 G8 Server from the rack, use HP ProLiant DL380 Gen8 Server Maintenance and Service Guide.
- To remove the ProLiant DL360 Gen9 Server from the rack, use HP ProLiant DL360 Gen9 Server Maintenance and Service Guide
- To remove the ProLiant DL380 Gen9 Server from the rack, use HP ProLiant DL380 Gen9 Server Maintenance and Service Guide.
- To remove servers from the HP BladeSystem c7000, use HP BladeSystem c7000 Enclosure Maintenance and Service Guide.
- To remove the HP 6125G/XG, use HP 6125G and 6125G/XG Blade Switches Installation Guide.
- To remove the HP 6125XLG, use HP 6125XLG Blade Switch Installation Guide.
- To remove the AC Power Distribution Unit (HP 252663-D72 or 252663-B31 Modular Power Distribution Unit)
 - To remove the AC PDU extension bar (Extension Bars, HP 252663-D72 or 252663-B31 Modular Power Distribution Unit)
- To remove the X5-2 Server, use Oracle Server X5-2 Service Manual
- To remove the X6-2 Server, use Oracle Server X6-2 Service Manual
- To remove the Catalyst 4900 Series Switch from the rack, use Catalyst 4900 Series Switch Installation Guide.
- To remove the Catalyst 3020 Blade Switch, use Catalyst Blade Switch 3020 for HP Hardware Installation Guide.
- To remove the DC Power Distribution Panel from the TMM rack, use Westell 07005-PDP-M3.
 - To remove or configure the PDP Alarm Card, use Westell 07005-PDP-M3 for removing, configuring and replacing the PDP Alarm Card (an integral part of the Westell 07005-PDP-M3).

