# Oracle® Communications Diameter Signaling Router
# Release Notes

Release 8.6.0.7.0

F91814-02

February 2024

ORACLE®

Oracle Communications Diameter Signaling Router Release Notes, Release 8.6.0.7.0

F91814-02

# Contents

**7 Supported Upgrade Paths**

**8 Deprecated Features**

**9 Resolved and Known Bugs**

# 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.

# What's New in this Guide

This section introduces the documentation updates for release 8.6.0.7.0.

**Release 8.6.0.7.0 - F91814-02, February 2024**

The following sections have been updated in this release:

- Added V1040997-01 part number and Media Pack information in Media Pack.
- Added PMAC release 6.6.1.5.0-66.18.0 version in Load Lineup.

**Release 8.6.0.7.0 - F91814-01, January 2024**

The following sections have been updated in this release:

- Updated the Media Pack information in Media Pack.
- Updated the Load Lineup versions in Load Lineup.
- Updated the supported upgrade paths in Supported Upgrade Paths.
- Added VNFM and vSTP resolved bugs in Resolved Bug List.

# 1
# Introduction

This *Oracle Communications Diameter Signaling Router Release Notes* includes the following:

- Feature descriptions
- Information on supported hardware baseline
- Media and documentation pack
- Supported upgrade paths for this release
- Resolved and known bugs for this release

Release Notes are included in the documentation pack and made available with every software release.

## 1.1 DSR Overview

Oracle Communications Diameter Signaling Router (DSR) helps communications service providers monetize their network more efficiently to remain competitive in the market. It creates a centralized and secure signaling architecture that enables core networks to grow incrementally and to support increasing service and traffic demands. The distinctive advantages provided by the Oracle Communications Diameter Signaling Router are network scalability, resiliency, interoperability, and security, as well as network visibility. The cloud deployable Oracle Communications Diameter Signaling Router enables service providers to manage Diameter signaling while optimizing network resources, therefore maximizing the return on network and technology investments.

**Disclaimer**

Before installing third-party software on the same server with Oracle products, for example, DSR, PCRF, UDR, PIC, EAGLE, and so on, you must be aware of the following information:

- Oracle is not responsible for installation, operation, maintenance, and so on, of any non-Oracle distributed software with Oracle products, for example, DSR, PCRF, UDR, PIC, EAGLE, and so on.
- Additional due diligence, including testing, is recommended to be performed in the lab before deploying non-Oracle software on production sites to avoid potential issues.
- Oracle is not responsible for validating or integrating non-Oracle software with Oracle products, for example, DSR, PCRF, UDR, PIC, EAGLE, and so on. Additionally, the persistence of the non-Oracle software over the upgrade of any Oracle product may or may not occur, and Oracle does not guarantee that the non-Oracle software will persist.
- Oracle Support may require that the customer uninstall the non-Oracle software and reinstall Oracle products, for example, DSR, PCRF, UDR, PIC, EAGLE, and so on, to recover the system to address any field issue.

# 2

# Virtual Platforms Supported

Virtual DSR is tested and supported only on the following platforms:

- VMware ESXi 6.0 U2
- KVM QEMU 1.5.3, libvirt 1.2.8, and API QEMU 1.2.8
- Openstack Train

For more information, see *DSR Cloud Benchmarking Guide*.

> **Note:**
>
> Our benchmarking and performance numbers are based only on the above mentioned platforms. If the customer environment is deployed on any other platform, all issues including compatibility and infrastructure concerns would be the responsibility of the customer. Oracle would only be responsible for application related issues.

# 3

# Feature Descriptions

This chapter provides a summary of features released in DSR release 8.6.0.7.0.

## 3.1 Release 8.6.0.7.0

This sections summarizes all the new and enhanced features in DSR, vSTP, VNFM, and SCEF.

### 3.1.1 DSR

No new features or feature enhancements have been introduced in this release.

### 3.1.2 vSTP

No new features or feature enhancements have been introduced in this release.

### 3.1.3 VNFM

No new features or feature enhancements have been introduced in this release.

### 3.1.4 SCEF

No new features or feature enhancements have been introduced in this release.

# 4

# Media and Documentation

Oracle Communications software is available for electronic download on the Oracle Software Delivery Cloud (OSDC). Documentation is delivered electronically on the Oracle Help Center (OHC). Both the software Media Pack and Documentation Pack are listed in this chapter.

## 4.1 Media Pack

All components available for download from the Oracle Software Delivery Cloud (https://edelivery.oracle.com/) are in the following Media Pack contents tables.

> ✏ **Note:**
>
> This list is accurate at the time of release but is subject to change. See the Oracle Software Delivery Cloud website for the latest information.

## 4.1.1 DSR Release 8.6.0.7.0

**Table 4-1    Media Pack Contents for DSR 8.6.0.7.0**

| Part Number | Description |
| --- | --- |
| V1040702-01 | Oracle Communications Diameter Signaling Router 8.6.0.7.0-96.34.0 ISO |
| V1040703-01 | Oracle Communications Diameter Signaling Router 8.6.0.7.0-96.34.0 OVA |
| V1040704-01 | Oracle Communications Diameter Signaling Router 8.6.0.7.0-96.34.0 QCOW2 |
| V1040705-01 | Oracle Communications Diameter Signaling Router, Full Address Resolution 8.6.0.7.0-96.34.0 ISO |
| V1040713-01 | Oracle Communications Diameter Signaling Router Diameter Security Application 8.6.0.7.0-96.34.0 |
| V1040714-01 | Oracle Communications Diameter Signaling Router Steering Of Roaming Application 8.6.0.7.0-96.34.0 |
| V1040715-01 | Oracle Communications Diameter Signaling Router Zero Balance Application 8.6.0.7.0-96.34.0 |
| V1040716-01 | Oracle Communications Diameter Signaling Router Rx ShUDR Application 8.6.0.7.0-96.34.0 |
| V1040717-01 | Oracle Communications Diameter Signaling Router 8.6.0.7.0-96.34.0 MIBs |
| V1040718-01 | Oracle Communications Diameter Signaling Router Virtual Network Functions Manager 5.4.6.0.0-54.14.2 QCOW2 |
| V1040720-01 | Oracle Communications Diameter Signaling Router User Data Repository 12.7.0.4.0-19.13.0 ISO |
| V1040722-01 | Tekelec Virtual Operating Environment 3.8.9.0.0-89.32.0 |

**Table 4-1    (Cont.) Media Pack Contents for DSR 8.6.0.7.0**

| Part Number | Description |
| --- | --- |
| V1040723-01 | Oracle Communications Diameter Signaling Router, Full Address Resolution 8.6.0.7.0-96.34.0 OVA |
| V1040725-01 | Oracle Communications Diameter Signaling Router Virtual Network Functions Manager Artifacts 5.4.6.0.0-54.14.2 |
| V1040726-01 | Oracle Communications Diameter Signaling Router User Data Repository 12.7.0.4.0-19.13.0 OVA |
| V1040728-01 | Tekelec Platform Distribution 7.8.9.0.0-89.32.0 |
| V1040729-01 | Oracle Communications Diameter Signaling Router, Full Address Resolution 8.6.0.7.0-96.34.0 QCOW2 |
| V1040997-01 | Tekelec Platform Management and Configuration 6.6.1.5.0-66.18.0 |

# 4.2 Load Lineup

This section provides information about supported services and ATS for this release.

## 4.2.1 DSR Release 8.6.0.7.0

DSR Release 8.6.0.7.0 contains the following components:

- Application Lineup
  - DSR: 8.6.0.7.0_96.34.0
  - SDS: 8.6.0.7.0_96.34.0
  - VNFM: VNFM_5.4.6.0.0_54.14.0
  - ATS: 8.6.0.0.0-1.0.8
- Platform Lineup
  - TPD: 7.8.9.0.0_89.32.0

    > **Note:**
    >
    > In this TPD version, due to DSR kernel taint issue, the rate limiting of kernel warning messages is back ported from the upstream kernel version. For more information, see Resolved Bug List for DSR.

  - TVOE: 3.8.9.0.0_89.32.0
  - PMAC: 6.6.1.4.0_66.17.0 and 6.6.1.5.0-66.18.0
  - gSOAP: 2.8.129
  - Comcol: 7.5.0.66.0-14123
  - Appw: 9.6.0-96.21.0
  - Exgs: 9.6.0-96.21.0

# 4.3 Documentation Pack

All documents are available for download from the Oracle Help Center (OHC) site.

**Table 4-2    Documentation Pack Contents**

| |
|---|
| **Release Notes and Licensing Information User Manuals Document Set** |
| Release Notes |
| Licensing Information User Manual |
| **DSR Planning, Installation, Upgrade, and Disaster Recovery Document Set** |
| DSR Feature Guide |
| DSR Planning Guide |
| DSR C-Class Hardware and Software Installation Procedure 1/2 |
| DSR C-Class Software Installation and Configuration Procedure 2/2 |
| DSR C-Class Disaster Recovery User Guide |
| DSR Software Upgrade Guide |
| Rack Mount Server Installation Guide |
| Rack Mount Server Disaster Recovery Guide |
| Rack Mount Server Network Interconnect |
| DSR/SDS NOAM Failover User Guide |
| DCA Feature Activation Procedure |
| DTLS Feature Activation Procedure |
| FABR Feature Activation Procedure |
| Mediation Feature Activation Procedure |
| PCA Feature Activation Procedure |
| RBAR Feature Activation Procedure |
| SCEF Feature Activation Procedure |
| DSR Network Impact Report |
| DSR NIR MEALS Data |
| DSR Security Guide |
| DSA with UDR User Guide |
| DSR Security App Using Mediation Example Procedure |
| Zero Balance Application User Guide |
| Diameter Signaling Router Rx ShUDR Application User Guide |
| DSR VM Placement and CPU Socket Pinning Tool |
| DSR Compliance Matrix |
| **Cloud Installation and Upgrade Document Set** |
| DSR Cloud Installation Guide |
| DSR Cloud Software Upgrade Guide |
| DSR Cloud Disaster Recovery Guide |
| DSR Automated Test Suite (ATS) Installation and User Guide |
| DSR API Gateway Installation Guide |
| DSR API Gateway Disaster Recovery Guide |
| VNF Whitepaper |
| DSR VNFM Installation and User Guide |

**Table 4-2    (Cont.) Documentation Pack Contents**

| |
|---|
| VNFM HEAT Templates |
| DSR Cloud Benchmarking Guide |
| SDS Cloud Installation Guide |
| SDS Cloud Disaster Recovery Guide |
| **Diameter Signaling Router Core Document Set** |
| DSR Getting Started |
| Roadmap to Hardware Documentation Reference |
| Operation, Administration, and Maintenance (OAM) User Guide |
| Diameter User Guide |
| MMI API Specification |
| Communication Agent User Guide |
| Policy Charging Application User Guide |
| Mediation User Guide |
| Range Based Address Resolution (RBAR) User Guide |
| Full Address Based Resolution (FABR) User Guide |
| Subscriber Binding Repository (SBR) User Guide |
| IP Front End (IPFE) User Guide |
| Diameter Common User Guide |
| Equipment Identity Register User Guide |
| Diameter Custom Application (DCA) User Guide |
| Diameter Custom Application (DCA) Programmer Guide |
| Roaming Steering Application User Guide |
| RADIUS User Guide |
| vSTP User Manual |
| vSTP SS7 Security User Guide |
| vSTP eLYNX Card Installation Guide |
| vSTP ADAX Card Installation Guide |
| ENUM User Guide |
| ENUM Heat Template |
| Mobile Number Portability (MNP) User Guide |
| TIF User Guide |
| SCEF User Guide |
| SCEF - YAML Files |
| DSR SCEF Partner's User Guide |
| Alarms and KPIs Reference |
| Measurements Reference |
| Glossary |
| Related Publications Reference |
| **Subscriber Data Server Document Set** |
| SDS Getting Started |
| SDS User Guide |
| SDS Provisioning Interface Guide |
| SDS Installation and Configuration Guide |

**Table 4-2    (Cont.) Documentation Pack Contents**

| |
|---|
| SDS Software Upgrade Guide |
| SDS Disaster Recovery Guide |
| **UDR Installation, Upgrade, and Disaster Recovery Document Set** |
| UDR Cloud Installation and Configuration Guide |
| UDR Cloud Software Upgrade Procedure |
| UDR Cloud Disaster Recovery Guide |
| Provisioning Gateway Installation Guide |
| UDR Heat Templates |
| Provisioning Gateway Heat Templates |
| UDR SOAP Provisioning Interface Specification |
| UDR REST Provisioning Interface Specification |
| UDR Bulk Import/Export File Specification |
| UDR Provisioning Database Application and Interface Specification |
| **Integrated Diameter Intelligence Hub (IDIH) Document Set** |
| IDIH Release Notes |
| IDIH User Guide |
| IDIH Alarm Forwarding Administrator's Guide |
| IDIH Audit Viewer Administrator's Guide |
| IDIH Operations, Administration and Maintenance Administrator's Guide |
| IDIH ProTrace User Guide |
| IDIH Log Viewer Administrator's Guide |

# 5
# Supported Hardware Baseline

The hardware identified in Table 5-1 comprises the hardware and server versions that have been verified with this release.

## 5.1 Supported Hardware Baseline

**Table 5-1    Supported Hardware Baseline**

| Hardware | Description |
|---|---|
| HP Gen8 | Intel Sandy Bridge CPU-based dual-socket blades and rack mount servers manufactured by HP |
| HP Gen9 | Intel Haswell CPU-based dual-socket blades and rack mount servers manufactured by HP |
| HP Gen9 v2 | Intel Haswell CPU-based dual-socket blades and rack mount servers manufactured by HP |
| Netra X5-2 | Intel Haswell CPU-based dual-socket rack mount servers manufactured by Oracle |
| Oracle X5-2 | Intel Haswell CPU-based dual-socket rack mount servers manufactured by Oracle |
| Oracle X6-2 | Intel Haswell CPU-based dual-socket rack mount servers manufactured by Oracle |
| Oracle X7-2 | Intel Haswell CPU-based dual-socket rack mount servers manufactured by Oracle |

The following sections contains the information about Oracle and HP hardware Bill of Material (BOM).

## 5.2 Oracle Hardware

| Oracle X7-2 for DSR (AC Power) | | | | |
|---|---|---|---|---|
| **Oracle Part Number** | **Supplier** | **Supplier Part Number** | **Description** | **Unit Qty** |
| **X7-2 AC Copper for Production** | | | | |
| **7117671** | | **ORACLE X7-2 AC Copper for Production** | | 1 |
| 7115194 | Oracle | 7115194 | Oracle Server X7-2: 1 RU base chassis with motherboard, eight 2.5-inch drive slots disk cage, 2 PSUs, slide rail kit, and cable management arm | 1 |

| Oracle X7-2 for DSR (AC Power) | | | | |
| --- | --- | --- | --- | --- |
| **Oracle Part Number** | **Supplier** | **Supplier Part Number** | **Description** | **Unit Qty** |
| 7110339 | Oracle | 7110339 | Eight 2.5-inch drive slots, DVD-RW and disk cage for 1U | 1 |
| 7113235 | Oracle | 7113235 | 1 Intel® Xeon® Platinum 8160 24-core 2.1 GHz processor (for factory installation) | 2 |
| 7115198 | Oracle | 7115198 | One 16 GB DDR4-2666 registered DIMM (for factory installation) | 16 |
| 7111107 | Oracle | 7111107 | One 1.2 TB 10000 rpm 2.5-inch SAS-3 HDD with marlin bracket (for factory installation) | 4 |
| 7117125 | Oracle | 7117125 | Oracle Storage 12 Gb SAS PCIe RAID HBA, internal: 16 port and 2 GB memory (for factory installation) | 1 |
| 7111182 | Oracle | 7111182 | Oracle Quad Port 10GBase-T Adapter (for factory installation) | 1 |
| 333W-10-13-C14RA | Oracle | 333W-10-13-C14RA | Power cord: Sun Rack jumper, 1 meter, C14RA plug, C13 connector, 13 A (for factory installation) | 2 |
| 7115197 | Oracle | 7115197 | Short heat sink (for factory installation) | 2 |
| 6331A-N | Oracle | 6331A-N | 2.5-inch HDD filler panel (for factory installation) | 6 |
| 7102748 | Oracle | 7102748 | PCIe filler panel (for factory installation) | 2 |
| 7116456 | Oracle | 7116456 | Processor clip (for factory installation) | 2 |
| 7117386 | Oracle | 7117386 | SAS cables for 1U (for factory installation) | 1 |
| **X7-2 AC Copper for Lab (Non-High Available)** | | | | |

| Oracle X7-2 for DSR (AC Power) | | | | |
|---|---|---|---|---|
| **Oracle Part Number** | **Supplier** | **Supplier Part Number** | **Description** | **Unit Qty** |
| **7117671** | | **ORACLE X7-2 AC Copper for Production** | | 1 |
| 7115194 | Oracle | 7115194 | Oracle Server X7-2: 1 RU base chassis with motherboard, eight 2.5-inch drive slots disk cage, 2 PSUs, slide rail kit, and cable management arm | 1 |
| 7110339 | Oracle | 7110339 | Eight 2.5-inch drive slots, DVD-RW and disk cage for 1U | 1 |
| 7113235 | Oracle | 7113235 | 1 Intel® Xeon® Platinum 8160 24-core 2.1 GHz processor (for factory installation) | 2 |
| 7115198 | Oracle | 7115198 | One 16 GB DDR4-2666 registered DIMM (for factory installation) | 16 |
| 7111107 | Oracle | 7111107 | One 1.2 TB 10000 rpm 2.5-inch SAS-3 HDD with marlin bracket (for factory installation) | 2 |
| 7117125 | Oracle | 7117125 | Oracle Storage 12 Gb SAS PCIe RAID HBA, internal: 16 port and 2 GB memory (for factory installation) | 1 |
| 7111182 | Oracle | 7111182 | Oracle Quad Port 10GBase-T Adapter (for factory installation) | 1 |
| 333W-10-13-C14RA | Oracle | 333W-10-13-C14RA | Power cord: Sun Rack jumper, 1 meter, C14RA plug, C13 connector, 13 A (for factory installation) | 2 |
| 7115197 | Oracle | 7115197 | Short heat sink (for factory installation) | 2 |

| Oracle X7-2 for DSR (AC Power) | | | | |
|---|---|---|---|---|
| **Oracle Part Number** | **Supplier** | **Supplier Part Number** | **Description** | **Unit Qty** |
| 6331A-N | Oracle | 6331A-N | 2.5-inch HDD filler panel (for factory installation) | 6 |
| 7102748 | Oracle | 7102748 | PCIe filler panel (for factory installation) | 2 |
| 7116456 | Oracle | 7116456 | Processor clip (for factory installation) | 2 |
| 7117386 | Oracle | 7117386 | SAS cables for 1U (for factory installation) | 1 |
| X7-2 AC Fiber for Production | | | | |
| **7117671** | | **ORACLE X7-2 AC Copper for Production** | | 1 |
| 7115194 | Oracle | 7115194 | Oracle Server X7-2: 1 RU base chassis with motherboard, eight 2.5-inch drive slots disk cage, 2 PSUs, slide rail kit, and cable management arm | 1 |
| 7110339 | Oracle | 7110339 | Eight 2.5-inch drive slots, DVD-RW and disk cage for 1U | 1 |
| 7113235 | Oracle | 7113235 | 1 Intel® Xeon® Platinum 8160 24-core 2.1 GHz processor (for factory installation) | 2 |
| 7115198 | Oracle | 7115198 | One 16 GB DDR4-2666 registered DIMM (for factory installation) | 16 |
| 7111107 | Oracle | 7111107 | One 1.2 TB 10000 rpm 2.5-inch SAS-3 HDD with marlin bracket (for factory installation) | 4 |
| 7117125 | Oracle | 7117125 | Oracle Storage 12 Gb SAS PCIe RAID HBA, internal: 16 port and 2 GB memory (for factory installation) | 1 |

| Oracle X7-2 for DSR (AC Power) | | | | |
|---|---|---|---|---|
| **Oracle Part Number** | **Supplier** | **Supplier Part Number** | **Description** | **Unit Qty** |
| 7111182 | Oracle | 7111182 | Oracle Quad Port 10GBase-T Adapter (for factory installation) | 1 |
| 333W-10-13-C14RA | Oracle | 333W-10-13-C14RA | Power cord: Sun Rack jumper, 1 meter, C14RA plug, C13 connector, 13 A (for factory installation) | 2 |
| 7115197 | Oracle | 7115197 | Short heat sink (for factory installation) | 2 |
| 6331A-N | Oracle | 6331A-N | 2.5-inch HDD filler panel (for factory installation) | 6 |
| 7102748 | Oracle | 7102748 | PCIe filler panel (for factory installation) | 2 |
| 7116456 | Oracle | 7116456 | Processor clip (for factory installation) | 2 |
| 7117386 | Oracle | 7117386 | SAS cables for 1U (for factory installation) | 1 |
| 2124A | Oracle | 2124A | QSFP Optical SR (for factory installation) | 4 |
| **X7-2 AC Fiber for Lab (Non-High Available)** | | | | |
| **7117671** | | **ORACLE X7-2 AC Copper for Production**1 | | 1 |
| 7115194 | Oracle | 7115194 | Oracle Server X7-2: 1 RU base chassis with motherboard, eight 2.5-inch drive slots disk cage, 2 PSUs, slide rail kit, and cable management arm | 1 |
| 7110339 | Oracle | 7110339 | Eight 2.5-inch drive slots, DVD-RW and disk cage for 1U | 1 |
| 7113235 | Oracle | 7113235 | 1 Intel® Xeon® Platinum 8160 24-core 2.1 GHz processor (for factory installation) | 2 |

| Oracle X7-2 for DSR (AC Power) | | | | |
|---|---|---|---|---|
| **Oracle Part Number** | **Supplier** | **Supplier Part Number** | **Description** | **Unit Qty** |
| 7115198 | Oracle | 7115198 | One 16 GB DDR4-2666 registered DIMM (for factory installation) | 16 |
| 7111107 | Oracle | 7111107 | One 1.2 TB 10000 rpm 2.5-inch SAS-3 HDD with marlin bracket (for factory installation) | 2 |
| 7117125 | Oracle | 7117125 | Oracle Storage 12 Gb SAS PCIe RAID HBA, internal: 16 port and 2 GB memory (for factory installation) | 1 |
| 7111182 | Oracle | 7111182 | Oracle Quad Port 10GBase-T Adapter (for factory installation) | 1 |
| 333W-10-13-C14RA | Oracle | 333W-10-13-C14RA | Power cord: Sun Rack jumper, 1 meter, C14RA plug, C13 connector, 13 A (for factory installation) | 2 |
| 7115197 | Oracle | 7115197 | Short heat sink (for factory installation) | 2 |
| 6331A-N | Oracle | 6331A-N | 2.5-inch HDD filler panel (for factory installation) | 6 |
| 7102748 | Oracle | 7102748 | PCIe filler panel (for factory installation) | 2 |
| 7116456 | Oracle | 7116456 | Processor clip (for factory installation) | 2 |
| 7117386 | Oracle | 7117386 | SAS cables for 1U (for factory installation) | 1 |
| 2124A | Oracle | 2124A | QSFP Optical SR (for factory installation) | 4 |

# 5.3 HP Hardware

**Table 5-2    Gen 9 v2 Blades**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| | | HPE BL460 Gen9 Config 1 | HPE BL460 Gen9 Configuration 1 | 1 |
| | Hewlett-Packard | 813198-B21 | HPE ProLiant BL460c Gen9 E5-v4 10Gb/20Gb FlexibleLOM Configure-to-order Blade Server | 1 |
| | Hewlett-Packard | 819853-L21 | HPE BL460c Gen9 Intel® Xeon® E5-2695v4 (2.1GHz/18-core/45MB/120W) FIO Proc Kit | 1 |
| | Hewlett-Packard | 819853-B21 | HPE BL460c Gen9 Intel® Xeon® E5-2695v4 (2.1GHz/18-core/45MB/120W) Proc Kit | 1 |
| | Hewlett-Packard | 805349-B21 | HPE 16GB (1x16GB) Single Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit (Use with the V4 processor only) | 8 |
| | Hewlett-Packard | 872479-B21 | HPE 1.2 TB 12G SAS 10K rpm SFF (2.5-inch) SC Ent 3yr Warranty Hard Drive | 2 |
| | Hewlett-Packard | 684214-B21 | HPE Ethernet 10Gb 2-port 560FLB Adapter (Flex LOM) | 1 |
| | Hewlett-Packard | 665246-B21 | HPE Ethernet 10Gb 2-port 560M Adapter | 2 |
| | Hewlett-Packard | 761871-B21 | HPE Smart Array P244br/1GB FBWC 12Gb 2-ports Int FIO SAS Controller | 1 |
| | Hewlett-Packard | 758959-B22 | HPE LEGACY FIO MODE SETTING | 1 |

**Table 5-3    Gen 9 v2 RMS Server (DC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| **Gen 9 RMS v2 Prod Server (DC)** | | | | |
| | | HPE DL380 Gen9 v2 DC | OCDSR Configuration 1 | 1 |
| | Hewlett-Packard | 719064-B21 | HPE ProLiant DL380 Gen9 8SFF | 1 |
| | Hewlett-Packard | 817951-L21 | HPE DL380 Gen9 Intel® Xeon® E5-2680v4 (2.4GHz/14-core/ 35MB/120W) FIO Processor Kit (Processor Kit Ships with a High Performance Heatsink) | 1 |
| | Hewlett-Packard | 817951-B21 | HPE DL380 Gen9 Intel® Xeon® E5-2680v4 (2.4GHz/14-core/ 35MB/120W) Processor Kit (Processor Kit Ships with a High Performance Heatsink) | 1 |
| | Hewlett-Packard | 805349-B21 | HPE 16GB (1x16GB) Single Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit (Use with V4 processor only) | 16 |
| | Hewlett-Packard | 749974-B21 | HPE Smart Array P440ar/2GB FBWC 12Gb 2-ports Int FIO SAS Controller (Includes the HP Smart Storage Battery) | 1 |
| | Hewlett-Packard | 665249-B21 | HPE Ethernet 10Gb Dual Port 560SFP+ Adapter | 2 |

**Table 5-3    (Cont.) Gen 9 v2 RMS Server (DC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| | Hewlett-Packard | 872479-B21 | HPE 1.2 TB 12G SAS 10K rpm SFF (2.5-inch) SC Ent 3yr Warranty Hard Drive | 2 |
| | Hewlett-Packard | 720480-B21 | HPE 800 W Flex Slot-48VDC Hot Plug Power Supply Kit | 2 |
| | Hewlett-Packard | 512485-B21 | HPE iLO Advanced including 1yr 24x7 Technical Support | 1 |
| | Hewlett-Packard | 720863-B21 | HPE 2U Small Form Factor Ball Bearing Gen8 Rail Kit with CMA (Required for Zone 4 installations) | 1 |
| | Hewlett-Packard | 768900-B21 | HPE DL380 Gen9 Systems Insight Display Kit | 1 |
| | Hewlett-Packard | 758959-B22 | HPE LEGACY FIO MODE SETTING | 1 |
| | Hewlett-Packard | 719070-B21 | HPE DL380 G9 Chassis NEBS Conversion Kit | 1 |
| | Hewlett-Packard | 719079-B21 | HPE DL380 Gen9 High Performance Fan Kit | 1 |
| | Hewlett-Packard | J6X43A | HPE 12AWG PWR-48V DC 3.0m Crd (DC Power Cable two required) | 2 |
| **Gen 9 v2 RMS non High Available (for Lab) Server (DC)** | | | | |
| | | HPE DL380 Gen9 v2 DC | OCDSR Configuration 2 Non HA for Lab | 1 |
| | Hewlett-Packard | 719064-B21 | HPE ProLiant DL380 Gen9 8SFF | 1 |

**Table 5-3    (Cont.) Gen 9 v2 RMS Server (DC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| | Hewlett-Packard | 817951-L21 | HPE DL380 Gen9 Intel® Xeon® E5-2680v4 (2.4GHz/14-core/ 35MB/120W) FIO Processor Kit (Processor Kit Ships with a High Performance Heatsink) | 1 |
| | Hewlett-Packard | 817951-B21 | HPE DL380 Gen9 Intel® Xeon® E5-2680v4 (2.4GHz/14-core/ 35MB/120W) Processor Kit (Processor Kit Ships with a High Performance Heatsink) | 1 |
| | Hewlett-Packard | 805349-B21 | HPE 16GB (1x16GB) Single Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit (Use with V4 processor only) | 16 |
| | Hewlett-Packard | 749974-B21 | HPE Smart Array P440ar/2GB FBWC 12Gb 2-ports Int FIO SAS Controller (Includes the HP Smart Storage Battery) | 1 |
| | Hewlett-Packard | 665249-B21 | HPE Ethernet 10Gb Dual Port 560SFP+ Adapter | 2 |
| | Hewlett-Packard | 872479-B21 | HPE 1.2 TB 12G SAS 10K rpm SFF (2.5-inch) SC Ent 3yr Warranty Hard Drive | 2 |

**Table 5-3    (Cont.) Gen 9 v2 RMS Server (DC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| | Hewlett-Packard | 720480-B21 | HPE 800 W Flex Slot-48VDC Hot Plug Power Supply Kit | 2 |
| | Hewlett-Packard | 512485-B21 | HPE iLO Advanced including 1yr 24x7 Technical Support | 1 |
| | Hewlett-Packard | 720863-B21 | HPE 2U Small Form Factor Ball Bearing Gen8 Rail Kit with CMA (Required for Zone 4 installations) | 1 |
| | Hewlett-Packard | 768900-B21 | HPE DL380 Gen9 Systems Insight Display Kit | 1 |
| | Hewlett-Packard | 758959-B22 | HPE LEGACY FIO MODE SETTING | 1 |
| | Hewlett-Packard | 719070-B21 | HPE DL380 G9 Chassis NEBS Conversion Kit | 1 |
| | Hewlett-Packard | 719079-B21 | HPE DL380 Gen9 High Performance Fan Kit | 1 |
| | Hewlett-Packard | J6X43A | HPE 12AWG PWR-48V DC 3.0m Crd (DC Power Cable two required) | 2 |
| **Gen 9 v2 RMS IDIH Server (DC)** | | | | |
| | | HPE DL380 Gen9 v2 DC | OCDSR Configuration 5 | 1 |
| | Hewlett-Packard | 719064-B21 | HPE ProLiant DL380 Gen9 8SFF | 1 |

**Table 5-3    (Cont.) Gen 9 v2 RMS Server (DC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| | Hewlett-Packard | 817951-L21 | HPE DL380 Gen9 Intel® Xeon® E5-2680v4 (2.4GHz/14-core/ 35MB/120W) FIO Processor Kit (Processor Kit Ships with a High Performance Heatsink) | 1 |
| | Hewlett-Packard | 817951-B21 | HPE DL380 Gen9 Intel® Xeon® E5-2680v4 (2.4GHz/14-core/ 35MB/120W) Processor Kit (Processor Kit Ships with a High Performance Heatsink) | 1 |
| | Hewlett-Packard | 805349-B21 | HPE 16GB (1x16GB) Single Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit (Use with V4 processor only) | 16 |
| | Hewlett-Packard | 749974-B21 | HPE Smart Array P440ar/2GB FBWC 12Gb 2-ports Int FIO SAS Controller (Includes the HP Smart Storage Battery) | 1 |
| | Hewlett-Packard | 665249-B21 | HPE Ethernet 10Gb Dual Port 560SFP+ Adapter | 2 |
| | Hewlett-Packard | 872479-B21 | HPE 1.2 TB 12G SAS 10K rpm SFF (2.5-inch) SC Ent 3yr Warranty Hard Drive | 6 |

**Table 5-3  (Cont.) Gen 9 v2 RMS Server (DC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| | Hewlett-Packard | 720480-B21 | HPE 800 W Flex Slot-48VDC Hot Plug Power Supply Kit | 2 |
| | Hewlett-Packard | 512485-B21 | HPE iLO Advanced including 1yr 24x7 Technical Support | 1 |
| | Hewlett-Packard | 720863-B21 | HPE 2U Small Form Factor Ball Bearing Gen8 Rail Kit with CMA (Required for Zone 4 installations) | 1 |
| | Hewlett-Packard | 768900-B21 | HPE DL380 Gen9 Systems Insight Display Kit | 1 |
| | Hewlett-Packard | 758959-B22 | HPE LEGACY FIO MODE SETTING | 1 |
| | Hewlett-Packard | 719070-B21 | HPE DL380 G9 Chassis NEBS Conversion Kit | 1 |
| | Hewlett-Packard | 719079-B21 | HPE DL380 Gen9 High Performance Fan Kit | 1 |
| | Hewlett-Packard | J6X43A | HPE 12AWG PWR-48V DC 3.0m Crd (DC Power Cable two required) | 2 |

**Table 5-4  Gen 9 v2 RMS Server (AC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| **Gen 9 RMS v2 Prod Server (AC)** | | | | |
| | | HPE DL380 Gen9 v2 AC | OCDSR Configuration 1 | 0 |
| | Hewlett-Packard | 719064-B21 | HPE ProLiant DL380 Gen9 8SFF | 1 |

**Table 5-4    (Cont.) Gen 9 v2 RMS Server (AC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| | Hewlett-Packard | 817951-L21 | HPE DL380 Gen9 Intel® Xeon® E5-2680v4 (2.4GHz/14-core/ 35MB/120W) FIO Processor Kit (Processor Kit Ships with a High Performance Heatsink) | 1 |
| | Hewlett-Packard | 817951-B21 | HPE DL380 Gen9 Intel® Xeon® E5-2680v4 (2.4GHz/14-core/ 35MB/120W) Processor Kit (Processor Kit Ships with a High Performance Heatsink) | 1 |
| | Hewlett-Packard | 805349-B21 | HPE 16GB (1x16GB) Single Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit (Use with V4 processor only) | 16 |
| | Hewlett-Packard | 749974-B21 | HPE Smart Array P440ar/2GB FBWC 12Gb 2-ports Int FIO SAS Controller (Includes the HP Smart Storage Battery) | 1 |
| | Hewlett-Packard | 665249-B21 | HPE Ethernet 10Gb Dual Port 560SFP+ Adapter | 2 |
| | Hewlett-Packard | 872479-B21 | HPE 1.2 TB 12G SAS 10K rpm SFF (2.5-inch) SC Ent 3yr Warranty Hard Drive | 2 |
| | Hewlett-Packard | 720479-B21 | HPE 800 W Flex Slot Platinum Hot Plug Power Supply Kit (AC Power Supply) | 2 |

**Table 5-4    (Cont.) Gen 9 v2 RMS Server (AC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| | Hewlett-Packard | 512485-B21 | HPE iLO Advanced including 1yr 24x7 Technical Support | 1 |
| | Hewlett-Packard | 720863-B21 | HPE 2U Small Form Factor Ball Bearing Gen8 Rail Kit with CMA (Required for Zone 4 installations) | 1 |
| | Hewlett-Packard | 768900-B21 | HPE DL380 Gen9 Systems Insight Display Kit | 1 |
| | Hewlett-Packard | 758959-B22 | HPE LEGACY FIO MODE SETTING | 1 |
| | Hewlett-Packard | 719070-B21 | HPE DL380 G9 Chassis NEBS Conversion Kit | 1 |
| | Hewlett-Packard | 719079-B21 | HPE DL380 Gen9 High Performance Fan Kit | 1 |
| **Gen 9 v2 RMS non High Available (for Lab) Server (AC)** | | | | |
| | | HPE DL380 Gen9 v2 AC | OCDSR Configuration 2 Non HA for Lab | 1 |
| | Hewlett-Packard | 719064-B21 | HPE ProLiant DL380 Gen9 8SFF | 1 |
| | Hewlett-Packard | 817951-L21 | HPE DL380 Gen9 Intel® Xeon® E5-2680v4 (2.4GHz/14-core/35MB/120W) FIO Processor Kit (Processor Kit Ships with a High Performance Heatsink) | 1 |
| | Hewlett-Packard | 817951-B21 | HPE DL380 Gen9 Intel® Xeon® E5-2680v4 (2.4GHz/14-core/35MB/120W) Processor Kit (Processor Kit Ships with a High Performance Heatsink) | 1 |

ORACLE®

**Table 5-4    (Cont.) Gen 9 v2 RMS Server (AC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| | Hewlett-Packard | 805349-B21 | HPE 16GB (1x16GB) Single Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit (Use with V4 processor only) | 16 |
| | Hewlett-Packard | 749974-B21 | HPE Smart Array P440ar/2GB FBWC 12Gb 2-ports Int FIO SAS Controller (Includes the HP Smart Storage Battery) | 1 |
| | Hewlett-Packard | 665249-B21 | HPE Ethernet 10Gb Dual Port 560SFP+ Adapter | 2 |
| | Hewlett-Packard | 872479-B21 | HPE 1.2 TB 12G SAS 10K rpm SFF (2.5-inch) SC Ent 3yr Warranty Hard Drive | 2 |
| | Hewlett-Packard | 720479-B21 | HPE 800 W Flex Slot Platinum Hot Plug Power Supply Kit (AC Power Supply) | 2 |
| | Hewlett-Packard | 512485-B21 | HPE iLO Advanced including 1yr 24x7 Technical Support | 1 |
| | Hewlett-Packard | 720863-B21 | HPE 2U Small Form Factor Ball Bearing Gen8 Rail Kit with CMA (Required for Zone 4 installations) | 1 |
| | Hewlett-Packard | 768900-B21 | HPE DL380 Gen9 Systems Insight Display Kit | 1 |
| | Hewlett-Packard | 758959-B22 | HPE LEGACY FIO MODE SETTING | 1 |
| | Hewlett-Packard | 719070-B21 | HPE DL380 G9 Chassis NEBS Conversion Kit | 1 |
| | Hewlett-Packard | 719079-B21 | HPE DL380 Gen9 High Performance Fan Kit | 1 |

**Table 5-4    (Cont.) Gen 9 v2 RMS Server (AC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| **Gen 9 v2 RMS IDIH Server (AC)** | | | | |
| | | HPE DL380 Gen9 v2 AC | OCDSR Configuration 5 | 1 |
| | Hewlett-Packard | 719064-B21 | HPE ProLiant DL380 Gen9 8SFF | 1 |
| | Hewlett-Packard | 817951-L21 | HPE DL380 Gen9 Intel® Xeon® E5-2680v4 (2.4GHz/14-core/35MB/120W) FIO Processor Kit (Processor Kit Ships with a High Performance Heatsink) | 1 |
| | Hewlett-Packard | 817951-B21 | HPE DL380 Gen9 Intel® Xeon® E5-2680v4 (2.4GHz/14-core/35MB/120W) Processor Kit (Processor Kit Ships with a High Performance Heatsink) | 1 |
| | Hewlett-Packard | 805349-B21 | HPE 16GB (1x16GB) Single Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit (Use with V4 processor only) | 16 |
| | Hewlett-Packard | 749974-B21 | HPE Smart Array P440ar/2GB FBWC 12Gb 2-ports Int FIO SAS Controller (Includes the HP Smart Storage Battery) | 1 |
| | Hewlett-Packard | 665249-B21 | HPE Ethernet 10Gb Dual Port 560SFP+ Adapter | 2 |
| | Hewlett-Packard | 872479-B21 | HPE 1.2 TB 12G SAS 10K rpm SFF (2.5-inch) SC Ent 3yr Warranty Hard Drive | 6 |

**Table 5-4    (Cont.) Gen 9 v2 RMS Server (AC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| | Hewlett-Packard | 720479-B21 | HPE 800 W Flex Slot Platinum Hot Plug Power Supply Kit (AC Power Supply) | 2 |
| | Hewlett-Packard | 512485-B21 | HPE iLO Advanced including 1yr 24x7 Technical Support | 1 |
| | Hewlett-Packard | 720863-B21 | HPE 2U Small Form Factor Ball Bearing Gen8 Rail Kit with CMA (Required for Zone 4 installations) | 1 |
| | Hewlett-Packard | 768900-B21 | HPE DL380 Gen9 Systems Insight Display Kit | 1 |
| | Hewlett-Packard | 758959-B22 | HPE LEGACY FIO MODE SETTING | 1 |
| | Hewlett-Packard | 719070-B21 | HPE DL380 G9 Chassis NEBS Conversion Kit | 1 |
| | Hewlett-Packard | 719079-B21 | HPE DL380 Gen9 High Performance Fan Kit | 1 |

**Table 5-5    Gen 9 Blade v1**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| | | HP BL460 Gen9 Config 1 | HP BL460 Gen9 Configuration 1 | 1 |
| | Hewlett-Packard | 727021-B21 | HP ProLiant BL460c Gen9 E5-v3 10Gb/20Gb FlexibleLOM Configure-to-order Blade Server | 1 |
| | Hewlett-Packard | 727003-L21 | HP BL460c Gen9 Intel® Xeon® E5-2695v3 (2.3GHz/14-core/35MB/120W) FIO Processor Kit | 1 |

**Table 5-5    (Cont.) Gen 9 Blade v1**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| | Hewlett-Packard | 727003-B21 | HP BL460c Gen9 Intel® Xeon® E5-2695v3 (2.3GHz/14-core/ 35MB/120W) Processor Kit | 1 |
| | Hewlett-Packard | 726719-B21 | HP 16GB (1x16GB) Dual Rank x4 PC4-2133P-R (DDR4-2133) Registered | 8 |
| | Hewlett-Packard | 872479-B21 | HPE 1.2 TB 12G SAS 10K rpm SFF (2.5-inch) SC Ent 3yr Warranty Hard Drive | 2 |
| | Hewlett-Packard | 655639-B21 | HP Ethernet 10Gb 2-port 560FLB Adapter (Flex LOM) | 1 |
| | Hewlett-Packard | 665246-B21 | HP Ethernet 10Gb 2-port 560M Adapter | 2 |
| | Hewlett-Packard | 761871-B21 | HP Smart Array P244br/1GB FBWC 12Gb 2-ports Int FIO SAS Controller | 1 |
| | Hewlett-Packard | 758959-B22 | HP LEGACY FIO MODE SETTING | 1 |

**Table 5-6    Gen 9 v1 RMS Server (DC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| **Gen 9 RMS v1 Prod Server (DC)** | | | | |
| | | HP DL380 Gen9 DC | OCDSR Configuration 1 | 1 |
| | Hewlett-Packard | 719064-B21 | HP ProLiant DL380 Gen9 8SFF Configure-to-order Server | 1 |
| | Hewlett-Packard | 762766-L21 | HP DL380 Gen9 Intel® Xeon® E5-2680v3 (2.5GHz/12-core/ 30MB/120W) FIO Processor Kit | 1 |

**Table 5-6    (Cont.) Gen 9 v1 RMS Server (DC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| | Hewlett-Packard | 762766-B21 | HP DL380 Gen9 Intel® Xeon® E5-2680v3 (2.5GHz/12-core/ 30MB/120W) FIO Processor Kit | 1 |
| | Hewlett-Packard | 726719-B21 | HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Reg Memory Kit | 16 |
| | Hewlett-Packard | 749974-B21 | HP Smart Array P440ar/2GB FBWC 12Gb 2-ports Int FIO SAS Controller | 1 |
| | Hewlett-Packard | 665249-B21 | HP Ethernet 10-Gb 2-port 560SFP+Adapter | 2 |
| | Hewlett-Packard | 872479-B21 | HPE 1.2 TB 12G SAS 10K rpm SFF (2.5-inch) SC Ent 3yr Warranty Hard Drive | 2 |
| | Hewlett-Packard | 720480-B21 | HP 800 W Flex Slot-48VDC Hot Plug Power Supply Kit | 2 |
| | Hewlett-Packard | 512485-B21 | HP iLO Advanced including 1yr 24x7 Technical Support and Updates Single Server License | 1 |
| | Hewlett-Packard | 720863-B21 | HP 2U Small Form Factor Ball Bearing Gen8 Rail Kit with CMA (Required for Zone 4 installations) | 1 |
| | Hewlett-Packard | 768900-B21 | HP DL380 Gen9 Systems Insight Display Kit | 1 |
| | Hewlett-Packard | 758959-B22 | HP LEGACY FIO MODE SETTING | 1 |
| | Hewlett-Packard | 719070-B21 | HP DL380 G9 Chassis NEBS Conversion Kit | 1 |

**Table 5-6    (Cont.) Gen 9 v1 RMS Server (DC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| | Hewlett-Packard | 719079-B21 | HP DL380 Gen9 High Performance Fan Kit | 1 |
| | Hewlett-Packard | J6X43A | HP 12AWG PWR-48V DC 3.0m Crd (DC Power Cable two required) | 2 |
| **Gen 9 v1 RMS non High Available (for Lab) Server (DC)** | | | | |
| | | HP DL380 Gen9 DC | OCDSR Configuration 2 Non HA for Lab | 1 |
| | Hewlett-Packard | 719064-B21 | HP ProLiant DL380 Gen9 8SFF Configure-to-order Server | 1 |
| | Hewlett-Packard | 762766-L21 | HP DL380 Gen9 Intel® Xeon® E5-2680v3 (2.5GHz/12-core/ 30MB/120W) FIO Processor Kit | 1 |
| | Hewlett-Packard | 762766-B21 | HP DL380 Gen9 Intel® Xeon® E5-2680v3 (2.5GHz/12-core/ 30MB/120W) FIO Processor Kit | 1 |
| | Hewlett-Packard | 726719-B21 | HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Reg Memory Kit | 16 |
| | Hewlett-Packard | 749974-B21 | HP Smart Array P440ar/2GB FBWC 12Gb 2-ports Int FIO SAS Controller | 1 |
| | Hewlett-Packard | 665249-B21 | HP Ethernet 10-Gb 2-port 560SFP+Adapter | 2 |
| | Hewlett-Packard | 872479-B21 | HPE 1.2 TB 12G SAS 10K rpm SFF (2.5-inch) SC Ent 3yr Warranty Hard Drive | 2 |
| | Hewlett-Packard | 720480-B21 | HP 800 W Flex Slot-48VDC Hot Plug Power Supply Kit | 2 |

**Table 5-6    (Cont.) Gen 9 v1 RMS Server (DC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| | Hewlett-Packard | 512485-B21 | HP iLO Advanced including 1yr 24x7 Technical Support and Updates Single Server License | 1 |
| | Hewlett-Packard | 720863-B21 | HP 2U Small Form Factor Ball Bearing Gen8 Rail Kit with CMA (Required for Zone 4 installations) | 1 |
| | Hewlett-Packard | 768900-B21 | HP DL380 Gen9 Systems Insight Display Kit | 1 |
| | Hewlett-Packard | 758959-B22 | HP LEGACY FIO MODE SETTING | 1 |
| | Hewlett-Packard | 719070-B21 | HP DL380 G9 Chassis NEBS Conversion Kit | 1 |
| | Hewlett-Packard | 719079-B21 | HP DL380 Gen9 High Performance Fan Kit | 1 |
| | Hewlett-Packard | J6X43A | HP 12AWG PWR-48V DC 3.0m Crd (DC Power Cable two required) | 2 |
| **Gen 9 v1 RMS IDIH Server (DC)** | | | | |
| | | HP DL380 Gen9 DC | OCDSR Configuration 5 | 1 |
| | Hewlett-Packard | 719064-B21 | HP ProLiant DL380 Gen9 8SFF | 1 |
| | Hewlett-Packard | 762766-L21 | HP DL380 Gen9 Intel® Xeon® E5-2680v3 (2.5GHz/12-core/30MB/120W) FIO Processor Kit (Processor Kit Ships with a High Performance Heatsink) | 1 |

**Table 5-6　(Cont.) Gen 9 v1 RMS Server (DC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| | Hewlett-Packard | 762766-B21 | HP DL380 Gen9 Intel® Xeon® E5-2680v3 (2.5GHz/12-core/30MB/120W) FIO Processor Kit (Processor Kit Ships with a High Performance Heatsink) | 1 |
| | Hewlett-Packard | 726719-B21 | HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Reg Memory Kit (Pick memory dims modules in groups of 4, 8,12,16 with a minimum requirement of 8x16GB=128GB and a maximum requirement of 16x16GB=256GB) | 16 |
| | Hewlett-Packard | 749974-B21 | HP Smart Array P440ar/2GB FBWC 12Gb 2-ports Int FIO SAS Controller (Includes the HP Smart Storage Battery) | 1 |
| | Hewlett-Packard | 665249-B21 | HP Ethernet 10-Gb 2-port 560SFP+Adapter | 2 |
| | Hewlett-Packard | 720480-B21 | HP 800 W Flex Slot-48VDC Hot Plug Power Supply Kit | 2 |
| | Hewlett-Packard | 512485-B21 | HP iLO Advanced including 1yr 24x7 Technical Support and Updates Single Server License | 1 |
| | Hewlett-Packard | 720863-B21 | HP 2U Small Form Factor Ball Bearing Gen8 Rail Kit with CMA (Required for Zone 4 installations) | 1 |

**ORACLE**®

**Table 5-6    (Cont.) Gen 9 v1 RMS Server (DC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| | Hewlett-Packard | 768900-B21 | HP DL380 Gen9 Systems Insight Display Kit | 1 |
| | Hewlett-Packard | 758959-B22 | HP LEGACY FIO MODE SETTING | 1 |
| | Hewlett-Packard | 719070-B21 | HP DL380 G9 Chassis NEBS Conversion Kit | 1 |
| | Hewlett-Packard | 719079-B21 | HP DL380 Gen9 High Performance Fan Kit | 1 |
| | Hewlett-Packard | 872479-B21 | HPE 1.2 TB 12G SAS 10K rpm SFF (2.5-inch) SC Ent 3yr Warranty Hard Drive | 6 |
| | Hewlett-Packard | J6X43A | HP 12AWG PWR-48V DC 3.0m Crd (DC Power Cable two required) | 2 |

**Table 5-7    Gen 9 v1 RMS Server (AC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| **Gen 9 RMS v1 Prod Server (AC)** | | | | |
| | | HP DL380 Gen9 AC | OCDSR Configuration 1 | 1 |
| | Hewlett-Packard | 719064-B21 | HP ProLiant DL380 Gen9 8SFF Configure-to-order Server | 1 |
| | Hewlett-Packard | 762766-L21 | HP DL380 Gen9 Intel® Xeon® E5-2680v3 (2.5GHz/12-core/30MB/120W) FIO Processor Kit | 1 |
| | Hewlett-Packard | 762766-B21 | HP DL380 Gen9 Intel® Xeon® E5-2680v3 (2.5GHz/12-core/30MB/120W) FIO Processor Kit | 1 |

**Table 5-7    (Cont.) Gen 9 v1 RMS Server (AC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| | Hewlett-Packard | 726719-B21 | HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Reg Memory Kit | 16 |
| | Hewlett-Packard | 749974-B21 | HP Smart Array P440ar/2GB FBWC 12Gb 2-ports Int FIO SAS Controller | 1 |
| | Hewlett-Packard | 665249-B21 | HP Ethernet 10-Gb 2-port 560SFP+Adapter | 2 |
| | Hewlett-Packard | 872479-B21 | HPE 1.2 TB 12G SAS 10K rpm SFF (2.5-inch) SC Ent 3yr Warranty Hard Drive | 2 |
| | Hewlett-Packard | 720479-B21 | HP 800 W Flex Slot Platinum Hot Plug Power Supply Kit (AC Power Supply) | 2 |
| | Hewlett-Packard | 512485-B21 | HP iLO Advanced including 1yr 24x7 Technical Support and Updates Single Server License | 1 |
| | Hewlett-Packard | 720863-B21 | HP 2U Small Form Factor Ball Bearing Gen8 Rail Kit with CMA (Required for Zone 4 installations) | 1 |
| | Hewlett-Packard | 768900-B21 | HP DL380 Gen9 Systems Insight Display Kit | 1 |
| | Hewlett-Packard | 758959-B22 | HP LEGACY FIO MODE SETTING | 1 |
| | Hewlett-Packard | 719070-B21 | HP DL380 G9 Chassis NEBS Conversion Kit | 1 |
| | Hewlett-Packard | 719079-B21 | HP DL380 Gen9 High Performance Fan Kit | 1 |

**Table 5-7    (Cont.) Gen 9 v1 RMS Server (AC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| **Gen 9 v1 RMS non High Available (for Lab) Server (AC)** | | | | |
| | | HP DL380 Gen9 AC | OCDSR Configuration 2 Non HA for Lab | 1 |
| | Hewlett-Packard | 719064-B21 | HP ProLiant DL380 Gen9 8SFF Configure-to-order Server | 1 |
| | Hewlett-Packard | 762766-L21 | HP DL380 Gen9 Intel® Xeon® E5-2680v3 (2.5GHz/12-core/30MB/120W) FIO Processor Kit | 1 |
| | Hewlett-Packard | 762766-B21 | HP DL380 Gen9 Intel® Xeon® E5-2680v3 (2.5GHz/12-core/30MB/120W) FIO Processor Kit | 1 |
| | Hewlett-Packard | 726719-B21 | HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Reg Memory Kit | 16 |
| | Hewlett-Packard | 749974-B21 | HP Smart Array P440ar/2GB FBWC 12Gb 2-ports Int FIO SAS Controller | 1 |
| | Hewlett-Packard | 665249-B21 | HP Ethernet 10-Gb 2-port 560SFP+Adapter | 2 |
| | Hewlett-Packard | 872479-B21 | HPE 1.2 TB 12G SAS 10K rpm SFF (2.5-inch) SC Ent 3yr Warranty Hard Drive | 2 |
| | Hewlett-Packard | 720479-B21 | HP 800 W Flex Slot Platinum Hot Plug Power Supply Kit (AC Power Supply) | 2 |

**Table 5-7    (Cont.) Gen 9 v1 RMS Server (AC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| | Hewlett-Packard | 512485-B21 | HP iLO Advanced including 1yr 24x7 Technical Support and Updates Single Server License | 1 |
| | Hewlett-Packard | 720863-B21 | HP 2U Small Form Factor Ball Bearing Gen8 Rail Kit with CMA (Required for Zone 4 installations) | 1 |
| | Hewlett-Packard | 768900-B21 | HP DL380 Gen9 Systems Insight Display Kit | 1 |
| | Hewlett-Packard | 758959-B22 | HP LEGACY FIO MODE SETTING | 1 |
| | Hewlett-Packard | 719070-B21 | HP DL380 G9 Chassis NEBS Conversion Kit | 1 |
| | Hewlett-Packard | 719079-B21 | HP DL380 Gen9 High Performance Fan Kit | 1 |
| **Gen 9 v1 RMS IDIH Server (AC)** | | | | |
| | | HP DL380 Gen9 AC | OCDSR Configuration 5 | 1 |
| | Hewlett-Packard | 719064-B21 | HP ProLiant DL380 Gen9 8SFF | 1 |
| | Hewlett-Packard | 762766-L21 | HP DL380 Gen9 Intel® Xeon® E5-2680v3 (2.5GHz/12-core/30MB/120W) FIO Processor Kit (Processor Kit Ships with a High Performance Heatsink) | 1 |

**Table 5-7    (Cont.) Gen 9 v1 RMS Server (AC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| | Hewlett-Packard | 762766-B21 | HP DL380 Gen9 Intel® Xeon® E5-2680v3 (2.5GHz/12-core/30MB/120W) FIO Processor Kit (Processor Kit Ships with a High Performance Heatsink) | 1 |
| | Hewlett-Packard | 726719-B21 | HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Reg Memory Kit (Pick memory dims modules in groups of 4, 8,12,16 with a minimum requirement of 8x16GB=128GB and a maximum requirement of 16x16GB=256GB ) | 16 |
| | Hewlett-Packard | 749974-B21 | HP Smart Array P440ar/2GB FBWC 12Gb 2-ports Int FIO SAS Controller (Includes the HP Smart Storage Battery) | 1 |
| | Hewlett-Packard | 665249-B21 | HP Ethernet 10-Gb 2-port 560SFP+Adapter | 2 |
| | Hewlett-Packard | 720479-B21 | HP 800 W Flex Slot Platinum Hot Plug Power Supply Kit (AC Power Supply) | 2 |
| | Hewlett-Packard | 512485-B21 | HP iLO Advanced including 1yr 24x7 Technical Support and Updates Single Server License | 1 |

**Table 5-7 (Cont.) Gen 9 v1 RMS Server (AC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| | Hewlett-Packard | 720863-B21 | HP 2U Small Form Factor Ball Bearing Gen8 Rail Kit with CMA (Required for Zone 4 installations) | 1 |
| | Hewlett-Packard | 768900-B21 | HP DL380 Gen9 Systems Insight Display Kit | 1 |
| | Hewlett-Packard | 758959-B22 | HP LEGACY FIO MODE SETTING | 1 |
| | Hewlett-Packard | 719070-B21 | HP DL380 G9 Chassis NEBS Conversion Kit | 1 |
| | Hewlett-Packard | 719079-B21 | HP DL380 Gen9 High Performance Fan Kit | 1 |
| | Hewlett-Packard | 872479-B21 | HPE 1.2 TB 12G SAS 10K rpm SFF (2.5-inch) SC Ent 3yr Warranty Hard Drive | 6 |
| **Gen 9 v1 RMS IDIH Server (DC)** | | | | |
| | | HP DL380 Gen9 DC | OCDSR Configuration 5 | 1 |
| | Hewlett-Packard | 719064-B21 | HP ProLiant DL380 Gen9 8SFF | 1 |
| | Hewlett-Packard | 762766-L21 | HP DL380 Gen9 Intel® Xeon® E5-2680v3 (2.5GHz/12-core/30MB/120W) FIO Processor Kit (Processor Kit Ships with a High Performance Heatsink) | 1 |
| | Hewlett-Packard | 762766-B21 | HP DL380 Gen9 Intel® Xeon® E5-2680v3 (2.5GHz/12-core/30MB/120W) FIO Processor Kit (Processor Kit Ships with a High Performance Heatsink) | 1 |

**Table 5-7    (Cont.) Gen 9 v1 RMS Server (AC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| | Hewlett-Packard | 726719-B21 | HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Reg Memory Kit (Pick memory dims modules in groups of 4, 8,12,16 with a minimum requirement of 8x16GB=128GB and a maximum requirement of 16x16GB=256GB ) | 16 |
| | Hewlett-Packard | 749974-B21 | HP Smart Array P440ar/2GB FBWC 12Gb 2-ports Int FIO SAS Controller (Includes the HP Smart Storage Battery) | 1 |
| | Hewlett-Packard | 665249-B21 | HP Ethernet 10-Gb 2-port 560SFP+Adapter | 2 |
| | Hewlett-Packard | 720480-B21 | HP 800 W Flex Slot-48VDC Hot Plug Power Supply Kit | 2 |
| | Hewlett-Packard | 512485-B21 | HP iLO Advanced including 1yr 24x7 Technical Support and Updates Single Server License | 1 |
| | Hewlett-Packard | 720863-B21 | HP 2U Small Form Factor Ball Bearing Gen8 Rail Kit with CMA (Required for Zone 4 installations) | 1 |
| | Hewlett-Packard | 768900-B21 | HP DL380 Gen9 Systems Insight Display Kit | 1 |
| | Hewlett-Packard | 758959-B22 | HP LEGACY FIO MODE SETTING | 1 |

**Table 5-7    (Cont.) Gen 9 v1 RMS Server (AC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| | Hewlett-Packard | 719070-B21 | HP DL380 G9 Chassis NEBS Conversion Kit | 1 |
| | Hewlett-Packard | 719079-B21 | HP DL380 Gen9 High Performance Fan Kit | 1 |
| | Hewlett-Packard | 872479-B21 | HPE 1.2 TB 12G SAS 10K rpm SFF (2.5-inch) SC Ent 3yr Warranty Hard Drive | 6 |
| | Hewlett-Packard | J6X43A | HP 12AWG PWR-48V DC 3.0m Crd (DC Power Cable two required) | 2 |

**Table 5-8    Gen 8 Blades**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| **Gen8 Blade DA-MP** | | | | |
| 7108039 | | | HP D9N37A_BL460C GEN8_BLADE SERVER_009_ROHS | 1 |
| 7108039 | Hewlett-Packard | 735151-B21 | HP ProLiant BL460c Gen8 E5-v2 10Gb FlexibleLOM Server | 1 |
| 7108039 | Hewlett-Packard | 690164-B21 | HP Smart Array P220i Controller FIO Kit | 1 |
| 7108039 | Hewlett-Packard | 718056-L21 | HP BL460c Gen8 E5-2680v2 FIO Kit | 1 |
| 7108039 | Hewlett-Packard | 718056-B21 | HP BL460c Gen8 E5-2680v2 Kit | 1 |
| 7108039 | Hewlett-Packard | 708641-B21 | HP 16GB 2Rx4 PC3-14900R-13 Kit | 4 |
| 7108039 | Hewlett-Packard | 652583-B21 | HP 652583-B21_600GB 6G SAS_HDD_10K_SFF_ROHS | 2 |

**Table 5-8    (Cont.) Gen 8 Blades**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| 7108039 | Hewlett-Packard | 631884-B21 | HP 631884-B21_HP FLEX-10_10GB_2 PORT_ 530M ADAPTER_ROHS | 2 |
| 7108039 | Hewlett-Packard | 684211-B21 | HP 684211-B21_HP FLEX-10_10GB_2 PORT_530FLB FIO ADAPTER_ROHS | 1 |
| **Gen8 Blade SOAM** | | | | |
| 7108027 | | | HP D9N30A_BL460C GEN8_BLADE SERVER_001_ROHS | 1 |
| 7108027 | Hewlett-Packard | 735151-B21 | HP ProLiant BL460c Gen8 E5-v2 10Gb FlexibleLOM Server | 1 |
| 7108027 | Hewlett-Packard | 690164-B21 | HP Smart Array P220i Controller FIO Kit | 1 |
| 7108027 | Hewlett-Packard | 718056-L21 | HP BL460c Gen8 E5-2680v2 FIO Kit | 1 |
| 7108027 | Hewlett-Packard | 718056-B21 | HP BL460c Gen8 E5-2680v2 Kit | 1 |
| 7108027 | Hewlett-Packard | 708641-B21 | HP 16GB 2Rx4 PC3-14900R-13 Kit | 8 |
| 7108027 | Hewlett-Packard | 652589-B21 | HP 652589-B21_900GB 6G SAS_HDD_10K_SFF_ROHS | 2 |
| 7108027 | Hewlett-Packard | 631884-B21 | HP 631884-B21_HP FLEX-10_10GB_2 PORT_ 530M ADAPTER_ROHS | 2 |
| 7108027 | Hewlett-Packard | 684211-B21 | HP 684211-B21_HP FLEX-10_10GB_2 PORT_530FLB FIO ADAPTER_ROHS | 1 |
| **Gen8 Blade DIH** | | | | |

**Table 5-8    (Cont.) Gen 8 Blades**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| 7108104 | Hewlett-Packard | 406740-B21 | HP-406740-B21_1GBE_PASS THRU MODULE_001_R OHS | 1 |
| 7108027 | | | HP D9N30A_BL460C GEN8_BLADE SERVER_001_RO HS | 1 |
| 7108027 | Hewlett-Packard | 735151-B21 | HP ProLiant BL460c Gen8 E5-v2 10Gb FlexibleLOM Server | 1 |
| 7108027 | Hewlett-Packard | 690164-B21 | HP Smart Array P220i Controller FIO Kit | 1 |
| 7108027 | Hewlett-Packard | 718056-L21 | HP BL460c Gen8 E5-2680v2 FIO Kit | 1 |
| 7108027 | Hewlett-Packard | 718056-B21 | HP BL460c Gen8 E5-2680v2 Kit | 1 |
| 7108027 | Hewlett-Packard | 708641-B21 | HP 16GB 2Rx4 PC3-14900R-13 Kit | 8 |
| 7108027 | Hewlett-Packard | 652589-B21 | HP 652589-B21_900GB 6G SAS_HDD_10K_S FF_ROHS | 2 |
| 7108027 | Hewlett-Packard | 631884-B21 | HP 631884-B21_HP FLEX-10_10GB_2 PORT_ 530M ADAPTER_ROHS | 2 |
| 7108027 | Hewlett-Packard | 684211-B21 | HP 684211-B21_HP FLEX-10_10GB_2 PORT_530FLB FIO ADAPTER_ROHS | 1 |
| 7108130 | | | HP_STORAGE BLADE QW918A_600GB HARD DRIVES_ROHS | 1 |
| 7108130 | Hewlett-Packard | QW918A | HP QW918A_STORA GE BLADE FOR ASSY_ROHS | 1 |

**Table 5-8    (Cont.) Gen 8 Blades**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| 7108130 | Hewlett-Packard | 652583-B21 | HP 652583-B21_600GB 6G SAS_HDD_10K_SFF_ROHS | 12 |

**Table 5-9    Gen 8 Server (DC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| **Management Server** | | | | |
| 7109444 | | | HP D9N07A_DL380 GEN8_DC_SERVER_001_ROHS | 1 |
| 7109444 | Hewlett-Packard | 653200-B21 | HP 653200-B21_HP DL380P GEN8 8_SFF_CTO CHASSIS_ROHS | 1 |
| 7109444 | Hewlett-Packard | 715215-L21 | HP DL380p Gen8 E5-2680v2 FIO Kit | 1 |
| 7109444 | Hewlett-Packard | 715215-B21 | HP DL380p Gen8 E5-2680v2 Kit | 1 |
| 7109444 | Hewlett-Packard | 708641-B21 | HP 16GB 2Rx4 PC3-14900R-13 Kit | 8 |
| 7109444 | Hewlett-Packard | 631679-B21 | HP 631679-B21_HP 1GB P SERIES_SMART ARRAY_FLASH BACKED WRITE CACHE UPGRADE_ROHS | 1 |
| 7109444 | Hewlett-Packard | 652589-B21 | HP 652589-B21_900GB 6G SAS_HDD_10K_SFF_ROHS | 2 |
| 7109444 | Hewlett-Packard | 636673-B21 | HP 636673-B21_HP 750W_COMMON SLOT_-48VDC_HOT PLUG POWER SUPPLY KIT | 2 |

**Table 5-9    (Cont.) Gen 8 Server (DC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| 7109444 | Hewlett-Packard | 512485-B21 | HP 512485-B21_PROLIANT ESSENTIALS_INTEGRATED LIGHTS-OUT ADVANCED PACK_1 SVR LICENSE_NO MEDIA | 1 |
| 7109444 | Hewlett-Packard | 684208-B21 | HP 684208-B21_HP FLEXLOM_1GB_4-PORT_331FLR ETHERNET ADAPTER_ROHS | 1 |
| 7109444 | Hewlett-Packard | 647594-B21 | HP 647594-B21_331T_4P_1G_PCIE ADAPTER_ROHS | 1 |
| 7109444 | Hewlett-Packard | 663478-B21 | HP 663478-B21_HP 2U_SFF_BALL BEARING GEN8 RAIL KIT_ROHS | 1 |
| 7109444 | Hewlett-Packard | 707865-B21 | HP 707865-B21_DL380 GEN8_NEBS CONVERSION CAGE KIT_PCI SLOTS 1-3_ROHS | 1 |
| 7109447 | TELECT | 009-8005-3404H | TEL 009-8005-3404H _FUSE PANEL_150A_4/4_DC_1U_ROHS 5/6 | 1 |
| 7108162 | Anixter | 814-0034-06 | ASSEMBLY MATERIALS_GEN8 DC RMS_POWER UNTERMINATED_MTG HARDWARE_ROHS 5/6 | 1 |

**Table 5-9    (Cont.) Gen 8 Server (DC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| 7110434 | Anixter | 814-0034-07 | ASSEMBLY MATERIALS_RMS_EXTENTION KIT_ETH CABLES_ROHS 5/6 | 1 |
| **NOAM server** | | | | |
| 7108070 | | | HP D9N07A_DL380 GEN8_DC_SERVER_001_ROHS | 1 |
| 7108070 | Hewlett-Packard | 653200-B21 | HP 653200-B21_HP DL380P GEN8 8_SFF_CTO CHASSIS_ROHS | 1 |
| 7108070 | Hewlett-Packard | 715215-L21 | HP DL380p Gen8 E5-2680v2 FIO Kit | 1 |
| 7108070 | Hewlett-Packard | 715215-B21 | HP DL380p Gen8 E5-2680v2 Kit | 1 |
| 7108070 | Hewlett-Packard | 708641-B21 | HP 16GB 2Rx4 PC3-14900R-13 Kit | 8 |
| 7108070 | Hewlett-Packard | 631679-B21 | HP 631679-B21_HP 1GB P SERIES_SMART ARRAY_FLASH BACKED WRITE CACHE UPGRADE_ROHS | 1 |
| 7108070 | Hewlett-Packard | 652589-B21 | HP 652589-B21_900GB 6G SAS_HDD_10K_SFF_ROHS | 2 |
| 7108070 | Hewlett-Packard | 636673-B21 | HP 636673-B21_HP 750W_COMMON SLOT_-48VDC_ HOT PLUG POWER SUPPLY KIT | 2 |

**Table 5-9    (Cont.) Gen 8 Server (DC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| 7108070 | Hewlett-Packard | 512485-B21 | HP 512485-B21_PROLIANT ESSENTIALS_INTEGRATED LIGHTS-OUT ADVANCED PACK_1 SVR LICENSE_NO MEDIA | 1 |
| 7108070 | Hewlett-Packard | 684208-B21 | HP 684208-B21_HP FLEXLOM_1GB_4-PORT_331FLR ETHERNET ADAPTER_ROHS | 1 |
| 7108070 | Hewlett-Packard | 647594-B21 | HP 647594-B21_331T_4P_1G_PCIE ADAPTER_ROHS | 1 |
| 7108070 | Hewlett-Packard | 663478-B21 | HP 663478-B21_HP 2U_SFF_BALL BEARING GEN8 RAIL KIT_ROHS | 1 |
| 7108070 | Hewlett-Packard | 707865-B21 | HP 707865-B21_DL380 GEN8_NEBS CONVERSION CAGE KIT_PCI SLOTS 1-3_ROHS | 1 |
| 7108146 | Hewlett-Packard | A5S98A | HP A5S98A_ POWER CABLE_DC GEN 8 SERVER_2.5M LONG_TERMINATED SERVER END_UNTERMINATED PDP END_ROHS | 1 |
| 7110434 | Anixter | 814-0034-07 | ASSEMBLY MATERIALS_RMS_EXTENTION KIT_ETH CABLES_ROHS 5/6 | 1 |
| **SDS Server** | | | | |

**Table 5-9    (Cont.) Gen 8 Server (DC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| 7108070 | | | HP D9N07A_DL380 GEN8_DC_SERVER_001_ROHS | 1 |
| 7108070 | Hewlett-Packard | 653200-B21 | HP 653200-B21_HP DL380P GEN8 8_SFF_CTO CHASSIS_ROHS | 1 |
| 7108070 | Hewlett-Packard | 715215-L21 | HP DL380p Gen8 E5-2680v2 FIO Kit | 1 |
| 7108070 | Hewlett-Packard | 715215-B21 | HP DL380p Gen8 E5-2680v2 Kit | 1 |
| 7108070 | Hewlett-Packard | 708641-B21 | HP 16GB 2Rx4 PC3-14900R-13 Kit | 8 |
| 7108070 | Hewlett-Packard | 631679-B21 | HP 631679-B21_HP 1GB P SERIES_SMART ARRAY_FLASH BACKED WRITE CACHE UPGRADE_ROHS | 1 |
| 7108070 | Hewlett-Packard | 652589-B21 | HP 652589-B21_900GB 6G SAS_HDD_10K_SFF_ROHS | 2 |
| 7108070 | Hewlett-Packard | 636673-B21 | HP 636673-B21_HP 750W_COMMON SLOT_-48VDC_HOT PLUG POWER SUPPLY KIT | 2 |
| 7108070 | Hewlett-Packard | 512485-B21 | HP 512485-B21_PROLIANT ESSENTIALS_INTEGRATED LIGHTS-OUT ADVANCED PACK_1 SVR LICENSE_NO MEDIA | 1 |

**Table 5-9    (Cont.) Gen 8 Server (DC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| 7108070 | Hewlett-Packard | 684208-B21 | HP 684208-B21_HP FLEXLOM_1GB_4-PORT_331FLR ETHERNET ADAPTER_ROHS | 1 |
| 7108070 | Hewlett-Packard | 647594-B21 | HP 647594-B21_331T_4P_1G_PCIE ADAPTER_ROHS | 1 |
| 7108070 | Hewlett-Packard | 663478-B21 | HP 663478-B21_HP 2U_SFF_BALL BEARING GEN8 RAIL KIT_ROHS | 1 |
| 7108070 | Hewlett-Packard | 707865-B21 | HP 707865-B21_DL380 GEN8_NEBS CONVERSION CAGE KIT_PCI SLOTS 1-3_ROHS | 1 |
| 7108146 | Hewlett-Packard | A5S98A | HP A5S98A_POWER CABLE_DC GEN 8 SERVER_2.5M LONG_TERMINATED SERVER END_UNTERMINATED PDP END_ROHS | 1 |
| 7110434 | Anixter | 814-0034-07 | ASSEMBLY MATERIALS_RMS_EXTENTION KIT_ETH CABLES_ROHS 5/6 | 1 |
| **Query Server** | | | | |
| 7108070 | | | HP D9N07A_DL380 GEN8_DC_SERVER_001_ROHS | 1 |
| 7108070 | Hewlett-Packard | 653200-B21 | HP 653200-B21_HP DL380P GEN8 8_SFF_CTO CHASSIS_ROHS | 1 |
| 7108070 | Hewlett-Packard | 715215-L21 | HP DL380p Gen8 E5-2680v2 FIO Kit | 1 |

**Table 5-9  (Cont.) Gen 8 Server (DC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| 7108070 | Hewlett-Packard | 715215-B21 | HP DL380p Gen8 E5-2680v2 Kit | 1 |
| 7108070 | Hewlett-Packard | 708641-B21 | HP 16GB 2Rx4 PC3-14900R-13 Kit | 8 |
| 7108070 | Hewlett-Packard | 631679-B21 | HP 631679-B21_HP 1GB P SERIES_SMART ARRAY_FLASH BACKED WRITE CACHE UPGRADE_ROHS | 1 |
| 7108070 | Hewlett-Packard | 652589-B21 | HP 652589-B21_900GB 6G SAS_HDD_10K_SFF_ROHS | 2 |
| 7108070 | Hewlett-Packard | 636673-B21 | HP 636673-B21_HP 750W_COMMON SLOT_-48VDC_HOT PLUG POWER SUPPLY KIT | 2 |
| 7108070 | Hewlett-Packard | 512485-B21 | HP 512485-B21_PROLIANT ESSENTIALS_INTEGRATED LIGHTS-OUT ADVANCED PACK_1 SVR LICENSE_NO MEDIA | 1 |
| 7108070 | Hewlett-Packard | 684208-B21 | HP 684208-B21_HP FLEXLOM_1GB_4-PORT_331FLR ETHERNET ADAPTER_ROHS | 1 |
| 7108070 | Hewlett-Packard | 647594-B21 | HP 647594-B21_331T_4P_1G_PCIE ADAPTER_ROHS | 1 |
| 7108070 | Hewlett-Packard | 663478-B21 | HP 663478-B21_HP 2U_SFF_BALL BEARING GEN8 RAIL KIT_ROHS | 1 |

**Table 5-9    (Cont.) Gen 8 Server (DC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| 7108070 | Hewlett-Packard | 707865-B21 | HP 707865-B21_DL380 GEN8_NEBS CONVERSION CAGE KIT_PCI SLOTS 1-3_ROHS | 1 |
| 7108146 | Hewlett-Packard | A5S98A | HP A5S98A_ POWER CABLE_DC GEN 8 SERVER_2.5M LONG_TERMIN ATED SERVER END_UNTERMI NATED PDP END_ROHS | 1 |
| 7110434 | Anixter | 814-0034-07 | ASSEMBLY MATERIALS_RM S_EXTENTION KIT_ETH CABLES_ROHS 5/6 | 1 |
| **Gen 8 IDIH Server** | | | | |
| 7108081 | | | HP D9U38A_DL380 GEN8_DC_SER VER_005_ROHS | 1 |
| 7108081 | Hewlett-Packard | 653200-B21 | HP 653200-B21_HP DL380P GEN8 8_SFF_CTO CHASSIS_ROHS | 1 |
| 7108081 | Hewlett-Packard | 715215-L21 | HP DL380p Gen8 E5-2680v2 FIO Kit | 1 |
| 7108081 | Hewlett-Packard | 715215-B21 | HP DL380p Gen8 E5-2680v2 Kit | 1 |
| 7108081 | Hewlett-Packard | 708641-B21 | HP 16GB 2Rx4 PC3-14900R-13 Kit | 8 |
| 7108081 | Hewlett-Packard | 631679-B21 | HP 631679-B21_HP 1GB P SERIES_SMART ARRAY_FLASH BACKED WRITE CACHE UPGRADE_ROH S | 1 |

**Table 5-9    (Cont.) Gen 8 Server (DC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| 7108081 | Hewlett-Packard | 652589-B21 | HP 652589-B21_900GB 6G SAS_HDD_10K_SFF_ROHS | 6 |
| 7108081 | Hewlett-Packard | 636673-B21 | HP 636673-B21_HP 750W_COMMON SLOT_-48VDC_HOT PLUG POWER SUPPLY KIT | 2 |
| 7108081 | Hewlett-Packard | 512485-B21 | HP 512485-B21_PROLIANT ESSENTIALS_INTEGRATED LIGHTS-OUT ADVANCED PACK_1 SVR LICENSE_NO MEDIA | 1 |
| 7108081 | Hewlett-Packard | 684208-B21 | HP 684208-B21_HP FLEXLOM_1GB_4-PORT_331FLR ETHERNET ADAPTER_ROHS | 1 |
| 7108081 | Hewlett-Packard | 593722-B21 | HP 593722-B21_NC365T_4 PORT ETHERNET SERVER ADAPTER_ROHS | 2 |
| 7108081 | Hewlett-Packard | 631670-B21 | HP 631670-B21_HP SMART ARRAY_P420/1GIB FBWC CONTROLLER_ROHS | 1 |
| 7108081 | Hewlett-Packard | 662883-B21 | HP 662883-B21_HP 380/385 GEN8_8-SFF CAGE/BKPLN KIT_ROHS | 1 |
| 7108081 | Hewlett-Packard | 663478-B21 | HP 663478-B21_HP 2U_SFF_BALL BEARING GEN8 RAIL KIT_ROHS | 1 |

**Table 5-9    (Cont.) Gen 8 Server (DC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| 7108081 | Hewlett-Packard | 662897-B21 | HP 662897-B21_HP MINI SAS STRAIGHT TO STRAIGHT 37IN CABLE ASSEMBLIES_ROHS | 2 |
| 7108081 | Hewlett-Packard | 707865-B21 | HP 707865-B21_DL380 GEN8_NEBS CONVERSION CAGE KIT_PCI SLOTS 1-3_ROHS | 2 |
| 7108081 | Hewlett-Packard | 653206-B21 | HP 653206-B21_DL380P/385P GEN8 3 SLOT PCI-E RISER KIT_ROHS | 1 |
| 7108146 | Hewlett-Packard | A5S98A | HP A5S98A_ POWER CABLE_DC GEN 8 SERVER_2.5M LONG_TERMINATED SERVER END_UNTERMINATED PDP END_ROHS | 1 |
| 7110434 | Anixter | 814-0034-07 | ASSEMBLY MATERIALS_RMS_EXTENTION KIT_ETH CABLES_ROHS 5/6 | 1 |

**Table 5-10    Gen 8 Server (AC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| **Management Server** | | | | |
| 7109443 | | | DL380 GEN8_AC_C-CLASS_MANAGEMENT SERVER_021_ROHS | 1 |

**Table 5-10    (Cont.) Gen 8 Server (AC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| 7109443 | Hewlett-Packard | 653200-B21 | HP 653200-B21_HP DL380P GEN8 8_SFF_CTO CHASSIS_ROHS | 1 |
| 7109443 | Hewlett-Packard | 715215-L21 | HP DL380p Gen8 E5-2680v2 FIO Kit | 1 |
| 7109443 | Hewlett-Packard | 715215-B21 | HP DL380p Gen8 E5-2680v2 Kit | 1 |
| 7109443 | Hewlett-Packard | 708641-B21 | HP 16GB 2Rx4 PC3-14900R-13 Kit | 8 |
| 7109443 | Hewlett-Packard | 631679-B21 | HP 631679-B21_HP 1GB P SERIES_SMART ARRAY_FLASH BACKED WRITE CACHE UPGRADE_ROHS | 1 |
| 7109443 | Hewlett-Packard | 652589-B21 | HP 652589-B21_900GB 6G SAS_HDD_10K_SFF_ROHS | 2 |
| 7109443 | Hewlett-Packard | 656363-B21 | HP 656363-B21_HP 750W_COMMON SLOT_PLATINUM PLUS_HOT PLUG POWER SUPPLY KIT_ROHS | 2 |
| 7109443 | Hewlett-Packard | 512485-B21 | HP 512485-B21_PROLIANT ESSENTIALS_INTEGRATED LIGHTS-OUT ADVANCED PACK_1 SVR LICENSE_NO MEDIA | 1 |
| 7109443 | Hewlett-Packard | 684208-B21 | HP 684208-B21_HP FLEXLOM_1GB_4-PORT_331FLR ETHERNET ADAPTER_ROHS | 1 |
| 7109443 | Hewlett-Packard | 647594-B21 | HP 647594-B21_331T_4P_1G_PCIE ADAPTER_ROHS | 1 |

**Table 5-10    (Cont.) Gen 8 Server (AC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| 7109443 | Hewlett-Packard | 663478-B21 | HP 663478-B21_HP 2U_SFF_BALL BEARING GEN8 RAIL KIT_ROHS | 1 |
| 7110434 | Anixter | 814-0034-07 | ASSEMBLY MATERIALS_RMS_EXTENTION KIT_ETH CABLES_ROHS 5/6 | 1 |
| **NOAM Server** | | | | |
| 7108054 | | | HP D9N03A_DL380 GEN8_AC_SERVER_001_ROHS | 1 |
| 7108054 | Hewlett-Packard | 653200-B21 | HP 653200-B21_HP DL380P GEN8 8_SFF_CTO CHASSIS_ROHS | 1 |
| 7108054 | Hewlett-Packard | 715215-L21 | HP DL380p Gen8 E5-2680v2 FIO Kit | 1 |
| 7108054 | Hewlett-Packard | 715215-B21 | HP DL380p Gen8 E5-2680v2 Kit | 1 |
| 7108054 | Hewlett-Packard | 708641-B21 | HP 16GB 2Rx4 PC3-14900R-13 Kit | 8 |
| 7108054 | Hewlett-Packard | 631679-B21 | HP 631679-B21_HP 1GB P SERIES_SMART ARRAY_FLASH BACKED WRITE CACHE UPGRADE_ROHS | 1 |
| 7108054 | Hewlett-Packard | 652589-B21 | HP 652589-B21_900GB 6G SAS_HDD_10K_SFF_ROHS | 2 |
| 7108054 | Hewlett-Packard | 656363-B21 | HP 656363-B21_HP 750W_COMMON SLOT_PLATINUM PLUS_HOT PLUG POWER SUPPLY KIT_ROHS | 2 |

**Table 5-10 (Cont.) Gen 8 Server (AC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| 7108054 | Hewlett-Packard | 512485-B21 | HP 512485-B21_PROLIANT ESSENTIALS_INTEGRATED LIGHTS-OUT ADVANCED PACK_1 SVR LICENSE_NO MEDIA | 1 |
| 7108054 | Hewlett-Packard | 684208-B21 | HP 684208-B21_HP FLEXLOM_1GB_4-PORT_331FLR ETHERNET ADAPTER_ROHS | 1 |
| 7108054 | Hewlett-Packard | 647594-B21 | HP 647594-B21_331T_4P_1G _PCIE ADAPTER_ROHS | 1 |
| 7108054 | Hewlett-Packard | 663478-B21 | HP 663478-B21_HP 2U_SFF_BALL BEARING GEN8 RAIL KIT_ROHS | 1 |
| 7110434 | Anixter | 814-0034-07 | ASSEMBLY MATERIALS_RMS_EXTENTION KIT_ETH CABLES_ROHS 5/6 | 1 |
| **SDS Server** | | | | |
| 7108054 | | | HP D9N03A_DL380 GEN8_AC_SERVER_001_ROHS | 1 |
| 7108054 | Hewlett-Packard | 653200-B21 | HP 653200-B21_HP DL380P GEN8 8_SFF_CTO CHASSIS_ROHS | 1 |
| 7108054 | Hewlett-Packard | 715215-L21 | HP DL380p Gen8 E5-2680v2 FIO Kit | 1 |
| 7108054 | Hewlett-Packard | 715215-B21 | HP DL380p Gen8 E5-2680v2 Kit | 1 |
| 7108054 | Hewlett-Packard | 708641-B21 | HP 16GB 2Rx4 PC3-14900R-13 Kit | 8 |

**Table 5-10    (Cont.) Gen 8 Server (AC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| 7108054 | Hewlett-Packard | 631679-B21 | HP 631679-B21_HP 1GB P SERIES_SMART ARRAY_FLASH BACKED WRITE CACHE UPGRADE_ROHS | 1 |
| 7108054 | Hewlett-Packard | 652589-B21 | HP 652589-B21_900GB 6G SAS_HDD_10K_SFF_ROHS | 2 |
| 7108054 | Hewlett-Packard | 656363-B21 | HP 656363-B21_HP 750W_COMMON SLOT_PLATINUM PLUS_HOT PLUG POWER SUPPLY KIT_ROHS | 2 |
| 7108054 | Hewlett-Packard | 512485-B21 | HP 512485-B21_PROLIANT ESSENTIALS_INTEGRATED LIGHTS-OUT ADVANCED PACK_1 SVR LICENSE_NO MEDIA | 1 |
| 7108054 | Hewlett-Packard | 684208-B21 | HP 684208-B21_HP FLEXLOM_1GB_4-PORT_331FLR ETHERNET ADAPTER_ROHS | 1 |
| 7108054 | Hewlett-Packard | 647594-B21 | HP 647594-B21_331T_4P_1G_PCIE ADAPTER_ROHS | 1 |
| 7108054 | Hewlett-Packard | 663478-B21 | HP 663478-B21_HP 2U_SFF_BALL BEARING GEN8 RAIL KIT_ROHS | 1 |
| 7110434 | Anixter | 814-0034-07 | ASSEMBLY MATERIALS_RMS_EXTENTION KIT_ETH CABLES_ROHS 5/6 | 1 |
| **Query Server** | | | | |

**Table 5-10    (Cont.) Gen 8 Server (AC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| 7108054 | | | HP D9N03A_DL380 GEN8_AC_SERVER_001_ROHS | 1 |
| 7108054 | Hewlett-Packard | 653200-B21 | HP 653200-B21_HP DL380P GEN8 8_SFF_CTO CHASSIS_ROHS | 1 |
| 7108054 | Hewlett-Packard | 715215-L21 | HP DL380p Gen8 E5-2680v2 FIO Kit | 1 |
| 7108054 | Hewlett-Packard | 715215-B21 | HP DL380p Gen8 E5-2680v2 Kit | 1 |
| 7108054 | Hewlett-Packard | 708641-B21 | HP 16GB 2Rx4 PC3-14900R-13 Kit | 8 |
| 7108054 | Hewlett-Packard | 631679-B21 | HP 631679-B21_HP 1GB P SERIES_SMART ARRAY_FLASH BACKED WRITE CACHE UPGRADE_ROHS | 1 |
| 7108054 | Hewlett-Packard | 652589-B21 | HP 652589-B21_900GB 6G SAS_HDD_10K_SFF_ROHS | 2 |
| 7108054 | Hewlett-Packard | 656363-B21 | HP 656363-B21_HP 750W_COMMON SLOT_PLATINUM PLUS_HOT PLUG POWER SUPPLY KIT_ROHS | 2 |
| 7108054 | Hewlett-Packard | 512485-B21 | HP 512485-B21_PROLIANT ESSENTIALS_INTEGRATED LIGHTS-OUT ADVANCED PACK_1 SVR LICENSE_NO MEDIA | 1 |
| 7108054 | Hewlett-Packard | 684208-B21 | HP 684208-B21_HP FLEXLOM_1GB_4-PORT_331FLR ETHERNET ADAPTER_ROHS | 1 |

**Table 5-10    (Cont.) Gen 8 Server (AC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| 7108054 | Hewlett-Packard | 647594-B21 | HP 647594-B21_331T_4P_1G_PCIE ADAPTER_ROHS | 1 |
| 7108054 | Hewlett-Packard | 663478-B21 | HP 663478-B21_HP 2U_SFF_BALL BEARING GEN8 RAIL KIT_ROHS | 1 |
| 7110434 | Anixter | 814-0034-07 | ASSEMBLY MATERIALS_RMS_EXTENTION KIT_ETH CABLES_ROHS 5/6 | 1 |
| **Gen 8 IDIH Server** | | | | |
| 7108067 | | | HP D9U37A_DL380 GEN8_AC_SERVER_005_ROHS | 1 |
| 7108067 | Hewlett-Packard | 653200-B21 | HP 653200-B21_HP DL380P GEN8 8_SFF_CTO CHASSIS_ROHS | 1 |
| 7108067 | Hewlett-Packard | 715215-L21 | HP DL380p Gen8 E5-2680v2 FIO Kit | 1 |
| 7108067 | Hewlett-Packard | 715215-B21 | HP DL380p Gen8 E5-2680v2 Kit | 1 |
| 7108067 | Hewlett-Packard | 708641-B21 | HP 16GB 2Rx4 PC3-14900R-13 Kit | 8 |
| 7108067 | Hewlett-Packard | 631679-B21 | HP 631679-B21_HP 1GB P SERIES_SMART ARRAY_FLASH BACKED WRITE CACHE UPGRADE_ROHS | 1 |
| 7108067 | Hewlett-Packard | 652589-B21 | HP 652589-B21_900GB 6G SAS_HDD_10K_SFF_ROHS | 6 |
| 7108067 | Hewlett-Packard | 656363-B21 | HP 656363-B21_HP 750W_COMMON SLOT_PLATINUM PLUS_HOT PLUG POWER SUPPLY KIT_ROHS | 2 |

**Table 5-10    (Cont.) Gen 8 Server (AC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| 7108067 | Hewlett-Packard | 512485-B21 | HP 512485-B21_PROLIANT ESSENTIALS_INTEGRATED LIGHTS-OUT ADVANCED PACK_1 SVR LICENSE_NO MEDIA | 1 |
| 7108067 | Hewlett-Packard | 684208-B21 | HP 684208-B21_HP FLEXLOM_1GB_4-PORT_331FLR ETHERNET ADAPTER_ROHS | 1 |
| 7108067 | Hewlett-Packard | 593722-B21 | HP 593722-B21_NC365T_4 PORT ETHERNET SERVER ADAPTER_ROHS | 2 |
| 7108067 | Hewlett-Packard | 631670-B21 | HP 631670-B21_HP SMART ARRAY_ P420/1GIB FBWC CONTROLLER_ROHS | 1 |
| 7108067 | Hewlett-Packard | 662883-B21 | HP 662883-B21_HP 380/385 GEN8_8-SFF CAGE/BKPLN KIT_ROHS | 1 |
| 7108067 | Hewlett-Packard | 663478-B21 | HP 663478-B21_HP 2U_SFF_BALL BEARING GEN8 RAIL KIT_ROHS | 1 |
| 7108067 | Hewlett-Packard | 662897-B21 | HP 662897-B21_HP MINI SAS STRAIGHT TO STRAIGHT 37IN CABLE ASSEMBLIES_ROHS | 2 |
| 7108067 | Hewlett-Packard | 653206-B21 | HP 653206-B21_DL380P/ 385P GEN8 3 SLOT PCI-E RISER KIT_ROHS | 1 |

**Table 5-10    (Cont.) Gen 8 Server (AC Power)**

| Oracle Part Number | Supplier | Supplier Part Number | Description | Unit Qty |
|---|---|---|---|---|
| 7110434 | Anixter | 814-0034-07 | ASSEMBLY MATERIALS_RMS _EXTENTION KIT_ETH CABLES_ROHS 5/6 | 1 |

# 6

# Firmware Components

The firmware components are software that is installed on the Hardware. These components are listed in this chapter and are also listed in the Firmware Release Notes. Please refer to the latest Firmware Release Notes for any updates to this list.

## 6.1 Oracle Firmware Upgrade Pack

*Oracle Firmware Upgrade Pack Release Notes 3.1.8*, *HP Solutions Firmware Upgrade Pack Release Notes 2.2.12 and 2.2.13* provide information about the firmware versions approved for this Oracle Firmware Upgrade Pack release to assist customers with upgrading their Oracle hardware. Also, additional instructions and guidance on the firmware upgrades have been provided wherever possible.

These Release Notes are available on Oracle Help Center (OHC) at https://docs.oracle.com/cd/E93250_01/index.htm.

# 7
# Supported Upgrade Paths

This release has been tested for an upgrade from specific prior releases. This chapter contains the exact paths for the upgrade. Verify that your current installed release is listed on a valid upgrade path.

The possible upgrade paths to DSR Release 8.6.0.7.0 are listed in the following table:

| Component | From | To |
|---|---|---|
| DSR | 8.4.0.X.Y, 8.5.0.X, 8.5.1.X, 8.6.0.0.0, 8.6.0.1.0, 8.6.0.2.0, 8.6.0.3.0, 8.6.0.4.0, 8.6.0.5.0, 8.6.0.6.0 | 8.6.0.7.0 |
| SDS | 8.4.0.X.Y, 8.5.0.X, 8.5.1.X, 8.6.0.0.0, 8.6.0.1.0, 8.6.0.2.0, 8.6.0.3.0, 8.6.0.4.0, 8.6.0.5.0, 8.6.0.6.0 | 8.6.0.7.0 |
| IDIH | 8.2.1, 8.2.2, 8.2.3, 8.2.3.1 | 8.2.3.2 |
| vSTP | 8.4.0.3.X, 8.5.0.X, 8.5.1.X, 8.6.0.0.0, 8.6.0.1.0, 8.6.0.2.0, 8.6.0.3.0, 8.6.0.4.0, 8.6.0.5.0, 8.6.0.6.0 | 8.6.0.7.0 |

Where, X denotes PI end cycle and Y denotes patches within the Program Increment (PI) cycle.

> **Note:**
>
> - Any upgrade other than those listed above is not recommended or supported. Version 8.6.0.x.0 is supported as a new or fresh installation.
> - VEDSR is not supported from DSR Release 8.3 onwards.
> - Diameter Security Application (DSA) with Universal-SBR (USBR) application is not supported from DSR Release 8.4.0.5.0. Customers using this application must not upgrade DSR software to DSR 8.4.0.5.0 release and must migrate to DSA with UDR based application.
> - Zero Balance Application with USBR and Steering of Roaming (SOR) with USBR are not supported from DSR Release 8.4.0.5.0 and later. Customers using these applications must not upgrade the DSR software to DSR 8.4.0.5.0 or a later release and must migrate to ZBA with UDR and SOR with UDR based applications.

# 8
# Deprecated Features

The following features are deprecated from 8.4.0.5 and later:

- DSA with USBR
- ZBA with USBR
- SOR with USBR

The following software elements are not compatible with DSR 8.4 and later:

- DAMP Active-Standby Configuration
- GLA
- MAP Diameter Interworking

Virtualized Engineered DSR (VEDSR) deployment, also known as TVOE based Fully Virtualized Rack Mount Server (FV RMS) Signaling node, is not supported from DSR 8.3 and later. The following are the non-supported network elements of Virtualized Engineered DSR (VEDSR):

- DSR NOAM
- DSR SOAM
- DSR Message Processors (MP)
- SS7 MP
- DSR IPFE
- DSR SBR (Session or Binding or Universal)
- SDS NOAM
- SDS SOAM
- SDS QS
- SDS DP

> **Note:**
>
> DSR and SDS BareMetal Installations with TVOE based NOAM or SOAM will continue to be supported.

Virtualized Engineered DSR (VEDSR) networks and associated elements need to be migrated to virtual DSR implementation based on KVM with or without OpenStack or VMware prior to DSR 8.3 or 8.4.x upgrade or install.

# 9
# Resolved and Known Bugs

This chapter lists the resolved and known bugs for DSR.

These lists are distributed to customers with a new software release at the time of General Availability (GA) and are updated for each maintenance release.

## 9.1 Severity Definitions

The problem report sections in this document refer to bug severity levels. Definitions of these levels can be found in the publication, *TL 9000 Quality Management System Measurement Handbook*.

**Problem Report**

A report from a customer or on behalf of the customer concerning a product or process defect requesting an investigation of the issue and a resolution to remove the cause. The report may be issued through any medium.

Problem reports are systemic deficiencies with hardware, software, documentation, delivery, billing, invoicing, servicing, or any other process involved with the acquisition, operation, or performance of a product. An incident reported to request help to bring back the service or functionality to normal without the intent to investigate and provide a resolution to the cause of the incident is not a problem report.

**Severity Definitions**

Service requests for supported Oracle programs may be submitted by you online through Oracle's web-based customer support systems or by telephone. The service request severity level is selected by you and Oracle and should be based on the severity definitions specified as follows:

1. Severity 1 - Your production use of the supported programs is stopped or so severely impacted that you cannot reasonably continue work. You experience a complete loss of service. The operation is mission critical to the business and the situation is an emergency. A Severity 1 service request has one or more of the following characteristics:

    • Data corrupted.

    • A critical documented function is not available.

    • System hangs indefinitely, causing unacceptable or indefinite delays for resources or response.

    • System crashes, and crashes repeatedly after restart attempts.

    Reasonable efforts will be made to respond to Severity 1 service requests within one hour. For response efforts associated with Oracle Communications Network Software Premier Support and Oracle
    Except as otherwise specified, Oracle provides 24 hour support for Severity 1 service requests for supported programs (OSS will work 24x7 until the issue is resolved) when you remain actively engaged with OSS working toward resolution of your Severity 1 service request. You must provide OSS with a contact during this 24x7 period, either on

site or by phone, to assist with data gathering, testing, and applying fixes. You are requested to propose this severity classification with great care, so that valid Severity 1 situations obtain the necessary resource allocation from Oracle.

Network Software Support & Sustaining Support, please see the Oracle Communications Network Premier & Sustaining Support and Oracle Communications Network Software Support & Sustaining Support sections above.

2. Severity 2 - You experience a severe loss of service. Important features are unavailable with no acceptable workaround; however, operations can continue in a restricted fashion.

3. Severity 3 - You experience a minor loss of service. The impact is an inconvenience, which may require a workaround to restore functionality.

4. Severity 4 - You request information, an enhancement, or documentation clarification regarding your software but there is no impact on the operation of the software. You experience no loss of service. The result does not impede the operation of a system.

# 9.2 Resolved Bug List

This sections lists all resolved bugs for DSR, vSTP, VNFM, and SCEF in this release.

## 9.2.1 DSR

**Release 8.6.0.7.0**

There are no resolved bugs for DSR 8.6.0.7.0 release.

**Release 8.6.0.6.0**

**Table 9-1    DSR 8.6.0.6.0 Resolved bugs**

| Bug Number | Severity | Found in Release | Title |
|---|---|---|---|
| 35869476 | 3 | 8.6 | PRT & ART condition checking |
| 35721765 | 4 | 8.6 | Update DSR Security Guide for tpdProvd password reset |

**Release 8.6.0.5.0**

**Table 9-2    DSR 8.6.0.5.0 Resolved bugs**

| Bug Number | Severity | Found in Release | Title |
|---|---|---|---|
| 35327430 | 3 | 8.6 | IPFE target set import or export issue |
| 35216098 | 3 | 8.6 | DeirUdrRspTaskThr missing in Profiles 45K_MPS_RBAR and 35K_MPS |

**Release 8.6.0.4.0**

**Table 9-3    DSR 8.6.0.4.0 Resolved bugs**

| Bug Number | Severity | Found in Release | Title |
|---|---|---|---|
| 35133917 | 3 | 8.6 | DSR nodes display kernel warnings when kernel is tainted. |

**Release 8.6.0.3.0**

The following table lists the resolved bugs in DSR 8.6.0.3.0 release.

**Table 9-4    DSR 8.6.0.3.0 Resolved bugs**

| Bug Number | Severity | Found in Release | Title |
|---|---|---|---|
| 34796178 | 3 | 8.6.0.1.0-96.15.0 | Issue in inserting data in Policy Clients in SOAM GUI |
| 34831673 | 3 | 8.5 | Realm validation issue during local node insert operation |
| 34832217 | 3 | 8.5 | Not able to add IP address in local node if local node is used in a disabled connection |
| 34830998 | 3 | 8.5 | CLR message not working properly based on cancellation type in previous location check scenario |
| 34861705 | 3 | 8.6.0.1.0-96.15.0 | Rel_8.6: GUI- Issue in Command Log in SDS NOAM GUI |
| 34886431 | 4 | 8.5 | Host-ip-address Avp is missing in CEA Error Response |

**Release 8.6.0.2.0**

The following table lists the resolved bugs in DSR 8.6.0.2.0 release.

**Table 9-5    DSR 8.6.0.2.0 Resolved bugs**

| Bug Number | Severity | Found in Release | Title |
|---|---|---|---|
| 34656585 | 3 | 8.6.0.1.0-96.15.0 | Failure of Source Host Validation Hss vulnerability screening for CLR/CLA message |
| 34569653 | 3 | 8.6.0.1.0_96.15.0 | Records are NOT showing in 'Target Sets' GUI after adding the entries on 8.6.0.1.0_96.15.0 |
| 34638143 | 3 | 8.5.0.2 | Vplmnid exception and timer distance CM issues |
| 34477602 | 4 | 8.5 | `fetchLogDsa.sh` script cannot process log files on DA-MP servers |

**Release 8.6.0.1.0**

The following table lists the resolved bugs in DSR 8.6.0.1.0 release.

**Table 9-6    DSR 8.6.0.1.0 Resolved bugs**

| Bug Number | Severity | Found in Release | Title |
|---|---|---|---|
| 34217470 | 3 | 8.6.0.0.0 | RAR message is not sent from PDRA to PCEF. |
| 33633847 | 3 | 8.6.0.0.0 | Not getting Success/failure message for Backup Restoration |

**Release 8.6.0.0.0**

The following table lists the resolved bugs in DSR 8.6.0.0.0 release.

**Table 9-7    DSR 8.6.0.0.0 Resolved bugs**

| Bug Number | Severity | Found in Release | Title |
|---|---|---|---|
| 28279189 | 2 | 8.2 | Information leakage via development config file |
| 33794065 | 3 | 8.5 | Error in GET API for /admin/softwareversions on 8.5.x |
| 33614865 | 3 | 8.5 | TKLCconfig script enhancement |
| 33682957 | 3 | 8.5 | DSA compilation issue fix for DSD 1309 |
| 33633847 | 3 | 8.5 | Not getting Success/failure message for Backup Restoration |
| 28545072 | 3 | 8.3 | Duplicate OID name in DSR MIB(eagleXgDsrDbHealthImpactNotify) |
| 33772088 | 3 | 8.6 | Max HA role for DR-NOAMs should be in "Active" state |
| 34072643 | 3 | 8.6 | Anonymous Access to Rsync Modules on VNFM servers |
| 34072694 | 3 | 8.6 | VNFM for support multiple VNFD ID for Secondary VNFM |
| 33218214 | 3 | 8.5.0.1 | DSA Business logic fix to handle the error code |
| 33826949 | 4 | 8.5 | NTP Sync from NOAM GUI making Server move to 'Spare' state |
| 33165790 | 4 | 8.4 | Excessive Request Rerouting Alarm 22077 reported but no corresponding meas pegged as per alarm description |

## 9.2.2 SCEF

**Release 8.6.0.7.0**

There are no resolved bugs for SCEF 8.6.0.7.0 release.

**Release 8.6.0.6.0**

There are no resolved bugs for SCEF 8.6.0.6.0 release.

**Release 8.6.0.5.0**

There are no resolved bugs for SCEF 8.6.0.5.0 release.

**Release 8.6.0.4.0**

There are no resolved bugs for SCEF 8.6.0.4.0 release.

**Release 8.6.0.3.0**

There are no resolved bugs for SCEF 8.6.0.3.0 release.

**Release 8.6.0.2.0**

There are no resolved bugs for SCEF 8.6.0.2.0 release.

**Release 8.6.0.1.0**

There are no resolved bugs for SCEF 8.6.0.1.0 release.

**Release 8.6.0.0.0**

There are no resolved bugs for SCEF 8.6.0.0.0 release.

## 9.2.3 vSTP

**Release 8.6.0.7.0**

The following table lists the resolved bugs in vSTP 8.6.0.7.0 release.

| Bug number | Severity | Found in Release | Title |
|---|---|---|---|
| 36079673 | 3 | 8.6.0.6.0 | SFAPP Validation Velocity Check Failed |
| 36080002 | 3 | 8.6.0.6.0 | In the VLR Profile and VLR Roaming tables, 'Last Used Time' have a future timestamp |
| 36083934 | 3 | 8.6.0.6.0 | Deletion of MRN Set with Mate RSP is giving error |
| 36116898 | 4 | 8.6.0.6.0 | 'VstpTmLnkAvailable' column in 'VSTP Link Usage' Measurement report for duplicated records has to be removed |

**Release 8.6.0.6.0**

The following table lists the resolved bugs in vSTP 8.6.0.6.0 release.

| Bug number | Severity | Found in Release | Title |
|---|---|---|---|
| 35727693 | 3 | 8.6 | Column cgpaSelId is not found in exported GTA after upgraded to R8.6.0.5 |
| 35780538 | 3 | 8.6 | Rel 8.6: Enum/DNS : logging issue /var is getting filled. |
| 34847520 | 3 | 8.6 | Rel9.0: vSTP GUI - Duplicate entries observed in CSV file for Feature Admin State MO |

| Bug number | Severity | Found in Release | Title |
|---|---|---|---|
| 35771772 | 4 | 8.6 | TCAP Code=None as filter is not working in Global Title Address |

**Release 8.6.0.5.0**

The following table lists the resolved bugs in vSTP 8.6.0.5.0 release.

| Bug number | Severity | Found in Release | Title |
|---|---|---|---|
| 35133399 | 3 | 8.6 | Negative Ack for SRI Message when MSISDN is found in UDR |
| 34886332 | 3 | 8.6 | vSTP abterms and watchdog failures due to Segmented XUDT packets reassembly |
| 35168080 | 3 | 8.6 | eLynx E1 physical status is not available in application |
| 35124036 | 3 | 8.6 | IR21 conversion providing empty file of NE in output |
| 35070313 | 3 | 8.6 | Ready status not send to peer when received in proving period |
| 35200075 | 3 | 8.6 | GUI displays duplicated RSPs in the configured MRNSET |
| 35277482 | 3 | 8.6 | SIF = 272 and SIO = 1 packet is truncated |
| 35363059 | 3 | 8.6 | Syntax issue for Domain Name or Address of the DNS Record in ENUM |
| 35248790 | 3 | 8.6 | PDU buffer continuously growing |
| 35478052 | 3 | 8.6 | [vENUM] DNS non-existing domains timing out |
| 35478029 | 4 | 8.6 | Decrease logging frequency for Event 70472 "ENUM Prof not found" |
| 35414654 | 4 | 8.6 | Requirement of loop back status in Link status with eLynx |
| 35363033 | 4 | 8.6 | Multiple links or connections cannot be selected under vSTP maintenance tab |
| 35143179 | 4 | 8.6 | [vENUM] Long numbers are rejected by ENUM. Need to accept long numbers upto 30 digits. |
| 35297513 | 4 | 8.6 | M2PA Config Description should include milliseconds (8.6) |
| 35545559 | 4 | 8.6 | Venum FMP was blocking traffic on port 49153 |

**Release 8.6.0.4.0**

There are no resolved bugs for vSTP 8.6.0.4.0 release.

**Release 8.6.0.3.0**

The following table lists the resolved bugs in vSTP 8.6.0.3.0 release.

| Bug number | Severity | Found in Release | Title |
|---|---|---|---|
| 34977081 | 2 | 8.6 | VSTP: vstp process restarts when single segmented xudt message's GTT translation fails and vstp generated XUDTS |
| 34828295 | 3 | 8.6 | vSTP incorrectly encoding spare bits in SLTA and SLTM message |
| 34709390 | 3 | 8.6 | ENUM:: venum process boots when process is loading up database and in between we run enum traffic |
| 34688747 | 3 | 8.6 | ENUM::E2U+PSTN:tel not working when exclude sp=no and regex not configured at UDR |
| 34963649 | 3 | 8.5 | Single segmented msu must not go for reassembly |
| 34721855 | 3 | 8.5 | vstp process restarted due to some issue in Wgttls Configuration |
| 34903452 | 3 | 8.5 | Abterm in vstp process due to corrupted reassembled XUDT packet |
| 34891876 | 4 | 8.6 | ENUM data support with GRN entity in UDR |
| 34958941 | 4 | 8.5 | Added New MNP SRI/SRISM measurements |

**Release 8.6.0.2.0**

The following table lists the resolved bugs in vSTP 8.6.0.2.0 release.

| Bug number | Severity | Found in Release | Title |
|---|---|---|---|
| 34551028 | 3 | 8.5 | vSTP:SFAPP::SGSN field not present in UDR |
| 34342490 | 3 | 8.6 | Issue with MTP screening Bulk Import order |
| 34342460 | 3 | 8.6 | Issue with MTP screening Import when rules are inter dependent |
| 34417692 | 3 | 8.6 | vSTP incorrect linkset & Route set status observed in peer vSTP while TDM links blocked at local vSTP |
| 34454587 | 3 | 8.5 | TX reset done for same transport (packet) by multiple threads |
| 34454566 | 3 | 8.5 | Watchdog abterms over Enabled Client Connections |
| 34588103 | 3 | 8.6 | G-Flex working for ATI (MSISDN) but failing for UL (IMSI) |
| 34680240 | 3 | 8.6 | Scheduled task is failing due to VSTP_MNP_Performance measurement report |

**Release 8.6.0.1.0**

The following table lists the resolved bugs in vSTP 8.6.0.1.0 release.

| Bug number | Severity | Found in Release | Title |
|---|---|---|---|
| 34246572 | 3 | 8.6.0.0.0 | BIE is not working correctly if the origin Point Code and domain is provided in the CSV. |
| 34230517 | 3 | 8.6.0.0.0 | Invalid Latitude for Mobile Country Code 640 in SfappCountryLongLat MO |
| 34128227 | 3 | 8.6.0.0.0 | SAI message - MBR decoding failure |
| 34108502 | 3 | 8.6.0.0.0 | TCAP Error Discard Feature Related Issue in VSTP |
| 34102710 | 4 | 8.6.0.0.0 | Description of "GTT set name (Not Present Set Name)" lacks information |
| 34090622 | 4 | 8.6.0.0.0 | Measurements discrepancy |

**Release 8.6.0.0.0**

The following table lists the resolved bugs in vSTP 8.6.0.0.0 release.

| Bug number | Severity | Found in Release | Title |
|---|---|---|---|
| 33668141 | 2 | 8.5 | VSTP generates XUDTS message with SIF size more than 272 bytes |
| 33593817 | 3 | 8.5 | VSTPOAM Process restarting on both SOAM |
| 33400405 | 3 | 8.5 | Abterm on vSTP MP on resetting some connections |
| 33619716 | 3 | 8.5 | Upgrade loader is missing for Network Appearance MO |
| 33659017 | 3 | 8.5 | vSTP: All the links in the vSTP get reset when a COO message is received |
| 33625425 | 3 | 8.5 | The MRNSET loadsharing fails for few pointcode even when dpc is AVAILABLE |
| 33759940 | 3 | 8.5 | Traffic TX not happening leading to congestion and blocking of links for transmission |
| 33698946 | 3 | 8.5 | vSTP not responding to RST when the sender OPC is in restricted RSP state |
| 33701239 | 3 | 8.5 | SFAPP enhancement: Make 3G and 4G velocity check optional |
| 33752572 | 3 | 8.5 | Fine Tune vSTP congestion control |
| 33939015 | 3 | 8.5 | Import is failing for GTA MO if the XLAT=NONE and RI=NONE |
| 33943778 | 3 | 8.5 | Alarms on vSTP platform : Abterm |
| 33930233 | 3 | 8.5 | INPQ not working when any other subsystem is deleted from SCCP Applications |

| Bug number | Severity | Found in Release | Title |
|---|---|---|---|
| 33817521 | 3 | 8.5 | Connection Status not updated even though connection and link both are up |
| 33799149 | 3 | 8.5 | VSTP sends incorrect service indicator value in response SLTA |
| 33663158 | 3 | 8.5 | Traffic prohibited /Destination Unavailable sent on DPC same as affected PC |
| 33794465 | 3 | 8.5 | TDM links (ADAX) fail to establish if group other that "aa" |
| 33798423 | 3 | 8.5 | In case of loopset failure with discard option ,Translation is already success and UDTS is not properly built |
| 33763954 | 3 | 8.5 | Operational Reason of Linkset Status is not getting updated after Operational Status and Reason of Link becomes Inservice and Normal |
| 33654273 | 3 | 8.5 | GTA cannot be created when GTTsettype: CdSSN with cdssn=0 |
| 34046486 | 4 | 8.5 | RSP/Destination Route Restricted Event Issue |
| 33829309 | 4 | 8.6 | Fields in GTA showing empty when opcode=None |
| 33777001 | 4 | 8.5 | ADAX issue: Vstp log filled with tdm message (Mtp2AdapterTask::mtp2Pol () No event Received on fdId ) |
| 33817201 | 4 | 8.5 | Not able to update OpCode=NONE |
| 33817140 | 4 | 8.5 | vSTP GUI shows blank under OPCODE column instead of none |
| 33768389 | 4 | 8.5 | VSTP Connection Configuration Sets ,while performing edit SCTP Data Chunk Delivery Ordered value changes from "No" to "Yes" |
| 33717035 | 4 | 8.5 | VSTP Connection Configuration Sets ,SCTP Data Chunk Delivery Ordered default value should be "Yes" |
| 33704403 | 4 | 8.5 | GUI permissions do not match user CLI permissions wrt view, create, edit, delete in VSTP |

## 9.2.4 VNFM

The following table lists the resolved bugs in VNFM 5.4.6.0.0 release.

**Table 9-8    VNFM Release 5.4.6.0.0 Resolved Bugs**

| Bug Number | Severity | Found in Release | Title |
|---|---|---|---|
| 36079310 | 3 | 5.4.5 | Signaling's Terminate Lcm operation is in failed state for TSA port deletion for Dual xsi network interface |
| 36079346 | 4 | 5.4.5 | Pick OL7 patches in VNFM 5.4.6 |
| 36079326 | 4 | 5.4.5 | Third Party Library Upliftment For VNFM 5.4.6 |

The following table lists the resolved bugs in VNFM 5.4.5.0.0 release.

**Table 9-9    VNFM Release 5.4.5.0.0 Resolved Bugs**

| Bug Number | Severity | Found in Release | Title |
|---|---|---|---|
| 35717211 | 3 | 5.4 | Pick OL7 patches in VNFM 5.4.5 |
| 35735719 | 3 | 5.4 | DHCP networks are getting auto configure on the Primary NOAM |
| 35798458 | 4 | 5.4 | VNFM 5.4.5 internal updates and fixes |
| 35735266 | 4 | 5.4 | Third Party Library Upliftment For VNFM 5.4.5 |

The following table lists the resolved bugs in VNFM 5.4.4.0.0 release.

**Table 9-10    VNFM Release 5.4.4.0.0 Resolved Bugs**

| Bug Number | Severity | Found in Release | Title |
|---|---|---|---|
| 35448283 | 4 | 5.4.3 | Pick OL7 patches in VNFM 5.4.X |
| 35458737 | 4 | 5.4.3 | Third Party Library Upliftment For VNFM 5.4.4 |

The following table lists the resolved bugs in VNFM 5.4.3.0.0 release.

**Table 9-11    VNFM Release 5.4.3.0.0 Resolved Bugs**

| Bug Number | Severity | Found in Release | Title |
|---|---|---|---|
| 34937938 | 3 | 5.4.1 | Mina SSHD 3rd party library version upgrade from 2.9.1 to 2.9.2 in order to fix CVE-2022-45047 security issue |
| 34937950 | 3 | 5.4.1 | Space warning on UDR12.7.0.2 after initial install of UDR instance by VNFM |
| 34827283 | 4 | | [VzW Scan] Oracle JRE Multiple Vulnerabilities (October 2022 CPU) |

**Table 9-11    (Cont.) VNFM Release 5.4.3.0.0 Resolved Bugs**

| Bug Number | Severity | Found in Release | Title |
|---|---|---|---|
| 34827306 | 4 | | [VzW Scan] Oracle JDK Multiple Vulnerabilities (October 2022 CPU) |
| 34827327 | 4 | | [VzW Scan] Oracle Linux 7 : Unbreakable Enterprise kernel (ELSA-2022-9870) |
| 34827725 | 4 | | Pick OL7 patches |
| 34849309 | 4 | 5.4.1 | Nessus Plugin 166906: Apache Tomcat 9.0.0-M1 < 9.0.68 Request Smuggling Vulnerability |
| 34827392 | 4 | 5.4 | [VzW Scan]: SSH Weak Key Exchange Algorithms Enabled in VNFM-5.4.1/5.4.2 |
| 34827405 | 4 | 5.4 | [VzW Scan]: Certificate Add/Update Procedure via Documentation in VNFM-5.4.1/5.4.2 |

The following table lists the resolved bugs in VNFM 5.4.2.0.0 release.

**Table 9-12    VNFM Release 5.4.2.0.0 Resolved Bugs**

| Bug Number | Severity | Found in Release | Title |
|---|---|---|---|
| 34684831 | 3 | 5.4.1 | Commons Configuration2 uplift to 2.8, Apache Tomcat, SNMP4j, JJWT, log4j, sshd-sftp, httpClient5 and Commons Beanutils to latest |
| 34657465 | 2 | 5.4.1 | VNFM Bug: Invalid input for field/ attribute user_data Error on openstack cloud |
| 34683128 | | | Nessus Plugin ID 12085: Apache Tomcat Default Files |
| 34688761 | | | TMO Security scan findings on VNFM (reported OL7 Sec patches are not included in VNFM-5.4.1) |

The following table lists the resolved bugs in VNFM 5.4.1.0.0 release.

**Table 9-13    VNFM Release 5.4.1.0.0 Resolved Bugs**

| Bug Number | Severity | Found in Release | Title |
|---|---|---|---|
| 34327917 | 2 | 5.4 | Back out of VNFs (Geo VNFM, Pr NOAM) is not working via Orchestrator |

The following table lists the resolved bugs in VNFM 5.4.0.0.0 release.

**Table 9-14    VNFM Release 5.4.0.0.0 Resolved Bugs**

| Bug Number | Severity | Found in Release | Title |
|---|---|---|---|
| 34046486 | 4 | 5.4 | RSP/Destination Route Restricted Event Issue |
| 33829309 | 4 | 5.4 | Fields in GTA showing empty when opcode=None |

# 9.3 Known Bug List

The section lists the known bugs for DSR, vSTP, VNFM, and SCEF along with the associated customer impact statements.

## 9.3.1 DSR

**Release 8.6.0.7.0**

There are no DSR known bugs for DSR 8.6.0.7.0 release.

**Release 8.6.0.6.0**

There are no DSR known bugs for DSR 8.6.0.6.0 release.

**Release 8.6.0.5.0**

The following table lists the DSR known bugs along with the customer impact statements for DSR 8.6.0.5.0 release.

**Table 9-15    DSR 8.6.0.5.0 Known Bugs**

| Bug Number | Severity | Found in Release | Title | Customer Impact |
|---|---|---|---|---|
| 35547085 | 3 | 8.6 | Observing Undesired alarms in backout from 8.6.0.5.0-96.28.0 to 8.6.0.3.0_96.21.0 | **Impact**: Following alarms may be observed during Backout operation:<br>• DB replication failed for MP<br>• Database health impacted<br>• Persistent database failure<br>• Writing the database to disk failed<br>• Server core file detected<br>Some VMs can get into spare state after performing backout on that VM.<br>**Workaround:**<br>If in case the above alarms are seen, then delete core files from `/var/TKLC/core` directory and restart the server using `sudo init 6` command. |

**Release 8.6.0.4.0**

There are no DSR known bugs for DSR 8.6.0.4.0 release.

**Release 8.6.0.3.0**

There are no DSR known bugs for DSR 8.6.0.3.0 release.

**Release 8.6.0.2.0**

The following table lists the DSR known bugs along with the customer impact statements for DSR 8.6.0.2.0 release.

**Table 9-16    DSR 8.6.0.2.0 Known Bugs**

| Bug Number | Severity | Found in Release | Title | Customer Impact |
|---|---|---|---|---|
| 32911957 | 3 | 8.5 | IPv6: [Multi-Homing]: Traffic is not auto-shifted to primary XSI IP and connection went down if secondary IP is bring down via 'ifdown' command | This issue is specific to the scenario when the eth interface on the VM shuts down using "ifdown" command. Other scenarios of multihoming switching are working fine. **Workaround**: None |
| 28134563 | 3 | 8.3 | Auto Site Upgrade failure is not cleaned up automatically, resulting in reupgrade attempt | If during Automated Site Upgrade, the upgrade on a server fails due to an issue like NTP failure or greater than 70% `/var` usage, the customer may observe a message. Site already has an automated site upgrade in progress, stating upon trying to restart the upgrade. **Workaround**: Cancel the Site Upgrade task from **Main Menu: Status & Manage**, and then **Tasks**, and then **Active Task** screen. Then, restart the upgrade. |

**Table 9-16    (Cont.) DSR 8.6.0.2.0 Known Bugs**

| Bug Number | Severity | Found in Release | Title | Customer Impact |
|---|---|---|---|---|
| 28353971 | 3 | 8.3 | OCSG does not validate special characters in ScsAsId delimiter | If customers enter special characters in SCSASID_APN_Suffix_Delimiter in the OCSG console, the URL is rendered incorrectly. **Workaround**: APIGW user document will describe the constraint on the delimiter configuration parameter. |
| 26939388 | 3 | 8.2 | SDS Upgrade: NOAM Servers shall not switchover while auditing is in progress | None, if the documented workaround is followed. **Workaround**: NOAM upgrades are manual upgrades, and the documented procedure instructs the operator to look for the audit clearance alarm. |
| 26969222 | 3 | 8.2 | EVENT_NUMBER: 31000 GN_INTERN/WRN Upload failed [FileUploader.cxx :123] post 8.2 | Minimal impact is the problem that occurs. The alarm may cycle a few times and then clear after the system retries file transfer. This has only been observed in one test system and did not have a long-term impact on the system. |

**Table 9-16    (Cont.) DSR 8.6.0.2.0 Known Bugs**

| Bug Number | Severity | Found in Release | Title | Customer Impact |
|---|---|---|---|---|
| 27087175 | 3 | 8.2 | Device Deployment Failed alarms on IPFEs while upgrading from 7.1.1 to 8.2 | In the unlikely event that the TPD provd server is down, and we happen to have a device edit pending, the edit will be blocked and an alarm is raised. (Bug title reflects an instance where this has happened once in the test cycle.) **Workaround**: Perform a trivial edit to the device; this will retry the edit operation with tpdprovd. |
| 26243446 | 3 | 8.1 | Information showing as green even though HostName is incorrect | No functional impact. Error text is displayed with a green background. |
| 26290407 | 3 | 8.1 | 8.1 Maj Upg NOAM "10134 Server upgrade operation failed", but upgrade succeeded | There will be a false alarm, but the upgrade will still be in progress. Upgrade progress can be verified from the Upgrade Screen. Moreover, Upgrade logs can be verified to see the progress of the upgrade. |
| 24796935 | 3 | 8 | [AW:oampAgent] "DB Late Write Nonactive" alarm by NO during Act->Stby transition | No operational impact. Alarm may be triggered when switchover of NOAM occurs. **Workaround**: None |

**Table 9-16    (Cont.) DSR 8.6.0.2.0 Known Bugs**

| Bug Number | Severity | Found in Release | Title | Customer Impact |
|---|---|---|---|---|
| 25505595 | 3 | 8 | DSR 8.0:ST: InstallOS op on guests using PMAC failed with reason as internal err | No impact to traffic. Filesystem full could prevent normal operations such upgrades or addition of new servers. The filesystem full condition was a result of an ISO being copied into an incorrect location (home/ admusr). **Workaround**: Delete extra files that have been incorrectly copied to `/home/ admusr`. This will clear the alarm and allow normal operation. |
| 25575141 | 3 | 8 | [PDRA:Recon] Disabling PDRA during USBR Recon fails with Error code 21648 | Users will not be able to disable PDRA function while running a reconfiguration plan for a USBR database. Users can disable function after all reconfiguration plans have been completed. |

**Table 9-16    (Cont.) DSR 8.6.0.2.0 Known Bugs**

| Bug Number | Severity | Found in Release | Title | Customer Impact |
|---|---|---|---|---|
| 25637633 | 3 | 8 | Unknown column 'ROLE' in 'where clause' | Minimal impact as filter is not typically used for System OAM during upgrades. User will receive error "Unknown column 'ROLE' in 'where clause'", when filtering on Server Role "System OAM" through the Main Menu: Administration **>** Software Management **>** Upgrade screen. **Workaround**: Users can navigate to the desired System OAM tab to get the data. |
| 25651803 | 3 | 8 | [PCA:CACD] Alarm for Degraded ComAgent Conns when USBRs removed from Session RD | No functional impact. Alarm is raised for servers that do not belong to the active Session SBR Database. **Workaround**: To clear the alarm, restart the SBR servers on which the alarm is raised. CAUTION: If any DCA application is actively sending data to these SBR servers, this workaround is NOT recommended as it may cause traffic loss. |

**Table 9-16    (Cont.) DSR 8.6.0.2.0 Known Bugs**

| Bug Number | Severity | Found in Release | Title | Customer Impact |
|---|---|---|---|---|
| 25656089 | 3 | 8 | DSR8.0:ST: ISO deployment got stuck for the site when servers got restarted | During preparation for upgrade activity, if the user reboots a server while an ISO transfer is taking place, the transfer will be stopped and will not restart until a manual workaround is performed.<br>**Workaround**: Contact My Oracle Support for assistance. |
| 25719122 | 3 | 8 | [PDRA:ApplRestart] psbr abterm can occur during controlled shutdown/restart | No service/traffic impact. An abterm may be generated during the process restart through GUI (Status&Manage **>** Server). |

**Table 9-16    (Cont.) DSR 8.6.0.2.0 Known Bugs**

| Bug Number | Severity | Found in Release | Title | Customer Impact |
|---|---|---|---|---|
| 25730821 | 3 | 8 | [ISBR:HaRes] SBRs may fail to de-register COMCOL Resources when removed from RDs | No impact to traffic since this issue was observed on a decommissioned server group that is not a part of resizing plan. Also, there should be no operational impact as MOP source documentation has been updated to the required cleanup of decommissioned Servers and Server Groups. **Workaround**: If there are any Servers and Server Groups which are no longer being used after the completion of a Resizing plan, then the user should delete them. |
| 23421644 | 4 | 8 | [AW]Log In button not centered in the box at the Login Screen in Firefox browser | No operational impact. Cosmetic issue only. |
| 24377541 | 4 | 8 | [Network Insert Screen]: VLAN ID field should not be mandatory | In the Main Menu > Networking > Networks [Insert] screen, users will need to populate the VLAN ID field with a value of 1-4094 regardless of whether used or not. |

**Table 9-16    (Cont.) DSR 8.6.0.2.0 Known Bugs**

| Bug Number | Severity | Found in Release | Title | Customer Impact |
|---|---|---|---|---|
| 24621473 | 4 | 8 | The SBR HA and HA health check scripts accessing tables instead of SOAP APIs. | No impact. |
| 25028429 | 4 | 8 | DSR Backout: invalid response from User (yes vs. y) shouldn't abort CLI Session | If users do not type y or N in response to, "Continue backout? [y/N]:", there is no reason given for the abort of the backout command. **Workaround**: The backout command can be re-entered. |
| 25379612 | 4 | 8 | IDIH : 80.17.2: OAM GUI showing extra Mediation input Sources | No operational impact. Extra mediation source entries may be displayed. If the IDIH has ever been modified to retrieve data from another DSR SOAM, table entries for server hosts from the other SOAM will be displayed in IDIH OAM application screen Applications > DSR>"Mediation Input Sources". **Workaround**: Disregard hosts that no longer apply to the current configuration. |

**Table 9-16    (Cont.) DSR 8.6.0.2.0 Known Bugs**

| Bug Number | Severity | Found in Release | Title | Customer Impact |
|---|---|---|---|---|
| 25462998 | 4 | 8 | Pause update not functioning on Comm Agent Screens | Minimal customer impact. The GUI status screens under "Communication Agent **>** Maintenance" will continue to update when a pause update check box is selected. |
| 25542610 | 4 | 8 | When NMS server added user may return to a screen with addtion not reported | Update may not be reflected on GUI until it is manually refreshed. **Workaround**: None. Users need to navigate back to the desired screen rather than be automatically returned to it. |
| 25584247 | 4 | 8 | Misleading DCA Custom Event Template Throttling Description | Misleading 'Alarm Throttling Interval' description. Minimum value is incorrect. [Default = 60; Range = 0-300] should read [Default = 60; Range = 5-300]. |
| 25616683 | 4 | 8 | Capacity Summary screen constraints inconsistent with Online Help doc | Online help has an inaccuracy concerning max local nodes =32 instead of 48. |
| 29531355 | 4 | 8.4 | STP8.4_GPORT_FT: MTSMSIMSI not taking ASDDN / ASDRNDN values | Resonse messages in case of GPORT cannot be encoded MTSMSIMSI as ASDDN and ASDRNDN. |

**Table 9-16    (Cont.) DSR 8.6.0.2.0 Known Bugs**

| Bug Number | Severity | Found in Release | Title | Customer Impact |
|---|---|---|---|---|
| 26710183 | 4 | 8.2 | RE when edited to remove the destination, should not be saved | If an RE is edited and all destination are set to None, then any FABR queries to this particular RE will fail (ATTACH failures will be observed). **Workaround**: None. As a note: for any FABR query to pass, a valid destination must be assigned to an RE. |
| 25573507 | 4 | 8.1 | [DSR SSST 8.1] IPFE validation missing in IPFE **>** Configuration **>** Options screen | If a wrong IP address is used, then TSA will not work. This will only happen when operator is configuring the IP address incorrectly. In field, operator shall use the correct IP address and verify the configuration before starting the traffic. |
| 25737480 | 4 | 8.1 | [DSR SSST 8.1]When we insert device, XSI IPv4 address replaces with IPv6 address. | Operators will not be able to add two devices at the same time |
| 26188293 | 4 | 8.1 | [DASH:P&C] DSR Dashboard PCA Avg Ing MPS instead reported as RxPdraMsgRate | The Dashboard screen does not include OCDRA MPS, it is showing only PDRA MPS. SBR Sessions under Servers tab SBR Sessions field is not including OCDRA Sessions count. |

**Table 9-16    (Cont.) DSR 8.6.0.2.0 Known Bugs**

| Bug Number | Severity | Found in Release | Title | Customer Impact |
|---|---|---|---|---|
| 26270776 | 4 | 8.1 | Process Util spikes seen for pingAllLivePeer and iptablesAdm | This has no impact on the advertised performance figures.<br><br>While testing the smallest VM resource profile, such as 4 vCPUs/8G RAM), we observed an anomaly wherein pingAllLivePeer, and iptablesAdm tasks result in CPU spikes. The bench-marked/ advertised MPS, that is, 6K RBAR MPS per DA-MP) has already considered these spikes and runs fine with this anomaly. |

# 9.3.2 SCEF Known Bugs

**Release 8.6.0.7.0**

There are no known bugs for SCEF 8.6.0.7.0 release.

**Release 8.6.0.6.0**

There are no known bugs for SCEF 8.6.0.6.0 release.

**Release 8.6.0.5.0**

There are no known bugs for SCEF 8.6.0.5.0 release.

**Release 8.6.0.4.0**

There are no known bugs for SCEF 8.6.0.4.0 release.

**Release 8.6.0.3.0**

There are no known bugs for SCEF 8.6.0.3.0 release.

**Release 8.6.0.2.0**

There are no known bugs for SCEF 8.6.0.2.0 release.

**Release 8.6.0.1.0**

There are no known bugs for SCEF 8.6.0.1.0 release.

**Release 8.6.0.0.0**

The following table lists the SCEF known bugs along with the customer impact statements.

**Table 9-17    SCEF Known Bugs**

| Bug Number | Severity | Found in Release | Title | Customer Impact |
|---|---|---|---|---|
| 28435966 | 3 | 8.3 | Invalid notification sent if DRR is with missing Absent-Subscriber-Diagnostic-T4 | If an SMSC sends a DRR with invalid SM-Delivery-Outcome-T4 AVP value as '0' but missing 'Absent-Subscriber-Diagnostic-T4' AVP, the SCEF Notification report will not be correct.<br><br>Notification report:<br><br>`/daf-network/ apigw/v1`<br>`{`<br><br>`"msisdn":"988 73983003",`<br><br>`"result": "Unknown`<br><br>`DeviceTrigger ingDeliveryRe sult: 255"`<br>`}`<br><br>**Workaround**: None |

## 9.3.3 vSTP

**Release 8.6.0.7.0**

There are no known bugs for vSTP 8.6.0.7.0 release.

**Release 8.6.0.6.0**

There are no known bugs for vSTP 8.6.0.6.0 release.

**Release 8.6.0.5.0**

There are no known bugs for vSTP 8.6.0.5.0 release.

**Release 8.6.0.4.0**

There are no known bugs for vSTP 8.6.0.4.0 release.

**Release 8.6.0.3.0**

The following table lists the vSTP known bugs along with the customer impact statements for vSTP 8.6.0.3.0 release.

**Table 9-18    vSTP 8.6.0.3.0 Known Bugs**

| Bug Number | Severity | Found in Release | Title | Customer Impact |
|---|---|---|---|---|
| 34903932 | 3 | 8.6 | vSTP Reassembly failure for XUDT Segmented packets with segments having optional parameter after TCAP | vSTP process can restart when such XUDT Segmented packets are received that have segments with optional parameter after TCAP portion. Workaround is to disable the Reassembly/ Segmentation feature of XUDT Class1 segmented packets. |

The following table lists the vSTP known bugs along with the customer impact statements for vSTP 8.6.0.2.0 release.

**Table 9-19    vSTP 8.6.0.2.0 Known Bugs**

| Bug Number | Severity | Found in Release | Title | Customer Impact |
|---|---|---|---|---|
| 34693998 | 3 | 8.6.0.1.0 | Exporting the measurements while selecting Scope other than Network Element fails | **Workaround**: Export measurements with scope configured as 'Network Element' and any Server Group from the drop down menu. |
| 33884723 | 3 | 8.5.0.0.0 | vSTP: MRNSET update issue when MRNSET is modified during high traffic load | vSTP: MRNSET update issue when MRNSET is modified during high traffic load. **Workaround:** Perform the MRNSET configuration changes during maintenance window or when the traffic rate is not high. |

**Table 9-19    (Cont.) vSTP 8.6.0.2.0 Known Bugs**

| Bug Number | Severity | Found in Release | Title | Customer Impact |
|---|---|---|---|---|
| 29518322 | 3 | 8.4 | MIX of ANSI + ITUI traffic (72K for 8 MP¿s per site) is not able to run on my performance setup, whereas same amount of traffic for just ITUI domain is running fine. | MIX traffic routing results in MSU failure, when running traffic is close to configured Link TPS.<br><br>**Workaround**:None |
| 29518100 | 3 | 8.4 | Few ITUI domain links got stuck in congestion level though I have reduced traffic to zero | When a linkset is pushed for more traffic routing, which triggers egress congestion, and if remains under this traffic stress, where links bounce due to congestion. Some Links get stuck in congestion levels though traffic gets reduced to zero. Here, Congestion level stuck links will never route egress traffic until they get reset. |
| 29408014 | 3 | 8.4 | On making the relativeCost value of Secondary entry same as relativeCost value of Primary entry, load sharing is not happening with respect to the weight. | Load sharing will not occur correctly on changing to the same cost. This could cause an early onset of congestion due to not using all available paths to load share.<br>**Workaround:** Reconfigure the MAP load sharing group by deleting the existing mapset group. Or, avoid put operation for changing RC. |

**Table 9-19    (Cont.) vSTP 8.6.0.2.0 Known Bugs**

| Bug Number | Severity | Found in Release | Title | Customer Impact |
|---|---|---|---|---|
| 31757106 | 3 | 8.5 | vSTP_SIG: XCA and CBA message are not sent for ITUN24 domain | SNM (Signalling Network Management) messages for ITUN24 domain will not work. ITUN24 domain traffic is running fine. For other domains, SNM messages are working fine. **Workaround**: None |
| 31757057 | 3 | 8.5 | [vSTP_SIG]: for ITUN24 domain, RST message is not sent when TFP message is received | SNM (Signalling Network Management) messages for ITUN24 domain will not work. ITUN24 domain traffic is running fine. For other domains, SNM messages are working fine. **Workaround**: None |
| 31588873 | 3 | 8.5 | MP_Perf: Observed discards due to congestion with MTP screening traffic | The MTP Screening with wild characters is heavy operation & consuming excessive CPU causing M3RL layer to congest. System shall limit TPS to 15K per MP when MTP3 Screening is turned ON. **Workaround**: Limit MTP3 Screening traffic to 15K TPS per vSTP MP for Gateway STP. No Impact for Non-Gateway deployments. |

**Table 9-19    (Cont.) vSTP 8.6.0.2.0 Known Bugs**

| Bug Number | Severity | Found in Release | Title | Customer Impact |
|---|---|---|---|---|
| 32672994 | 3 | 8.5 | vSTP_SIG : During traffic at 100% TPS, links are getting down and not coming up | M2PA links may go down some time when the traffic runs at the maximum MP capacity and does not recover automatically.<br><br>**Workaround**: Disable and then enable the affected link from GUI/MMI to bring the link up. |
| 32573278 | 3 | 8.5 | 8.5.0.1_ST:Comagent connection gets deleted in case of UDR based traffic | Comagent connections between vSTP and UDR go down for some time during high traffic scenarios. Transactions at vSTP MP may timeout and fail during such time when the connection is down with UDR.<br><br>**Workaround**: None. The comagent connections recover automatically. |
| 31983406 | 3 | 8.5 | R8.5.0.1:VstpM3UAEventQueue alarms on intervstp M3UA links | Queue alarms and congestion is observed while running 10K TPS traffic on one of the M3UA links.<br><br>**Workaround**: None. Run lower than 10K TPS per M3UA link. |

## 9.3.4 VNFM Known Bugs

**Release 5.4.6**

There are no known bugs for vSTP 5.4.6 release.

**Release 5.4.5**

There are no known bugs for vSTP 5.4.5 release.

**Release 5.4.4**

There are no known bugs for vSTP 5.4.4 release.

**Release 5.4.3**

There are no known bugs for vSTP 5.4.3 release.

**Release 5.4.2**

There are no known bugs for vSTP 5.4.2 release.

**Release 5.4.1**

There are no known bugs for vSTP 5.4.1 release.

**Release 5.4.0**

There are no known bugs for vSTP 5.4.0 release.