EAGLE® XG Diameter Signaling Router

Roadmap to Hardware Documentation

910-6721-001 Revision A
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Introduction

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About this Manual

This document is an aid to navigate the respective manufacturer online documentation related to the Tekelec Diameter Signaling Router (DSR) product. This document provides links to typical hardware-related user information. The referenced documentation includes hardware descriptions and operation information.

The hardware included with DSR utilizes the HP ProLiant Gen8 line of servers mounted in a cabinet. Dependent upon customer order and system configuration delivered, the cabinet may be powered by either an AC or DC input from the customer site. There are separate cabinet assemblies for AC or DC installations.

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

Scope and Audience

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

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

Organization

This manual is organized into the following chapters:

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

Documentation Admonishments

Admonishments are icons and text throughout this manual that alert the reader to assure personal safety, to minimize possible service interruptions, and to warn of the potential for equipment damage.

Table 1: Admonishments

	**DANGER**: (This icon and text indicate the possibility of *personal injury*.)

	**WARNING**: (This icon and text indicate the possibility of *equipment damage*.)
	**CAUTION**: (This icon and text indicate the possibility of *service interruption*.)

Customer Care Center

The Tekelec Customer Care Center is your initial point of contact for all product support needs. A representative takes your call or email, creates a Customer Service Request (CSR) and directs your requests to the Tekelec Technical Assistance Center (TAC). Each CSR includes an individual tracking number. Together with TAC Engineers, the representative will help you resolve your request.

The Customer Care Center is available 24 hours a day, 7 days a week, 365 days a year, and is linked to TAC Engineers around the globe.

Tekelec TAC Engineers are available to provide solutions to your technical questions and issues 7 days a week, 24 hours a day. After a CSR is issued, the TAC Engineer determines the classification of the trouble. If a critical problem exists, emergency procedures are initiated. If the problem is not critical, normal support procedures apply. A primary Technical Engineer is assigned to work on the CSR and provide a solution to the problem. The CSR is closed when the problem is resolved.

Tekelec Technical Assistance Centers are located around the globe in the following locations:

Tekelec - Global

Email (All Regions): support@tekelec.com

- **USA and Canada**

  Phone:

  1-888-FOR-TKLC or 1-888-367-8552 (toll-free, within continental USA and Canada)

  1-919-460-2150 (outside continental USA and Canada)

  TAC Regional Support Office Hours:

  8:00 a.m. through 5:00 p.m. (GMT minus 5 hours), Monday through Friday, excluding holidays

- **Caribbean and Latin America (CALA)**

  Phone:

  +1-919-460-2150

  TAC Regional Support Office Hours (except Brazil):

  10:00 a.m. through 7:00 p.m. (GMT minus 6 hours), Monday through Friday, excluding holidays

  - **Argentina**

    Phone:

0-800-555-5246 (toll-free)

- **Brazil**

  Phone:

  0-800-891-4341 (toll-free)

  TAC Regional Support Office Hours:

  8:00 a.m. through 5:48 p.m. (GMT minus 3 hours), Monday through Friday, excluding holidays
- **Chile**

  Phone:

  1230-020-555-5468
- **Colombia**

  Phone:

  01-800-912-0537
- **Dominican Republic**

  Phone:

  1-888-367-8552
- **Mexico**

  Phone:

  001-888-367-8552
- **Peru**

  Phone:

  0800-53-087
- **Puerto Rico**

  Phone:

  1-888-367-8552 (1-888-FOR-TKLC)
- **Venezuela**

  Phone:

  0800-176-6497

- **Europe, Middle East, and Africa**

  Regional Office Hours:

  8:30 a.m. through 5:00 p.m. (GMT), Monday through Friday, excluding holidays

  - **Signaling**

    Phone:

    +44 1784 467 804 (within UK)
  - **Software Solutions**

    Phone:

+33 3 89 33 54 00

- **Asia**
  - **India**

    Phone:

    +91-124-465-5098 or +1-919-460-2150

    TAC Regional Support Office Hours:

    10:00 a.m. through 7:00 p.m. (GMT plus 5 1/2 hours), Monday through Saturday, excluding holidays
  - **Singapore**

    Phone:

    +65 6796 2288

    TAC Regional Support Office Hours:

    9:00 a.m. through 6:00 p.m. (GMT plus 8 hours), Monday through Friday, excluding holidays

Emergency Response

In the event of a critical service situation, emergency response is offered by the Tekelec Customer Care Center 24 hours a day, 7 days a week. The emergency response provides immediate coverage, automatic escalation, and other features to ensure that the critical situation is resolved as rapidly as possible.

A critical situation is defined as a problem with the installed equipment that severely affects service, traffic, or maintenance capabilities, and requires immediate corrective action. Critical situations affect service and/or system operation resulting in one or several of these situations:

- A total system failure that results in loss of all transaction processing capability
- Significant reduction in system capacity or traffic handling capability
- Loss of the system's ability to perform automatic system reconfiguration
- Inability to restart a processor or the system
- Corruption of system databases that requires service affecting corrective actions
- Loss of access for maintenance or recovery operations
- Loss of the system ability to provide any required critical or major trouble notification

Any other problem severely affecting service, capacity/traffic, billing, and maintenance capabilities may be defined as critical by prior discussion and agreement with the Tekelec Customer Care Center.

Related Publications

The Diameter Signaling Router (DSR) documentation set includes the following publications, which provide information for the configuration and use of DSR and related applications.

Getting Started includes a product overview, system architecture, and functions. It also explains the DSR GUI features including user interface elements, main menu options, supported browsers, and common user interface widgets.

Feature Notice describes new features in the current release, provides the hardware baseline for this release, and explains how to find customer documentation on the Customer Support Site.

Roadmap to Hardware Documentation provides links to access manufacturer online documentation for hardware related to the DSR.

Operation, Administration, and Maintenance (OAM) Guide provides information on system-level configuration and administration tasks for the advanced functions of the DSR, both for initial setup and maintenance.

Communication Agent User Guide explains how to use the Communication Agent GUI pages to configure Remote Servers, Connection Groups, and Routed Servers, and to maintain configured connections.

Diameter and Mediation User Guide explains how to use the Diameter GUI pages to manage the configuration and maintenance of Local and Peer Nodes, connections, Configuration Sets, Peer Routing Rules, Application Routing Rules, and System, DNS, and Local Congestion options; and explains how to configure and use Diameter Mediation.

IP Front End (IPFE) User Guide explains how to the use the IPFE GUI pages to configure IPFE to distribute IPv4 and IPv6 connections from multiple clients to multiple nodes.

Range-Based Address Resolution (RBAR) User Guide explains how to use the RBAR GUI pages to configure RBAR to route Diameter end-to-end transactions based on Diameter Application ID, Command Code, Routing Entity Type, and Routing Entity address ranges and individual addresses.

Full-Address Based Resolution (FABR) User Guide explains how to use the FABR GUI pages to configure FABR to resolve designated Diameter server addresses based on Diameter Application ID, Command Code, Routing Entity Type, and Routing Entity addresses.

Charging Proxy Application (CPA) and Offline Charging Solution User Guide describes the Offline Charging Solution and explains how to use the CPA GUI pages to set System Options for CPA, configure the CPA's Message Copy capability, and configure the Session Binding Repository for CPA.

Policy DRA User Guide describes the topology and functions of the Policy Diameter Routing Agent (Policy DRA or P-DRA) DSR application and the Policy Session Binding Repository, and explains how to use the Policy DRA GUI pages to configure P-DRA.

DSR Alarms, KPIs, and Measurements Reference Guide provides detailed descriptions of alarms, events, Key Performance Indicators (KPIs), and measurements; indicates actions to take to resolve an alarm, event, or unusual Diameter measurement value; and explains how to generate reports containing current alarm, event, KPI, and measurement information.

DSR Administration Guide describes DSR architecture, functions, configuration, and tools and utilities (IPsec, Import/Export, DIH, and database backups); and provides references to other publications for more detailed information.

Locate Product Documentation on the Customer Support Site

Access to Tekelec's Customer Support site is restricted to current Tekelec customers only. This section describes how to log into the Tekelec Customer Support site and locate a document. Viewing the document requires Adobe Acrobat Reader, which can be downloaded at www.adobe.com.

1. Log into the *Tekelec Customer Support* site.

   Note: If you have not registered for this new site, click the **Register Here** link. Have your customer number available. The response time for registration requests is 24 to 48 hours.

2. Click the **Product Support** tab.
3. Use the Search field to locate a document by its part number, release number, document name, or document type. The Search field accepts both full and partial entries.
4. Click a subject folder to browse through a list of related files.
5. To download a file to your location, right-click the file name and select **Save Target As**.

Chapter 2

Roadmap

Topics:

Introduction

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

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

General Descriptions and Hardware Features

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

Note: Not all features presented in the manufacturer documentation may be supported by this configuration. Contact the Tekelec *Customer Care Center* for additional information.

- *HP BladeSystem c-Class architecture technology brief* provides a general explanation of c-Class architecture and describes how the components within BladeSystem c-Class work together.
- *Important Safety Information - For Server, Storage, Power, Networking, and Rack Products* contains important safety information concerning Server, Storage, Power, Networking, and Rack Products.
- The *HP Intelligent Rack Family User Guide* provides additional installation information for the HP642 series cabinet.
- *Technologies in the HP BladeSystem c7000 Enclosure* describes the HP BladeSystem c7000 Enclosure.
- *HP ProLiant BL460c Gen8 Server Blade User Guide* describes the ProLiant BL460c Gen8 blade server.
- *HP ProLiant DL360p Gen8 Server User Guide* describes the HP ProLiant DL360p Gen8 Server system features and components.
- *HP ProLiant DL380p Gen8 Server User Guide* describes the HP ProLiant DL380p Gen8 Server system features and components.
- *Cisco Catalyst Blade Switch 3020 for HP Hardware Installation Guide* describes the Catalyst 3020 switch, as well as system features and components.
- *ProCurve Series 6120 Blade Switches Installation and Getting Started Guide* describes the HP ProCurve 6120XG switch, as well as system features and components.
- *Catalyst 4948E and Catalyst 4948E-F Switch Installation Guide* describes the Cisco Catalyst 4849E and 4948E-F switches, as well as system features and components.
- *1Gb Ethernet Pass-Thru Module* describes the 1Gb Ethernet Pass-Thru Module.
- *Telect 100A 4-Position Demarcation Circuit Breaker panel, ±24V/-48V* describes the Telect 100A 4-Position Demarcation DC Power Distribution Panel.
- *Telect 100A Dual-feed 4/4 TPA/GMT, -48V* describes the Telect 100A Dual-feed DC Power Distribution Panel.
- *HP 252663 Modular Power Distribution Unit with Extension Bars* describes the AC Power Distribution Unit.

User Operations - LEDs

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

WARNING: Customers do not perform installation procedures; these procedures are performed by Tekelec authorized personnel. Contact the Tekelec *Customer Care Center* for assistance with any procedure.

WARNING: Performing any procedure not authorized or approved by Tekelec may void any or all Tekelec warranties. Contact the Tekelec *Customer Care Center* for assistance with any procedure.

- Information describing LED functions of the 3020 switch can be found in this document: *Cisco Catalyst Blade Switch 3020 for HP Hardware Installation Guide*.
- The LED functions of the Cisco Catalyst 4948E/4948E-F Switch can be found in this document: *Catalyst 4948E and Catalyst 4948E-F Switch Installation Guide*.
- The LED functions of the HP ProCurve 6120XG switch can be found in this document: *ProCurve Series 6120 Blade Switches Installation and Getting Started Guide*.
- *HP ProLiant DL360p Gen8 Server User Guide* provides information describing LED functions of the DL 360p Gen8 server.
- *HP ProLiant DL380p Gen8 Server User Guide* provides information describing LED functions of the DL 380p Gen8 server.
- See the *HP ProLiant BL460c Gen8 Server Blade User Guide* for information describing LED functions of the BL460c Gen8 server.
- See *Telect 100A 4-Position Demarcation Circuit Breaker panel* for information describing the Telect 100A 4-Position Demarcation DC Power Distribution Panel LEDs.
- See *Telect 100A Dual-feed 4/4 TPA/GMT, -48V* for information describing the Telect 100A Dual-feed DC Power Distribution Panel LEDs.

Diameter Signaling Router (DSR) Platform Configuration

Cabinet configurations are specific to customer requirements. All hardware components listed in *General Descriptions and Hardware Features* may not be shown in the example configurations presented. You must refer to your customer order for exact configuration and rack line-up.

Refer to *General Descriptions and Hardware Features* for the components that may be installed in an Diameter Signaling Router (DSR) c-Class cabinet.

Examples of possible cabinet configuration and component placement are presented here.

- *Figure 1: AC Cabinet with Cisco 4948E-F, (3) Enclosures, (1 DL380/ 2 DL360)*
- *Figure 2: AC Cabinet with Cisco 4948E-F, (2) Enclosures, (6 DL380/ 12 DL360)*
- *Figure 3: AC Cabinet with Cisco 4948E-F, (1) Enclosures, (11 DL380/ 12 DL360)*
- *Figure 4: DC Cabinet; (2) Enclosures; (2) Switches; RMS*
- *Figure 5: DC Cabinet; (1) Enclosure; (2) Switches; RMS*

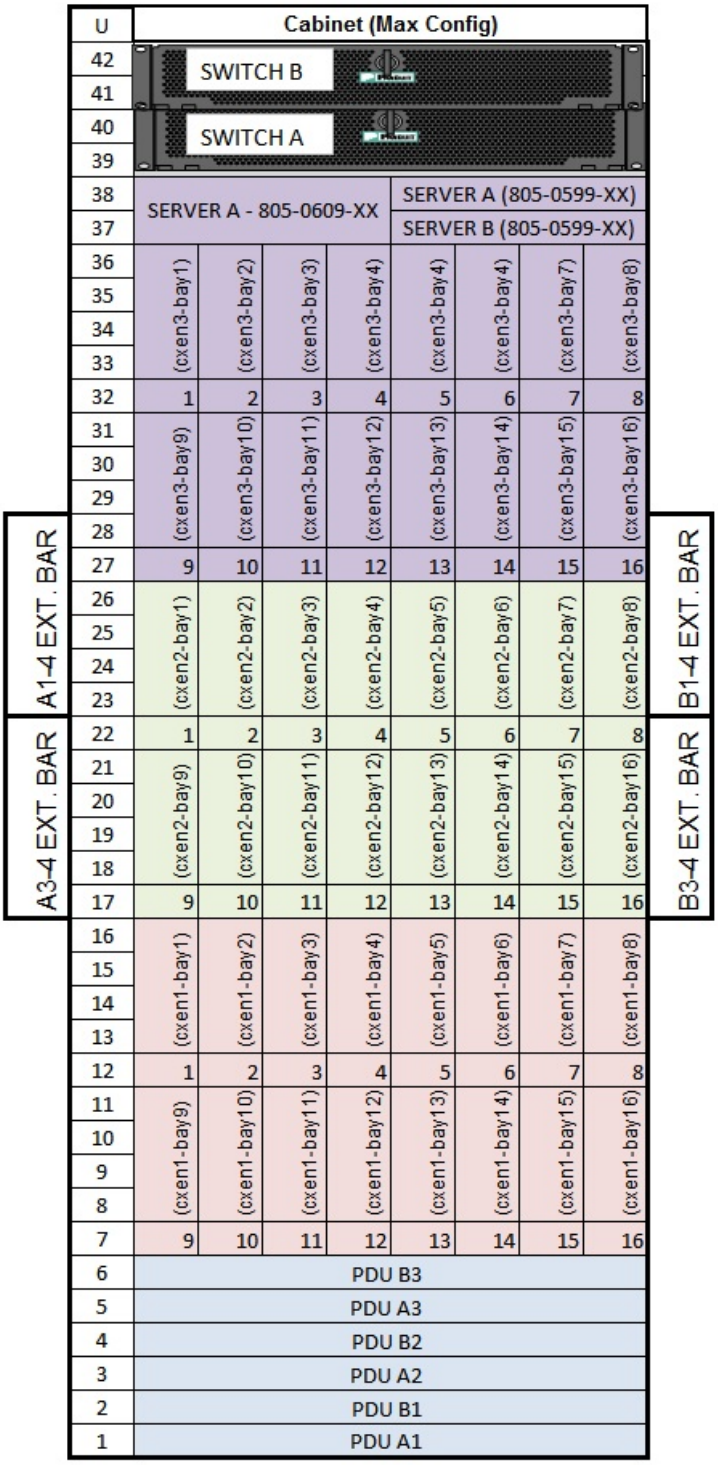

Figure 1: AC Cabinet with Cisco 4948E-F, (3) Enclosures, (1 DL380/ 2 DL360)

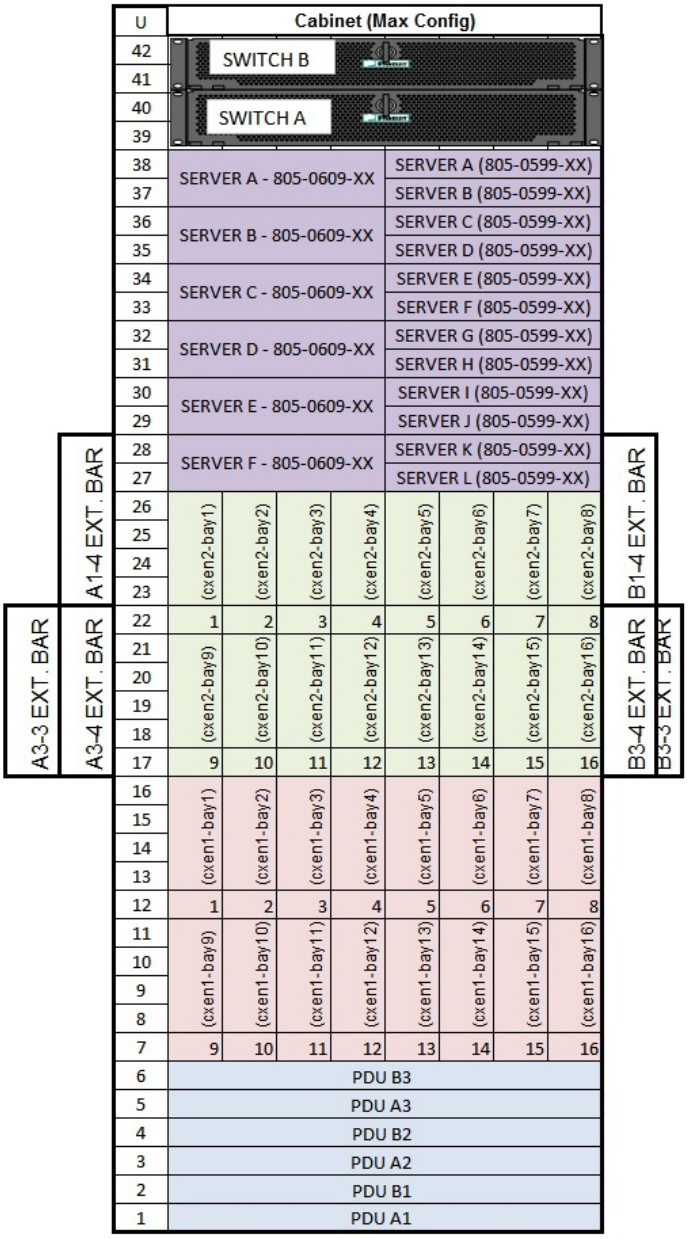

Figure 2: AC Cabinet with Cisco 4948E-F, (2) Enclosures, (6 DL380/ 12 DL360)

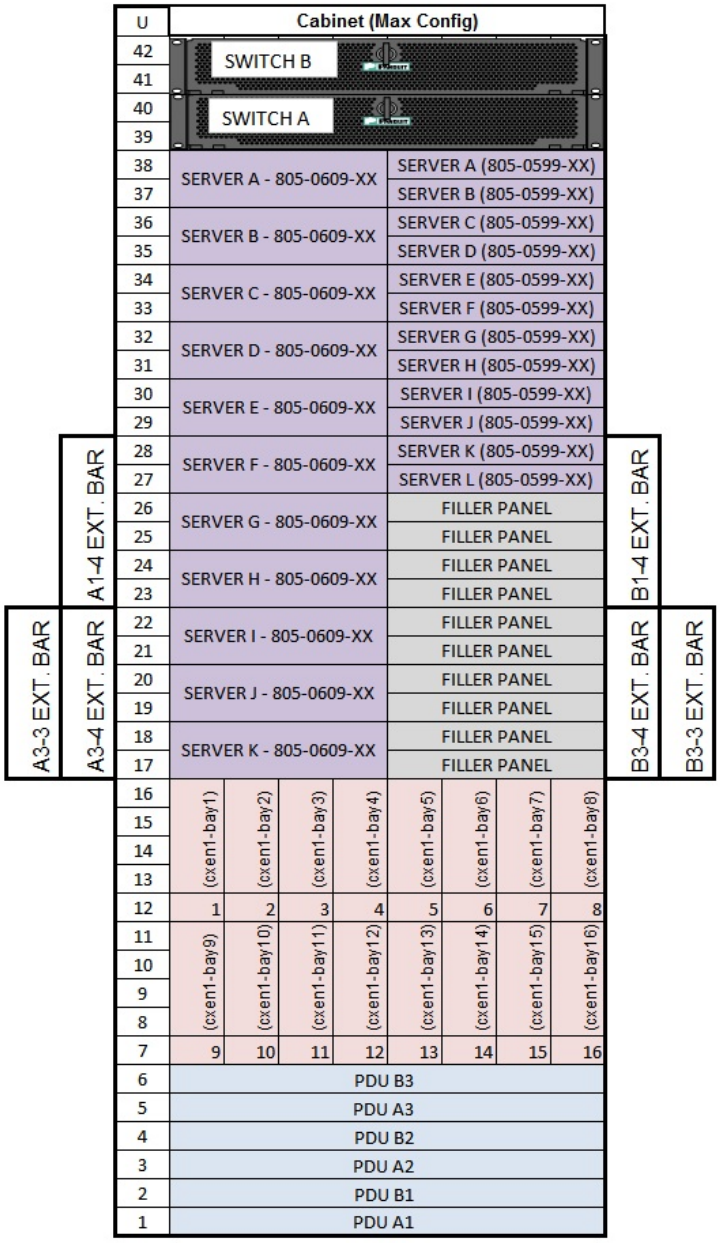

Figure 3: AC Cabinet with Cisco 4948E-F, (1) Enclosures, (11 DL380/ 12 DL360)

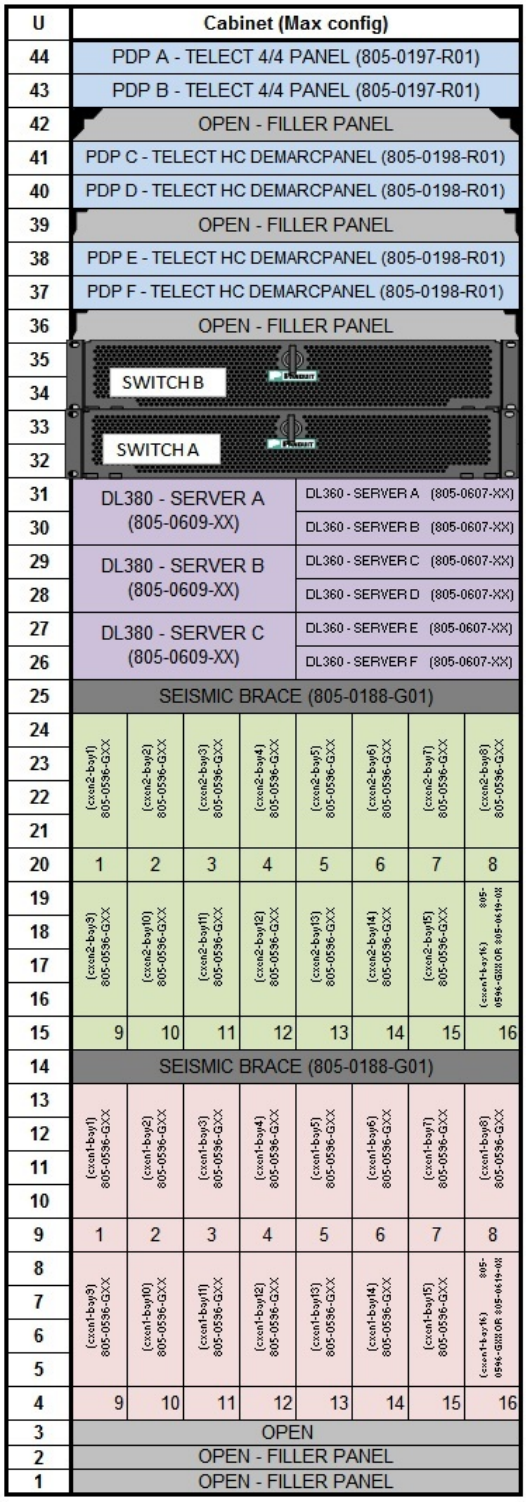

Figure 4: DC Cabinet; (2) Enclosures; (2) Switches; RMS

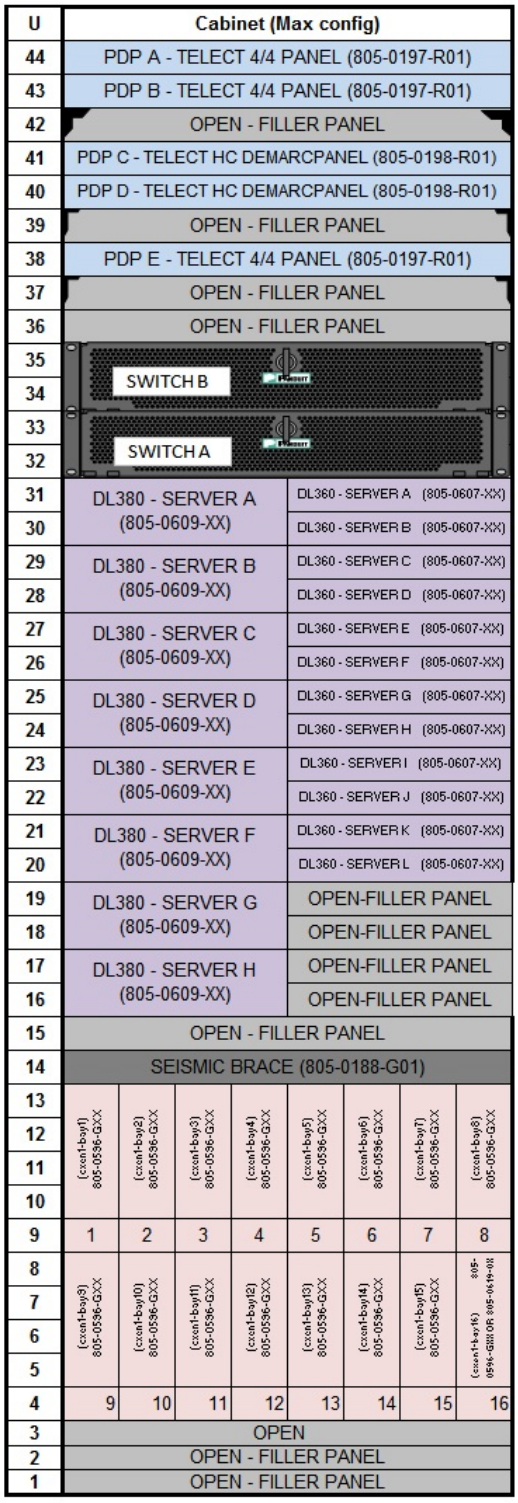

Figure 5: DC Cabinet; (1) Enclosure; (2) Switches; RMS