Oracle® Communications Diameter Signaling Router

Diameter Common User Guide

Release 9.1.0.0.0
G16503-01
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Oracle Communications Diameter Signaling Router Diameter Common User Guide, Release 9.1.0.0.0

G16503-01

Contents

5 Visualization Server

Whats New in This Guide

This section introduces the documentation updates for DSR 9.1.0.0.0 release.

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There are no updates for this guide in this release.

1
Introduction

The *Diameter Common User's Guide* and Help provide information about how to use the Diameter Common GUI pages to configure Network Identifiers and MP Profiles, and how to export and import configuration data for Diameter, Diameter Common, IPFE, MAP-Diameter Interworking, and DSR Applications.

1.1 Overview

The *Diameter Common User's Guide* and Help provide information about how to use the Diameter Common GUI pages to perform configuration and DSR Bulk Import/Export tasks.

The document provides the following types of information:

- Procedures to configure Diameter Common components
- Procedures to perform DSR Bulk Import/Export operations

1.2 Scope and Audience

The Diameter Common documentation is intended for anyone responsible for configuring and using the Diameter Common functions.

Users of this manual must have a working knowledge of telecommunications, of network installations, and of the product that is using the Diameter Common functions.

The Diameter Common software component is shared by multiple applications in the product line. For this reason, this document includes references to the shared applications, and describes GUI options that are not visible or applicable to UDR. For example, DSR applications (such as RBAR, FABR, CPA, and PCA) and IPFE are currently not used by UDR, so disregard any references to these applications.

1.3 Manual Organization

This manual is organized into the following chapters:

- Introduction contains general information about the Diameter Common help documentation, the organization of this manual, and how to get technical assistance.
- Diameter Common on the NOAM describes the configuration of the Dashboard, Metric and Dashboard Elements, MCCMNC, and MCCMNC Mapping Network Identifiers on the NOAM.
- Diameter Common on the SOAM describes the configuration of the MCC Ranges Network Identifiers and MPs (Profiles and Assignments) on the SOAM.
- Diameter Common Bulk Import and Export provides procedures and CSV file formats for use in DSR Bulk Import and Export of Diameter, Diameter Common, IPFE, and DSR Application configuration data on the NOAM and SOAM.

1.4 My Oracle Support

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

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

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

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

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

2
Diameter Common on the NOAM

The Diameter Common GUI pages on the NOAM can be used for configuration of the DSR Dashboard, MCCMNC, MCCMNC Mapping Network Identifiers, as well as Bulk Import and Export functions.

2.1 Overview

The Diameter Common menu items on the NOAM provide access to GUI pages to perform the following tasks:

- Configure **Diameter Common**, and then **Dashboard**, and then **Dashboard** (see Dashboard)
- Configure **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Metric Groups** (see Metric Groups)
- Configure **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Metric Threshold Configuration Sets** (see Metric Threshold Configuration Sets)
- Configure **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Dashboard Network Elements** Dashboard Network Elements)
- Configure **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Dashboard Networks** (see Dashboard Networks)
- Configure **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC** (see MCCMNC Configuration)
- Configure **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC Mapping** (see MCCMNC Mapping Configuration)
- Configure **Diameter Common**, and then **Common Application Options** (see Common Application Options).
- Perform DSR Bulk Import/Export operations (see Diameter Common Bulk Import and Export)

2.2 Dashboard

Depending on your system, the dashboard differs.

- Dashboard on the NOAM
- Dashboard on the SOAM

Dashboard on the NOAM

The Dashboard on the NOAM is viewed at **Diameter Common**, and then **Dashboard**.

The Dashboard provides high level Metrics, which provide an overall view of the health of one or more Network Elements (NEs) of a network, making Metrics the core component of the DSR Dashboard. Each column on the Dashboard contains the set of values for a particular Metric. The selection of which Metrics are displayed on the Dashboard is done via configuration.

The NOAM Dashboard shows both Network summary and NE summary Metrics.

The order that Metric Groups are displayed on the Dashboard is determined from configuration which cannot be modified. The order that Metrics are displayed within a Metric Group on the Dashboard display is determined from configuration which cannot be modified. Metrics selected for display on the Dashboard via configuration can be hidden/viewed via a Dashboard GUI control based on threshold level filters. A threshold level filter is used to limit which Metrics are displayed on the Dashboard based on a severity value. These limits are valuable because they focus on more potentially significant problems.

Horizontal and vertical scrolling allows any Metrics which do not fit onto a single physical screen to be seen.

The Dashboard also facilitates troubleshooting via Metric-specific hyperlinks on the Dashboard to assist in viewing more detailed information via existing DSR status and maintenance screens. The linkage between content on the Dashboard to DSR status and maintenance screens will be determined from configuration which cannot be modified.

Per Network Metrics are derived from per-NE summary Metrics. A Network is the set of one or more Dashboard Network Elements. The formula for calculating a Network Metric value is identical to that for calculating the per-NE Metric for that Metric.

Dashboard on the SOAM

The SOAM Dashboard shows the NE's summary Metrics, its per-Server Type summary Metrics and its per-Server Metrics.

A Server Type physically groups Metrics associated with a particular type of Server (e.g., DA-MP) onto the Dashboard display in order to create summary Metrics for Servers of a similar type. The order of Server Types on the SOAM Dashboard is determined from configuration which cannot be modified. The Server Types are predefined and cannot be modified. The DA-MP, DSR, SBR, and SOAM Server Types are supported.

Server Metrics are maintained by each MP. Per-Server Metric values are periodically pushed to their local SOAM, where they are displayed on the SOAM Dashboard display.

Server Type Metrics show a roll-up of Server Metrics by Server type. The formula for calculating a Server Type Metric value is identical to that for calculating the per-NE Metric for that Metric.

Network Element (NE) Metrics are derived from per-Server Metrics. A Network Element is the set of servers managed by a SOAM. The formula for calculating a per-NE Metric value is Metric-specific although, in general, most NE Metrics are the sum of the per-Server Metrics. The set of servers which are managed by a SOAM is determined through standard NOAM configuration and cannot be modified via Dashboard configuration. An NOAM can manage up to 32 NEs.

2.2.1 Metric Groups

The **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Metric Groups** page allows Dashboard Metric Groups to be configured.

A Metric Group establishes a collection of Metrics onto the Dashboard display and creates an aggregation status for a group of metrics. The "status" of a Metric Group is the worst-case status of the metrics within that group.

The name of a Metric Group is determined from configuration which cannot (initially) be modified.

The assignment of a Metric to a Metric Group is determined from configuration which cannot (initially) be modified.

The fields are described in Metric Groups elements.

2.2.1.1 Metric Groups elements

Table 2-1 describes the fields on the **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Metric Groups [Edit]** page.

Table 2-1 Metric Groups Elements

Field (* indicates a required field)	Value	Description
*Metric Group Name	Format: Text Box	Name of the Metric Group. Metric Group names are not user-configurable.

Each Metric Group has its own unique metrics. To see the specific metrics within a particular Metric Group, click the **+**. Once expanded, the list of Metric Names also shows whether or not a given metric is displayed on the Dashboard.

For metrics to be displayed on the Dashboard, the metrics must be selected to do so. To select which metrics are displayed on the Dashboard, select a Metric Group and click **Edit**

Address Resolution Metrics elements

After selecting the Address Resolution Metric Group and clicking **Edit** on the **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Metric Groups** page, the **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Metric Groups [Edit]** page appears. Table 2-2 describes the fields for the specific Address Resolution Metrics.

Table 2-2 Address Resolution Metrics Elements

Metric Name	Display on Dashboard	Description
# RBAR Cong Instances	Format: Check Box	Total number of **RBAR** instances in congestion (CL1, CL2, or CL3) across included servers.
RBAR Avg Ing MPS	Format: Check Box	Average RBAR ingress MPS across included DA-MP servers.
RBAR Trans Rej %	Format: Check Box	Percentage of RBAR transactions rejected across included DA-MP servers.
# FABR Cong Instances	Format: Check Box	Total number of FABR instances in congestion (CL1, CL2, or CL3) across included servers.
FABR Avg Ing MPS	Format: Check Box	Average FABR ingress MPS across included DA-MP servers.
FABR Trans Rej %	Format: Check Box	Percentage of FABR transactions rejected across included DA-MP servers.

Alarms Metrics elements

After selecting the Alarms Metric Group and clicking **Edit** on the **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Metric Groups** page, the **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Metric Groups [Edit]** page appears. Table 2-3 describes the fields for the specific Alarms Metrics.

Table 2-3 Alarms Metrics Elements

Metric Name	Display on Dashboard	Description
# Critical Alarms	Format: Check Box	The total number of critical alarms currently being reported by all associated servers.
# Major Alarms	Format: Check Box	The total number of major alarms currently being reported by all associated servers.
# Minor Alarms	Format: Check Box	The total number of minor alarms currently being reported by all associated servers.

Connections Metrics elements

After selecting the Diameter Connections Metric Group and clicking **Edit** on the **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Metric Groups** page, the **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Metric Groups [Edit]** page appears. Table 2-4 describes the fields for the specific Diameter Connections Metrics.

Table 2-4 Connections Metrics Elements

Metric Name	Display on Dashboard	Description
# Fixed Conns Unavail	Format: Check Box	Total number of fixed connections (Diameter or RADIUS) enabled, but unavailable, across included DA-MPs
# IPFE Conns Unavail	Format: Check Box	Total number of IPFE Diameter connections enabled, but unavailable, across included DA-MPs
# Conns Egress Cong	Format: Check Box	Total number of connections (Diameter or RADIUS) that are experiencing egress congestion, across included DA-MPs
# Conns Ingress Cong	Format: Check Box	Total number of connections (Diameter or RADIUS) that are experiencing ingress congestion, across included DA-MPs
# Peer Nodes Unavail	Format: Check Box	Total number of Peer Nodes unavailable, across included DA-MPs
# Peer Nodes Degraded	Format: Check Box	Total number of Peer Nodes degraded, across included DA-MPs
# Route Lists Unavail	Format: Check Box	Total number of Route Lists unavailable, across included DA-MPs
# Route Lists Degraded	Format: Check Box	Total number of Route Lists degraded, across included DA-MPs
# PTL ETGs Degraded	Format: Check Box	Total number of Pending Transaction Limiting Egress Throttle Groups Degraded, across included DA-MPs
# RL ETGs Degraded	Format: Check Box	Total number of Rate Limiting Egress Throttle Groups Degraded, across included DA-MPs
# TTPs with Loss more than zero percent loss	Format: Check Box	Total number of TTPs with Loss more than zero percent loss, across included DA-MPs
# TTPs with Loss more than Threshold	Format: Check Box	Total number of TTPs with Loss more than Threshold, across included DA-MPs, across included DA-MPs
# TTGs with Loss more than zero percent loss metric	Format: Check Box	Total number of TTGs with Loss more than zero percent loss metric, across included DA-MPs.

Policy & Charging Metrics elements

After selecting the Policy & Charging Metric Group and clicking **Edit** on the **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Metric Groups** page, the **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Metric Groups [Edit]** page appears. Table 2-5 describes the fields for the specific Policy and Charging Metrics.

Table 2-5 Policy & Charging Metrics Elements

Metric Name	Display on Dashboard	Description
# PCA Cong Instances	Format: Check Box	Total number of PCA instances in congestion (CL1, CL2, or CL3) across included servers
PCA Avg Ing MPS	Format: Check Box	Average PCA ingress MPS across included DA-MP servers
PCA Trans Rej %	Format: Check Box	Percentage of PCA transactions rejected across included DA-MP servers
# GLA Cong Instances	Format: Check Box	Total number of GLA instances in congestion (CL1, CL2, or CL3) across included servers
GLA Avg Ing MPS	Format: Check Box	Average GLA ingress MPS across included DA-MP servers
GLA Trans Rej %	Format: Check Box	Percentage of GLA transactions rejected across included DA-MP server

Priority Service Metrics elements

After selecting the Priority Service Metric Group and clicking **Edit** on the **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Metric Groups** page, the **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Metric Groups [Edit]** page appears. Table 2-6 describes the fields for the specific Priority Service Metrics.

Table 2-6 Priority Service Metrics Elements

Metric Name	Display on Dashboard	Description
NGN-PS Offered Rate	Format: Check Box	Rate of NGN-PS messages received from DSR peers
NGN-PS Transaction Pass %	Format: Check Box	Ratio of number of 2xx NGN-PS Answers sent to Peer/ Number of NGN-PS messages Accepted by DSR
NGN-PS Transaction Fail Peers %	Format: Check Box	Ratio of number of non-2xx NGN-PS Answers received from Peer/Number of NGN-PS messages Accepted by DSR

Protocol Metrics elements

After selecting the Protocol Metric Group and clicking the **Edit** on the **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Metric Groups** page, the **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Metric Groups [Edit]** page appears. Table 2-7 describes the fields for the specific Protocol Metrics.

Table 2-7 Protocol Metrics elements

Metric Name	Display on Dashboard	Description
Avg D2D Trans Hold Tm	Format: Check Box	Average Diameter-to-Diameter Transaction Hold Time across included DA-MPs (ms)
Avg D2M Trans Hold TM	Format: Check Box	Average Diameter-to-MAP Transaction Hold Time
Avg M2D Trans Hold Tm	Format: Check Box	Average MAP-to-Diameter Transaction Hold Time
Success Trans %	Format: Check Box	Percentage of transactions completed successfully across included servers
Ext Node Rej %	Format: Check Box	Percentage of transactions rejected by external signaling nodes
Egress Answer Tmout %	Format: Check Box	Percentage of egress transactions with answer timeout
Orphan Answer %	Format: Check Box	Percentage of orphan answers detected across included servers

RADIUS Metrics elements

After selecting the Servers Metric Group and clicking **Edit** on the **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Metric Groups** page, the **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Metric Groups [Edit]** page appears. Table 2-8 describes the fields for the specific RADIUS Metrics.

Table 2-8 RADIUS Metrics Elements

Metric Name	Display on Dashboard	Description
Avg RADIUS MPS	Format: Check Box	Average RADIUS MPS across included DA-MP servers
Avg RD-IWF MPS	Format: Check Box	Average RD-IWF MPS across included DA-MP servers

Servers Metrics elements

After selecting the Servers Metric Group and clicking **Edit** on the **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Metric Groups** page, the **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Metric Groups [Edit]** page appears. Table 2-9 describes the fields for the specific Servers Metrics.

Table 2-9 Servers Metrics Elements

Metric Name	Display on Dashboard	Description
# Servers Unavail	Format: Check Box	The total number of associated servers administratively enabled, but not reporting status data
# Servers Exc Mem Thr	Format: Check Box	The total number of servers whose memory usage exceeds any defined threshold
# Servers Exc CPU Thr	Format: Check Box	The total number of servers whose CPU usage exceeds any defined threshold

Table 2-9 (Cont.) Servers Metrics Elements

Metric Name	Display on Dashboard	Description
# Servers Exc Proc Rate Thr	Format: Check Box	The total number of servers whose processing rate usage exceeds any defined threshold
# Servers Stack Congested	Format: Check Box	The total number of servers whose stack is in congestion (CL1, CL2, or CL3)
DA-MP Ingress MPS	Format: Check Box	Total ingress MPS across included DA-MP servers
IPFE Ingress Pkts/sec	Format: Check Box	Total ingress packets per second across included IPFE servers
IPFE Ingress MB/sec	Format: Check Box	Total ingress MB per second across included IPFE servers
SBR Ingress Events/sec	Format: Check Box	Total ingress events per second across included SBR servers
SBR Sessions	Format: Check Box	Total sessions across included SBR servers
SBR Bindings	Format: Check Box	Total bindings across included SBR servers

2.2.2 Metric Threshold Configuration Sets

The **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Metric Threshold Configuration Sets** page allows Dashboard Metric Threshold Configuration Sets to be configured.

A Metric Threshold Configuration Set (MTCfgSet) contains all the information defining up to three thresholds for every configured metric. MTCfgSets have two types - Server Thresholds and Summary Thresholds.

The Server Metric Threshold Configuration Set contains thresholds applied only at Server scope. Server Type thresholds cannot be edited, but can be viewed on the Server Type tab of the **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Metric Threshold Configuration Sets** page.

Summary Metric Threshold Configuration Sets can apply at Dashboard Network Element or Dashboard Network scope. These thresholds can be configured and viewed on the Summary Type tab of the **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Metric Threshold Configuration Sets** page.

Metric thresholds allow for visualization enhancements on the Dashboard. Visualization enhancements such as coloring are used on the Dashboard to attract attention to a potential problem. When a visual enhancement on the Dashboard is enabled when a user-defined threshold is exceeded, potential problems can be investigated by the inspection of additional information.

Metric thresholds are only used for Dashboard visualization enhancements and are not associated with alarms. Most (but not necessarily all) metrics have thresholds. Whether a Metric can be assigned thresholds is determined from configuration, which cannot be modified.

For information on how to create or edit a Metric Threshold Configuration Set, refer to Inserting a Summary Metric Threshold Configuration Set and Editing a Summary Metric Threshold Configuration Set.

2.2.2.1 Metric Threshold Configuration Sets elements

Table 2-10 describes the elements on the **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Metric Threshold Configuration Sets [Insert]** and **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Metric Threshold Configuration Sets [Edit]** pages on the NOAM.

Table 2-10 Metric Threshold Configuration Sets Elements

Field (* Indicates Required Field)	Description	Data Input Notes
*Metric Threshold Configuration Set Name	A name that uniquely identifies the Metric Threshold Configuration Set	Format: Text box Default: N/A Range: A 32-character string. Valid characters are alphanumeric and underscore. Must contain at least one alpha and must not start with a digit.
Type	Summary type applies to Metrics at Network Element and Network scopes. Server type applies to Metrics at Server scope.	Format: Radio button Default: Summary Range: N/A

Table 2-11 Metric Threshold Elements

Metric Name	Metric Description	Data Input Notes
Alarms Metric Group		
# Critical Alarms	The total number of critical alarms currently being reported by all associated servers.	Format: Text box Default: N/A Range: 0-999999999999999. Must be an integer
# Major Alarms	The total number of major alarms currently being reported by all associated servers.	Format: Text box Default: N/A Range: 0-999999999999999. Must be an integer
# Minor Alarms	The total number of minor alarms currently being reported by all associated servers.	Format: Text box Default: N/A Range: 0-999999999999999. Must be an integer
Servers Metric Group		
# Servers Unavail	The total number of associated servers administratively enabled, but not reporting status data	Format: Text box Default: N/A Range: 0-999999999999999. Must be an integer
# Servers Exc Mem Thr	The total number of servers whose memory usage exceeds any defined threshold	Format: Text box Default: N/A Range: 0-999999999999999. Must be an integer

Table 2-11 (Cont.) Metric Threshold Elements

Metric Name	Metric Description	Data Input Notes
# Servers Exc CPU Thr	The total number of servers whose CPU usage exceeds any defined threshold	Format: Text box Default: N/A Range: 0-999999999999999. Must be an integer
# Servers Exc Proc Rate Thr	The total number of servers whose processing rate usage exceeds any defined threshold	Format: Text box Default: N/A Range: 0-999999999999999. Must be an integer
# Servers Stack Congested	The total number of servers whose stack is in congestion (CL1, CL2, or CL3)	Format: Text box Default: N/A Range: 0-999999999999999. Must be an integer
DA-MP Ingress MPS	Total ingress MPS across included DA-MP servers	Format: Text box Default: N/A Range: 0-999999999999999. Must be an integer
IPFE Ingress Pkts/sec	Total ingress packets per second across included IPFE servers	Format: Text box Default: N/A Range: 0-999999999999999. Must be an integer
IPFE Ingress MB/sec	Total ingress MB per second across included IPFE servers	Format: Text box Default: N/A Range: 0-999999999999999. Must be an integer
SBR Ingress Events/sec	Total ingress events per second across included SBR servers	Format: Text box Default: N/A Range: 0-999999999999999. Must be an integer
SBR Sessions	Total sessions across included SBR servers	Format: Text box Default: N/A Range: 0-999999999999999. Must be an integer
SBR Bindings	Total bindings across included SBR servers	Format: Text box Default: N/A Range: 0-999999999999999. Must be an integer
Protocol Metric Group		
Avg D2D Trans Hold Tm	Average Diameter-Diameter Transaction Hold Time across included DA-MPs (ms)	Format: Text box Default: N/A Range: 0-999999999999999. Must be an integer
Success Trans %	Percentage of transactions completed successfully across included servers	Format: Text box Default: N/A Range: 0-100. Must be an integer

Table 2-11 (Cont.) Metric Threshold Elements

Metric Name	Metric Description	Data Input Notes
Ext Node Rej %	Percentage of transactions rejected by external signaling nodes	Format: Text box Default: N/A Range: 0-100. Must be an integer
Egress Answer Tmout %	Percentage of egress transactions with answer timeout	Format: Text box Default: N/A Range: 0-100. Must be an integer
Orphan Answer %	Percentage of orphan answers detected across included servers	Format: Text box Default: N/A Range: 0-100. Must be an integer
Diameter Connections Metric Group		
# Fixed Diam Conns Unavail	Total number of fixed Diameter connections enabled, but unavailable, across included DA-MPs	Format: Text box Default: N/A Range: 0-999999999999999. Must be an integer
# IPFE Conns Unavail	Total number of IPFE Diameter connections enabled, but unavailable, across included DA-MPs	Format: Text box Default: N/A Range: 0-999999999999999. Must be an integer
# Diam Conns Egress Cong	Total number of Diameter connections that are experiencing egress congestion, across included DA-MPs	Format: Text box Default: N/A Range: 0-999999999999999. Must be an integer
# Diam Conns Ingress Cong	Total number of Diameter connections that are experiencing ingress congestion, across included DA-MPs	Format: Text box Default: N/A Range: 0-999999999999999. Must be an integer
# Peer Nodes Unavail	Total number of Peer Nodes unavailable, across included DA-MPs	Format: Text box Default: N/A Range: 0-999999999999999. Must be an integer
# Peer Nodes Degraded	Total number of Peer Nodes degraded, across included DA-MPs	Format: Text box Default: N/A Range: 0-999999999999999. Must be an integer
# Route Lists Unavail	Total number of Route Lists unavailable, across included DA-MPs	Format: Text box Default: N/A Range: 0-999999999999999. Must be an integer
# Route Lists Degraded	Total number of Route Lists degraded, across included DA-MPs	Format: Text box Default: N/A Range: 0-999999999999999. Must be an integer

Table 2-11 (Cont.) Metric Threshold Elements

Metric Name	Metric Description	Data Input Notes
# PTL ETGs Degraded	Total number of Pending Transaction Limiting Egress Throttle Groups Degraded, across included DA-MPs	Format: Text box Default: N/A Range: 0-999999999999999. Must be an integer
# RL ETGs Degraded	Total number of Rate Limiting Egress Throttle Groups Degraded, across included DA-MPs	Format: Text box Default: N/A Range: 0-999999999999999. Must be an integer
Policy & Charging Metric Group		
# PCA Cong Instances	Total number of PCA instances in congestion (CL1, CL2, or CL3) across included servers	Format: Text box Default: N/A Range: 0-999999999999999. Must be an integer
PCA Avg Ing MPS	Average PCA ingress MPS across included DA-MP servers	Format: Text box Default: N/A Range: 0-999999999999999. Must be an integer
PCA Trans Rej %	Percentage of PCA transactions rejected across included DA-MP servers	Format: Text box Default: N/A Range: 0-100. Must be an integer
# GLA Cong Instances	Total number of GLA instances in congestion (CL1, CL2, or CL3) across included servers	Format: Text box Default: N/A Range: 0-999999999999999. Must be an integer
GLA Avg Ing MPS	Average GLA ingress MPS across included DA-MP servers	Format: Text box Default: N/A Range: 0-999999999999999. Must be an integer
GLA Trans Rej %	Percentage of GLA transactions rejected across included DA-MP servers	Format: Text box Default: N/A Range: 0-100. Must be an integer
Address Resolution Metric Group		
# RBAR Cong Instances	Total number of RBAR instances in congestion (CL1, CL2, or CL3) across included servers	Format: Text box Default: N/A Range: 0-999999999999999. Must be an integer
RBAR Avg Ing MPS	Average RBAR ingress MPS across included DA-MP servers	Format: Text box Default: N/A Range: 0-999999999999999. Must be an integer
RBAR Trans Rej %	Percentage of RBAR transactions rejected across included DA-MP servers	Format: Text box Default: N/A Range: 0-100. Must be an integer

Table 2-11 (Cont.) Metric Threshold Elements

Metric Name	Metric Description	Data Input Notes
# FABR Cong Instances	Total number of FABR instance in congestion (CL1, CL2, or CL3) across included servers	Format: Text box Default: N/A Range: 0-999999999999999. Must be an integer
FABR Avg Ing MPS	Average FABR ingress MPS across included DA-MP servers	Format: Text box Default: N/A Range: 0-999999999999999. Must be an integer
FABR Trans Rej %	Percentage of FABR transactions rejected across included DA-MP servers	Format: Text box Default: N/A Range: 0-100. Must be an integer

2.2.2.2 Inserting a Summary Metric Threshold Configuration Set

1. On the Summary tab of the **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Metric Threshold Configuration Sets** page, click **Insert** to insert a new Summary Metric Threshold Configuration Set.
2. Fill in the fields on the **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Metric Threshold Configuration Sets [Insert]** page.

   The fields are described in Metric Threshold Configuration Sets elements.

2.2.2.3 Editing a Summary Metric Threshold Configuration Set

1. On the Summary tab of the **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Metric Threshold Configuration Sets** page, click **Edit** to edit a Summary Metric Threshold Configuration Set.
2. Fill in the fields on the **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Metric Threshold Configuration Sets [Edit]** page.

   The fields are described in Metric Threshold Configuration Sets elements.

2.2.2.4 Deleting a Metric Threshold Configuration Set

Use this task to delete a Metric Threshold Configuration Set.

1. From the NOAM, select **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Metric Threshold Configuration Sets**.
2. Select the Metric Threshold Configuration Set Name you want to delete.
3. Click **Delete.**
4. Click **OK** or **Cancel**.

2.2.3 Dashboard Network Elements

The **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Dashboard Network Elements** page allows Dashboard Network Elements to be configured.

A Dashboard Network Element contains all the information that defines a view into a single DSR site/Network Element (i.e., an SOAM Server Group and its subtending servers). Each Server Group within a site is associated with the Dashboard Network Element for that site.

Up to 32 Dashboard NEs are supported.

The fields are described in Dashboard Network Elements elements.

For information on how to create or edit a Dashboard Network Element, refer to Inserting a Dashboard Network Element and Editing a Dashboard Network Element.

2.2.3.1 Dashboard Network Elements elements

Table 2-12 describes the elements on the **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Dashboard Network Elements [Insert]** and **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Dashboard Network Elements [Edit]** pages on the NOAM.

Table 2-12 Dashboard Network Elements Elements

Field (* Indicates Required Field)	Description	Data Input Notes
*Network Element	A name that uniquely identifies the Dashboard Network Element	Format: Pull down list Default: N/A Range: A 32-character string. Valid characters are alphanumeric and underscore. Must contain at least one alpha and must not start with a digit.
Server Metric Threshold Configuration Set	The Server Metric Threshold Configuration Set used to determine Dashboard screen cell colorization of the Server-scoped Metric values in this Dashboard Network Element. **Note**: Selection is optional.	Format: Pull down list
Summary Metric Threshold Configuration Set	The Summary Metric Threshold Configuration Set used to determine Dashboard screen cell colorization of this Dashboard Network Element's Metric values. **Note**: Selection is optional.	Format: Pull down list
Display Administratively Disabled Servers	When checked, servers that are administratively disabled will be displayed on the SOAM Dashboard screen.	Format: Check box

2.2.3.2 Inserting a Dashboard Network Element

1. To insert a new Dashboard, click **Insert**.
2. Fill in the fields on the **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Dashboard Network Elements [Insert]** page.

   The fields are described in Dashboard Network Elements elements.

2.2.3.3 Editing a Dashboard Network Element

1. To insert a new Dashboard, click **Edit**.
2. Fill in the fields on the **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Dashboard Network Elements [Edit]** page.

   The fields are described in Dashboard Network Elements elements.

2.2.3.4 Deleting a Dashboard Network Element

Use this task to delete a Dashboard Network Element.

1. Click **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Dashboard Network Element**.
2. Select the Dashboard Network Element Name you want to delete.
3. Click **Delete.**
4. Click **OK** or **Cancel**.

2.2.4 Dashboard Networks

The **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Dashboard Networks** page allows Dashboard Networks to be configured.

A Dashboard Network is a set of Dashboard Network Elements, Metrics, and associated Network Metric Thresholds that is created by configuration defines the content and thresholds of a NOAM Dashboard display.

The set of Dashboard Network Elements assigned to Dashboard Network is determined from configuration and cannot be modified. Only one Dashboard Network is supported.

The fields are described in Dashboard Networks elements.

2.2.4.1 Dashboard Networks elements

Table 2-13 describes the elements on the **Diameter Common**, and then **Dashboard**, and then **Configuration**, and then **Dashboard Networks** page.

Table 2-13 Dashboard Networks Elements

Field	Description	Data Input Notes
Dashboard Network Name	Name of the Dashboard Network. **Note**: The Dashboard Network name is not user-configurable.	Format: Text box
Summary Metric Threshold Configuration Set	The Summary Metric Threshold Configuration Set used to determine Dashboard screen cell colorization of this Dashboard Network's Metric values.	Format: Pull down list

Table 2-13 (Cont.) Dashboard Networks Elements

Field	Description	Data Input Notes
Dashboard Network Elements Display Order	The order in which the Dashboard Network Elements will be displayed on the NOAM Dashboard screen. To display a Dashboard Network, move it to the lower list. Use the up and down arrows next to the lower list to set the order in which the Dashboard Network Elements will be displayed.	Format: Display boxes with navigable buttons

2.3 MCCMNC Configuration

The **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC** pages are used to configure up to 2500 distinct combinations of Mobile Country Code (**MCC**) and Mobile Network Code (**MNC**).

The configured MCCMNC entries can be mapped to Diameter Realms, MSISDN prefix digits, and CC+NDC combinations, using the **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC Mapping** page (see MCCMNC Mapping Configuration).

MCCMNC combinations are used by Address resolution applications like Full Address Based Resolution (FABR) and Range Based Address Resolution (RBAR), which need to categorize User Identities (digit strings) decoded from the Diameter Request AVPs as either MSISDN or IMSI, to allow looking up the User Identity in the appropriate lookup table.

Most of the time, these applications can clearly categorize the decoded User Identity based on:

- The configured Routing Entity Type
- The contents of the AVP
  For instance, if the User Identity has been decoded from a SIP URI that has a "+" sign before the digits (such as sig:+1-919-460-5500@oracle.com), it can be directly categorized as an MSISDN.
- The number of digits in the User Identity

In certain cases, none of these methods allow a clear categorization (for example, if the number of digits needs to be used and the received number of digits are applicable to both IMSIs and MSISDNs, and thus leads to an ambiguous determination; or if there is no ""+" sign before the digits). In such cases, a tie breaker procedure is required to categorize the digits as an IMSI or an MSISDN. The configured MCCMNC combinations can be used to provide a tie breaker mechanism in such cases, as follows:

- If FABR has been configured to decode an IMPU from a User Identity (digit string) but cannot determine whether the User Identity is an IMSI or an MSISDN based on digit analysis, FABR needs a tie breaker to categorize the User Identity properly.
  FABR extracts the first 5 or 6 digits of the User Identity and compares them against the list of configured 5-digit and 6-digit MCC-MNC combinations on the **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC** page.

  If a match occurs, the User Identity is considered to be an IMSI and is used for an IMSI lookup.

  If a match does not occur, the User Identity is considered to be an MSISDN and is used for an MSISDN lookup.

- If RBAR has been configured to decode an IMPU/MSISDN from a User Identity (digit string) but cannot determine whether the User Identity is an IMSI or an MSISDN based on digit analysis, RBAR needs a tie breaker to categorize the user identity properly.
  RBAR extracts the first 5 or 6 digits of the User Identity and compares them against the list of configured 5-digit and 6-digit MCC-MNC combinations on the **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC** page.

  If a match occurs, the User Identity is considered to be an IMSI. RBAR will bypass the AVP; as RBAR does not support decoding an IMSI from a Routing Entity of IMPU or MSISDN.

  If a match does not occur, the User Identity is considered to be an MSISDN and is used for MSISDN lookup.

As described in MCCMNC Mapping Configuration, MCCMNC combinations and MCCMNC Mapping are used by:

- The MAP-Diameter Interworking Function to translate a Diameter Request message to a MAP Request message (ITU) or a MAP Request message to a Diameter Request message.
- Diameter Mediation to populate the Destination-Realm AVP based on the IMSI value present in a Request message.

On the **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC** page, you can perform the following actions:

- Filter the list of entries, to display only the desired entries.
- Sort the list entries in ascending or descending order by by clicking the column heading. By default, the list is sorted by **MCC** and **MNC** in ascending ASCII order.
- Click **Insert**.

  The **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC [Insert]** page opens. You can add new MCCMNC entries. If the maximum number of MCCMNC entries (2500) already exists in the system, the **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC [Insert]** page will not open, and an error message is displayed.
- Select an MCCMNC entry in the list, and click **Edit**.
  The **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC [Edit]** page opens. The selected MCCMNC entry can be edited.
- Select an MCCMNC entry in the list, and click **Delete** to remove the selected entry.

2.3.1 MCCMNC Elements

Table 2-14 describes the fields on the **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC** pages.

Table 2-14 MCCMNC Elements

Field (* indicates a required field)	Description	Value
*MCC	Mobile Country Code	Format: Text box; numeric. Valid values are 0-999. Range: 3 digits
*Country Name	Country Name corresponding to the MCC	Format: text box; alphanumeric string Range: Up to 128 characters

Table 2-14 (Cont.) MCCMNC Elements

Field (* indicates a required field)	Description	Value
*MNC	Mobile Network Code	Format: Text box; numeric. Valid values are 0-999. Range: 2 or 3 digits
*Network Name	Network Name corresponding to the MNC	Format: text box; ASCII printable characters; alphanumeric string. Range: Up to 128 characters.

2.3.2 Adding MCCMNC Entries

Use this task to configure new **MCCMNC** entries.

MCCMNC fields are described in MCCMNC Elements.

1. On the NOAM, select **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC**.

   The **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC** page appears.

2. Click **Insert**.

   The **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC [Insert]** page appears.

   If the maximum number of **MCCMNC** entries (2500) has already been configured in the system, the **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC [Insert]** page does not open, and an error message appears.

3. Enter a value for each field.

4. Click:

   - **OK** to save the new entry and return to the **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC** page.
   - **Apply** to save the new entry and remain on this page. The data displayed on the page is updated.
   - **Cancel** to return to the **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC** page without saving any changes.

   If **OK** or **Apply** is clicked and any of the following conditions exist, an error message appears:

   - Any fields contain a value that is out of the allowed range
   - Any required field is empty (not entered)
   - Adding the new **MCCMNC** entry would cause the allowed maximum number of entries (2500) to be exceeded
   - The combination of the **MCC** and **MNC** field values is not unique (already exists)

2.3.3 Editing MCCMNC Entries

Use this task to change **MCCMNC** entries.

MCCMNC fields are described in MCCMNC Elements.
When the **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC [Edit]** page opens, the fields are populated with the current configured values.

> **Note:**
>
> The **MCC** and **MNC** field values cannot be changed.

1. On the NOAM, select **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC**.

   The **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC** page appears.
2. Select the **MCCMNC** entry to be changed.
3. Click **Edit**.

   The **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC [Edit]** page appears.
4. Edit the fields that need to be changed.
5. Click:
   - **OK** to save the changes and return to the **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC** page.
   - **Apply** to save the changes and remain on this page.
   - **Cancel** to return to the **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC** page without saving any changes.

   If **OK** or **Apply** is clicked and any of the following conditions exist, an error message appears:
   - Any field contains values that are not valid or are out of range
   - Any required field is empty (not entered)

2.3.4 Deleting MCCMNC Entries

Use this task to delete an MCCMNC entry.

1. From the NOAM, select **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC**.

   The **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC** page appears.
2. Select the **MCCMNC** entry to be deleted.
3. Click **Delete**.
4. Click:
   - **OK** to delete the **MCCMNC** entry.
   - **Cancel** to cancel the delete function and return to the **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC** page.

   If **OK** is clicked and the selected **MCCMNC** entry no longer exists (it was deleted by another user), an error message is displayed.

2.4 MCCMNC Mapping Configuration

The **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC Mapping** pages are used to configure mapping of MCC+MNC combinations to Diameter Realms, MSIN prefix digits, and CC+NDC combinations.

The MCC+MNC combinations must first be configured using the **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC** pages (see MCCMNC Configuration) before the MCCMNC Mapping configuration is performed.

MCCMNC combinations and MCCMNC Mapping are used by:

- The MAP-Diameter Interworking Function to translate:
  - A Diameter Request message to a MAP Request message (ITU)
    If a Diameter Request message does not contain a Destination Host AVP, but does contain IMSI digits in a User-Name AVP, the MCCMNC Mapping configuration is used to translate the MCC and MNC in the IMSI to the CC and NDC that are populated in the SCCP Called Party Address (CdPA) of the MAP Request. A longest prefix match of IMSI digits (MCC+MNC+prefix digits) is performed.
  - A MAP Request message to a Diameter Request message
    If the GTA digits are in IMSI format (for ANSI this occurs if the SCCP CdPA Translation Type is 9, and for ITU this occurs if the SCCP CdPA Numbering Plan is E.212), then the MCCMNC Mapping configuration is used to translate the MCC and MNC in the IMSI to a Diameter Realm.

    The Diameter Realm is populated into the Destination-Realm AVP of the Diameter Request message.
- Diameter Mediation to populate the Destination-Realm AVP based on the IMSI value present in a Request message.
  Mediation retrieves the IMSI value from one of the following AVPs in the Request:
  1. Subscription-ID (Subscription-ID-Type=1)
  2. User-Name
  - The first instance of an AVP that contains an IMSI is used.
  - The Mediation Set Diameter Realm Action extracts the MCC and MNC values from the IMSI by prefix matching against the MCCMNC combinations configured on the **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC** page. The MCC and MNC cannot be extracted from the IMSI if there is no match found on this page.
  - The Destination-Realm AVP is added or populated with the Realm that corresponds to the MCCMNC combination configured on the **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC Mapping** page.
  - If no Realm is specified for the MCCMNC combination, the Destination-Realm is populated in 3GPP format "epc.mnc<MNC>.mcc<MCC>.3gppnetwork.org", where <MNC> and <MCC> fields correspond to the MNC and MCC values extracted from the AVP containing the IMSI present in the Request.
  - If the Destination-Realm AVP is not present in the message, the Action adds it.

On the **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC Mapping** page, you can perform the following actions:

- Filter the list of entries, to display only the desired entries.

- Sort the list entries in ascending or descending order by clicking the column heading. By default, the list is sorted by **MCC** and **MNC** in ascending ASCII order.
- Click **Insert**.

  The **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC Mapping [Insert]** page opens. You can add new MCCMNC Mapping entries. If the maximum number of MCCMNC Mapping entries (2500) already exists in the system, the **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC Mapping [Insert]** page will not open, and an error message is displayed.
- Select an MCCMNC Mapping entry in the list, and click **Edit**.
  The **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC Mapping [Edit]** page opens. The selected MCCMNC Mapping entry can be edited.
- Select an MCCMNC Mapping entry in the list, and click **Delete** to remove the selected entry.

2.4.1 MCCMNC Mapping Elements

Table 2-15 describes the fields on the **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC Mapping** pages.

Table 2-15 MCCMNC Mapping Elements

Field (* indicates a required field)	Description	Value
*MCCMNC	Country and Network Code.	Format: Pulldown list. Range: Configured MCCMNC entries
Country Name	Country Name corresponding to the MCC.	Read-only field Format: text box; alphanumeric string. Range: Country Name configured for selected MCCMNC entry.
Network Name	Network Name corresponding to the MNC.	Read-only field Format: text box; ASCII printable characters; alphanumeric string. Range: Network Name configured for selected MCCMNC entry.
MSIN Prefix Digits	Optional MSIN prefix digits that form a "MCC+MNC+MSIN prefix digits" string. An empty MSIN prefix digits entry (0 digits) is used to map MCC+MNC to configuration data. If MSIN prefix digits are specified, it maps "MCC+MNC+ MSIN prefix digits" to configuration data.	Format: text box; numeric string. Valid values are 0-9999999999 Range: 0-10 digits Default: Empty string (null)
CCNDC	Optional Country Code (CC) plus National Destination Code (NDC) that is associated with the "MCC+MNC+ optional MSIN Prefix Digits".	Format: text box; numeric string. Valid values are 0-999999999999999 Range: 0-15 digits Default: Empty string (null)

Table 2-15 (Cont.) MCCMNC Mapping Elements

Field (* indicates a required field)	Description	Value
Realm	Diameter Realm that is associated with the "MCC+MNC+ optional MSIN Prefix Digits"	Format: string consisting of a list of labels separated by dots. A label can contain letters, digits, dash (-), and underscore (_). A label must begin with a letter, digit, or underscore, and must end with a letter or digit. Underscore can be used only as the first character. Range: A valid Realm; Realm - up to 255 characters; label - up to 63 characters
Description	Optional description or note about this entry.	Format: text box Range 0-255 characters

2.4.2 Adding MCCMNC Mapping Entries

Use this task to configure new **MCCMNC Mapping** entries.

MCCMNC Mapping fields are described in MCCMNC Mapping Elements.

1. On the NOAM, select **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC Mapping**.

   The **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC Mapping** page appears.

2. Click **Insert**.

   The **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC Mapping [Insert]** page appears.

   If the maximum number of **MCCMNC** entries (2500) has already been configured in the system, the **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC Mapping [Insert]** page does not open, and an error message appears.

3. Enter a value for each field.

4. Click:

   - **OK** to save the new entry and return to the **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC Mapping** page.
   - **Apply** to save the new entry and remain on this page. The data displayed on the page is updated.
   - **Cancel** to return to the **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC Mapping** page without saving any changes.

   If **OK** or **Apply** is clicked and any of the following conditions exist, an error message appears:

   - Any fields contain a value that is out of the allowed range
   - Any required field is empty (not entered)
   - Adding the new **MCCMNC Mapping** entry would cause the allowed maximum number of entries (2500) to be exceeded

- The **MCC+MNC+MSIN Prefix Digits** entry is not unique (already exists)

2.4.3 Editing MCCMNC Mapping Entries

Use this task to change **MCCMNC Mapping** entries.

MCCMNC fields are described in MCCMNC Mapping Elements.
When the **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC Mapping [Edit]** page opens, the fields are populated with the current configured values.

> **Note:**
>
> The **MCC** and **MNC** field values cannot be changed.

1. On the NOAM, select **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC Mapping**.

   The **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC Mapping** page appears.
2. Select the **MCCMNC Mapping** entry to be changed.
3. Click **Edit**.

   The **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC Mapping [Edit]** page appears.
4. Change the field values as needed.
5. Click:
   - **OK** to save the changes and return to the **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC Mapping** page.
   - **Apply** to save the changes and remain on this page.
   - **Cancel** to return to the **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC Mapping** page without saving any changes.

   If **OK** or **Apply** is clicked and any of the following conditions exist, an error message appears:
   - Any field contains values that are not valid or are out of range
   - Any required field is empty (not entered)

2.4.4 Deleting MCCMNC Mapping Entries

Use this task to delete an MCCMNC Mapping entry.

1. On the NOAM, select **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC Mapping**.

   The **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC Mapping** page appears.
2. Select the **MCCMNC Mapping** entry to be deleted.
3. Click **Delete**.

   A popup window appears to confirm the delete.

4. Click:
   - **OK** to delete the **MCCMNC Mapping** entry.
   - **Cancel** to cancel the delete function and return to the **Diameter Common**, and then **Network Identifiers**, and then **MCCMNC Mapping** page.

   If **OK** is clicked and the selected **MCCMNC Mapping** entry no longer exists (it was deleted by another user), an error message is displayed.

2.5 Common Application Options

The Enhanced Overload Control Function checkbox can be either enabled or disabled on PCA DA-MPs and SBR MPs This feature can only be enabled on the NOAM.

Table 2-16 Common Application Options

Field	Description	Values
Enhanced Overload Control Function	If this checkbox is unchecked, the existing PCA/SBR overload control function applies to those DA-MPs and SBR MPs where the DRMP feature is disabled. If this checkbox is checked, the enhanced overload control function applies to all PCA DA-MPs and SBR MPs under the same NO topology.	Format: Checkbox Range: checked, unchecked Default: unchecked

3
Diameter Common on the SOAM

The Diameter Common GUI pages on the SOAM can be used for viewing the DSR Dashboard, for configuration of the MCC Ranges Network Identifiers, and for Bulk Import and Export functions.

3.1 Overview

The Diameter Common menu items on the SOAM provide access to GUI pages to perform the following tasks:

- View **Diameter Common**, and then **Dashboard** (see Dashboard)
- Configure **Diameter Common**, and then **Network Identifiers**, and then **MCC Ranges** (see MCC Ranges Configuration)
- Configure **Diameter Common**, and then **MPs**, and then **Profiles and Diameter Common**, and then **MPs**, and then **Profile Assignments** (see MPs)
- Perform DSR Bulk Import/Export operations (see Diameter Common Bulk Import and Export)

3.2 Dashboard

Depending on your system, the dashboard differs.

- Dashboard on the NOAM
- Dashboard on the SOAM

Dashboard on the NOAM

The Dashboard on the NOAM is viewed at **Diameter Common**, and then **Dashboard**.

The Dashboard provides high level Metrics, which provide an overall view of the health of one or more Network Elements (NEs) of a network, making Metrics the core component of the DSR Dashboard. Each column on the Dashboard contains the set of values for a particular Metric. The selection of which Metrics are displayed on the Dashboard is done via configuration.

The NOAM Dashboard shows both Network summary and NE summary Metrics.

The order that Metric Groups are displayed on the Dashboard is determined from configuration which cannot be modified. The order that Metrics are displayed within a Metric Group on the Dashboard display is determined from configuration which cannot be modified. Metrics selected for display on the Dashboard via configuration can be hidden/viewed via a Dashboard GUI control based on threshold level filters. A threshold level filter is used to limit which Metrics are displayed on the Dashboard based on a severity value. These limits are valuable because they focus on more potentially significant problems.

Horizontal and vertical scrolling allows any Metrics which do not fit onto a single physical screen to be seen.

The Dashboard also facilitates troubleshooting via Metric-specific hyperlinks on the Dashboard to assist in viewing more detailed information via existing DSR status and maintenance

screens. The linkage between content on the Dashboard to DSR status and maintenance screens will be determined from configuration which cannot be modified.

Per Network Metrics are derived from per-NE summary Metrics. A Network is the set of one or more Dashboard Network Elements. The formula for calculating a Network Metric value is identical to that for calculating the per-NE Metric for that Metric.

Dashboard on the SOAM

The SOAM Dashboard shows the NE's summary Metrics, its per-Server Type summary Metrics and its per-Server Metrics.

A Server Type physically groups Metrics associated with a particular type of Server (e.g., DA-MP) onto the Dashboard display in order to create summary Metrics for Servers of a similar type. The order of Server Types on the SOAM Dashboard is determined from configuration which cannot be modified. The Server Types are predefined and cannot be modified. The DA-MP, DSR, SBR, and SOAM Server Types are supported.

Server Metrics are maintained by each MP. Per-Server Metric values are periodically pushed to their local SOAM, where they are displayed on the SOAM Dashboard display.

Server Type Metrics show a roll-up of Server Metrics by Server type. The formula for calculating a Server Type Metric value is identical to that for calculating the per-NE Metric for that Metric.

Network Element (NE) Metrics are derived from per-Server Metrics. A Network Element is the set of servers managed by a SOAM. The formula for calculating a per-NE Metric value is Metric-specific although, in general, most NE Metrics are the sum of the per-Server Metrics. The set of servers which are managed by a SOAM is determined through standard NOAM configuration and cannot be modified via Dashboard configuration. An NOAM can manage up to 32 NEs.

3.3 MCC Ranges Configuration

The **MCC Ranges** component defines up to 10 distinct, non-overlapping Mobile Country Code (**MCC**) Ranges, which are the first 3 digits of the IMSI. The FABR and RBAR applications consider an IMSI to be invalid for address lookup if the MCC portion of the decoded IMSI falls within any of the Reserved MCC Range configured by the user.

While searching for an IMSI in the Diameter message AVPs, if the MCC digits portion of decoded IMSI digits fall within one of the configured **MCC Ranges**, the IMSI digits will NOT be used for further Address Resolution. The FABR and RBAR applications will continue to search other AVP instances (if present), or next priority AVP (if configured) or next Routing Entity (if configured) for a valid address.

The two following MCC Ranges are reserved by telephony standards and are recommended to be configured in addition to other user-specified ranges:

- 000-199
- 800-899

On the **Diameter Common**, and then **Network Identifiers**, and then **MCC Ranges** page, you can perform the following actions:

- Filter the list of **MCC Ranges**, to display only the desired **MCC Ranges**.
- Sort the list entries in ascending or descending order by **Start MCC** values or **End MCC** values by clicking the column heading. By default, the list is sorted by **Start MCC** values in ascending ASCII order.

- Click **Insert**.

  The **Diameter Common**, and then **Network Identifiers**, and then **MCC Ranges [Insert]** page opens. You can add new MCC Ranges. If the maximum number of MCC Ranges (10) already exists in the system, the **Diameter Common**, and then **Network Identifiers**, and then **MCC Ranges [Insert]** page will not open, and an error message is displayed.

- Select an MCC Range in the list, and click **Edit**.
  The **Diameter Common**, and then **Network Identifiers**, and then **MCC Ranges [Edit]** page opens. The **Start MCC**, **End MCC**, or both for the selected MCC Range can be edited.

- Select an MCC Range in the list, and click **Delete** to remove the selected MCC Range.

3.3.1 MCC Ranges Elements

Table 3-1 describes the fields on the **Diameter Common**, and then **Network Identifiers**, and then **MCC Ranges** pages.

Table 3-1 MCC Ranges Elements

Field (* indicates a required field)	Description	Value
*Start MCC	The start value of the Reserved Mobile Country Code Range.	Format: text box; numeric. Range: 0-999
*End MCC	The end value of the Reserved Mobile Country Code Range.	Format: text box; numeric. Range: 0-999

3.3.2 Adding MCC Ranges

Use this task to configure new **MCC Ranges**.

MCC Ranges fields are described in MCC Ranges Elements.

1. On the SOAM, select **Diameter Common**, and then **Network Identifiers**, and then **MCC Ranges**.

   The **Diameter Common**, and then **Network Identifiers**, and then **MCC Ranges** page appears.

2. Click **Insert**.

   The **Diameter Common**, and then **Network Identifiers**, and then **MCC Ranges [Insert]** page appears.

   If the maximum number of **MCC Ranges** (10) has already been configured in the system, the **Diameter Common**, and then **Network Identifiers**, and then **MCC Ranges [Insert]** page does not open, and an error message appears.

3. Enter a value for the **Start MCC** field.
4. Enter a value for the **End MCC** field.
5. Click:
   - **OK** to save the new **MCC Range** and return to the **Diameter Common**, and then **Network Identifiers**, and then **MCC Ranges** page.
   - **Apply** to save the new **MCC Range** and remain on this page. The data displayed on the page is updated.

- **Cancel** to return to the **Diameter Common**, and then **Network Identifiers**, and then **MCC Ranges** page without saving any changes.

If **OK** or **Apply** is clicked and any of the following conditions exist, an error message appears:

- Any fields contain a value that is out of the allowed range
- Any required field is empty (not entered)
- Adding the new **MCC Range** would cause the maximum number of **MCC Ranges** (10) to be exceeded
- The **Start MCC** field value is greater than the End MCC field value
- The **MCC Range** created lies within the ranges of other **MCC Ranges**

3.3.3 Editing MCC Ranges

Use this task to change **MCC Ranges**.

MCC Ranges fields are described in MCC Ranges Elements.

When the **Diameter Common**, and then **Network Identifiers**, and then **MCC Ranges [Edit]** page opens, the fields are populated with the current configured values.

1. On the SOAM, select **Diameter Common**, and then **Network Identifiers**, and then **MCC Ranges**.

   The **Diameter Common**, and then **Network Identifiers**, and then **MCC Ranges** page appears.
2. Select the **MCC Range** to be changed.
3. Click **Edit**.

   The **Diameter Common**, and then **Network Identifiers**, and then **MCC Ranges [Edit]** page appears.
4. Change the **Start MCC** value, the **End MCC** value, or both.
5. Click:
   - **OK** to save the changes and return to the **Diameter Common**, and then **Network Identifiers**, and then **MCC Ranges** page.
   - **Apply** to save the changes and remain on this page.
   - **Cancel** to return to the **Diameter Common**, and then **Network Identifiers**, and then **MCC Ranges** page without saving any changes.

   If **OK** or **Apply** is clicked and any of the following conditions exist, an error message appears:
   - The selected **MCC Range** no longer exists; it has been deleted by another user
   - Any field contains values that are out of range
   - Any required field is empty (not entered)
   - The **Start MCC** field value is greater than the **End MCC** field value
   - The **MCC Range** created lies within the ranges of other MCC Ranges

3.3.4 Deleting MCC Ranges

Use this task to delete an MCC Ranges entry.

1. On the SOAM, select **Diameter Common**, and then **Network Identifiers**, and then **MCC Ranges**.

   The **Diameter Common**, and then **Network Identifiers**, and then **MCC Ranges** page appears.

2. Select the **MCC Ranges** entry to be deleted.
3. Click **Delete**.

   A popup window appears to confirm the delete.

4. Click:
   - **OK** to delete the **MCC Ranges** entry.
   - **Cancel** to cancel the delete function and return to the **Diameter Common**, and then **Network Identifiers**, and then **MCC Ranges** page.

   If **OK** is clicked and the selected **MCC Ranges** entry no longer exists (it was deleted by another user), an error message is displayed.

3.4 MPs

A Diameter Agent Message Processor (DA-MP) is a computer or blade hosting the Diameter base protocol and one or more DSR Applications. Multiple DA-MPs are supported in a DSR system.

An MP Profile defines maximum and threshold values for an MP. An MP Profile must be assigned to each DA-MP in the system configuration. Select the appropriate MP Profile according to the hardware and application or applications that are running on the MP, as shown in Table 3-2.

> **Note:**
>
> The profiles listed in Table 3-2 and that appear on the MPs GUI pages might not include all of the profiles that are available for all Oracle Communications products. Product-specific profiles and instructions for assigning them are included in the *Installation Guide* for each product.

Table 3-2 MP Profile Selection

Hardware	Application(s)	MP Profile
DA-MPs		
G6 half height blade	Diameter Relay	G6:Relay
G8/G9 half height blade	Diameter Relay	G8/G9:Relay
G7 full height blade	Diameter Relay	G7:Relay
Virtual DA-MP	Diameter Relay	VM:Relay **Note**: If a virtualized version of DSR is being used, then the MP Profile can be VM:10K_MPS.

Table 3-2 (Cont.) MP Profile Selection

Hardware	Application(s)	MP Profile
Gen9V2 half height blade	Diameter Relay	Gen9V2:Relay
G6 half height blade	Diameter Relay + FABR or RBAR	G6:Database
G8/G9 half height blade	Diameter Relay + FABR or RBAR	G8/G9:Database
G7 full height blade	Diameter Relay + FABR or RBAR	G7:Database
Virtual DA-MP	Diameter Relay + FABR or RBAR	VM:Database **Note**: If a virtualized version of DSR is being used, then the MP Profile can be VM:10K_MPS.
Gen9V2 half height blade	Diameter Relay + FABR or RBAR	Gen9V2:Database
G6 half height blade	Diameter Relay + CPA or PCA	G6:Session
G8/G9 half height blade	Diameter Relay + CPA or PCA	G8/G9:Session
G7 full height blade	Diameter Relay + CPA or PCA	G7:Session
Virtual DA-MP	Diameter Relay + CPA or PCA	VM:10K_MPS
G6 half height blade	Diameter Relay + RBAR + PCA	G6:Session_Database
G8/G9 half height blade	Diameter Relay + RBAR + PCA	G8/G9:Session_Database
G7 full height blade	Diameter Relay + RBAR + PCA	G7:Session_Database
Gen9V2 half height blade	Diameter Relay + RBAR + PCA	Gen9V2:Session
G8/G9 half height blade	MAP-to-Diameter Interworking Function (MD-IWF) Application	G8/G9:MD-IWF
Virtual DA-MP	Diameter Relay + FABR or RBAR	VM:35K_MPS

MPs Profiles Elements describes the user-configurable and engineering-configured values in an MP Profile.

> **Note:**
>
> The Ingress Message Rate Alarm Threshold values for the PCA application are user-configurable on the NOAM **Policy and Charging**, and then **Configuration**, and then **Congestion Options** page; they are not shown in MPs Profiles Elements.

3.4.1 MPs Profiles Elements

Table 3-3 describes the fields on the DA-MP tab on the **Diameter Common**, and then **MPs**, and then **Profiles** page.

> **Note:**
>
> The Data Input Notes apply only to the DA-MP Configurable elements.

Table 3-3 MPs Profiles DA-MP Elements

Field (* indicates required field)	Description	Data Input Notes
DA-MP Configurable		
*CL1 Discard Percent	The percentage below DA-MP Engineered Ingress MPS that DA-MP Overload Control will police the total DA-MP ingress MPS when the DA-MP is in congestion level 1.	Format: text box Range: 0 - 50% Default: 0
*CL2 Discard Percent	The percentage below DA-MP Engineered Ingress MPS that DA-MP Overload Control will police the total DA-MP ingress MPS to when the DA-MP is in congestion level 2.	Format: text box Range: 10 - 50% Default: 20
*CL3 Discard Percent	The percentage below DA-MP Engineered Ingress MPS that DA-MP Overload Control will police the total DA-MP ingress MPS to when the DA-MP is in congestion level 3.	Format: text box Range: 20 - 50% Default: 40
*Congestion Discard Policy	The order of priority and/or color-based traffic segments to consider when determining discard candidates for the application of treatment during DA-MP Congestion processing.	Format: pulldown list Range: Priority Only, Color Within Priority, Priority Within Color Default: Priority Only
*DOC Message Discard Percentage	The percent of total DA-MP ingress MPS above DA-MP Engineered Ingress MPS that DA-MP Overload Control will discard when the DA-MP is in danger of congestion.	Format: text box Range: 0 - 50 % Default: 20
DOC Discard Policy	The order of priority and/or color-based traffic segments to consider when determining discard candidates for the application of treatment during DA-MP DOC processing.	Format: pulldown list Range: Priority Only, Color Within Priority, Priority Within Color Default: Priority Only
DA-MP View-Only		
Maximum Connections	The maximum number of Diameter connections the DA-MP can have configured at any one time	Engineering-configured
Engineered Ingress MPS	The maximum ingress message rate, in messages per second, that the DA-MP will support without overload. This value limits the total Reserved Ingress MPS of all Diameter Connections assigned to the DA-MP.	Engineering-configured
Maximum Ingress Message Rate Minor Alarm Set Threshold	The ingress message rate, in messages per second, above which a minor alarm is raised.	Engineering-configured
Maximum Ingress Message Rate Minor Alarm Clear Threshold	The ingress message rate, in messages per second, below which a minor alarm is cleared.	Engineering-configured
Maximum Ingress Message Rate Major Alarm Set Threshold	The ingress message rate, in messages per second, above which a major alarm is raised.	Engineering-configured
Maximum Ingress Message Rate Major Alarm Clear Threshold	The ingress message rate, in messages per second, below which a major alarm is cleared.	Engineering-configured
Maximum Ingress Message Rate Critical Alarm Set Threshold	The ingress message rate, in messages per second, above which a critical alarm is raised.	Engineering-configured

Table 3-3 (Cont.) MPs Profiles DA-MP Elements

Field (* indicates required field)	Description	Data Input Notes
Maximum Ingress Message Rate Critical Alarm Clear Threshold	The ingress message rate, in messages per second, below which a critical alarm is cleared.	Engineering-configured
Routing Message Rate Minor Alarm Set Threshold	The Diameter message processing rate, in messages per second, above which a minor alarm is raised.	Engineering-configured
Routing Message Rate Minor Alarm Clear Threshold	The Diameter message processing rate, in messages per second, below which a minor alarm is cleared.	Engineering-configured
Routing Message Rate Major Alarm Set Threshold	The Diameter message processing rate, in messages per second, above which a major alarm is raised.	Engineering-configured
Routing Message Rate Major Alarm Clear Threshold	The Diameter message processing rate, in messages per second, below which a major alarm is cleared.	Engineering-configured
Routing Message Rate Critical Alarm Set Threshold	The Diameter message processing rate, in messages per second, above which a critical alarm is raised.	Engineering-configured
Routing Message Rate Critical Alarm Clear Threshold	The Diameter message processing rate, in messages per second, below which a critical alarm is cleared.	Engineering-configured
Average Message Size Minor Alarm Set Threshold	The Average Message Size above which a minor alarm is set.	Engineering-configured
Average Message Size Minor Alarm Clear Threshold	The Average Message Size below which a minor alarm is cleared.	Engineering-configured
Average Message Size Major Alarm Set Threshold	The Average Message Size above which a major alarm is set.	Engineering-configured
Average Message Size Major Alarm Clear Threshold	The Average Message Size below which a major alarm is cleared.	Engineering-configured
Average Message Size Critical Alarm Set Threshold	The Average Message Size above which a critical alarm is set.	Engineering-configured
Average Message Size Critical Alarm Clear Threshold	The Average Message Size below which a critical alarm is cleared.	Engineering-configured
Average Hold Time Minor Alarm Set Threshold	The Average Hold Time above which a minor alarm is set.	Engineering-configured
Average Hold Time Minor Alarm Clear Threshold	The Average Hold Time below which a minor alarm is cleared.	Engineering-configured
Average Hold Time Major Alarm Set Threshold	The Average Hold Time above which a major alarm is set.	Engineering-configured
Average Hold Time Major Alarm Clear Threshold	The Average Hold Time below which a major alarm is cleared.	Engineering-configured
Average Hold Time Critical Alarm Set Threshold	The Average Hold Time above which a critical alarm is set.	Engineering-configured

Table 3-3 (Cont.) MPs Profiles DA-MP Elements

Field (* indicates required field)	Description	Data Input Notes
Average Hold Time Critical Alarm Clear Threshold	The Average Hold Time below which a critical alarm is cleared.	Engineering-configured
RBAR Receive Message Rate Minor Alarm Set Threshold	The ingress request rate for the RBAR Application, in messages per second, above which a minor alarm is raised.	Engineering-configured
RBAR Receive Message Rate Minor Alarm Clear Threshold	The ingress request rate for the RBAR Application, in messages per second, below which a minor alarm is cleared.	Engineering-configured
RBAR Receive Message Rate Major Alarm Set Threshold	The ingress request rate for the RBAR Application, in messages per second, above which a major alarm is raised.	Engineering-configured
RBAR Receive Message Rate Major Alarm Clear Threshold	The ingress request rate for the RBAR Application, in messages per second, below which a major alarm is cleared.	Engineering-configured
RBAR Receive Message Rate Critical Alarm Set Threshold	The ingress request rate for the RBAR Application, in messages per second, above which a critical alarm is raised.	Engineering-configured
RBAR Receive Message Rate Critical Alarm Clear Threshold	The ingress request rate for the RBAR Application, in messages per second, below which a critical alarm is cleared.	Engineering-configured
FABR Receive Message Rate Minor Alarm Set Threshold	The ingress request rate for the FABR Application, in messages per second, above which a minor alarm is raised.	Engineering-configured
FABR Receive Message Rate Minor Alarm Clear Threshold	The ingress request rate for the FABR Application, in messages per second, below which a minor alarm is cleared.	Engineering-configured
FABR Receive Message Rate Major Alarm Set Threshold	The ingress request rate for the FABR Application, in messages per second, above which a major alarm is raised.	Engineering-configured
FABR Receive Message Rate Major Alarm Clear Threshold	The ingress request rate for the FABR Application, in messages per second, below which a major alarm is cleared.	Engineering-configured
FABR Receive Message Rate Critical Alarm Set Threshold	The ingress request rate for the FABR Application, in messages per second, above which a critical alarm is raised.	Engineering-configured
FABR Receive Message Rate Critical Alarm Clear Threshold	The ingress request rate for the FABR Application, in messages per second, below which a critical alarm is cleared.	Engineering-configured
CPA Receive Message Rate Minor Alarm Set Threshold	The ingress request rate for the CPA Application, in messages per second, above which a minor alarm is raised.	Engineering-configured
CPA Receive Message Rate Minor Alarm Clear Threshold	The ingress request rate for the CPA Application, in messages per second, below which a minor alarm is cleared.	Engineering-configured
CPA Receive Message Rate Major Alarm Set Threshold	The ingress request rate for the CPA Application, in messages per second, above which a major alarm is raised.	Engineering-configured
CPA Receive Message Rate Major Alarm Clear Threshold	The ingress request rate for the CPA Application, in messages per second, below which a major alarm is cleared.	Engineering-configured

Table 3-3 (Cont.) MPs Profiles DA-MP Elements

Field (* indicates required field)	Description	Data Input Notes
CPA Receive Message Rate Critical Alarm Set Threshold	The ingress request rate for the CPA Application, in messages per second, above which a critical alarm is raised.	Engineering-configured
CPA Receive Message Rate Critical Alarm Clear Threshold	The ingress request rate for the CPA Application, in messages per second, below which a critical alarm is cleared.	Engineering-configured
DM-IWF Receive Message Rate Minor Alarm Set Threshold	The ingress request rate for the DM-IWF Application, in messages per second, above which a critical alarm is raised.	Engineering-configured
DM-IWF Receive Message Rate Minor Alarm Clear Threshold	The ingress request rate for the DM-IWF Application, in messages per second, below which a critical alarm is cleared.	Engineering-configured
DM-IWF Receive Message Rate Major Alarm Set Threshold	The ingress request rate for the DM-IWF Application, in messages per second, above which a critical alarm is raised.	Engineering-configured
DM-IWF Receive Message Rate Major Alarm Clear Threshold	The ingress request rate for the DM-IWF Application, in messages per second, below which a critical alarm is cleared.	Engineering-configured
DM-IWF Receive Message Rate Critical Alarm Set Threshold	The ingress request rate for the DM-IWF Application, in messages per second, above which a critical alarm is raised.	Engineering-configured
DM-IWF Receive Message Rate Critical Alarm Clear Threshold	The ingress request rate for the DM-IWF Application, in messages per second, below which a critical alarm is cleared.	Engineering-configured

3.4.2 Editing Configurable MP Profile Parameters

Use this task to edit the values for configurable parameters in each MP Profile type that will be assigned to a DA-MP in the DSR.

The configurable parameters are described in MPs Profiles Elements.

1. Select **Diameter Common**, and then **MPs**, and then **Profiles**.

   The **Diameter Common**, and then **MPs**, and then **Profiles** page appears.
2. For each MP Profile type, edit the values for the configurable parameters.
3. Click:
   - **Apply** to save the edited parameter values.
   - **Cancel** to reset the parameter values to their previous setting.

3.4.3 MPs Profile Assignments Elements

Table 3-4 describes the fields on the **Diameter Common**, and then **MPs**, and then **Profile Assignments** page.

Table 3-4 MPs Profile Assignments Elements

Field	Description	Data Input Notes
DA-MP	The Hostname of the MP. Active and Standby MP pairs are listed on the same line; they have the same type of Profile assigned. MPs that are stand-alone or that belong to multi-active server groups will have lines of their own.	View-only
MP Profile	MP Profile assigned to the MP.	Format: Pulldown list Range: Valid Profiles for the type of MP
current value	The current MP Profile for each MP, and a description of the MP.	View-only

3.4.4 Assigning MP Profiles to MPs

Use this task to assign an MP Profile to each DA-MP in the system.

> **Note:**
>
> An MP Profile assignment does not take effect until the MP has been restarted.

MPs Profile Assignments Elements describes the MP Profile Assignments elements.

1. Select **Diameter Common**, and then **MPs**, and then **Profile Assignments**.

   The **Diameter Common**, and then **MPs**, and then **Profile Assignments** page appears.

2. For each DA-MP, select one of the available MP Profiles. See Table 3-2 for help in selecting the appropriate MP Profile.

3. Click:

   - **Assign** to assign the selected MP Profiles to the MPs.
   - **Cancel** to reset the MP Profile assignments to their previous setting.

   To correct a warning that a Standby MP has a different MP Profile assignment than its corresponding Active MP, reassign the desired MP Profile to the Active/Standby MP pair on this page.

4
Diameter Common Bulk Import and Export

The **Diameter Common**, and then **Import** and **Diameter Common**, and then **Export** GUI pages provide access to functions for exporting and importing configuration data for Diameter and Diameter Common components, IPFE, MAP-Diameter Interworking, and DSR Applications.

4.1 DSR Bulk Import

The DSR Bulk Import operations use configuration data in ASCII Comma-Separated Values (CSV) files (.csv), to insert new data into, update existing data in, or delete existing data from the Diameter Configuration and Diameter Common, IPFE Configuration, or DSR Applications (FABR, RBAR, PCA, GLA, CPA and Charging SBR, MD-IWF, DM-IWF, and RADIUS) configuration data in the system.

Import CSV Files

Import CSV files can be created by using a DSR Bulk Export operation, or can be manually created using a text editor. The CSV file formats are described in Diameter and Diameter Common CSV File Formats and Contents.

> **Caution:**
>
> The format of each Import CSV file record must be compatible with the configuration data in the current DSR release in the system.

- Configuration data refers to any data that is configured for one of the **Export Application** types (Diameter, FABR, RBAR, CPA, PCA, GLA, SBR, MDIWF, IPFE).
- For the "Diameter" **Export Application** type, configuration data refers to any data that is configured using the GUI pages that are available from the **Diameter Configuration** menu folder, and the **Diameter Common**, and then **Network Identifiers** and **Diameter Common**, and then **MPs** menu folders.

> **Note:**
>
> **Diameter**, and then **AVP Dictionary** configuration data cannot be imported using the Bulk Export function.

> **Note:**
>
> Diameter Mediation configuration data cannot be imported with DSR Bulk Import operations; Mediation has its own Import and Export functions.

- Each file can contain one or more records of the same format (for one configuration component, such as records for several Diameter Configuration Connections); the entire format for each record must be contained in one line of the file.

Files that are created using the DSR Bulk Export operation can be exported either to the Status & Manage File Management Directory (**Status**, and then **Manage**, and then **Files** page), or to the local Export Server Directory.

For files that are exported to the Export Server Directory,

- If a remote Export Server has been configured (see the **Administration**, and then **Remote Servers**, and then **Data Export** page), the files in the Export Server Directory are automatically transferred to the configured remote Export Server and are deleted from the Export Server Directory. The transferred files do not appear in the list on the local system **Status & Manage**, and then **Files** page or in the list on the **Diameter**, and then **Configuration**, and then **Import** page.
- If a remote Export Server has not been configured, the files in the Export Server Directory appear in the list on the **Status & Manage**, and then **Tasks**, and then **Active Tasks** page, and also appear in the list on the local system **Status & Manage**, and then **Files** page, but not on the **Diameter**, and then **Configuration**, and then **Import** page.

For files that are exported to the File Management Directory,

- The files appear in the File Management area list on the local system **Status & Manage**, and then **Files** page and in the list on the **Diameter**, and then **Configuration**, and then **Import** page.
- The files can be downloaded, edited, uploaded, and used for Import operations.
  - Import CSV files must be in the File Management area of the local system before they can be used for Import operations on the local system.
  - The **Download** function on the **Status & Manage**, and then **Files** page can be used to download the files to a location off of the local system for editing or transfer to another system.
  - The **Upload** function on the **Status & Manage**, and then **Files** page can be used to upload the files to the File Management area of the local system.

For files that are created manually using a text editor,

- Import CSV files that are located off of the local system must be uploaded to the File Management area of the local system before they can be used for Import operations on the local system.
- The **Upload** function on the **Status & Manage**, and then **Files** page can be used to upload the files to the File Management area of the local system.

Import Operations

> **Caution:**
>
> Bulk Import can degrade the performance of the DA-MP and should be performed only in the maintenance window.

The CSV files that are used for Import operations must be in the local File Management area on the OAM where the data can be configured:

- The NOAM for Diameter Topology Hiding data, network-wide PCA data, and MAP-Diameter Interworking data for MD-IWF

- The SOAM for the rest of the Diameter data, site-specific PCA data, MAP-Diameter Interworking data for DM-IWF, IPFE data, MP Profiles and Profile Assignments data, and data for other DSR Applications.

The **Diameter Common**, and then **Import** page lists all files in the File Management area (on the **Status & Manage**, and then **Files** page) that have the .csv file extension.

The **File Management** button on the **Diameter Common**, and then **Import** page opens the **Status & Manage**, and then **Files** page.

The following Import operations can be performed:

> **Note:**
>
> The **Application Type**, **Keyword**, and **Key** fields in each file record are used to identify the configuration data entry in the system.

- Insert new configuration data into the system
  Only data records that do not currently exist in the system are inserted. Any records in the file that do already exist in the system are treated and logged as failures.
- Update existing configuration data in the system
  Only data records that currently exist in the system can be updated. Any records in the file that do not already exist in the system, and any records that already exist in the system but are not updated in the file, are treated and logged as failures.
- Delete existing configuration data from the system
  Only data records that currently exist in the system can be deleted. Any records in the file that do not exist in the system, and any records that exist in the system but are not changed in the file, are treated and logged as failures.

For the Import operation on each record in a file to be successful with no errors logged for the operation, each record must be valid for the configuration data format and for the Import operation that is being performed.

- Exported configuration data probably needs to be edited before the exported file is used for an Import operation on the same system.
  Insert from CSV operations - Records need to be added or edited to be able to insert new configuration data entries (such as connections or Route Lists). It is best to remove from the file any records for existing configuration data entries; they will be flagged as errors for an Insert operation. It might be difficult to distinguish between logged errors for existing data and for the records for the new entries.

  Update from CSV operations – Records need to be edited to change element values in existing configuration data entries. The Application Type, Keyword, and Key fields are NOT changed in the records, so that the entries can be identified as existing in the system. It is best to remove from the file any records for existing configuration data entries that are NOT being updated; they will be flagged as errors for an Insert operation. It might be difficult to distinguish between logged errors for existing records that are not updated and for the updated records.

  Delete from CSV operations – Using an exported file without editing it will remove from the system all of the configuration data entries in the exported records. If you do not want to delete all of the configuration data entries that are in the file records, edit the file and remove the records for the entries that are NOT to be deleted. Records for configuration data entries that do not exist in the system will be flagged as errors for a Delete operation. For example, if you want to delete 20 of 100 configured connections, edit the file and remove the records for the 80 connections that you do not want to delete.

- Files that were created using the DSR Bulk Export operation and are transferred to another system for importing configuration data on that other system may not need to be edited. Exceptions might be system-specific information such as IP addresses and MP Profiles.
- Manually created files can be created so that they contain only the configuration data that is needed for the desired Import operation.
  The files can be edited later for use with a different Import operation.

  Manually created CSV files are not required to contain a comment header. If a comment header is included in the file, it must be formatted using pound signs (#), as shown in the Export file header that is described in Export Results.

> **Note:**
>
> IPFE supports Import and Delete operations only. Due to the design of the IPFE database, import of a single table is not supported. Importing both *IpfeOption* and *IpListTsa* is required. You must import IpfeOption first followed by IpListTsa. IpfeOption defines part of the Target Set data used during validation of the IpListTsa.

Import Operation Results

Each Import operation creates one or two files that appear in the File Management area:

- A log file that has the same name as the Import file, but with the .log extension
  For example, `ImportExportStatus/<import file name>.log`

  The Bulk Import operation can be configured with the **Abort On First Error** check box to:

  – Log the error for each record that failed during the operation, and continue the Import operation.

  – Log the error for just the first record that failed, and end the Import operation.

  Information for records that succeed is not included in the log. The log file contains the Action (Import operation) that was performed; and the number of Successful Operations (records), Failed Operations (records), and Total Operations (records).
- A Failures file, if failures occurred during the Import operation
  The file is a .csv with the same name as the Import file, but contains _Failures in the file name.

  For example, if the Import file name is `October_2_SO_DSR1_Diameter_CmdCodes.csv`, the Failures file is named `October_2_SO_ DSR1_Diameter_CmdCodes_Failures.csv`

  A Failures file can be downloaded from the local File Management area to a server off the local system, edited to correct each record that failed, uploaded to the local system File Management area, and used again to repeat the Import operation and successfully process the records.

Any Failures .csv files in the File Management Directory that remain unchanged for more than 14 days and any log files older than 14 days will be automatically removed. The task to remove these files runs once a day.

The Diameter Common > Import page

On the **Diameter Common**, and then **Import** page, you can perform the following actions:

- Sort the list of files by column, by clicking the column heading. The default sort is by File Name in ascending ASCII order.

- Select a file and click **Insert From CSV**, **Update From CSV**, or **Delete From CSV**.
  A popup window appears to confirm the selected Import operation.

  One import or export task at a time is allowed.
- Click **Tasks** to display the status and progress of an Import operation.
  The progress of the import operation can also be viewed on the **Status**, and then **Manage**, and then **Tasks**, and then **Active Tasks** page.
- Click **File Management** to open the **Status & Manage**, and then **Files** page.
  Exported .csv files can be viewed, downloaded to an external location, uploaded from an external location, and deleted.

  Log files from Import operations can be viewed and deleted.
- Click the **Abort On First Error** check box.
  When a check mark appears in the box, only the first record that failed is recorded in the log and the Failures .csv file. The Bulk Import operation stops after the error is detected and logged.

  When there is no check mark in the box (the default), all records that failed are recorded in the log and the Failures .csv file.

4.1.1 Bulk Import elements

Table 4-1 describes the fields on the **Diameter Common**, and then **Import** page.

Table 4-1 Bulk Import Elements

Element	Description
File Name	The name of the .csv file from the Status & Manage File Management area.
Line Count	Number of lines in the file.
Time Stamp	The creation time and date of the file.

4.1.2 Using an Import File to insert DSR Configuration Data

Use the following procedure to insert into the system new configuration data entries from the records in a DSR Bulk Import CSV file.

1. Select **Diameter Common**, and then **Import**.

   The **Diameter**, and then **Common**, and then **Import** page appears. The page lists all of the .csv files from the **Status & Manage**, and then **Files** File Management area.
2. Select the **File Name** for the file to be used to insert the configuration data.
3. Specify whether the Import operation should stop processing on the first error that occurs, or should continue processing if errors occur during the Import operation.
   - To continue processing when errors occur, click the **Abort On First Error** check box so that the box is empty (the default).
   - To stop processing on the first error, click the **Abort On First Error** check box so that a checkmark appears in the check box.
4. Click **Insert From CSV**.

   A popup window appears to confirm the file to use for the **Insert From CSV** operation.
5. On the popup window, do one of the following actions:

- **OK** to perform the Import **Insert From CSV** operation.
  An indication is displayed that the operation is in progress.
- **Cancel** to cancel the **Insert From CSV** operation and return to the **Diameter Common**, and then **Import** page.

6. To view the progress of the Import operation, you can:
   - Select the **Tasks** icon near the top left of the **Diameter**, and then **Configuration**, and then **Import** page.
   - Select **Status & Manage**, and then **Tasks**, and then **Active Tasks** to open the **Status & Manage**, and then **Tasks**, and then **Active Tasks (Filtered)** page.
7. To view the log file from the Import operation, and the Failures.csv file if one was created, click **File Management** to open the **Status & Manage**, and then **Files (Filtered)** page.

4.1.3 Using an Import File to update DSR Configuration Data

Use the following procedure to use the contents of a DSR Bulk Import .csv file to update existing configuration data in the system.

1. Select **Diameter Common**, and then **Import**.

   The **Diameter Common**, and then **Import** page appears. The page lists all of the .csv files from the **Status & Manage**, and then **Files** File Management area.
2. Select the **File Name** for the file to be used to update the configuration data.
3. Specify whether the Import operation should stop processing on the first error that occurs, or should continue processing if errors occur during the Import operation.
   - To continue processing when errors occur, click the **Abort On First Error** check box so that the box is empty (the default).
   - To stop processing on the first error, click the **Abort On First Error** check box so that a checkmark appears in the check box.
4. Click **Update From CSV**.

   A popup window appears to confirm the file to use for the **Update From CSV** operation.
5. On the popup window, do one of the following actions:
   - **OK** to perform the Import **Update From CSV** operation.
     An indication is displayed that the operation is in progress.
   - **Cancel** to cancel the **Update From CSV** operation and return to the **Diameter Common**, and then **Import** page.
6. To view the progress of the Import operation, you can:
   - Select the **Tasks** icon near the top left of the **Diameter**, and then **Configuration**, and then **Import** page.
   - Select **Status & Manage**, and then **Tasks**, and then **Active Tasks** to open the **Status & Manage**, and then **Tasks**, and then **Active Tasks (Filtered)** page.
7. To view the log file from the Import operation, and the Failures.csv file if one was created, click **File Management** to open the **Status & Manage**, and then **Files (Filtered)** page.

4.1.4 Using an Import File to delete DSR Configuration Data

Use the following procedure to use the contents of a DSR Bulk Import .csv file to delete configuration data.

> **Note:**
>
> This operation does NOT delete a .csv file from the list of files on the page.

1. Select **Diameter Common**, and then **Import**.

   The **Diameter Common**, and then **Import** page appears. The page lists all of the .csv files from the **Status & Manage**, and then **Files** File Management area.
2. Select the **File Name** for the file to be used to delete the configuration data.
3. Click **Delete From CSV**.

   A popup window appears to confirm the file that you want to use for the **Delete From CSV** operation.
4. On the popup window, click:
   - **OK** to perform the Import **Delete From CSV** operation.
     An indication is displayed that the operation is in progress.
   - Click **Cancel** to cancel the **Delete From CSV** operation and return to the **Diameter Common**, and then **Import** page.
5. To view the progress of the Import operation, you can:
   - Select the **Tasks** icon near the top of the **Diameter Common**, and then **Import** page.
   - Select **Status & Manage**, and then **Tasks**, and then **Active Tasks** to open the **Status & Manage**, and then **Tasks**, and then **Active Tasks (Filtered)** page.
6. To view the log file from the Import operation, click **File Management** to open the **Status & Manage**, and then **Files (Filtered)** page.

4.2 DSR Bulk Export

The DSR Bulk Export operation creates ASCII Comma-Separated Values (CSV) files (.csv) containing Diameter and Diameter Common, IPFE, and DSR Application configuration data. Exported configuration data can be edited and used with the DSR Bulk Import operations to change the configuration data in the local system without the use of GUI pages. The exported files can be transferred to and used to configure another DSR system.

> **Note:**
>
> Exported CSV files are not intended for long-term backup of configuration data. (Use the Database Backup function described in the *DSR Administration Guide* and DSR Administration Help for long-term backups of configuration data.)

Exported CSV Files

Each exported CSV file contains one or more records for the configuration data that was selected for the Export operation. The record formats and contents are described in Diameter and Diameter Common CSV File Formats and Contents.

The selected configuration data can be exported once immediately, or can be periodically automatically exported on a defined schedule.

- Configuration data refers to any data that is configured for one of the **Export Application** types (Diameter, RADIUS, FABR, RBAR, CPA, SBR, PCA, GLA, MDIWF and IPFE).

  > **Note:**
  >
  > GLA requires that Policy DRA Pooling is active. For more information, see *Gateway Location Application (GLA) User Guide* or *PCA User Guide*.

  Exports must be performed on the OAM where the data can be configured - the NOAM for Diameter Topology Hiding, Diameter Common data, network-wide PCA data, and MAP-Interwokring data for MD-IWF ; and the SOAM for the rest of the Diameter data, Diameter Common data, site-specific PCA data, IPFE data, MAP-Diameter Interworking data for DM-IWF, and DSR Application data.
- For the "Diameter" **Export Application** type, configuration data refers to any data that is configured using the GUI pages that are available from the Diameter Configuration folders and the Diameter Common folders.

  > **Note:**
  >
  > **Diameter**, and then **AVP Dictionary** configuration data cannot be imported using the Bulk Export function.

  > **Note:**
  >
  > Diameter Mediation configuration data cannot be exported with DSR Bulk Export; Mediation has its own Import and Export functions.

The following configuration data can be exported in one Export operation:

- All exportable configuration data available on the OAM
- All exportable configuration data from the selected Export Application, on the OAM
- Exportable configuration data from a selected configuration component for the selected Export Application

When ALL is selected, the exported data for each configuration component appears in a separate .csv file.

For data that is exported once immediately, the default Output File Name has the following format; the name can be changed and is not required to keep this format: `NE Name_Timestamp-TimeZone_ApplicationType_DataType.csv`.

For data that is scheduled to be exported periodically, the default Task Name is DSR Configuration Export; the name can be changed.

All exported .csv files contain a comment header with the following information:

- Software revision used to generate the exported file
- Date and Time file was generated
- Name of each selected Data object exported
- Total number of exported records

The following example illustrates how the export file header might appear, but it might not look exactly as shown:

```
################################################################################
####
# Oracle Communications DSR Software Revision: <x.x.x-xxx.xx.x>
# Date/Time Generated: <yyyy/mon/dd hh:mm:ss timezone>
# Exported Application: <ApplicationType>
# Exported Object: <ObjectType>
# Number of Records: <nnn>
################################################################################
####
```

Export Operations

Exported files can be written to the File Management Directory in the Status & Manage File Management area (see the **Status & Manage**, and then **Files** page) or to the Export Server Directory.

Files that are created by a DSR Bulk Export operation must be in the local File Management area before they can be used for Bulk Import operations. See DSR Bulk Import.

For files that are exported to the local File Management Directory,

- The files appear in the File Management area list on the local system (see the **Status & Manage**, and then **Files** page) and in the list on the **Diameter**, and then **Configuration**, and then **Import** page.
- These files can be used for Import operations on the local system.

Any .csv files that are exported to the File Management Directory and remain unchanged for more than 14 days will be automatically removed. The task to remove these files runs once a day.

For files that are exported to the local Export Server Directory,

- If a remote Export Server has been configured (see **Administration**, and then **Remote Servers**, and then **Data Export**), the files in the local Export Server Directory are transferred to the configured remote Export Server location and are deleted from the local Export Server Directory. These transferred files do not appear in the File Management area on the local system, and cannot be used for Import operations on the local system.
- If a remote Export Server has not been configured, the files in the local Export Server Directory appear in the list on the **Status & Manage**, and then **Tasks**, and then **Active Tasks** page and in the File Management area list on the local system, but not on the **Diameter Common**, and then **Import** page. These files cannot be used for Import operations on the local system.

Export Results

If the export has any failures or is unsuccessful, the results of the export operation are logged to a log file with the same name as the exported file but with a ".log" extension. Successful export operations will not be logged.

The Diameter Common Export page

On the **Diameter Common**, and then **Export** page, you can perform the following actions:

- Manually export configuration data one time immediately in a CSV file to either the Export Server or the File Management area.

- Schedule periodic automatic exports of configuration data in CSV files to either the Export Server or the File Management area. Scheduled exports are listed on the **Status & Manage**, and then **Tasks**, and then **Scheduled Tasks** page.
- Click **Tasks** to display the status and progress of an Export operation.
  The progress of the export operation can also be viewed on the **Status & Manage**, and then **Tasks**, and then **Active Tasks** page.
- Click **File Management** on the **Diameter Common**, and then **Export** page to open the **Status & Manage**, and then **Files** page.
  On the **Status & Manage**, and then **Files** page, exported .csv files can be viewed, downloaded to an external location, uploaded from an external location, and deleted. Log files from Export operations can be viewed and deleted.

4.2.1 Bulk Export elements

Table 4-2 describes the fields on the Diameter Configuration Export page.

Table 4-2 Bulk Export Elements

Element (* indicates required field)	Description	Data Input Notes
*Export Application	Diameter or activated DSR Application from which configuration data will be exported. **Diameter** includes Diameter Common configuration data.	Format: Pulldown list Range: ALL, **Diameter**, **IPFE**, all activated DSR Applications To clear the field, select **-Select-** in the list.
Export Data	Data to be exported. **Diameter**, **IPFE**, or a specific activatedDSR Application must be selected in Export Application before this list is available. This field is required when **Diameter** or a DSR Application is selected. **Diameter** includes Diameter Common configuration data.	Format: Pulldown list Range: ALL; configuration folders for **Diameter** (except Mediation folders), **IPFE**, or the selected DSR Application. To clear the field, select **-Select-** in the list.

Table 4-2 (Cont.) Bulk Export Elements

Element (* indicates required field)	Description	Data Input Notes
Output File Name	Name of the .csv export file. The default name appears in this field when Export Frequency is **Once** and: • **ALL** is selected in Export Application • **Diameter**, **IPFE**, or a DSR Application is selected in Export Application, and **ALL** or a specific configuration folder is selected in Export Data **Diameter** includes Diameter Common data. The default file name can be changed, and is not required to follow the default format. This field is required when it is available.	Format: Valid characters are alphanumeric characters, dash (-), and underscore (_) Default file name: file name in the format NeName_ReportDate-TimeZone_ApplicationType_ReportType, with the following values: NeName = Host name of the NO or SO from which the configuration data will be exported. ReportDate = Current date in the format mmddyy. TimeZone = Current Time Zone. Application Type = the selected Export Application to export from ObjectType = the selected Data to export
*Task Name	Periodic Export Task name. This field is required when the Export Frequency is not **Once**.	Format: text box; length must not exceed 24 characters. Valid characters are alphanumeric, minus sign (-), and spaces between words. The first character must be an alpha character. The last character must not be a minus sign. Range: 1-24 characters Default: DSR Configuration Export
Description	Periodic Export Task description.	Format: text box; length must not exceed 255 characters. Valid characters are alphanumeric, minus sign (-), and spaces between words. The first character must be an alpha character. The last character must not be a minus sign. Range: 1-255 characters

Table 4-2 (Cont.) Bulk Export Elements

Element (* indicates required field)	Description	Data Input Notes
Export Directory	Directory in which an export file will be placed. Files that are exported to the Export Server Directory will automatically be copied over to the remote if one is configured. The files will be deleted form the local system after the transfer to the remote Export Server is complete. Files that are exported to the File Management Directory, or are exported to the Export Server Directory when no remote Export Server is configured, can be viewed and imported on the local system.	Format: radio buttons Range: radio button for Export Server Directory, radio button for File Management Directory Default: Export Server Directory
Export Frequency	How often the data will be written to the Export Server Directory or File Management Directory. When **Once** is selected, the export is performed immediately after **Ok** is clicked.	Format: radio buttons Range: radio buttons for Once, Hourly, Daily, Weekly Default: Once
Minute	The minute of each hour when the data will be exported. This field is available only when **Hourly** is selected for**Export Frequency**.	Format: text box with up and down selection arrows Range: 1-59 Default: 0
Time of Day	Time of day when data will be exported. This field is available only when **Daily** or **Weekly** is selected for **Export Frequency**.	Format: • Text box; the time can be typed in the format HH:MM AM or HH:MM PM. • Pulldown list; click in the box to display a 24-hour list of times that are at 15-minute intervals. Select the desired time in the list. Range: 12:00 AM through 11:45 PM in 15-minute intervals, or specified time Default: 12:00 AM
Day of the Week	Day of the week on which data will be exported. This field is available only when **Weekly** is selected for **Export Frequency**.	Format: a radio button for each day of the week Range: Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday Default: Sunday

4.2.2 Manually Exporting a Configuration Data File Once

Use the following procedure to export a configuration data .csv file once immediately to the Status & Manage File Management area or to the Export Server Directory.

> **Note:**
>
> The exported file appears the File Management area list on the **Status & Manage**, and then **Files** page if the **File Management Directory** is selected as the **Export Directory**, or if the **Export Server Directory** is selected and no remote Export Server is configured.

1. Navigate to **Diameter Common**, and then **Export**.
2. Verify the **Once** option is selected in the **Export Frequency** list. (Select **Once** if another radio button is currently selected.)
3. From the **Export Application** options, select **ALL**, **Diameter**, **IPFE**, **RADIUS**, or the activated DSR application from which the configuration data will be exported.

   If you selected **ALL**, go to step 5.
4. From the **Export Data** options, select **ALL** or the configuration folder that contains the data that will be exported from the selected **Export Application** type.
5. Either use (do not change) the default **Output File Name**, or change the entry to the desired name.
6. Select the **Export Directory** option for the file that will be exported.

   Select either the Export Server Directory (the default), or the File Management Directory.
7. Click **OK** to Export.

   An indication displays that the operation is in progress.
8. To view the progress of the Export operation, you can:
   - Select the **Tasks** icon near the top of the **Diameter Common**, and then **Export** page.
   - Navigate to **Status & Manage**, and then **Tasks**, and then **Active Tasks** to display open tasks.
9. To locate a file in the File Management area or to view the log file from an Export operation, click **File Management** to open the **Status & Manage**, and then **Files (Filtered)** page.

4.2.3 Scheduling Periodic Automatic Exports of Configuration Data

Use the following procedure to schedule periodic automatic Exports of configuration data files to the local Export Server Directory or to the local File Management area.

> **Note:**
>
> When the selected **Export Directory** is the **Export Server Directory,** the file is exported to a temporary Export directory on the local system. A remote Export Server must be configured before the exported file can be transferred to the specified directory on the configured remote Export Server. See the online help for the **Administration**, and then **Remote Servers**, and then **Data Export** page and Help for instructions to configure a remote Export Server.
> If no remote Export Server is configured, or if the exported configuration data could be used for Import operations on the local system, select **File Management Directory** as the **Export Directory**.

1. Select **Diameter Common**, and then **Export**.

   The **Diameter Common**, and then **Export** page appears.

2. In the **Export Application** list, select **ALL**, **Diameter**, **IPFE**, **RADIUS**, or the activated DSR Application from which the configuration data will be exported.

   If you selected **ALL**, go to 4.

3. In the **Export Data** list, select **ALL** or the configuration folder that contains the data that will be exported from the selected **Export Application** type.

4. Select the radio button for the **Export Frequency** of the scheduled Exports. (Do not select **Once**.)

5. Either use the default **Task Name** (DSR Configuration Export), or change the name if desired for the Export operation.

   The **Task Name** is required when the **Export Frequency** is not **Once**.

6. If a description of the Export task is desired, enter the **Description** in the text box (up to 255 characters).

7. Select the radio button for the **Export Directory** to which the file will be exported.

   Select either the **Export Server Directory** (the default), or the **File Management Directory**.
   Select the **File Management Directory** if no remote Export Server has been configured.

8. Enter or select the time or day information to specify when the scheduled Export operations will occur.

   - If **Export Frequency** is **Hourly**, enter (type or click the arrows) the **Minute** of each hour (0-59) when the file will be exported.
   - If **Export Frequency** is **Daily**, enter (type, or click in the box and select from the list) the **Time of Day** when the file will be exported. Select from 15-minute intervals or enter a specific time.
   - If **Export Frequency** is **Weekly**,
     - Select the radio button for the **Day of Week** on which the file will be exported.
     - Enter (type, or click in the box and select from the pulldown list) the **Time of Day** when the file will be exported. Select from 15-minute intervals or enter a specific time.

9. Click **Ok** to save the schedule.

To view, edit, or delete the saved schedule task, select **Status & Manage**, and then **Tasks**, and then **Active Tasks** or click the link in the indication to open the **Status & Manage**, and then **Tasks**, and then **Scheduled Tasks** page.

The schedule can be changed or deleted on the **Status & Managed**, and then **Tasks**, and then **Scheduled Tasks** page.

10. To view the progress of an Export operation, you can:
    - Select the **Tasks** icon near the top of the **Diameter Common**, and then **Export** page.
    - Select **Status & Manage**, and then **Tasks**, and then **Active Tasks** to open the **Status & Manage**, and then **Tasks**, and then **Active Tasks (Filtered)** page.
11. To locate a file in the File Management area or to view the log file from an Export operation, click **File Management** to open the **Status & Manage**, and then **Files (Filtered)** page.

4.2.4 Bulk Import and Export CSV File Formats and Contents

CSV File Formats and Contents

DSR Bulk Import and Export files support an ASCII Comma-Separated Values (CSV) file format.

- The configuration data described in each table in this help section is contained in a single line in the CSV file.
- The first field or column of each line defines the Application Type; see Table 4-3.
- The second column describes the configuration data type, such as LocalNode, PeerNode, or RouteList.
- Subsequent fields or columns contain the associated configuration data.
- Fields containing text that includes spaces or commas are enclosed in double quotes.
- Element values that are selected using radio buttons on the GUI page are shown as separate fields or columns in the CSV Format tables. A selected value appears in its field or column; an unselected value is shown as just two commas in the file (...,,...) to maintain the positioning in the file.
- The CSV file can include optional comment lines for documenting within the file. Comment lines must begin with a pound sign (#) in the first column, and can be included on any line of the file.
- All text fields within the CSV file containing comma (,), double quotes ("), newline (\n), tab (\t), carriage return (\r) or their combinations are double quoted.

Table 4-3 Application Types Supported by DSR Bulk Import and Export

Application Type	Description
Diameter	Common Diameter Plug-In (DPI); includes Diameter Common data
RBAR	Range Based Address Resolution (RBAR)
FABR	Full Address Based Resolution (FABR)
CPA	Charging Proxy Application (CPA)
SBR	Session Binding Repository (Charging SBR)
PCA	Policy and Charging Application (PCA)
IPFE	IP Front End (IPFE)

Table 4-3 (Cont.) Application Types Supported by DSR Bulk Import and Export

Application Type	Description
GLA	Gateway Location Application (GLA)
MAPIWF	MAP-Diameter Interworking Function
RADIUS	Remote Authentication Dial In User Service

4.2.4.1 Diameter and Diameter Common CSV File Formats and Contents

Diameter CSV File Formats

The following tables describe the CSV file content and attribute field or column positions for all Diameter configuration data supported by the Diameter Application Type.

> **Note:**
>
> **Diameter**, and then **AVP Dictionary** configuration data cannot be imported and exported with the Bulk Import/Export functions in Diameter Common.

"Local Node Configuration Elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-4 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-4 Local Node CSV Format

Column	Data Description
0	Application Type (Diameter)
1	LocalNode (Keyword)
2	Name (Key)
3	Fqdn
4	Realm
5	Tcp Port
6	Sctp Port
7	Dtls Port
8	TlsPort
9	RADIUS UDP Server Ports [0]
	(repeated x 10)
19	Enable RADIUS UDP Client Ports (Yes/No)
20	RADIUS Client UDP Port Range Start
21	RADIUS Client UDP Port Range End
22	Verification Mode ('SslVerifyNone', 'SslVerifyPeer', 'SslVerifyPeerFailIfNoPeerCert' and 'SslVerifyPeerVerifyClientOnce')
23	Certificate Type
24	Certificate Name
25	Connection Configuration Set Name
26	Cex Configuration Set Name
27	IP Address [0]

Table 4-4 (Cont.) Local Node CSV Format

Column	Data Description
	(repeated x 128)
153	IP Address [127]
154	IP Type [0] (LocalIp, PeerIp, IpfeTsa)
	(repeated x 128)
282	IP Type [127] (LocalIp, PeerIp, IpfeTsa)

"Peer Node Configuration Elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-5 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-5 Peer Node CSV Format

Column	Data Description
0	Application Type
1	PeerNode (Keyword)
2	Name (Key)
3	AAA Protocol (RADIUS, Diameter)
4	Fqdn
5	Realm
6	Tcp Port
7	Sctp Port
8	Dtls Port
9	Tls Port
10	RADIUS Server UDP Ports[0]
	(repeated x 10)
19	RADIUS Server UDP Ports[9]
20	Replace Destination Host (No, Yes)
21	Replace Destination Realm (No, Yes)
22	Minimum Connection Capacity
23	Alternate Route on Connection failure (SamePeer, DifferentPeer, SameConnection)
24	Alternate Route on Answer Timeout (SamePeer, DifferentPeer, SameConnection)
25	Alternate Route on Answer Result Code (SamePeer, DifferentPeer, SameConnection)
26	Alternate Implicit Route
27	Maximum Alternate Routing Attempts
28	IP Address [0]
	(repeated x 128)
155	IP Address [127]
156	Dynamic (No, Yes)
157	Routing Option Set
158	Pending Answer Timer
159	Peer Route Table
160	Message Priority Setting

Table 4-5 (Cont.) Peer Node CSV Format

Column	Data Description
161	Message Priority Configuration Set
162	Application Route Table
163	Topology Hiding Status (Enabled, Disabled)
164	Peer Node Group Name
165	Transaction Configuration Set
166	AVP Removal List

"Peer Node Group Configuration Elements" in the *Diameter User Guide* and Help describes the configuration data elements list in Table 4-6 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-6 Peer Node Group CSV Format

Column	Data Description
0	Application Type
1	PeerNodeGroup (Keyword)
2	Peer Node Group Name

"Route Groups Configuration Elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-7 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-7 Route Group CSV Format

Column	Data Description
0	Application Type
1	RouteGrp (Keyword)
2	Name (Key)
3	Dynamic (No, Yes)
4	Type (Peer, Connection)
5	Peer Node 1 Name
6	Peer Node 1 Weight
	(repeated x 160)
323	Peer Node 160 Name
324	Peer Node 160 Weight
325	Connection 1 Name
326	Connection 1 Weight
	(repeated x 512)
1347	Connection 512 Name
1348	Connection 512 Weight

"Route List Configuration Elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-8 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-8 Route List CSV Format

Column	Data Description
0	Application Type
1	RouteList (Keyword)
2	Name (Key)
3	Dynamic (No, Yes)
4	Minimum Route Group Availability Weight
5	Route Across Route Groups (Enabled/Disabled)
6	Route Group 1 Name
7	Route Group 1 Priority
	(repeated x 3)
10	Route Group 3 Name
11	Route Group 3 Priority
12	Site Name[0]
13	Traffic Throttle Group[0]
14	Maximum Loss Percent Threshold[0]
15	Route Group Name[0]
	(repeated x 10)
48	Site Name[10]
49	Traffic Throttle Group[10]
50	Maximum Loss Percent Threshold[10]
51	Route Group Name[10]
	(12-51 repeated x 3)
92	Site Name[0]
93	Traffic Throttle Group[0]
94	Maximum Loss Percent Threshold[0]
95	Route Group Name[0]
	(repeated x 10)
128	Site Name[0]
129	Traffic Throttle Group[0]
130	Maximum Loss Percent Threshold[0]
131	Route Group Name[0]

"Peer Routing Rules Configuration Elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-9 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-9 Peer Routing Rule CSV Format

Column	Data Description
0	Application Type (Diameter)
1	PeerRouteRule (Keyword)
2	Name (Key)
3	Priority
4	param (DestHost, DestRealm, OrigHost, OrigRealm, CmdCode, AppID)

Table 4-9 (Cont.) Peer Routing Rule CSV Format

Column	Data Description
5	condOperator (Present, Absent, Equal, Not Equal, StartsWith, EndsWith, DontCare, Always True)
6	Value
7	param (DestHost, DestRealm, OrigHost,OrigRealm, CmdCode, AppID)
8	condOperator (Present, Absent, Equal, Not Equal, StartsWith, EndsWith, DontCare, Always True)
9	Value
10	param (DestHost, DestRealm, OrigHost, OrigRealm, CmdCode, AppID)
11	condOperator (Present, Absent, Equal, Not Equal, StartsWith, EndsWith, DontCare, Always True)
12	Value
13	param (DestHost, DestRealm, OrigHost, OrigRealm, CmdCode, AppID)
14	condOperator (Present, Absent, Equal, Not Equal, StartsWith, EndsWith, DontCare, Always True)
15	Value
16	param (DestHost, DestRealm, OrigHost, OrigRealm, CmdCode, AppID)
17	condOperator (Present, Absent, Equal, Not Equal, StartsWith, EndsWith, DontCare, Always True)
18	value
19	param (DestHost, DestRealm, OrigHost, OrigRealm, CmdCode, AppID)
20	condOperator (Present, Absent, Equal, Not Equal, StartsWith, EndsWith, DontCare, Always True)
21	Value
22	Action (RouteToPeer, Forward To Peer Route Table, SendAnswer, Abandon With No Answer)
23	Target Peer Route Table Name
24	Route List Name
25	Diameter Answer Code
26	Answer Error Message
27	Message Priority (NC, PR0, PR1, PR2)
28	Message Copy Configuration Set
29	Vendor Id
30	Peer Route Table

"Connections Configuration Elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-10 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-10 Connection CSV Format

Column	Data Description
0	Application Type

Table 4-10 (Cont.) Connection CSV Format

Column	Data Description
1	Conn (Keyword)
2	Connection Name (Key)
3	AAA Protocol (RADIUS, Diameter)
4	Type (FullySpecified, LocalMpInitiator, LocalMpResponder, RadiusServer, RadiusClient)
5	Local Node Name
6	Dynamic (No, Yes)
7	Peer Node Name
8	IPFE Initiator DAMP IP Address
9	Protocol Type (Tcp, Sctp, Dtls, Tls, Udp)
10	Connection Configuration Set Name
11	Cex Configuration Set Name
12	Cap Configuration Set Name
13	Primary Local IP Address
14	Secondary Local IP Address
15	Primary Peer IP Address
16	Secondary Peer IP Address
17	Transport Fqdn
18	Peer Identification (Ip, TransportFqdn, PeerFqdn)
19	Local Initiate Port
20	UDP Port
21	Transport Congestion Abatement Timeout
22	Remote Busy Usage (Enabled, Disabled)
23	Remote Busy Timeout
24	Message Priority Setting (None, RequestMessage, UserConfigured)
25	Message Priority Configuration Set
26	Egress Message Throttling Configuration Set
27	Shared Secret Configuration Set
28	Message Authenticator Configuration Set
29	Message Conversion Configuration Set
30	Ingress Status-Server Configuration Set
31	Suppress Connection Unavailable Alarm (Yes, No)
32	Suppress Connections Attempts (Yes, No)
33	Test Mode (Yes, No)

"Connection Configuration Set Elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-11 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-11 Connection Configuration Set CSV Format

Column	Data Description
0	Application Type
1	ConnCfgSet (Keyword)

Table 4-11 (Cont.) Connection Configuration Set CSV Format

Column	Data Description
2	ConnCfgSet Name (Key)
3	retransInitialTimeout
4	retransMinTimeout
5	retransMaxTimeout
6	retransMaxTimeoutInit
7	retransPathFailure
8	retransAssocFailure
9	retransInitFailure
10	sackDelay
11	heartbeatInterval
12	sctpSockSendSize
13	sctpSockRecvSize
14	burstMax
15	sctpNumInboundStreams
16	sctpNumOutboundStreams
17	sctpDatagramBundlingEnabled (Yes, No)
18	sctpMaxSegmentSize
19	sctpFragmentationEnabled (Yes, No)
20	sctpDataChunkDeliveryOrdered (Yes, No)
21	tcTimer
22	twinitTimer
23	tcexTimer
24	tdpxTimer
25	provingMode (Always, Suspect, Never)
26	provingTimeout
27	provingDwrsToSend
28	pendTransPerConn
29	cexHostIpValidationEnabled(Yes, No)
30	nagleEnabled (Yes, No)
31	tcpSockSendSize
32	tcpSockRecvSize
33	tcpMaxSegmentSize
34	tcpKeepAliveEnabled (Yes, No)
35	tcpKeepAliveIdleTime
36	tcpKeepAliveProbeInterval
37	tcpKeepAliveMaxCount
38	radiusPendTransPerConn
39	preventDupEgressRetrans
40	preventDupIngressRetrans
41	cachedResponseDur

"Reroute On Answer Configuration Elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-12 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-12 Reroute on Answer CSV Format

Column	Data Description
0	Application Type (Diameter)
1	RerouteOnAns (Keyword)
2	Answer Result-Code AVP Value
3	Application ID

"System Options Elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-13 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-13 System Options CSV Format

Column	Data Description
0	Application Type
1	Options (Keyword)
2	Fixed Connection Failure Major Aggregation Alarm Threshold
3	Fixed Connection Failure Critical Aggregation Alarm Threshold
4	IPFE Connection Failure Major Aggregation Alarm Threshold
5	IPFE Connection Failure Critical Aggregation Alarm Threshold
6	Peer Node Failure Critical Aggregation Alarm Threshold
7	Route List Failure Critical Aggregation Alarm Threshold
8	Excessive Reroute Onset Threshold
9	Excessive Reroute Abatement Threshold
10	Message Copy Feature Enabled (Enabled, Disabled)
11	Message Copy Disable Congestion Level (CL1, CL2)
12	Redirect Answer Processing Enabled (Yes, No)
13	Redirect Application Route Table
14	Redirect Peer Route Table
15	Client Socket Send Buffer Size
16	Client Socket Receive Buffer Size
17	Server Socket Send Buffer Size
18	Server Socket Receive Buffer Size
19	Encode FQDN In Lower Case (Yes, No)
20	Realm Expiration Minor Alarm Set Time
21	Realm Expiration Major Alarm Set Time
22	NGN-PS Admin State (Enabled, Disabled)
23	Minimum Answer Priority
24	Minimum Inviolable Priority
25	NGN-PS Maximum Message Rate Percent

Table 4-13 (Cont.) System Options CSV Format

Column	Data Description
26	NGN-PS Gx Admin State (Enabled, Disabled)
27	NGN-PS Gx ARP1
28	NGN-PS Gx ARP2
29	NGN-PS Gx ARP3
30	NGN-PS Gx ARP4
31	NGN-PS Gx ARP5
32	NGN-PS Gx Advance Priority Type (None, Spr, Hss)
33	NGN-PS Rx Admin State (Enabled, Disabled)
34	NGN-PS Rx MPS AVP Value
35	NGN-PS Cx/Dx Admin State (Enabled, Disabled)
36	NGN-PS Dh/Sh Admin State (Enabled, Disabled)

"DNS Options Elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-14 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-14 DNS Options CSV Format

Column	Data Description
0	Application Type (Diameter)
1	DnsOption (Keyword)
2	Primary IP
3	Secondary IP
4	Query Duration Timer

"CEX Configuration Sets Elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-15 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-15 CEX Configuration Set CSV Format

Column	Data Description
0	Application Type (Diameter)
1	CexCfgSet (Keyword)
2	Name (Key)
3	Dynamic (Yes, No)
4	Selected Application ID [1]
5	Selected Type [1]
6	Selected Vendor ID [1]
	(repeated x 10)
31	Selected Application ID [10]
32	Selected Type [10]
33	Selected Vendor ID [10]
34	Must Application ID [1]

Table 4-15 (Cont.) CEX Configuration Set CSV Format

Column	Data Description
35	Must Type [1]
36	Must Vendor ID [1]
	(repeated x 10)
61	Must Application ID [10]
62	Must Type [10]
63	Must Vendor ID [10]
64	Vendor ID [1]
	(repeated x 10)
73	Vendor ID [10]
74	DSR Feature Status AVP (Yes, No)

"Capacity Configuration Sets Elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-16 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-16 Capacity Configuration Set CSV Format

Column	Data Description
0	Application Type (Diameter)
1	CapCfgSet (Keyword)
2	Capacity Configuration Set Name (Key)
3	Reserved Ingress MPS
4	Maximum Ingress MPS
5	Ingress MPS Minor Alarm Threshold
6	Ingress MPS Major Alarm Threshold
7	Ingress MPS Abatement Time
8	Convergence Time

"Application Routing Rules Configuration Elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-17 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-17 AppRouteRule CSV Format

Column	Data Description
0	Application Type
1	AppRouteRule (Keyword)
2	Name (Key)
3	Priority
4	param (DestHost, DestRealm, OrigHost,OrigRealm, CmdCode AppID)
5	condOperator (Present, Absent, Equal, Not Equal, StartsWith, EndsWith, DontCare, Always True)
6	Value
7	param (DestHost, DestRealm, OrigHost,OrigRealm, CmdCode AppID)

Table 4-17 (Cont.) AppRouteRule CSV Format

Column	Data Description
8	condOperator (Present, Absent, Equal, Not Equal, StartsWith, EndsWith, DontCare, Always True)
9	Value
10	param (DestHost, DestRealm, OrigHost,OrigRealm, CmdCode AppID)
11	condOperator (Present, Absent, Equal, Not Equal, StartsWith, EndsWith, DontCare, Always True)
12	Value
13	param (DestHost, DestRealm, OrigHost,OrigRealm, CmdCode AppID)
14	condOperator (Present, Absent, Equal, Not Equal, StartsWith, EndsWith, DontCare, Always True)
15	Value
16	param (DestHost, DestRealm, OrigHost,OrigRealm, CmdCode AppID)
17	condOperator (Present, Absent, Equal, Not Equal, StartsWith, EndsWith, DontCare, Always True)
18	Value
19	param (DestHost, DestRealm, OrigHost,OrigRealm, CmdCode AppID)
20	condOperator (Present, Absent, Equal, Not Equal, StartsWith, EndsWith, DontCare, Always True)
21	Value
22	Application Name
23	Action (Route to Application, Forward To Egress Routing, Send Answer, Abandon With No Answer, Forward To Application Route Table, Forward To Peer Route Table)
24	Target Route Table Name (Application Route Table Name/Peer Route Table Name)
25	Answer Result-Code Value
26	Vendor Id
27	Answer Error Message
28	Gx-Prime (No, Yes)
29	Application Route Table

"Application Ids Elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-18 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-18 Application ID CSV Format

Column	Data Description
0	Application Type (Diameter)
1	Appids (Keyword)
2	Application ID
3	Name

"CEX Parameters elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-19 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-19 CEX Parameters CSV Format

Column	Data Description
0	Application Type (Diameter)
1	CexParameters (Keyword)
2	Application ID
3	Application ID Type (Authentication, Accounting)
4	Vendor ID

"Pending Answer Timers Elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-20 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-20 Pending Answer Timer CSV Format

Column	Data Description
0	Application Type (Diameter)
1	PendingAnswerTimer (Keyword)
2	Name (Key)
3	Timer

"Routing Option Set Elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-21 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-21 Routing Option Set CSV Format

Column	Data Description
0	Application Type
1	RoutingOptionSet (Keyword)
2	Name (Key)
3	Maximum Per Message Forwarding Allowed
4	Transaction Lifetime
5	Pending Answer Timer
6	Resource Exhausted Action
7	Resource Exhaustion Result Code
8	Resource Exhausted Error Message
9	Resource Exhausted Vendor Id
10	No Peer Response Action
11	No Peer Response Result Code
12	No Peer Response Error Message
13	No Peer Response Vendor Id
14	Connection Failure Action
15	Connection Failure Result Code
16	Connection Failure Error Message

Table 4-21 (Cont.) Routing Option Set CSV Format

Column	Data Description
17	Connection Failure Vendor Id
18	Connection Congestion Action
19	Connection Congestion Result Code
20	Connection Congestion Error Message
21	Connection Congestion Vendor Id
22	Peer Node Reported Congestion Action
23	Peer Node Reported Congestion Result Code
24	Peer Node Reported Congestion Error Message
25	Peer Node Reported Congestion Vendor Id
26	Destination Realm Not Served Action
27	Destination Realm Not Served Result Code
28	Destination Realm Not Served Error Message
29	Destination Realm Not Served Vendor Id
30	Nested ART/PRT Error Action
31	Nested ART/PRT Error Result Code
32	Nested ART/PRT Error Message
33	Nested ART/PRT Error Vendor Id

"Peer Route Tables Elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-22 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-22 Peer Route Table CSV Format

Column	Data Description
0	Application Type (Diameter)
1	PeerRouteTable (Keyword)
2	Name (Key)

"Message Priority Configuration Set Elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-23 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-23 Message Priority Configuration Set CSV Format

Column	Data Description
0	Application Type (Diameter)
1	MsgPriorityCfgSet (Keyword)
2	Name
3	applId[1]
4	cmdCode[1]
5	msgPriority[1]
	(repeated x 50)
151	applId[50]
152	cmdCode[50]

Table 4-23 (Cont.) Message Priority Configuration Set CSV Format

Column	Data Description
153	msgPriority[50]

"Message Throttling Configuration Set Elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-24 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-24 Message Throttling Configuration Set CSV Format

Column	Data Description
0	Application Type (Diameter)
1	MsgThrottlingCfgSet (Keyword)
2	Name (Key)
3	maxEMR
4	smoothFactor
5	abateTime
6	TT1
7	AT1
8	TT2
9	AT2
10	TT3
11	AT3

"Message Copy Configuration Set Elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-25 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-25 MessagecopyCfgSet CSV Format

Column	Data Description
0	Application Type
1	MessagecopyCfgSet (Keyword)
2	Message Copy Configuration Set Name
3	Message Copy Request Type
4	Original Answer Result Code for Message Copy
5	Route List of the DAS node
6	Ingress Answer Included (No, Yes)
7	DAS Answer Result Code
8	Max DAS Retransmission Attempts

"Application Route Tables elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-26 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-26 Application Route Table CSV Format

Column	Data Description
0	Application Type (Diameter)
1	ApplicationRouteTable (Keyword)
2	Name (Key)

"Command Codes elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-27 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-27 Command Code CSV Format

Column	Data Description
0	Application Type (Diameter)
1	CmdCodes (Keyword)
2	cmdCode
3	name

Troubleshooting with IDIH "Traces elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-28 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-28 Trace CSV Format

Column	Data Description
0	Application Type
1	Trace (Keyword)
2	Trace Name (Key)
3	Trace Location
4	Scope Type
5	Scope Value
6	Number of Matches
7	Time of Duration
8	Content Type
9	Condition 1 Name
10	Condition 1 AVP
11	Condition 1 Operator
12	Condition 1 Value
	(repeated x 13)
57	Condition 13 Name
58	Condition 13 AVP
59	Condition 13 Operator
60	Condition 13 Value
61	Notes

Troubleshooting with IDIH "Options elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-29 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-29 Trace Options CSV Format

Column	Data Description
0	Application Type (Diameter)
1	TraceOptions (Keyword)
2	Max Bandwidth
3	IDIH IP Address
4	IDIH Visualization IP address

Troubleshooting with IDIH "Global Options elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-30 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-30 Trace Global Options CSV Format

Column	Data Description
0	Application Type (Diameter)
1	TraceGlobalOptions (Keyword)
2	Max Active Network Traces

"Trusted Network Lists elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-31 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-31 Trusted Network List CSV Format

Column	Data Description
0	Application Type (Diameter)
1	TrustedNetworkList (Keyword)
2	Name (Key)
3	trustedRealm [1]
	(repeated x 100)

"Path Topology Hiding Configuration Sets Elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-32 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-32 Path Topology Hiding Configuration Set CSV Format

Column	Data Description
0	Application Type (Diameter)
1	PathTopologyHidingCfgSet (Keyword)
2	Name (Key)
3	hostnameSuffix
	(repeated x 10)
13	pseudoRouteRecord
14	pseudoProxy
15	encryptionKey

"S6a/S6d Topology Hiding Configuration Sets Elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-33 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-33 S6a/S6d HSS Topology Hiding Configuration Set CSV Format

Column	Data Description
0	Application Type
1	HssTopologyHidingCfgSet (Keyword)
2	Name (Key)
3	useSingleHssPseudoHostname
4	singleHssPseudoHostname
5	count
6	randomizeCount
7	autoGenerate
8	prefix
9	suffix
10	length
11	action (SendAnswer, Forward, Abandon)
12	resultCode
13	vendorId
14	errMsg
15	actualHostname
16	pseudoHostname1
17	pseudoHostname2
18	pseudoHostname3
	(combination of actual and pseudo hostnames repeated x 500)

"MME/SGSN Topology Hiding Configuration Sets Elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-34 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-34 MME/SGSN Topology Hiding Configuration Set CSV Format

Column	Data Description
0	Application Type (Diameter)
1	MmeTopologyHidingCfgSet (Keyword)
2	Name (Key)
3	count
4	randomizeCount
5	autoGenerate
6	prefix
7	suffix
8	length
9	Action (SendAnswer, Forward, Abandon)
10	resultCode
11	vendorId

Table 4-34 (Cont.) MME/SGSN Topology Hiding Configuration Set CSV Format

Column	Data Description
12	errMsg
13	actualHostname[1]
14	pseudoHostname1
15	pseudoHostname2
16	pseudoHostname3
	(combination of actual and pseudo hostnames repeated x 300)

"S9 PCRF Topology Hiding Configuration Sets Elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-35 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-35 S9 PCRF Topology Hiding Configuration Set CSV Format

Column	Data Description
0	Application Type (Diameter)
1	S9PcrfTopologyHidingCfgSet (Keyword)
2	Name (Key)
3	count
4	randomizeCount
5	autoGenerate
6	prefix
fe7	suffix
8	length
9	action (SendAnswer, Forward, Abandon)
10	resultCode
11	vendorId
12	errMsg
13	actualHostname
14	pseudoHostname1
15	pseudoHostname2
16	pseudoHostname3
	(combination of actual and pseudo hostnames repeated x 600)

"S9 AF/pCSCF Topology Hiding Configuration Sets Elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-36 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-36 S9 AF/pCSCF Topology Hiding Configuration Set CSV Format

Column	Data Description
0	Application Type (Diameter)
1	S9AfPcscfTopologyHidingCfgSet (Keyword)
2	Name (Key)

Table 4-36 (Cont.) S9 AF/pCSCF Topology Hiding Configuration Set CSV Format

Column	Data Description
3	count
4	randomizeCount
5	autoGenerate
6	prefix
7	suffix
8	length
9	Action (SendAnswer, Forward, Abandon)
10	resultCode
11	vendorId
12	errMsg
13	actualHostname[1]
14	pseudoHostname1
15	pseudoHostname2
16	pseudoHostname3
	(combination of actual and pseudo hostnames repeated x 500)

"Protected Network Configuration Elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-37 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-37 Protected Network CSV Format

Column	Data Description
0	Application Type (Diameter)
1	ProtectedNetwork (Keyword)
2	protectedRealm (Key)
3	trustedNetList
4	pathTopologyHidingCfgSet
5	mmeTopologyHidingCfgSet
6	hssTopologyHidingCfgSet
7	S9PcrfTopologyHidingCfgSet
8	S9AfPcscfTopologyHidingCfgSet

Diameter Common CSV File Formats

The following tables describe the CSV file content and attribute field or column positions for all Diameter Common configuration data supported by the **Diameter** Application Type.

"MCCMNC Elements" describes the configuration data elements listed in Table 4-38 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-38 MCCMNC CSV Format

Column	Data Description
0	Application Type (Diameter)
1	MccMnc (Keyword)
2	Mobile Country Code (MCC)
3	Mobile Network Code (MNC)
4	Country Name
5	Network Name

"MCCMNC Mapping Elements" describes the configuration data elements listed in Table 4-39 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-39 MCCMNC Mapping CSV Format

Column	Data Description
0	Application Type (Diameter)
1	MccMncMapping (Keyword)
2	Mobile Country Code (MCC)
3	Mobile Network Code (MNC)
4	Prefix
5	Country Name
6	Network Name
7	CCNDC
8	Realm
9	Description

"MCC Ranges Elements" describes the configuration data elements listed in Table 4-40 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-40 Reserved MCC Ranges CSV Format

Column	Data Description
0	Application Type (Diameter)
1	ReservedMccRanges (Keyword)
2	startMccRange
3	endMccRange

"Transaction Configuration Set Elements" describes the configuration data elements list in Table 4-41 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-41 Transaction Configuration Group CSV Format

Column	Data Description
0	Application Type

Table 4-41 (Cont.) Transaction Configuration Group CSV Format

Column	Data Description
1	TransactionConfigurationSet(Keyword)
2	Name(Key)

'Transaction Configuration Rule Elements" describes the configuration data elements listed in Table 4-42 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-42 Transaction Configuration Rule CSV Format

Column	Data Description
0	Application Type
1	TransactionConfigurationRule(Keyword)
2	Name(Key)
3	appId
4	cmdCode
5	routingOptionSet
6	pendingAnswerTimer
7	applicationRouteTable
8	peerRouteTable
9	transactionCfgSet

"MP Profiles Elements" describes the editable configuration data elements listed in Table 4-43 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-43 MP Profile Parameters CSV Record Format

Column	Data Description
0	Application Type (Diameter)
1	MpProfileRwParm (Keyword)
2	profileName (key)
3	key (key)
4	value

"MP Profile Assignments Elements" describes the configuration data elements listed in Table 4-44 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-44 MP Profile Assignments CSV Record Format

Column	Data Description
0	Application Type (Diameter)
1	MpProfileAssigment (Keyword)
2	nodeName (key)
3	profileName

"Rate Limiting Configuration Elements" describes the configuration data elements listed in Table 4-45 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-45 Rate Limiting Configuration CSV Record Format

Column	Data Description
0	Application Type
1	RateCfgSet (Keyword)
2	Name (Key)
3	Maximum Egress Rate
4	RateConvergenceTime
5	RateAbatementTime
6	RateOnsetThres1
7	RateAbateThres1
8	RateOnsetThres2
9	RateAbateThres2
10	RateOnsetThres3
11	RateAbateThres3

"Pending Transaction Limiting Configuration Elements" describes the configuration data elements listed in Table 4-46 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-46 Pending Transaction Limiting Configuration CSV Record Format

Column	Data Description
0	Application Type
1	PendTransCfgSet (Keyword)
2	Name (Key)
3	Maximum Number of Pending Transactions
4	PendTransOnsetThres1
5	PendTransAbateThres1
6	PendTransOnsetThres2
7	PendTransAbateThres2
8	PendTransOnsetThres3
9	PendTransAbateThres3
10	PendTransAbateTime3

"Egress Throttle List Elements" describes the configuration data elements listed in Table 4-47 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-47 Egress Throttle List CSV Record Format

Column	Data Description
0	Application Type
1	Etl (Keyword)
2	Name (Key)

Table 4-47 (Cont.) Egress Throttle List CSV Record Format

Column	Data Description
3	siteName_1
4	etgName_1
5	connFailPctReduction_1
6	siteName_2
7	etgName_2
8	connFailPctReduction_2
9	siteName_3
10	etgName_3
11	connFailPctReduction_3
12	RateCfgSet
13	PendTransCfgSet

"Egress Throttle Group Elements" in the *Diameter User Guide* and Help describes the configuration data elements listed in Table 4-48 and configuration considerations for the data elements that must be observed when the elements are edited n the CSV files.

Table 4-48 Egress Throttle Group CSV Format

Column	Data Description
0	Application Type
1	Etg (Keyword)
2	Name (Key)
3	EtgControlScope
4	RateCfgSet
5	PendTransCfgSet
6	Peers
	(repeated x 128)
133	Conns
	(repeated x 128)

"Dashboard Network Elements" describes the configuration data elements listed in Table 4-49 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-49 Dashboard Network CSV Format

Column	Data Description
0	Application Type
1	DshNetwork (Keyword)
2	Network Name (always "Network" in DSR 7.1)
3	SOAM Server Group #1 Name
4	SOAM Server Group #1 Display Order
5-66	(31 additional SOAM SG pairs of rows)
67	Summary Threshold Configuration Set Name

"Dashboard Network Element Elements" describes the configuration data elements listed in Table 4-50 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-50 Dashboard Network Element CSV Format

Column	Data Description
0	Application Type
1	DshNe (Keyword)
2	Network Element Name
3	Server Threshold Configuration Set Name (empty or "ServerThresholds" in DSR 7.1)
4	Summary Threshold Configuration Set Name
5	Display Administratively Disabled Servers ("Yes"/"No")

"Dashboard Metric Group Elements" describes the configuration data elements listed in Table 4-51 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-51 Dashboard Metric Group CSV Format

Column	Data Description
0	Application Type
1	DshMetricGroup (Keyword)
2	Metric Group Name
3	Metric #1 Name
4	Metric #1 Display on Dashboard ("Yes"/"No")
5-30	(13 additional SOAM SG pairs of rows)

"Dashboard Metric Threshold Configuration Set Elements" describes the configuration data elements listed in Table 4-52 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-52 Dashboard Metric Threshold Configuration Set CSV Format

Column	Data Description
0	Application Type
1	DshMetricThresholdCfgSet (Keyword)
2	MTCfgSet Name
3	MTCfgSet Type ("Server"/"Summary")
4	Metric #1 Name
5	Metric #1 Threshold 1
6	Metric #1 Threshold 2
7	Metric #1 Threshold 3
8	Metric #2 Name
9	Metric #2 Threshold 1
10	Metric #2 Threshold 2
11	Metric #2 Threshold 3

Table 4-52 (Cont.) Dashboard Metric Threshold Configuration Set CSV Format

Column	Data Description
12-239	(57 additional groups of 4 rows per engineering-configured Metric)

"AVP Removal List Elements" describes the configuration data elements listed in Table 4-53 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-53 AvpRemovalList CSV Format

Column	Data Description
0	Application Type
1	AvpRemovalList (Keyword)
2	Name (Key)
3	Direction
4	Message Type
5	AVP Code_1
6	AVP Name_1
7	Vendor Id_1
8	Vendor Name_1
	(repeated x 10)
41	AVP Code_10
42	AVP Name_10
43	Vendor Id_10
44	Vendor Name_10

"Discovery Attributes Elements" describes the configuration data elements listed in Table 4-54 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-54 DpdAttribute CSV Format

Column	Data Description
0	Application Type
1	DpdAttributeSet (Keyword)
2	Realm Name
3	DNS Set
4	Local Node
5	Connection Mode
6	Local Protocol Preference Override (No, Yes)
7	Application Id[1]
8	Application Type[1]
9	Vendor Id[1]
10	TCP Preference[1]
11	SCTP Preference[1]
12	TLS Preference[1]

Table 4-54 (Cont.) DpdAttribute CSV Format

Column	Data Description
13	DTLS Preference[1]
14	Max Num Peers[1]
15	Max Num Connections[1]
	(repeated x 10)
88	Application Id[10]
89	Application Type[10]
90	Vendor Id[10]
91	TCP Preference[10]
92	SCTP Preference[10]
93	TLS Preference[10]
94	DTLS Preference[10]
95	Max Num Peers[10]
96	Max Num Connections[10]
97	Local IP Address
98	IPFE Initiator DAMP
99	Connection Configuration Set
100	Capacity Configuration Set
101	Realm Prefix

"DNS Set Elements" describes the configuration data elements listed in Table 4-55 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-55 DpdDnsSet CSV Format

Column	Data Description
0	Application Type
1	DpdDnsSet (Keyword)
2	DNS Set Name (Key)
3	Primary DNS Server IP Address
4	Secondary DNS Server IP Address
5	DNS Query Timeout
6	Number Of Retries

"Dynamic Peer Discovery Realms Elements" describes the configuration data elements listed in Table 4-56 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-56 DpdRealm CSV Format

Column	Data Description
0	Application Type
1	DpdRealm (Keyword)
2	Realm Name

"Traffic Throttle Group Elements" describes the configuration data elements listed in Table 4-57 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-57 TrafficThrottleGroup CSV Format

Column	Data Description
0	Application Type
1	TrafficThrottleGroup (Keyword)
2	Name (Key)
3	Traffic Throttle Point [1]
	(repeated x 20)
22	Traffic Throttle Point [20]
23	Application ID
24	Shared (No, Yes)

"Traffic Throttle Point Elements" describes the configuration data elements listed in Table 4-58 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-58 TrafficThrottlePoint CSV Format

Column	Data Description
0	Application Type
1	TrafficThrottlePoint (Keyword)
2	Name (Key)
3	TTP Configuration Set
4	Max Loss Percent Threshold
5	Alternate Implicit Route
6	Peer Node
7	Application Id
8	Max ETR

"Traffic Throttle Point Configuration Elements" describes the configuration data elements listed in Table 4-59 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-59 TrafficThrPointCfgSet CSV Format

Column	Data Description
0	Application Type
1	TrafficThrPointCfgSet (Keyword)
2	Name (Key)
3	Diversion Policy
4	Abatement Recovery Rate
5	Override Message Priority Threshold
6	Default Reduction Percentage
7	Default Validity Duration
8	Rate Convergence Time

Diameter Signaling Firewall Elements describes the configuration data elements listed in Table 4-60 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-60 Signaling Firewall CSV Format

Column	Data Description
0	Application Type
1	Signaling Firewall (Keyword)
2	Signaling Node Name
3	Signaling Firewall Administrative State

4.2.4.2 Range Based Address Resolution (RBAR) CSV File Formats and Contents

The following tables describe the CSV file content and attribute column positions for all configuration data supported by the RBAR Application Type.

> **Note:**
>
> Address Individual and Address Range elements are in different CSV files for performance reasons.

"Applications configuration elements" in the RBAR Help describes the configuration data elements listed in Table 4-61 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-61 Supported Application CSV Format

Column	Data Description
0	Application Type (Rbar)
1	SuppAppl (Keyword)
2	Application ID
3	Routing Mode (Proxy)

"Addresses configuration elements" in the RBAR Help describes the configuration data elements listed in Table 4-62 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-62 Address Individual CSV Format

Column	Data Description
0	Application Type (Rbar)
1	AddressIndv (Keyword)
2	Table Name
3	Address
4	Destination
5	Pfx Length
6	Old Table Name
7	Old Address

Table 4-62 (Cont.) Address Individual CSV Format

Column	Data Description
8	Old Pfx Length

"Addresses configuration elements" in the RBAR Help describes the configuration data elements listed in Table 4-63 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-63 Address Range CSV Format

Column	Data Description
0	Application Type (Rbar)
1	AddressRange (Keyword)
2	Table Name
3	Start Address
4	End Address
5	Destination
6	Pfx Length
7	Old Table Name (Key)
8	Old Start Address (Key)
9	Old Pfx Length (Key)

"Address Tables configuration elements" in the RBAR Help describes the configuration data elements listed in Table 4-64 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-64 Address Table CSV Format

Column	Data Description
0	Application Type (Rbar)
1	AddressTable (Keyword)
2	Name
3	Comment
4	Routing Entity (Imsi, Msisdn, Impi, Impu, ExternalId, Ipv4, Ipv6PfxAddr, Unsigned16)

"Destinations configuration elements" in the RBAR Help describes the configuration data elements listed in Table 4-65 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-65 Destination Table CSV Format

Column	Data Description
0	Application Type (Rbar)
1	Destination (Keyword)
2	Name (Key)
3	Realm
4	Fqdn

Table 4-65 (Cont.) Destination Table CSV Format

Column	Data Description
5	Avp Insertion (No, Yes)

"Exceptions configuration elements" in the RBAR Help describes the configuration data elements listed in Table 4-66 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-66 Routing Exception CSV Format

Column	Data Description
0	Application Type (Rbar)
1	RoutingException (Keyword)
2	Application ID
3	Exception Type (UnknownCmdCode, NoRoutingEntityAddress, NoDrtEntry)
4	Action (FwdUnchanged, FwdToDest, SendAnswer, SendAnsExp)
5	Destination Name
6	Answer Result Code
7	Vendor ID
8	Error Message

"Address Resolutions configuration elements" in the RBAR Help describes the configuration data elements listed in Table 4-67 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-67 Address Resolution CSV Format

Column	Data Description
0	Application Type (Rbar)
1	Resolution (Keyword)
2	Application ID
3	CMD Code
4	Routing Entity 1 (Imsi, Msisdn, Impi, Impu, Ipv4, Ipv6PfxAddr, Unsigned16, ExternalId)
5	Re 1 Avp 1 (PublicIdentity, SvcInfoSubscrId0, SvcInfoSubscrId1, SvcInfoSubscrId2, SvcInfoSubscrId3, SvcInfoSubscrId4, SubscriptionId0, SubscriptionId1, SubscriptionId2, SubscriptionId3, SubscriptionId4, UserIdentityMsisdn, UserIdentityPublic, UserIdentifierExternalId, UserName, FramedIpAddress, FramedIpv6Prefix, SvcInfoPsInfo3gppcc, Unprovisioned)

Table 4-67 (Cont.) Address Resolution CSV Format

Column	Data Description
6	Re 1 Avp 2 (PublicIdentity, SvcInfoSubscrId0, SvcInfoSubscrId1, SvcInfoSubscrId2, SvcInfoSubscrId3, SvcInfoSubscrId4, SubscriptionId0, SubscriptionId1, SubscriptionId2, SubscriptionId3, SubscriptionId4, UserIdentityMsisdn, UserIdentityPublic, UserIdentifierExternalId, UserName, FramedIpAddress, FramedIpv6Prefix, SvcInfoPsInfo3gppcc, Unprovisioned)
7	Re 1 Address Table Name
8	Routing Entity 2 (Imsi, Msisdn, Impi, Impu, Ipv4, Ipv6PfxAddr, Unsigned16, Externalid)
9	Re 2 Avp 1 (PublicIdentity, SvcInfoSubscrId0, SvcInfoSubscrId1, SvcInfoSubscrId2, SvcInfoSubscrId3, SvcInfoSubscrId4, SubscriptionId0, SubscriptionId1, SubscriptionId2, SubscriptionId3, SubscriptionId4, UserIdentityMsisdn, UserIdentityPublic, UserIdentifierExternalId, UserName, FramedIpAddress, FramedIpv6Prefix, SvcInfoPsInfo3gppcc, Unprovisioned)
10	Re 2 Avp 2 (PublicIdentity, SvcInfoSubscrId0, SvcInfoSubscrId1, SvcInfoSubscrId2, SvcInfoSubscrId3, SvcInfoSubscrId4, SubscriptionId0, SubscriptionId1, SubscriptionId2, SubscriptionId3, SubscriptionId4, UserIdentityMsisdn, UserIdentityPublic, UserIdentifierExternalId, UserName, FramedIpAddress, FramedIpv6Prefix, SvcInfoPsInfo3gppcc, Unprovisioned)
11	Re 2 Address Table name
12	Routing Entity 3 (Imsi, Msisdn, Impi, Impu, Ipv4, Ipv6PfxAddr, Unsigned16, ExternalId)
13	Re 3 Avp 1 (PublicIdentity, SvcInfoSubscrId0, SvcInfoSubscrId1, SvcInfoSubscrId2, SvcInfoSubscrId3, SvcInfoSubscrId4, SubscriptionId0, SubscriptionId1, SubscriptionId2, SubscriptionId3, SubscriptionId4, Msisdn, UserIdentityMsisdn, UserIdentifier Msisdn, UserIdentity Public, UserIdentifierExternalId , UserIdentifierUserName, UserName, FramedIpAddress, FramedIpv6Prefix, SvcInfoPsInfo3gppcc, Unprovisioned)
14	Re 3 Avp 2 (PublicIdentity, SvcInfoSubscrId0, SvcInfoSubscrId1, SvcInfoSubscrId2, SvcInfoSubscrId3, SvcInfoSubscrId4, SubscriptionId0, SubscriptionId1, SubscriptionId2, SubscriptionId3, SubscriptionId4, Msisdn, UserIdentityMsisdn, UserIdentifier Msisdn, UserIdentity Public, UserIdentifierExternalId , UserIdentifierUserName, UserName, FramedIpAddress, FramedIpv6Prefix, SvcInfoPsInfo3gppcc, Unprovisioned)
15	Re 3 Address Table name

"System Options elements" in the RBAR Help describes the configuration data elements listed in Table 4-68 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-68 Option CSV Format

Column	Data Description
0	Application Type (Rbar)
1	Option (Keyword)
2	Uri Supported (No, Yes)
3	RemoveDestHost (No, Yes)
4	Exclude Space (No, Yes)
5	Allow SubsequentDSR App Invoc (No, Yes)
6	Realm
7	Fqdn
8	Resource Exhaustion Error Code
9	Resource Exhaustion Error Message
10	Resource Exhaustion Vendor ID
11	Unavailable Application Action (ContinueRouting, DefaultRoute, SendAnswer, SendAnsExp)
12	Unavailable Application Route List
13	Unavailable Application Result Code
14	Unavailable Application Error Message
15	Unavailable Application Vendor ID
16	ASCII Exluded List [0]
	(repeated x 20) . . .
35	ASCII Excluded List [19]
36	TBCD Excluded List [0]
	(repeated x 5) . . .
40	TBCD Excluded List [4]

4.2.4.3 Full Address Based Resolution (FABR) CSV File Formats and Contents

Full Address-Based Resolution (FABR) CSV File Formats

The following tables describe the CSV file content and attribute column positions for all configuration data supported by the**FABR** Application Type.

"Applications configuration elements" in the FABR Help describes the configuration data elements listed in Table 4-69 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-69 Supported Application CSV Format

Column	Data Description
0	Application Type (Fabr)
1	SuppAppl (Keyword)
2	Application ID
3	Routing Mode (Proxy)

"Exceptions configuration elements" in the FABR Help describes the configuration data elements listed in Table 4-70 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-70 Routing Exception CSV Format

Column	Data Description
0	Application Type (Fabr)
1	RoutingException (Keyword)
2	Application ID
3	Exception Type (UnknownCmdCode, NoRoutingEntityAddress, NoAddrMatch, DpErrors, DpCongestion)
4	Action (FwdUnchanged, FwdToDest, SendAnswer, SendAnsExp, AbandonRequest)
5	Destination Name
6	Answer Result Code
7	Vendor ID
8	Error Message

"Destinations configuration elements" in the FABR Help describes the configuration data elements listed in Table 4-71 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-71 Default Destination Table CSV Format

Column	Data Description
0	Application Type (Fabr)
1	Destination (Keyword)
2	Name
3	Realm
4	Fqdn

"Address Resolutions configuration elements" in the FABR Help describes the configuration data elements listed in Table 4-72 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-72 Address Resolution CSV Format

Column	Data Description
0	Application Type (Fabr)
1	Resolution (Keyword)
2	Application ID
3	CMD Code
4	Routing Entity 1 (Imsi, Msisdn, Impi, Impu, ExternalId)

Table 4-72 (Cont.) Address Resolution CSV Format

Column	Data Description
5	Re 1 Avp 1 (PublicIdentity, SvcInfoSubscrId0, SvcInfoSubscrId1, SvcInfoSubscrId2, SvcInfoSubscrId3, SubscriptionId0, SubscriptionId1, SubscriptionId2, SubscriptionId3, Msisdn, UserIdentityMsisdn, UserIdentifierMsisdn, UserIdentityPublic, UserIdentifierExternalId , UserIdentifierUserName, UserName, WildCardedPubIdnty)
6	Re 1 Avp 2 (PublicIdentity, SvcInfoSubscrId0, SvcInfoSubscrId1, SvcInfoSubscrId2, SvcInfoSubscrId3, SubscriptionId0, SubscriptionId1, SubscriptionId2, SubscriptionId3, Msisdn, UserIdentityMsisdn, UserIdentifierMsisdn, UserIdentityPublic, UserIdentifierExternalId , UserIdentifierUserName, UserName, WildCardedPubIdnty)
7	Re 1 Destination Type (MtcHss, ImsHss, LteHss, Pcrf, Ocs, Ofcs, Aaa, UserDefined1, UserDefined2)
8	Routing Entity 2 (Imsi, Msisdn, Impi, Impu, ExternalId)
9	Re 2 Avp 1 (PublicIdentity, SvcInfoSubscrId0, SvcInfoSubscrId1, SvcInfoSubscrId2, SvcInfoSubscrId3, SubscriptionId0, SubscriptionId1, SubscriptionId2, SubscriptionId3, Msisdn, UserIdentityMsisdn, UserIdentifierMsisdn, UserIdentityPublic, UserIdentifierExternalId , UserIdentifierUserName, UserName, WildCardedPubIdnty)
10	Re 2 Avp 2 (PublicIdentity, SvcInfoSubscrId0, SvcInfoSubscrId1, SvcInfoSubscrId2, SvcInfoSubscrId3, SubscriptionId0, SubscriptionId1, SubscriptionId2, SubscriptionId3, Msisdn, UserIdentityMsisdn, UserIdentifierMsisdn, UserIdentityPublic, UserIdentifierExternalId , UserIdentifierUserName, UserName, WildCardedPubIdnty)
11	Re 2 Destination Type (MtcHss, ImsHss, LteHss, Pcrf, Ocs, Ofcs, Aaa, UserDefined1, UserDefined2)
12	Routing Entity 1 Search Prefix (Yes, No)
13	Routing Entity 2 Search Prefix (Yes, No)
14	Routing Entity 1 Search Blacklist (Yes, No)
15	Routing Entity 2 Search Blacklist (Yes, No)
16	Routing Entity 3 (Imsi, Msisdn, Impi, Impu, ExternalId)
17	Re 3 Avp 1 (PublicIdentity, SvcInfoSubscrId0, SvcInfoSubscrId1, SvcInfoSubscrId2, SvcInfoSubscrId3, SubscriptionId0, SubscriptionId1, SubscriptionId2, SubscriptionId3, Msisdn, UserIdentity Msisdn, UserIdentifierMsisdn, UserIdentityPublic, UserIdentifier ExternalId , UserIdentifierUserName, UserName, WildCardedPubIdnty)

Table 4-72 (Cont.) Address Resolution CSV Format

Column	Data Description
18	Re 3 Avp 2 (PublicIdentity, SvcInfoSubscrId0, SvcInfoSubscrId1, SvcInfoSubscrId2, SvcInfoSubscrId3, SubscriptionId0, SubscriptionId1, SubscriptionId2, SubscriptionId3, Msisdn, UserIdentityMsisdn, UserIdentifierMsisdn, UserIdentityPublic, UserIdentifier ExternalId , UserIdentifierUserName, UserName, WildCardedPubIdnty)
19	Re 3 Destination Type (MtcHss, ImsHss, LteHss, Pcrf, Ocs, Ofcs, Aaa, UserDefined1, UserDefined2)
20	Routing Entity 3 Search Prefix (Yes, No)
21	Routing Entity 3 Search Blacklist (Yes, No)

"System Options elements" in the FABR Help describes the configuration data elements listed in Table 4-73 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-73 Option CSV Format

Column	Data Description
0	Application Type (Fabr)
1	Option (Keyword)
2	RemoveDestHost (No, Yes)
3	Exclude Space (No, Yes)
4	Allow SubsequentDSR App Invoc (No, Yes)
5	Realm
6	Fqdn
7	Resource Exhaustion Error Code
8	Resource Exhaustion Error Message
9	Resource Exhaustion Vendor ID
10	Unavailable Application Action (ContinueRouting, DefaultRoute, SendAnswer, SendAnsExp)
11	Unavailable Application Route List
12	Unavailable Application Result Code
13	Unavailable Application Error Message
14	Unavailable Application Vendor ID
15	ASCII Excluded List [0]
	(repeated x 20) . . .
33	ASCII Excluded List [19]
35	TBCD Excluded List [0]
	(repeated x 5) . . .
39	TBCD Excluded List [4]
40	Bundling Enabled (Yes, No)
41	Max Bundle Size
42	Prefix Search Enabled (Yes, No)
43	Blacklist Search Enabled (Yes, No)

4.2.4.4 Charging Proxy Application (CPA) CSV File Formats and Contents

Charging Proxy Application (CPA) CSV File Formats

The following tables describe the CSV file content and attribute column positions for all configuration data supported by the CPA Application Type.

"System Options configuration elements" in the Charging Proxy Application (CPA) Help describes the configuration data elements listed in Table 4-74 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-74 System Option CSV Format

Column	Data Description
0	Application Type (Cpa)
1	Option (Keyword)
2	unavailableAction (SendAnswer)
3	unavailableAppResultCode
4	unavailableActionVendorId
5	unavailableActionErrorMessage
6	application InvokedAvpInsertion (Yes, No)
7	shutdownMode (Graceful, Force)
8	shutdownTimer
9	generateAnswerResultCode
10	generateAnswerVendorId
11	generateAnswerErrorMessage
12	behaviorIfSessionLookupError (GenerateAnswer, ContinueRouting)

"Message Copy elements" in the Charging Proxy Application (CPA) Help describes the **Message Copy** configuration data elements listed in Table 4-75 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-75 Message Copy CSV Format

Column	Data Description
0	Application Type (Cpa)
1	Messagecopy (Keyword)
2	messageCopyStatus
3	messageCopyRouteList1
4	messageCopyRouteList2
5	messageCopyRouteList3
6	messageCopyRouteList4
7	messageCopyRouteList5
8	messageCopyRouteList6
9	messageCopyRouteList7
10	messageCopyRouteList8
11	messageCopyRouteList9
12	messageCopyRouteList10

Table 4-75 (Cont.) Message Copy CSV Format

Column	Data Description
13	calledStationIdString1
14	calledStationIdString2
15	calledStationIdString3
16	calledStationIdString4

"SBR elements" describes the **Session Binding Repository** (**SBR**) configuration data elements listed in Table 4-76 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-76 SBR CSV Format

Column	Data Description
0	Application Type (Sbr)
1	Sbrconfig (Keyword)
2	sbdbAuditStartTime
3	sbdbAuditStopTime
4	staleSbdbSessionBindingAge
5	maximumActiveSessionBindings
6	mostlyStalePercent

4.2.4.5 Charging Session Binding Repository (CSBR) CSV File Formats and Contents

The following tables describe the CSV file content and attribute column positions for all configuration data supported by the SBR.

"SBR elements" describes the **Session Binding Repository** (**SBR**) configuration data elements listed in Table 4-76 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-77 SBR CSV Format

Column	Data Description
0	Application Type (CSBR)
1	Sbrconfig (Keyword)
2	sbdbAuditStartTime
3	sbdbAuditStopTime
4	staleSbdbSessionBindingAge
5	maximumActiveSessionBindings
6	mostlyStalePercent

4.2.4.6 IP Front End (IPFE) CSV File Formats and Contents

IP Front End CSV File Formats

The following tables describe the CSV file content and attribute column positions for all configuration data supported by the IP Front End (IPFE) Application Type.

> **Note:**
>
> Both IPFE CSV formats must be included in the file for an IPFE Import operation (Insert or Delete). Bulk Import for IPFE does not support Insert or Delete for only IpfeOption or only IpfeListTsa.

"Configuration Options elements" in the IPFE Help describes the configuration data elements listed in Table 4-78 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-78 IPFE IpfeOption CSV Format

Column	Data Description
0	Application Type
1	Options (Keyword)
2	Ipfe1IpAddress
3	Ipfe2IpAddress
4	Ipfe3IpAddress
5	Ipfe4IpAddress
6	StatSyncTcpPort
7	StateSyncReconnectS
8	RejectOption (tcpreset, drop, icmphostunreachable, icmpportunreachable, icmpadminprohibited)
9	SctpRejectOption (drop, icmphostunreachable, icmpportunreachable, icmpadminprohibited)
10	OverloadStart
11	LeastLoadStart
12	GratuitousArpType
13	Accounting Support (enabled, disabled)
14	ConnectTryPort
15	ConnectTimeoutS
16	ConnectTryIntervalS
17	MonitorProtocol (tcpconnectonly, fullmonitoring, disabled)
18	PacketRateLimit
19	Tsa1DeleteAge
20	Tsa1IPAddress
21	Tsa1IPSecondaryAddress
22	Tsa1IPSecondaryPreferredIpfe
23	Tsa1LoadAlgorithm (hash, roundrobin, leasttraff, leastconns, leastload, leastloadtest)
24	Tsa1PreferredIpfe (1, 2, 3, 4)

Table 4-78 (Cont.) IPFE IpfeOption CSV Format

Column	Data Description
25	Tsa1Protocols (SCTP, TCP, SCTP_AND_TCP)
26	Tsa1TsDisable (0, 1)
27	Tsa1AllowedDeviation (0-50)
28	Tsa1LoadFactorMPS (0-100)
29	Tsa1LoadFactorConn (0-100)
30	Tsa1PeerGroup (enabled, disabled)
31	Tsa1PeerGroupDelta (1-10)
	(fields 19 thru 31 repeated x 31 times) . . .
422	Tsa32DeleteAge
423	Tsa32IPAddress
424	Tsa32IPSecondaryAddress
425	Tsa32IPSecondaryPreferredIpfe
426	Tsa32LoadAlgorithm (hash, roundrobin, leasttraff, leastconns, leastload, leastloadtest)
427	Tsa32PreferredIpfe
428	Tsa32Protocols (SCTP, TCP, SCTP_AND_TCP)
429	Tsa32TsDisable (0, 1)
430	Tsa32AllowedDeviation (0-50)
431	Tsa32LoadFactorMPS (0-100)
432	Tsa32LoadFactorConn (0-100)
433	Tsa32PeerGroup (enabled, disabled)
434	Tsa32PeerGroupDelta (1-10)

"Target Sets configuration elements" in the IPFE Help describes the configuration data elements listed in Table 4-79 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-79 IPFE IpfeListTsa CSV Format

Column	Data Description
0	Application Type (Ipfe)
1	IPListTsa (Keyword)
2	tsa
3	server
4	ipAddress
5	description
6	ipSecondaryAddress
7	Initiator Port Start
8	Initiator Port Mid
9	Initiator Port End

4.2.4.7 Policy and Charging Application (PCA) CSV File Formats and Contents

The following tables describe the CSV file content and attribute column positions for all configuration data supported by the Policy and Charging Application Type.

"PCRFs elements" in the PCA Help describes the configuration data elements listed in Table 4-80 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-80 PCRFs CSV Format

Column	Data Description
0	Application Type (Pca - Policy and Charging Application)
1	Pcrf (Keyword)
2	PCRF Peer Node Name (Key)
3	Comments

"Binding Key Priority elements" in the PCA Help describes the configuration data elements listed in Table 4-81 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-81 Binding Key Priority CSV Format

Column	Data Description
0	Application Type (Pca - Policy and Charging Application)
1	BindPriority (Keyword)
2	Priority 1
3	Binding Key Type 1 (Imsi, Msisdn, Ipv4, Ipv6)
4	Priority 2
5	Binding Key Type 2 (Imsi, Msisdn, Ipv4, Ipv6)
6	Priority 3
7	Binding Key Type 3 (Imsi, Msisdn, Ipv4, Ipv6)
8	Priority 4
9	Binding Key Type 4 (Imsi, Msisdn, Ipv4, Ipv6)

"Site Options elements" and "Network-Wide Options elements" in the PCA Help describes the configuration data elements listed in Table 4-82 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-82 Policy DRA Options CSV Format

Column	Data Description
0	Application Type (Pca - Policy and Charging Application)
1	PdraOptions (Keyword)
2	Enable Topology Hiding
3	Topology Hiding Scope
4	Default Topology Hiding FQDN
5	Default Topology Hiding Realm
6	Topology Hiding Host
7	Topology Hiding Realm
8	Peer Route Table Name
9	Enable PCRF Pooling

Table 4-82 (Cont.) Policy DRA Options CSV Format

Column	Data Description
10	PCRF Pooling Mode
11	Default APN for Non Specific Binding Correlation
12	Early Binding Polling Interval
13	Maximum Early Binding Lifetime
14	Suspect Binding Removal Events Ignore Interval
15	Suspect Binding Removal Events Reset Interval
16	Suspect Binding Removal Events Threshold
17	RAR Origin Host and Realm Option
18	Max Query RAR Rate Per Session Server Group
19	RarAttemptedThreshold
20	Max Release RAR Rate Per Session Server Group
21	Max Attempts Per Release RAR
22	Query RAR Queue Capacity Per Session Server Group
23	Release RAR Queue Capacity Per Session Server Group

"Error Codes elements" in the PCA Help describes the configuration data elements listed in Table 4-83 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-83 PCA Error Codes CSV Format

Column	Data Description
0	Application Type (Pca - Policy and Charging Application)
1	ErrorCodes (Keyword)
2	Error Condition (Key) (PdraUnavailCong, PcaFuncUnavailableOrDisabled, BindingNotFound, UnableToRoute, SbrError, BindingKeyNotFoundCondition, SessionNotFound, MissingOrUnconfiguredApn)
3	Gx/Gxx Result Code
4	Gx/Gxx Vendor ID
5	Rx Result Code
6	Rx Vendor ID
7	S9 Result Code
8	S9 Vendor ID
9	Gx-Prime Result Code
10	Gx-Prime Vendor ID
11	Gy/Ro Result Code
12	Gy/Ro Vendor ID
13	All Result Code
14	All Vendor ID

"PCA Access Point Names elements" in the PCA Help describes the configuration data elements listed in Table 4-84 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-84 PCA Access Point Names CSV Format

Column	Data Description
0	Application Type (Pca - Policy and Charging Application)
1	AccessPointName (Keyword)
2	Access Point Name
3	Function Name
4	PCRF Pool Name
5	Maximum Allowed Sessions per IMSI
6	Per IMSI Session Exceeded Treatment (Reject, Route)
7	Stale Session Timeout
8	PCRF Sub-Pool Count (Read Only)
9	Last Updated Timestamp (Read Only)

"Alarm Settings elements" in the PCA Help describes the configuration data elements listed in Table 4-85 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-85 Alarm Settings CSV Format

Column	Data Description
0	Application Type (Pca - Policy and Charging Application)
1	AlarmSupp (Keyword)
2	Alarm Name 1 (PcaIngressMessageRate, OutstandingPdraSessionsThresholdExceeded)
3	Critical Alarm Threshold (Percent) 1
4	Suppress Critical 1 (Yes, No)
5	Major Alarm Threshold (Percent) 1
6	Suppress Major 1 (Yes, No)
7	Minor Alarm Threshold (Percent) 1
8	Suppress Minor 1 (Yes, No)
9	Alarm Name 2 (PsbrActiveSessionsThreshold)
10	Critical Alarm Threshold (Percent) 2
11	Suppress Critical 2 (Yes, No)
12	Major Alarm Threshold (Percent) 2
13	Suppress Major 2 (Yes, No)
14	Minor Alarm Threshold (Percent) 1
15	Suppress Minor 2 (Yes, No)
16	Alarm Name 3 (PsbrActiveBindingsThreshold)
17	Critical Alarm Threshold (Percent) 3
18	Suppress Critical 3 (Yes, No)
19	Major Alarm Threshold (Percent) 3
20	Suppress Major 3 (Yes, No)

Table 4-85 (Cont.) Alarm Settings CSV Format

Column	Data Description
21	Minor Alarm Threshold (Percent) 3
22	Suppress Minor 3 (Yes, No)

"Congestion Options elements" in the PCA Help describes the configuration data elements listed in Table 4-86 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-86 Congestion Options CSV Format

Column	Data Description
0	Application Type (Pca - Policy and Charging Application)
1	CongOptions (Keyword)
2	Critical Alarm Onset Threshold 1
3	Critical Alarm Abatement Threshold 1
4	Major Alarm Onset Threshold 1
5	Major Alarm Abatement Threshold 1
6	Minor Alarm Onset Threshold 1
7	Minor Alarm Abatement Threshold 1
8	Congestion Level 1- Discard Session Creation Requests
9	Congestion Level 1- Discard Session Update Requests
10	Congestion Level 1- Discard Session Terminate Requests
11	Congestion Level 2- Discard Session Creation Requests
12	Congestion Level 2- Discard Session Update Requests
13	Congestion Level 2- Discard Session Terminate Requests
14	Congestion Level 3- Discard Session Creation Requests
15	Congestion Level 3- Discard Session Update Requests
16	Congestion Level 3- Discard Session Terminate Requests

"**PCRF Pools** elements" in the PCA Help describes the PCRF Pools CSV Record elements listed in Table 4-87 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-87 PCRF Pools CSV Record Format

Column	Data Description
0	Application Type (Pca - Policy and Charging Application)

Table 4-87 (Cont.) PCRF Pools CSV Record Format

Column	Data Description
1	PcrfPool (Keyword)
2	PCRF Pool Name (Key)
3	Is Pcrf SubPool
4	Comments

"**PCRF Sub-Pool** Selection Rules elements" in the PCA Help describes the PCRF Sub-Pool Selection Rules CSV Record elements listed in Table 4-88 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-88 PCRF Sub-Pool Selection Rules CSV Record Format

Column	Data Description
0	Application Type (Pca - Policy and Charging Application)
1	SubPoolSelRules (Keyword)
2	Rule Name (Key)
3	Priority
4	PCRF Pool Name
5	Condition Parameter (Origin-Host)
6	Condition Operator (Equals, StartsWith, EndsWith)
7	Condition Value
8	PCRF Sub-Pool Name
9	Last Updated Timestamp (Read Only)

"PCRF Pool To PRT Mapping CSV Record elements" in the PCA Help describes the PCRF Pool To PRT Mapping CSV Record elements listed in Table 4-89 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-89 PCRF Pool To PRT Mapping CSV Record Format

Column	Data Description
0	Application Type (Pca - Policy and Charging Application)
1	PcrfPoolToPrt (Keyword)
2	PCRF Pool Name (Key)
3	Peer Route Table Name

"General Options CSV Record elements" in the PCA Help describes the General Options CSV Record elements listed in Table 4-90 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-90 General Options CSV Record Format

Column	Data Description
0	Application Type (Pca - Policy and Charging Application)
1	GeneralOptions (Keyword)
2	Policy DRA Enabled
3	Online Charging DRA Enabled
4	Number of Policy Binding Server Groups
5	Number of Policy and Charging Session Sever Groups
6	Default Stale Session Timeout
7	Maximum Audit Frequency

"Online Charging DRA OCS Session State CSV Record elements" in the PCA Help describes the OCS Session State CSV Record elements listed in Table 4-91 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-91 Online Charging DRA OCS Session State CSV Record Format

Column	Data Description
0	Application Type (Pca - Policy and Charging Application)
1	OcsSessionState (Keyword)
2	OCS Realm
3	OCS FQDN
4	OCS Session State Enabled

"Online Charging DRA Realm CSV Record elements" in the PCA Help describes the OC-DRA Realm CSV Record elements listed in Table 4-92 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-92 Online Charging DRA Realm CSV Record Format

Column	Data Description
0	Application Type (Pca - Policy and Charging Application)
1	Realm (Keyword)
2	OCS Realm
3	Comment

"Online Charging DRA Network-Wide Options CSV Record elements" in the PCA Help describes the OC-DRA Network-Wide Options CSV Record elements listed in Table 4-93 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-93 Online Charging DRA Network-Wide Options CSV Record Format

Column	Data Description
0	Application Type (Pca - Policy and Charging Application)
1	OcdraNwOptions (Keyword)
2	Session State Scope (None, All Messages, Specific Message)
3	Session State Unavailable Action (Send Answer, Route To Peer)
4	OCS Pool Selection Mode (Single Pool, Multiple Pools)

"PCA Policy Clients Options CSV Record elements" in the PCA Help describes the OC-DRA Network-Wide Options CSV Record elements listed in Table 4-94 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-94 PDRA Policy Clients CSV Record Format

Column	Data Description
0	Application Type (Pca - Policy and Charging Application)
1	PolicyClients (Keyword)
2	Policy Client Peer Node Name
3	Topology Hiding Enabled
4	Comments

"Online Charging DRA OCSs CSV Record elements" in the PCA Help describes the OC-DRA OCSs CSV Record elements listed in Table 4-95 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-95 Online Charging DRA OCSs CSV Record Format

Column	Data Description
0	Application Type (Pca - Policy and Charging Application)
1	Ocs (Keyword)
2	OCS Peer Node Names
3	Comments

"Online Charging DRA CTFs CSV Record elements" in the PCA Help describes the OC-DRA CTFs CSV Record elements listed in Table 4-96 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-96 Online Charging DRA CTFs CSV Record Format

Column	Data Description
0	Application Type (Pca - Policy and Charging Application)

Table 4-96 (Cont.) Online Charging DRA CTFs CSV Record Format

Column	Data Description
1	Ctf (Keyword)
2	CTF Peer Node Names
3	Comments

"Suspect Binding Removal Rules Elements" in the PCA Help describes the Suspect Binding Removal Rules CSV elements listed in Table 4-97 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-97 Suspect Binding Removal Rules CSV Record Format

Column	Data Description
0	Application Type (Pca - Policy and Charging Application)
1	SuspectBindingRemovalRules (Keyword)
2	Rule Name (Key)
3	Application Name
4	Command Code
5	Error Scenario Category
6	Result Code
7	Vendor ID
8	Remove Suspect Binding Immediately
9	Comments

4.2.4.8 MAP-Diameter Interworkng Function CSV File Formats and Contents

The following tabiles describe the CSV file content and attribute column positions for all configuration data supported by the MDIWF Application Type, for the MD-IWF and DM-IWF applications.

"Diameter Realm elements" in the MAP-Diameter Interworking Help describes the configuration data elements listed in Table 4-98 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-98 Mapiwf Diameter Realm CSV Format

Column	Data Description
0	Application Type (Mapiwf - MAP-Diameter Interworking)
1	DiameterRealm (Keyword)
2	Realm
3	Network (ANSI, ITUI, ITUN)
4	MGT Conversion Needed (Yes, No, NA)

"Diameter Identity Global Title Address elements" in the MAP-Diameter Interworking Help describes the configuration data elements listed in Table 4-99 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-99 Mapiwf DiamIdGta CSV Format

Column	Data Description
0	Application Type (Mapiwf - MAP-Diameter Interworking)
1	DiamIdGta (Keyword)
2	Host
3	Realm
4	GTA

"Global Title Address Range to Point Code elements" in the MAP-Diameter Interworking Help describes the configuration data elements listed in Table 4-100 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-100 Mapiwf GtaRangeToPc CSV Format

Column	Data Description
0	Application Type (Mapiwf - MAP-Diameter Interworking)
1	GtaRangeToPc (Keyword)
2	Default Configuration (Yes, No)
3	GTA Start
4	GTA End
5	Network (ANSI, ITUI, ITUN)
6	Primary Point Code
7	Secondary Point Code
8	Load Sharing (Solitary, ActiveActive, ActiveStandby)

"MD-IWF Options elements" in the MAP-Diameter Interworking Help describes the configuration data elements listed in Table 4-101Table 4-82 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-101 Mapiwf MD-IWF Option CSV Format

Column	Data Description
0	Application Type (Mapiwf - MAP-Diameter Interworking)
1	MdiwfOption (Keyword)
2	Diameter Timeout
3	MAP Timeout
4	EIR Host Name
5	EIR Realm
6	IWF HSS Destination Host
7	IWF HSS Destination Realm
8	EIR Destination GTA
9	Shutdown Mode (Forced, Graceful)
10	Shutdown Timer

Table 4-101 (Cont.) Mapiwf MD-IWF Option CSV Format

Column	Data Description
11	ECR No Destination Host Action (Discard, SendAnswer, TranslateUsingEir)
12	ECR No Destination Host Result Code
13	ECR No Destination Host Vendor ID
14	ECR No Destination Host Error String
15	ECR Destination Host Action (Discard, SendAnswer, TranslateUsingEir)
16	ECR Destination Host Result Code
17	ECR Destination Host Vendor ID
18	ECR Destination Host Error String
19	DSR Node GTA (entityId_1)
20	DSR Node GTA (gta_1)
	-entityId and gta repeated total of 32 times…
81	DSR Node GTA (entityId_32)
82	DSR Node GTA (gta_32)

"DM-IWF Option elements" in the MAP-Diameter Interworking Help describes the configuration data elements listed in Table 4-102 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-102 Mapiwf DM-IWF Option CSV Format

Column	Data Description
0	Application Type (Mapiwf - MAP-Diameter Interworking)
1	DmiwfOption (Keyword)
2	Unavailable Action (ContinueRouting, DefaultRoute, SendAnswer)
3	Route List Name
4	Unavailable Action Result Code
5	Unavailable Action Vendor ID
6	Unavailable Action Error Message
7	AVP Insertion (Yes, No)
8	Shutdown Mode (Forced, Graceful)
9	Shutdown Timer
10	Realm
11	FQDN
12	Application Route Table (ART)
13	Peer Route Table (PRT)

"Diameter Exception elements" in the MAP-Diameter Interworking Help describes the configuration data elements listed in Table 4-103 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-103 Mapiwf Diameter Exception CSV Format

Column	Data Description
0	Application Type (Mapiwf - MAP-Diameter Interworking)
1	DiameterException (Keyword)
2	Exception Type (InternalProcessingError, DiamToMapTransTimeout, TranslationError)
3	Exception Name
4	Action (Discard, SendAnswer, ApplyUnavailAction)
5	Result Code
6	Vendor ID
7	Error String

"MAP Exception elements" in the MAP-Diameter Interworking Help describes the configuration data elements listed in Table 4-104 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-104 Mapiwf MAP Exception CSV Format

Column	Data Description
0	Application Type (Mapiwf - MAP-Diameter Interworking)
1	MapException (Keyword)
2	Exception Type (InternalProcessingError, MapToDiamTransTimeout, TranslationError
3	Exception Name
4	Action (Discard, SendAnswer)
5	Abort Reason (UserDefined, ContextNotSupported, DialogRefused)
6	Error Cause (SystemFailure, DataMissing, UnexpectedDataValue, FacilityNotSupported, IncompatibleTerminal, ResourceLimitation)
7	Abort Choice (SpecificReason, ResourceLimitation, ResourceUnavailable)
8	Resource Unavailable Reason (ShortTermLimitation, LongTermLimitation)

"CCNDC Mapping elements" in the MAP-Diameter Interworking Help describes the configuration data elements listed in Table 4-86 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-105 Mapiwf CCNDC Mapping CSV Format

Column	Data Description
0	Application Type (Mapiwf - MAP-Diameter Interworking)
1	CcNdcMapping (Keyword)
2	Ccndc
3	Realm

Table 4-105 (Cont.) Mapiwf CCNDC Mapping CSV Format

Column	Data Description
4	Description

4.2.4.9 Gateway Location Application (GLA) CSV File Formats and Contents

"Configure GLA Exceptions elements" in the GLA Help describes the Gateway Location Application (GLA) CSV Record elements listed in Table 4-106 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-106 GLA Exception CSV Record Format

Column	Data Description
0	Application Type (GLA)
1	Exception (Keyword)
2	Exception Type(EdlDecodeError, UnknownAppId, UnknownCmdCode, ImsiMsisdnPresent, ImsiMsisdnAbsent, PsbrQueryFailure, PsbrQueryTimeout, ResourceExhausted, UnableToProcess)
3	Exception Name
4	Action (SendAnswer, SendAnsExp, AbandonRequest)
5	Result Code
6	Vendor ID
7	Error String

"Configure GLA System Options elements" in the GLA Help describes the Gateway Location Application (GLA) CSV Record elements listed in Table 4-107 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-107 GLA Option CSV Record Format

Column	Data Description
0	Application Type (GLA)
1	Option (Keyword)
2	Unavailable Action (ContinueRouting, DefaultRoute, SendAnswer, Discard)
3	Unavailable Application Result Code
4	Unavailable Application Vendor ID
5	Unavailable Application Error Message
6	Realm
7	FQDN
8	Unavailable Application Route List

"Configure GLA Alarm Settings elements" in the GLA Help describes the Gateway Location Application (GLA) CSV Record elements listed in Table 4-108 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-108 GLA Alarm CSV Record Format

Column	Data Description
0	Application Type (GLA)
1	Alarm (Keyword)
2	Alarm Type (RxGlaMsgRate)
3	Severity(Critical, Major, Minor)
4	Action(Set, Clear)
5	Level

4.2.4.10 RADIUS CSV File Formats and Contents

RADIUS CSV File Formats

The following tables describe the CSV file content and attribute field or column positions for all RADIUS configuration data supported by the RADIUS Application Type.

"RADIUS Message Authentication Cfg Set elements" in the *RADIUS User's Guide* describes the configuration data elements listed in Table 4-109 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-109 RADIUS Message Authentication Cfg Sets CSV Format

Column	Data Description
0	Application Type (RADIUS)
1	MsgAuthCfgSet (Keyword)
2	Message Authenticator Set Name (Keyword)
3	Encode Message-Authenticator in egress CoA-Request (YES, NO)
4	Encode Message-Authenticator in egress Disconnect-Request (YES, NO)
5	Encode Message-Authenticator in response to Status-Server (YES, NO)
6	Encode Message-Authenticator in egress CoA-NACK (YES, NO)
7	Encode Message-Authenticator in egress CoA-ACK (YES, NO)
8	Encode Message-Authenticator in egress Disconnect-ACK (YES, NO)
9	Encode Message-Authenticator in egress Disconnect NACK (YES, NO)
10	Encode Message-Authenticator in egress Access-Request (YES, NO)
11	Encode Message-Authenticator in egress Access-Accept (YES, NO)
12	Encode Message-Authenticator in egress Access-Reject (YES, NO)
13	Encode Message-Authenticator in egress Access-Challenge (YES, NO)

"RADIUS Shared Secret Cfg Set elements" in the *RADIUS User's Guide* describes the configuration data elements listed in Table 4-110 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-110 RADIUS Shared Secret Cfg Set CSV Format

Column	Data Description
0	Application Type (RADIUS)
1	SharedSecretCfgSet (Keyword)
2	Shared Secret Configuration Set Name
3	Shared Secret Configuration Set Key
4	Iv
5	Index

"RADIUS Ingress Status Server Cfg Set elements" in the *RADIUS User's Guide* describes the configuration data elements listed in Table 4-111 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-111 RADIUS Ingress Status Server Cfg Set CSV Format

Column	Data Description
0	Application Type (RADIUS)
1	IngressStatusServerCfgSet (Keyword)
2	Ingress Status-Server Set Name
3	Send Response to Status-Server (Yes, No)
4	Status Server Response Message Type (AccountingResponse, AccessAccept)

"RADIUS Message Conversion Cfg Set elements" in the *RADIUS User's Guide* describes the data elements listed in Table 4-112 and considerations for the data elements that must be observed when the elements are edited in the CSV files.

> **Note:**
>
> Import of the Message Conversion Cfg Set is not supported because user configuration of this data is not supported.

Table 4-112 RADIUS Message Conversion Cfg Set CSV Format

Column	Data Description
0	Application Type (RADIUS)
1	MsgConvCfgSet (Keyword)
2	Message Conversion Set Name
3	Message Conversion Set Rules

"RADIUS NAS Node elements" in the *RADIUS User's Guide* describes the configuration data elements listed in Table 4-113 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-113 RADIUS NAS Node CSV Format

Column	Data Description
0	Application Type (RADIUS)
1	NasNode (Keyword)
2	NAS Node Name
3	FQDN
4	Realm
5	NAS Node Identifier
6	NAS IP Addresses [0]
	(repeated x 4)
9	NAS IP Addresses [3]

"RADIUS Network Options elements" in the *RADIUS User's Guide* describes the configuration data elements listed in Table 4-114 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-114 RADIUS Network Options CSV Format

Column	Data Description
0	Application Type (RADIUS)
1	NetworkOptions (Keyword)
2	Name
3	Shared Secret
4	Iv
5	Index

4.2.4.11 Subscriber Binding Repository (SBR) CSV File Formats and Contents

The following tables describe the CSV file content and attribute column positions for all configuration data supported by the SBR.

"SBR Database Elements" in the PCA Help describes the SBR Database CSV elements listed in Table 4-115 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-115 SBR Database CSV Record Format

Column	Data Description
0	Application Type (SBR)
1	SbrDatabase (Keyword)
2	SBR Database Name (Key)
3	Database Type (Binding or Session)
4	Resource Domain Name
5	Number of Server Groups
6	Place Association Name

"SBR Database Resizing Elements" in the PCA Help describes the SBR Database Resizing CSV elements listed in Table 4-116 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-116 SBR Database Resizing CSV Record Format

Column	Data Description
0	Application Type (SBR)
1	SbrDatabaseResizingPlan (Keyword)
2	SBR Database Resizing Plan Name (Key)
3	SBR Database Name
4	Target Resource Domain Name
5	Target Number of Server Groups

"SBR Data Migration Plan Elements" in the PCA Help describes the SBR Migration Plan CSV elements listed in Table 4-117 and configuration considerations for the data elements that must be observed when the elements are edited in the CSV files.

Table 4-117 SBR Data Migration Plan CSV Record Format

Column	Data Description
0	Application Type (SBR)
1	SbrDataMigrationPlan (Keyword)
2	SBR Data Migration Plan Name (Key)
3	Migration Type
4	Initial SBR Database Name
5	Target SBR Database Name

5
Visualization Server

Visualization Server displays all the logs in a graphical format. It logs vulnerable messages into a log file on MPs. The Active SO collects these log files from MPs and exports them in the configured path of Visualization Server.

5.1 Visualization Server Elements

The following table describes elements required for configuring Visualization Server for logging vulnerable messages.

Table 5-1 Visualization Server Elements

Element	Description
Task Name	Periodic log export task name. The task name must be unique for each entry.
Hostname List	IP address of the remote server. This value must be a valid IP address that can be pinged. You can add multiple IP addresses by using the **Add** button.
Username	User name to access the export server. The user name must be common for all the remote servers.
Remote Directory Path	Filesystem directory **absolute path** on the export server. For example, `/root/ftp/`. The exported data files are transferred to this directory.
Source Directory	Source directory path in the file management area on the local server. The files are transferred from the source directory to the remote export server. • For VSTP = $filemgmt/export/SecurityLogs/vstp_logs • For DSA = $filemgmt/export/SecurityLogs/dca_logs
Key exchange Status	The status of key exchange is done with remote servers. If the status is **PENDING**, file export is not possible. Provide a common password for the user name of the remote servers to change the status to **COMPLETE**. The key exchange status is **PARTIAL** when the key exchange is done for one or more servers but not for all servers. By default, this status value is **PENDING**.
Upload Frequency	Indicates the frequency of exporting files. By default, in every 2 minutes, all the files are exported to the visualization server.

5.2 Configuring Visualization Server for Logging Vulnerable Messages

1. From the SO GUI main menu, click **Diameter Common**, and then **Visualization Server**.
2. In the Table Description: Visualization Server Table section, click **Insert**.

3. In the Adding a new Visualization Server Task Configuration section, complete the following configuration as described in Visualization Server Elements:
   - **Task Name**: Enter a task name.
   - **Hostname List**: Enter the IP address of the remote server.
   - **Username**: Enter an user name to access the export server.
   - **Key Exchange Status**: Ensure that the default status is **PENDING**.
   - **Remote Directory Path**: Enter the directory path for transferring exported data files.
   - **Source Directory**: Enter the source directory path.
   - **Upload Frequency**: Ensure that the default value is set to 2 minutes.
4. Click one of the following buttons:
   - **OK**: For the changes to take effect.
     A record with the task name is added to Table Description: Visualization Server Table.
   - **Cancel**: To go back to the previous page.

Perform the ssh key exchange so that jobs start sending the data automatically to all Visualization Servers in a round-robin method.

5.3 Editing the Existing Visualization Server Configuration

Perform this procedure to modify the existing configuration settings of a specific export job.

Ensure that Visualization Server is configured for logging vulnerable messages.

1. From the SO GUI main menu, click **Diameter Common**, and then **Visualization Server**.
2. From the Table Description: Visualization Server Table, select a task name that you want to edit, and then click **Edit**.
3. Modify the required fields.

   Note that some options cannot be modified. The buttons, text boxes, or lists are grayed out. Some options might become active based on other selections, for example, **Upload Frequency**.
4. Click one of the following buttons:
   - **OK**: For the changes to take effect.
   - **Cancel**: To go back to the previous page.

5.4 Deleting an Existing Visualization Server Configuration

Perform this procedure to remove an existing configuration settings of a specific export job.

Ensure that Visualization Server is configured for logging vulnerable messages.

1. From the SO GUI main menu, click **Diameter Common**, and then **Visualization Server**.
2. From the Table Description: Visualization Server Table, select a task name that you want to remove.
3. Click **Delete** and respond to the displayed confirmation dialogue box.
4. Click **OK**.

5.5 Generating SSH Key Exchange

Perform this procedure to generate the public key of the remote server.

Ensure that Visualization Server is configured for logging vulnerable messages.

1. From the SO GUI main menu, click **Diameter Common**, and then **Visualization Server**.
2. From the Table Description: Visualization Server Table, select a task name for generating the SSH key.
3. Click **SSH Key Exchange** and respond to the displayed dialogue box and enter the remote server password.
4. Click **OK**.