

Diamproxy Peer Connection Status Audit

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Feature Summary and Revision History

Summary Data

Applicable Product(s) or Functional Area	P-GW
Applicable Platform(s)	ASR 5500
Feature Default	Disabled - Configuration Required
Related Changes in This Release	Not Applicable
Related Documentation	• *Command Line Interface Reference* • *P-GW Administration Guide*

Revision History

Revision Details	Release
First introduced.	21.3

Feature Description

The TCP connections between the Diameter proxy (Diamproxy) and the configured peers for different endpoints can either be in Open or Closed state. The state of these TCP connections for every peer (or endpoints) is maintained at the Diamproxy and the clients (sessmgrs/aaamgrs), for enabling communication with these peers through the Diamproxy. If the connection status of sessmgrs/aaamgrs is IDLE and the Diamproxy is in

OPEN state, then the Diameter messaging failures, resulting in call failures, can be seen. This is the primary reason an audit mechanism and auto-correction is required and useful.

Due to network conditions, the connection state can change randomly. If this change is not communicated appropriately, it can result in discrepancies regarding connection state at the clients. Similarly, when a new peer is configured, the clients initiates PIN Peer messages to Diamproxy to notify the new peer configuration. Due to the throttling done at the Diamproxy, some of the PIN Peer messages get dropped. This can also result in discrepancies in connection state at the clients.

This feature helps in auto-detecting, and correcting these discrepancies by Peer Connection Status Audit mechanism between the Diamproxy and Diabase clients. The Diamproxy periodically publishes current connection status of Diameter peers across all endpoints to the registered Diabase clients (sessmgr/aaamgr tasks). The Diabase client audits the current connection status and takes corrective action if there is any discrepancy in connection status.

How It Works

Following is a brief overview of how this feature works:

1. The Diamproxy initiates endpoint peer connection status audit process with sessmgr and aaamgr.
2. If there is any discrepancy in peer connection status, then the sessmgr and aaamgr initiate an auto-corrective action.
3. Any discrepancy in peer connection status between Diamproxy and sessmgr/aaamgr gets corrected within pre-defined time interval.
4. After any type of recovery event and peer connection status audit process, there is no race condition between peer connection status reconciliation during startup.

The Audit is delayed by 3 minutes for connection stabilization when any of the following events occur:

1. Diamproxy tasks starts.
2. Diamproxy task restarts.
3. ICSR switchover -> Chassis state moves from Standby to Active.
4. Planned card migration -> Start AUDIT 3 minutes from migration end time.
5. Unplanned card migration -> Same as Diamproxy task restart.

Configuring Diamproxy Peer Connection Status Audit

This section provides information about CLI commands available in support of the feature.

Enabling Connection Status Audit Interval

Use the following CLI commands under Global Configuration Mode to enable the connection status audit interval:

```
configure
  diameter-proxy conn-audit interval audit_interval
  exit
```

Notes:

- **diameter-proxy**: Specifies the Diamproxy related configurations.
- **conn-audit**: Specifies the periodic connection status audit processes. Disabled by default.
- **interval** *audit_interval*: Specifies the connection status audit interval in minutes in the range of 1 through 10. Recommended value is 2 minutes.
- If previously configured, use the **default diameter-proxy conn-audit** CLI command to disable Diamproxy Peer Connection Status Audit with Diabase clients.
- Enabling Diamproxy Peer Connection Status Audit with Diabase clients might affect performance of the services using Diameter interface.

Verifying the Diamproxy Peer Connection Status Audit

Use the following CLI command to verify if the connection status is in SYNC at all Diameter peers.

- **show diameter peers full debug**