

P-GW Buffering Optimization

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Feature Summary and Revision History

Summary Data

Applicable Product(s) or Functional Area	P-GW
Applicable Platform(s)	• ASR 5500 • VPC- DI • VPC- SI
Feature Default	Enabled - Always-on
Related Changes in This Release	Not Applicable
Related Documentation	• *Command Line Interface Reference* • *P-GW Administration Guide*

Revision History

Revision Details	Release
First Introduced	21.22.3

Feature Description

The P-GW Buffering Optimization enables the P-GW to handle the Presence Reporting Area (PRA) messages efficiently. When two or more PRAs are received, while UBResp is still pending, there are chances that P-GW buffer queue can become full or even a message drop can happen. This enhancement enables the PRA response from Policy and Charging Rules Function (PCRF) to be handled efficiently as the chances of message drop is less.

When a new message arrives, the P-GW merges the message with the existing similar type of message in the queue. This allows the P-GW to process similar type of messages at the same time without increasing the queue size and reducing the message drop ratio. When messages are read from the queue, the Gx Rule Level Attribute -value pairs (AVPs) defined actions are triggered. The Rule Level AVPs validity is not checked when messages are buffered.

Relationship to Other Feature

The P-GW Buffering Optimization feature is related to P-GW Buffering Mechanism functionality. For details, see the *P-GW Buffering Mechanism* chapter in the *P-GW Administration Guide*.

How it Works

Under Active Charging Service (ACS) mode, a CLI command - **optimze-update** is enabled or disbaled to enable or disable the buffering mechanism.

Configuring the P-GW Buffering Optimization

Use the following configuration to enable or disable the P-GW buffering optimization to process the similar type of messages in the queue.

```
configure
          active-charging service service_name
            [ no ] policy control optimze-update pra-change
        end
```

NOTES:

- **optimize-update**: Enables the optimization for multiple policies received from PCRF, when the earlier response is pending. Default is Disabled.
- **no**: Disables the optimization for multiple policies.
- **pra-change**: Enables policy optimization only during the Presence Reporting Area (PRA) change.

Monitoring and Troubleshooting

This section provides information on how to monitor and troubleshoot using show commands to support this feature.

Show Commands and Outputs

This section provides information regarding show commands and their outputs for this feature.

show Active-Charging Sessions Full All

The output of the Show Active-Charging Sessions Full All.

Table 1: show active-charging sessions full all Command Output Descriptions

Field	Description
Current P-GW-Buffer Queue Length	Displays the currently utilized queue length.
Total P-GW Buffer Merge Count	Displays the merged count of PRA messages.

show Active-Charging Service All

The output of the Show Active-Charging Service All.

Table 2: show active-charging service all Command Output Descriptions

Field	Description
optimize-update	Enables multiple policy optimization.
pra-change	Enables optimization policies for PRA changes.