

P-GW Engineering Rules

This appendix provides PDN Gateway-specific engineering rules or guidelines that must be considered prior to configuring the ASR 5500 for your network deployment. General and network-specific rules are located in the appendix of the *System Administration and Configuration Guide* for the specific network type.

The following topics are included:

- Interface and Port Rules, on page 1
- P-GW Context and Service Rules, on page 2
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Interface and Port Rules

The rules discussed in this section pertain to the Ethernet 10/100 line card, the Ethernet 1000 line card and the four-port Quad Gig-E line card and the type of interfaces they facilitate, regardless of the application.

S2a Interface Rules

This section describes the engineering rules for the S2a interface for communications between the Mobility Access Gateway (MAG) service residing on the HSGW and the Local Mobility Anchor (LMA) service residing on the P-GW.

LMA to MAG

The following engineering rules apply to the S2a interface from the LMA service to the MAG service residing on the HSGW:

- An S2a interface is created once the IP address of a logical interface is bound to an LMA service.
- The logical interface(s) that will be used to facilitate the S2a interface(s) must be configured within an ingress context.
- LMA services must be configured within an ingress context.
- Depending on the services offered to the subscriber, the number of sessions facilitated by the S2ainterface can be limited in order to allow higher bandwidth per subscriber.

S5/S8 Interface Rules (GTP)

The following engineering rule applies to the S5/S8 interface from the P-GW to the S-GW:

- P-GW preserves an IP address between S2a interface (PMIPv6) and S5/S8 interface (GTP) when the user moves between Wi-Fi and LTE if a common P-GW is used as the anchor point between the two services.

P-GW Context and Service Rules

The following engineering rules apply to services configured within the system:

- A maximum of 256 services (regardless of type) can be configured per system.



Caution Large numbers of services greatly increase the complexity of management and may impact overall system performance (i.e. resulting from such things as system handoffs). Therefore, it is recommended that a large number of services only be configured if your application absolutely requires it. Please contact your local service representative for more information.

- The system supports unlimited peer HSGW/MAG addresses per P-GW.
  - The system maintains statistics for a maximum of 8192 peer HSGWs per P-GW service.
  - If more than 8192 HSGWs are attached, older statistics are identified and overwritten.
  - PMIPv6 does not support any peer level statistics (per MAG level statistics).
- The system supports 65,000 S-GW addresses per P-GW.
  - The system maintains statistics for all peer S-GWs per P-GW service.
- The system maintains statistics for a maximum of 64,000 peer P-GWs per HSGW or S-GW service.
- There are a maximum of 8 P-GW assignment tables per context and per chassis.
- The total number of entries per table and per chassis is limited to 256.

P-GW Subscriber Rules

The following engineering rule applies to subscribers configured within the system:

- Default subscriber templates may be configured on a per P-GW service.