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Cisco PGW Packet Data Network Gateway



Strong, Reliable Support for Mobile Networks

Cisco Packet Data Network Gateway (PGW) is a critical network function for the 4G mobile core network, known as the evolved packet core (EPC). The PGW acts as the interface between the LTE network and other packet data networks, such as the Internet or SIP-based IMS networks.. The PGW serves as the anchor point for network mobility and:

- Acts as the Policy and Charging Enforcement Function (PCEF)
- Manages quality of service (QoS)
- Provides deep-packet inspection and lawful intercept

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The PGW function is supported on the Cisco ASR 5000 Series and delivers the high performance throughput, call transaction rates, packet processing, and significant memory resources required for mobile broadband.

EPC: Defining a Simplified Mobile Network

EPC specifications define a simplified network architecture. The Cisco PGW can further simplify the network acting as a standalone element or integrated with other EPC elements, such as:

- Mobility management entity (MME)
- Serving gateway (SGW)

By combining these functions into a single carrier-class platform, like the ASR 5000, operators can reduce signaling overhead, distribute session management, and maximize the control and user plane capabilities.

PGW Primary Features

- Integration of multiple core network functions in a single node
- Multiple instances of the PGW can enable call localization and local breakout
- High performance across all parameters signaling, throughput, density, and latency
- Integrated in-line services
- Support for enhanced content charging, content filtering with blocklisting, dynamic network-based traffic optimization, application detection and optimization, stateful firewall, NAT translation, and lawful intercept
- High-availability helps to ensure subscriber satisfaction and 99.999 percent system availability

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