



Cisco ASR 1000 Series Aggregation Services Routers

Simplify Edge-Based Service Delivery with Cisco ASR 1000 Series

Aggregation Services Router: A New Price-Performance Class

The Cisco® ASR 1000 Series Aggregation Services Router is the first platform to use the new Cisco QuantumFlow Processor, a router engine designed for edge-based service delivery. The Cisco ASR 1000 Series can be deployed as customer premises equipment (CPE) at the customer edge or used to deliver complex residential quad-play or business services from the provider edge.

The Cisco ASR 1000 Series offers an exceptional price-performance class:

- Compact service routing scaling from 2 rack units (2RU) with 5-Gbps forwarding capacity to 6RU with 20-Gbps or greater performance
- Integrated on-chip service capability
- Carrier-class high availability with In-Service Software Upgrade (ISSU) without the need for redundant hardware
- Modular and resilient hardware and software architecture with control and data-plane separation

Because network complexity is increasing as end-user services such as voice over IP (VoIP), video, and security proliferate, aggregation services at the edge require an entirely new category of network processors. The innovative Cisco QuantumFlow Processor uniquely provides a fully integrated and programmable router engine designed to unify:

- Massive multithreaded parallel processing for line-rate forwarding with features enabled.
- Hierarchical quality-of-service (QoS) capability that scales to support more than 128,000 queues
- Integrated on-chip service delivery and easy programmability

- Full packet processing for Deep Packet Inspection (DPI)
- Dual low-latency queues to enable both voice and video services to be prioritized over other data traffic

Benefits for Service Providers

Network operators deploying the Cisco ASR 1000 Series can realize the following benefits:

- Fewer customer-site visits: Service delivery is instantaneous because Session Border Control, firewall, IP Security (IPsec), DPI, and other emerging services can be remotely enabled and require only licenses to activate.
- New revenue-generating services: New service opportunities include managed or hosted Cisco TelePresence (using Cisco TelePresence equipment), security, and VPN
- Lower operating costs: Both managed and hosted services can be supported by identical infrastructure and operating environments, simplifying training and network configurations, and reducing spares.
- Simplified network operations are enabled by ISSU, even for single route processor configurations.
- Lower environmental impact: Integrated service delivery, compact form factor, and high scalability reduce power consumption and minimize network carbon footprint.

Cisco ASR 1000 Series Components

The Cisco ASR 1000 Series offers modular hardware and software and has all the elements of a true carrier-class routing product. A common hardware and software architecture and common components are used across the product series. Primary components of the Cisco ASR 1000 Series include:

- Chassis: Available in 2RU, 4RU, and 6RU sizes with redundant AC or DC power supplies.
- Route processor card: The route processor runs the router control plane including processing of network control packets, computation of routes, and connection setup.
- Embedded services processor card: This processor includes the Cisco QuantumFlow Processor chip set and provides forwarding, services, and traffic management (QoS) capabilities.
- SPA interface processor (SIP): The SIP houses the shared port adapters (SPAs) in the system; each SIP can accommodate up to four half-height SPAs
- Shared port adapters: SPAs enable modular interface flexibility across multiple Cisco platforms, including copper, Ethernet, Packet-over-SONET/SDH (PoS), and ATM interfaces.

Why Cisco?

With more than 20 years of experience in network technology leadership and innovation, Cisco is uniquely positioned to help service providers deliver superior service while reducing operating expenses. The Cisco ASR 1000 Series is based on the successful designs of existing Cisco IP Next-Generation Network (IP NGN) platforms, including the Cisco 7600 Series Routers, Cisco 12000 Series Routers, and Cisco CRS-1 Carrier Routing Systems. Take advantage of the Cisco IP NGN architecture to converge your networks, services, and applications for greater revenue, reduced costs, and better differentiation.

For More Information

For more information about the Cisco ASR 1000 Series Aggregation Services Router, visit <http://www.cisco.com/go/asr1000>.