

# Cisco ASR 9000 Series Routers

## Overview

Networks are pressured to evolve more rapidly to keep pace with the increasing demand for ultra-low latency connections across both mobile and wireline networks. Edge networks need the capacity to scale, and feature-richness to support a wide array of high demand applications such as distributed provider edge, Internet peering, and metro aggregation. By delivering unparalleled feature richness and with the ability to scale in support of 400 GbE, the Cisco ASR 9000 series is changing the architectural economics for edge networks. Edge network architectures are becoming more distributed to enable new revenue generating services and bring edge compute and storage closer to the end user. This edge evolution requires both hardware and software to deliver scale, simplicity, trust, and security—a combination that can only be found in the Cisco portfolio.

## The Cisco ASR 9000 Series

The ASR 9000 is a high-density, high performance edge platform optimized for content streaming (video, online gaming) and mobile aggregation. The ASR is capable of supporting connections from 1G up to 400G providing operators with a long-term growth platform that scales ahead of demand. With carrier-class reliability, comprehensive system redundancy and a full complement of network resiliency schemes, this platform can service growing or high-demand markets. These routers are complete solutions that help you simplify and enhance the deployment and operation of service delivery networks.

## Benefits

- Increase revenue by deploying new performance guaranteed services and entering new markets.
- Reduce operational costs through network consolidation and end-to-end automated network orchestration.
- Greatly improve service agility by orchestrating services across a converged network and enabling on-demand service capabilities with customer self-service options.

**“Telefonica is committed to delivering the fastest, most advanced mobile services throughout our markets in Latin America. Partnering with Cisco ensures that we’ve got the network foundation to meet our business goals as we offer our customers greater choice, performance, and innovation.”**

**Javier Gavilán**  
Technology and Planning Director  
in CTO, Telefonica



The Cisco ASR 9000 Series is critical component of the Cisco Converged SDN Transport network design. Edge devices need to deliver the scale, features, and bandwidth, without incurring a larger footprint and higher power costs. The Cisco ASR 9000 system is cloud enhanced with automation tools that utilize streaming telemetry data to provide actionable intelligence for network optimization. Recent updates give your network engineers fine-grained, end-to-end control of traffic flow and can add MACsec security for protection during transport.

Cisco ASR 9000 Series routers are designed to simplify and enhance the operations of your network by:

- Meeting the needs of mass scale networks with segment routing, EVPN protocol support to build flexibility into your traffic transport.
- Protecting and maximizing your capital investments with a flexible consumption model for licensing and dynamic licensing pooling.
- Accelerating service agility with multi-dimensional programmability, open APIs, and advanced telemetry built into IOS XR to provide network visibility and closed loop remediation driven by analytics and machine learning.

## Next steps

Please visit <http://www.cisco.com/c/en/us/products/routers/asr-9000-series-aggregation-services-routers/index.html>, <https://www.cisco.com/c/en/us/solutions/service-provider/mobile-internet/5g-transport.html> and [www.cisco.com/go/asr9000](http://www.cisco.com/go/asr9000) for more information.

## Cisco ASR 9000 Routers

You can take full advantage of a converged, full-featured aggregation platform designed for the mobile and business markets with the Cisco ASR platform. It has the flexibility to support 1G, 10G, 25G, 40G, 100G, and 400G ports allowing deployments for small market remote Point-Of-Presence (POP) applications, or to serve as a Metro aggregation router for mobile traffic. The ASR 9000 gives you full redundancy, shallow depth, low power consumption, and high service scale making it one of the most versatile infrastructure units on the market.

## Additional benefits

- Enjoy investment protection through industry leading bandwidth capacities in the ASR 9900 series and a roadmap to meet demands of the future.
- A SDN optimized routing platform that supports standards-based interfaces such as Netconf and YANG models. Each is highly programmable with intelligent virtualization capabilities to lower operational costs. The fully virtualized ASR 9000 with Cisco IOS XRv is optimized for cloud networking.
- The ASR 9000 series combined with Cisco service orchestration capabilities extend from the network edge into data center for instant-on services, customer self-service capabilities, and a reduction of service creation time from months to minutes.
- Segment Routing and Ethernet Virtual Private Networking (EVPN) significantly reduce the network complexity and add dynamic routing policies to decrease potential network congestion.