CISCO
The bridge to possible

Cisco Catalyst 8000 Edge Platforms Family

Build a complete WAN Edge with optimized 5G, SD-WAN, SD-Routing, Cloud Security and Multicloud Access

The Cisco® Catalyst® 8000 Edge Platforms Family provides a flexible, scalable, and secure WAN edge for business-first resiliency and cloud-native agility.

Advanced features include industry-leading performance and automation for SD-WAN, routing, multicloud onramp, 5G wireless WAN, and Secure Access Service Edge (SASE) architectures.

A hardware-anchored root of trust provides device peace of mind with firmware defenses to secure zero-touch provisioning in SD-WAN.

Enjoy performance upgrades from a multicore architecture and custom Cisco silicon, greater port density to scale your enterprise, and faster encryption performance to secure traffic without throughput degradation.

A user-centric design cuts operating costs with greater power efficiency, advanced self-cooling, and faster inventory management.

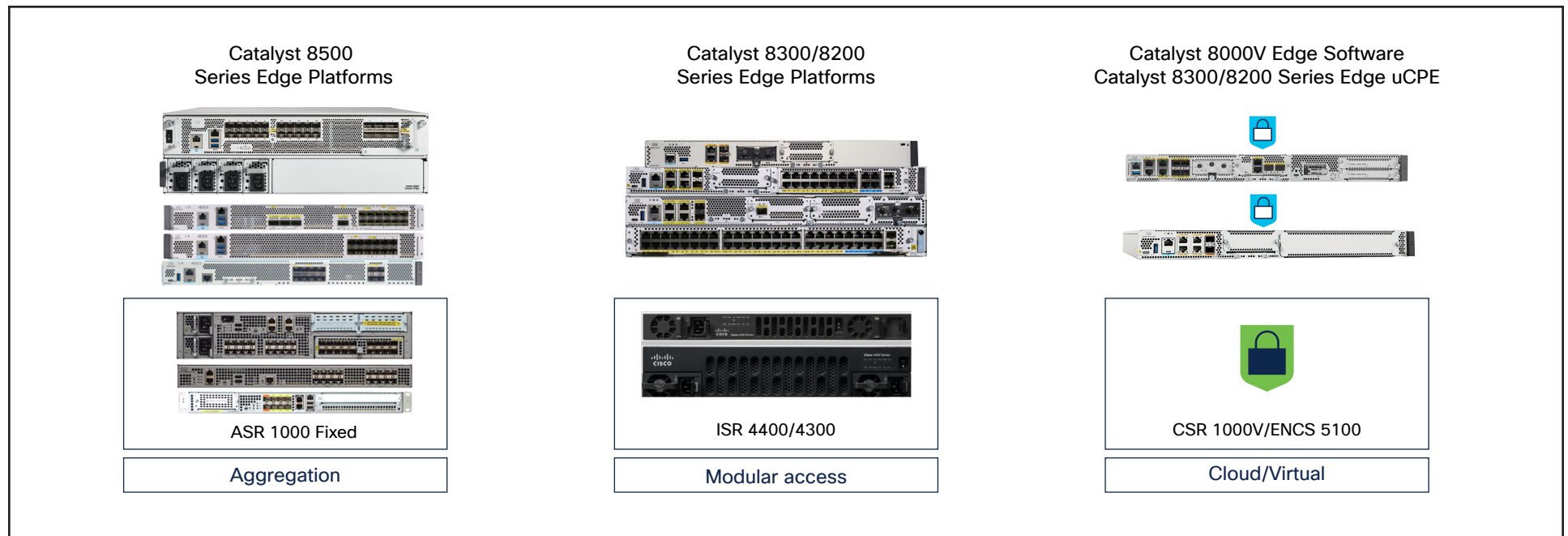You can do it all and much, much more with the Catalyst 8000 edge platforms.

Catalyst 8500
Series Edge Platforms

Catalyst 8300/8200
Series Edge Platforms

Catalyst 8000V Edge Software
Catalyst 8300/8200 Series Edge uCPE

ASR 1000 Fixed

ISR 4400/4300

CSR 1000V/ENCS 5100

Aggregation

Modular access

Cloud/Virtual

Figure 1.   Catalyst 8000: cloud-scale performance and security at the WAN edge

Key benefits and features include

Connected experience

Industry-leading security and networking services converge, on premises or in the cloud, to deliver high performance for SD-WAN and SD-Routing at the WAN edge.

· **Secure Access Service Edge (SASE) architecture:** With support for Cisco Umbrella® cloud security services, customers have the flexibility to deliver security and networking services together from the cloud or on premises, powered by Cisco SD-WAN.

· **Software-defined WAN:** Achieve up to four times better performance for SD-WAN services with dynamic compute resource allocation on the Catalyst 8200 Series, 8200 Edge uCPE, 8300 Edge uCPE, and 8300 Series. The Catalyst 8500 Series, based on the third-generation Cisco QuantumFlow Processor™ packs more encryption, greater port density, and improved SD-WAN tunnel performance in the Catalyst 8500 Series. The Catalyst 8000 family enables the best of Cisco SD-WAN, such as enhanced segmentation, application optimization, and Cloud OnRamp capabilities.

· **Secure remote access:** Flexible connectivity, distributed inspection, and centralized policy enforcement based on roles and identity

of users and devices readies 5G-enabled networks.

· **Edge Intelligence:** Integrated modular compute (Cisco UCS E-Series), unified communications, and storage integrated into a single form factor to provide the foundation for an all-in-one platform for branch or remote offices.

· **Software-defined routing:** Experience scalable software-defined secure routing at the WAN edge with full lifecycle device management, monitoring, and assurance controlled by the unified Cisco Catalyst SD-WAN Manager.

Cloud-native agility

An open and fully programmable software architecture enables automation at cloud scale and support for a diverse set of microservices, making cloud migration simple.

· **Open and programmable:** An open and fully programmable software architecture with API support enables automation at scale to achieve zero-touch IT capabilities while migrating workloads to the cloud.

· **Microservices enabled:** The Catalyst 8000 family provides a distributed analytics architecture with support for container-based applications and third-party ecosystem partners.

Application visibility

Applications and users are more distributed than ever, and the internet has effectively become the new enterprise WAN. As organizations continue to embrace internet, cloud, and SaaS, network and IT teams are challenged to deliver consistent and reliable connectivity and application performance over networks and services they don't own or directly control. Cisco ThousandEyes is natively integrated on eligible Catalyst 8000 edge platforms to expand visibility across the internet, cloud, and SaaS.

· Gain hop-by-hop visibility into network underlay, including detailed path and performance metrics.

· Monitor SD-WAN overlay performance and routing policy validation.

· Measure the reachability and performance of SaaS and internally owned applications.

· Establish network and application performance baselines across global regions before, during, and after deployment of SD-WAN to mitigate risk and validate Key Performance Indicators (KPIs).

· Isolate fault domains and provide actionable network insights that drastically expedite troubleshooting and resolution before users are impacted.

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Business-first resiliency

The flexibility to deploy any service, anywhere and the ability to implement intelligent capacity planning allows IT to adopt evolving technology, such as 5G, without compromising performance or uptime.

· **Services resiliency:** Facilitating 5G-based edge services, the Catalyst 8000 platforms offer wireless WAN flexibility and provide enterprises the ability to increase resources whenever needed, to support edge compute and virtualization.

· **Operational resiliency:** Powered by advanced telemetry data from the Catalyst 8000 family, Cisco Catalyst SD-WAN Analytics offers insights into circuit and application utilization, assisting customers in intelligent capacity planning and anomaly detection.

· **Business resiliency:** The edge platforms offer investment protection and cost savings, with an easy upgrade path for 5G and other emerging technologies, as well as backward compatibility to support previous technologies.

Secure firmware and supply chain in SD-WAN

The Catalyst 8000 edge platforms not only offer industry-leading SD-WAN and routing performance, they provide multilayered security that leads the industry.

· The Catalyst 8000 family comes equipped with Cisco trustworthy solutions, including the new Cisco Trust Anchor, an embedded module that protects SD-WAN firmware, Public Key Infrastructure (PKI), and product authenticity.

· Value chain security: Control and management of third-party cloud provider risk domains.

· The Cisco Secure Development Lifecycle: A combination of DevSec best practices to help ensure a quality SD-WAN fabric.

Multicloud migration

The world is changing at an unpredictable pace, and so is the technology that supports it. As more workforces become distributed and remote, and applications move to the cloud, it has become more important than ever to create a network architecture that can evolve. A new approach to networking is required — a new model that combines the best of networking and security to manage the multicloud world. In this changing environment, connectivity can happen from any location, applications can be in the cloud or on premises, and services need to be deployed where needed, quickly. IT needs flexibility without compromising performance or scale, while still providing secure access and a consistent user experience.

Key use cases

- **Multicloud connectivity:** Support a diverse set of container-based applications and third-party cloud ecosystem partners.

- **SD-WAN:** Create a software-defined WAN for secure cloud access, segmentation, application optimization, and much more.

- **SD-Routing:** Deploy and manage traditional routing environments at scale with a consistent management and orchestration dashboard also used for SD-WAN use cases.

- **5G wireless WAN:** Connect to remote sites with the latest wireless WAN technology, using a simple pluggable interface module or cellular gateway.

- **Secure access:** Protect the network with advanced, multilayered security providing application-aware enterprise firewall, Intrusion Prevention System (IPS), URL filter, Layer 2 encryption, and continuous DNS monitoring.

- **Edge computing:** Deploy services faster and enable access to mission-critical applications where they are needed most – at the edge.

- **Edge virtualization:** Rapidly deliver business applications and network services where business gets done with Cisco's uCPE offerings.

Why Cisco?

The Cisco Catalyst 8000 Edge Platforms Family is designed to be scalable, secure, and optimized for multicloud. Only Cisco has the ability to meet the needs of any size customer, across any vertical and any geography. We offer the broadest portfolio, maximum choice with our third-party technology ecosystem, and over 30 years of networking experience combined with leadership in SD-WAN and security.

Cisco DNA Software

Cisco DNA for SD-WAN and Routing subscriptions are available in three tiers. A subscription can be purchased either as an individual transaction or as an enrollment in a Cisco DNA Enterprise Agreement. Software licenses are portable across the cloud and premises, are easy to upgrade across tiers, and include Software Support Service (SWSS). **Learn more**.

Cisco services

Accelerate your success with services from Cisco Customer Experience (CX). Now you can adopt SD-WAN with ease and confidence, thanks to our trusted expert resources. **View our services**.

Cisco ThousandEyes

A valid ThousandEyes agent license is required to activate the ThousandEyes agent. Existing ThousandEyes subscriptions can be leveraged on eligible Catalyst 8000 edge platforms. To learn more about ThousandEyes subscriptions, go to: **https://www.thousandeyes.com/signup/?utm_ source=Cisco&utm_medium=referral&utm_ campaign=CiscoSD-WAN**.

How to buy

To view buying options and speak with a Cisco sales representative, visit: **https://www.cisco. com/c/en/us/buy**.

Additional resources

- **Catalyst 8000 Edge Platforms Family**.

- **Benefits of Upgrading to Catalyst 8000**.

- **Cisco SD-WAN**.

- **Cisco SD-WAN Cloud OnRamp**.