

Product Highlights

Performance

- 10 Terabits per second fabric capacity
- 1.25 Terabits per second per line card
- 384 wirespeed 10GbE ports
- 5.76 BPPS wirespeed L2 & L3
- 4.5 microsecond latency (64 bytes)

High Hardware Availability

- 2+2 Grid redundant power system
- 1+1 Supervisor redundancy
- N+1 Fabric module redundancy
- N+1 Fan module redundancy

High Software Reliability

- Fine-grained software modularity
- Health monitoring and self healing
- Live patching through ISSU

Scalable Architecture

- 40GbE and 100GbE ready
- Deep packet buffers (18 GB total)
- 384 Virtual Output Queues per port

Resilient Control Plane

- Dual-core x86 CPU
- 4GB DRAM
- 2GB Flash
- Dual Supervisor modules

Data Center Class Design

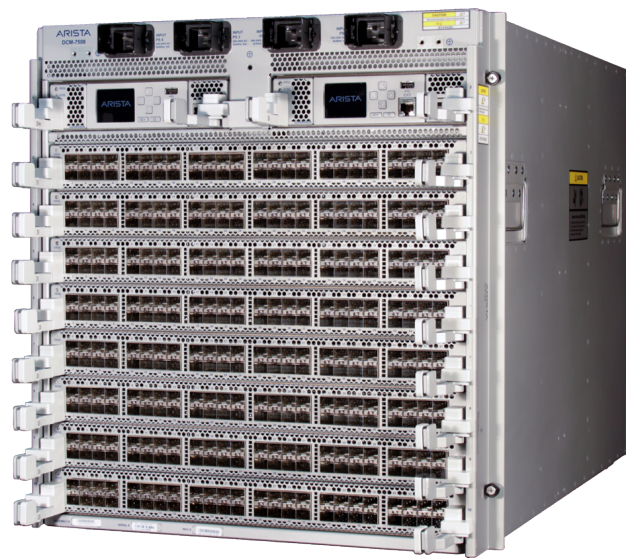
- 11RU chassis
- Front-to-rear airflow
- 10W per port (typical, fully loaded)
- 1536 ports per 44U rack

Arista Extensible Operating System

- Single binary image for all products
- Truly modular network OS
- Access to Linux tools
- Extensible platform

Overview

The Arista 7500 Series modular switch sets a new standard for performance, density, reliability, and power efficiency for data center switches. In a compact 11RU chassis, the Arista 7508 offers 10 Terabits of fabric capacity, 384 wirespeed 10 GbE ports and 5.76 BPPS of L2/3 throughput. The Arista 7500 offers a comprehensive feature set, as well as future support for the 40GbE and 100GbE standards. With front-to-rear airflow, redundant and hot swappable supervisor, power, fabric and cooling modules, the 7500 is energy efficient with typical power consumption of 10 watts per port for a fully loaded chassis. All of these attributes make the Arista 7500 an ideal platform for building low latency, scalable, data center networks.



Arista 7508 Switch: 10 Terabit capacity, 384 wirespeed 10GbE Ports

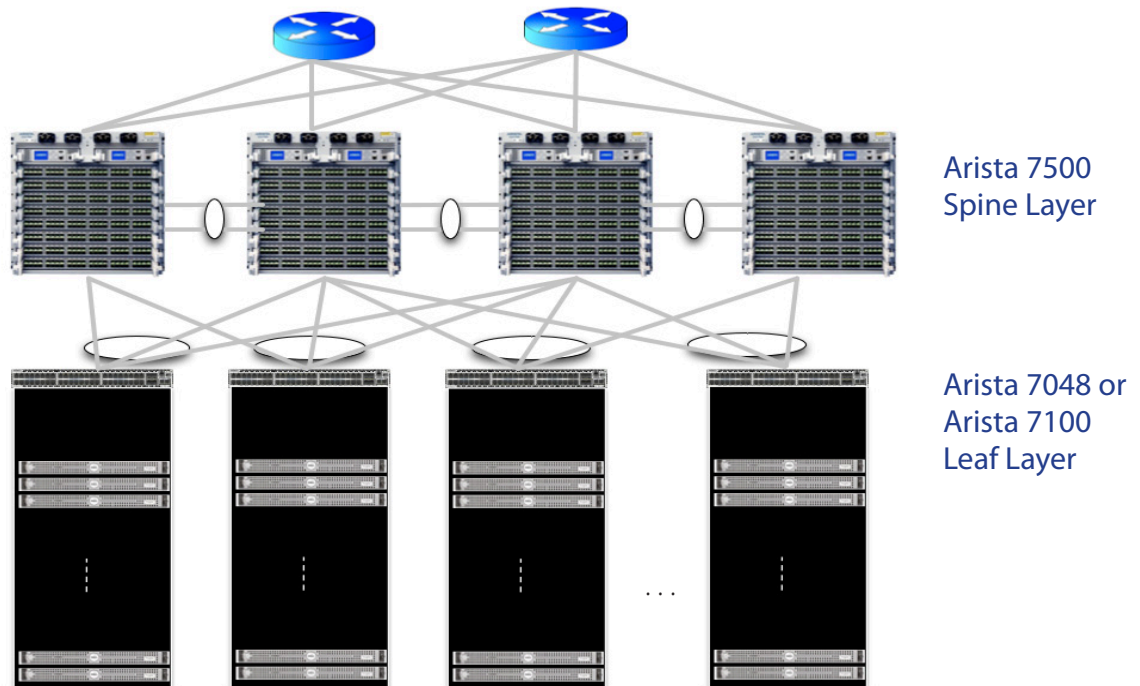
Arista EOS

All Arista products including the 7500 series switches run Arista EOS software. The same binary image supports all Arista products, making it easy for network administrators to standardize the operating system across all switches in the data center. With the addition of Arista 7500, EOS has been extended to support redundant supervisor modules with stateful switchover without the loss of data plane forwarding.

Arista EOS is a modular switch operating system with a unique state sharing architecture that cleanly separates switch state from protocol processing and application logic. Built on top of a standard Linux kernel, all EOS processes run in their own protected memory space and exchange state through a memory based database. This multi-process state sharing architecture provides the foundation for in-service-software updates and self-healing resiliency.

Scaling Data Center Performance

The Arista 7500 enables dramatically faster and simpler network designs for large-scale data centers. When used in conjunction with Arista 7048 or 7100 leaf switches and Arista's Multi-Chassis Link Aggregation (MLAG) technology, a pair of 7508 Switches can support 9200 Servers with a leaf/spine active/active L2 network topology. With four Arista 7508 switches at Layer 3, more than 18,000 Servers can be connected with a non-blocking, low-latency, two-stage network that provides predictable end-to-end application performance.



Cloud Networking: Arista 7000 Family Leaf/Spine network design

Predictable Network Performance

The Arista 7500 uses a deep buffer virtual output queue (VOQ) architecture that eliminates head-of-line (HOL) blocking and virtually eliminates packet drops even in the most congested network scenarios. An advanced traffic scheduler fairly allocates bandwidth between all virtual output queues while accurately following queue disciplines including weighted fair queueing, fixed priority, or hybrid schemes including 802.1Qaz ETS. As a result, the Arista 7500 can handle the most demanding data center requirements with ease, including mixed traffic loads of real-time, multicast, and storage traffic.

Designed for High Availability

The Arista 7500 is designed specifically for high-availability requirements. The hardware supports hot-swappable redundant power, cooling, fabric, supervisors, and linecards. The fabric is N+1 redundant with graceful degradation. The Arista EOS software supports stateful failover between the redundant supervisors as well as self healing and live patching through in-service-software updates.