The Arista Advantage

The Arista 7100 Series of Ethernet switches features the industry's highest density 10 Gigabit Ethernet switching solution with a breakthrough price-performance model. With an extremely consistent low latency and an extensible modular network operating system, it enables the adoption of 10 Gigabit Ethernet everywhere in the data center and in cloud networking, with significant improvements in server utilization and consequently in computing, network and storage performance and efficiency.

Best Price-Performance Solution in the Industry

Server connections are quickly moving to 10Gbs due to increased performance demand and to realize the full performance potential of the hardware investment of compute, applications and storage functions; at the same time increasing pressure and constraints on IT budgets demand competitive cost solutions.

The entire Arista 7100 product line offers an extremely competitive, breakthrough price-performance to target the top-of-rack, blade server aggregation and distribution layer segments in the datacenter as well as the cloud networking needs. The 7124S, a 24 port 10 GbE switch and the 7148SX, a 48 port 10GbE switch offer the highest densities of 10GbE non-blocking performance at the most competitive prices. The 7148S, a 48 port slightly blocking 10 GbE switch offers an optimized solution for a different class of price-performance needs. The 7148S and 7148SX models offer the highest 10GbE performance in a one rack unit (RU) form factor in the industry. The 7100 series delivers layer 2/3/4 switching up to 960 Gbps and 720 Mpps.

Ultra Low Latency

To support the scale and user performance requirements of modern datacenters and cloud computing, network latency needs to be both consistent and extremely low.
The Arista products deliver packets-size independent latencies as low as .6 microseconds. The average latency for other products in the industry is in the 3 to 3.5 microsecond range (source: Lippis Report).

EOS: A Modular, Resilient and Flexible OS

Modern datacenters and large scale cloud network deployments require automated provisioning, monitoring, maintenance, upgrading and troubleshooting to eliminate the complexity and risk of real-time upgrades and image/patch management.

Arista's Extensible Operating System (EOS) offers a fine-grained, modular software architecture that leapfrogs traditional network OS designs by providing the following capabilities and benefits[1]:

In-Service Software Updates (ISSU)	Reduced maintenance windows due to ability to update processes and deploy bug fixes without system interruption
Software Fault Containment (SFC)	Faults are contained to a single module Provides superior system stability
Stateful Fault Repair (SRC)	Continuous health monitoring of all processes enables system self healing through invisible repair of faults
Security Exploit Containment (SEC)	Improves security by limiting any potential vulnerability to an individual module
Scalable Management Interface (SMI)	Enables automated maintenance, updates and integration with 3rd party NMS systems

EOS offers also an open platform with a flexible set of API to enable customization of the platform capabilities and behavior for specific customer needs, quickly adapting to cloud computing fast-paced reconfiguration needs.

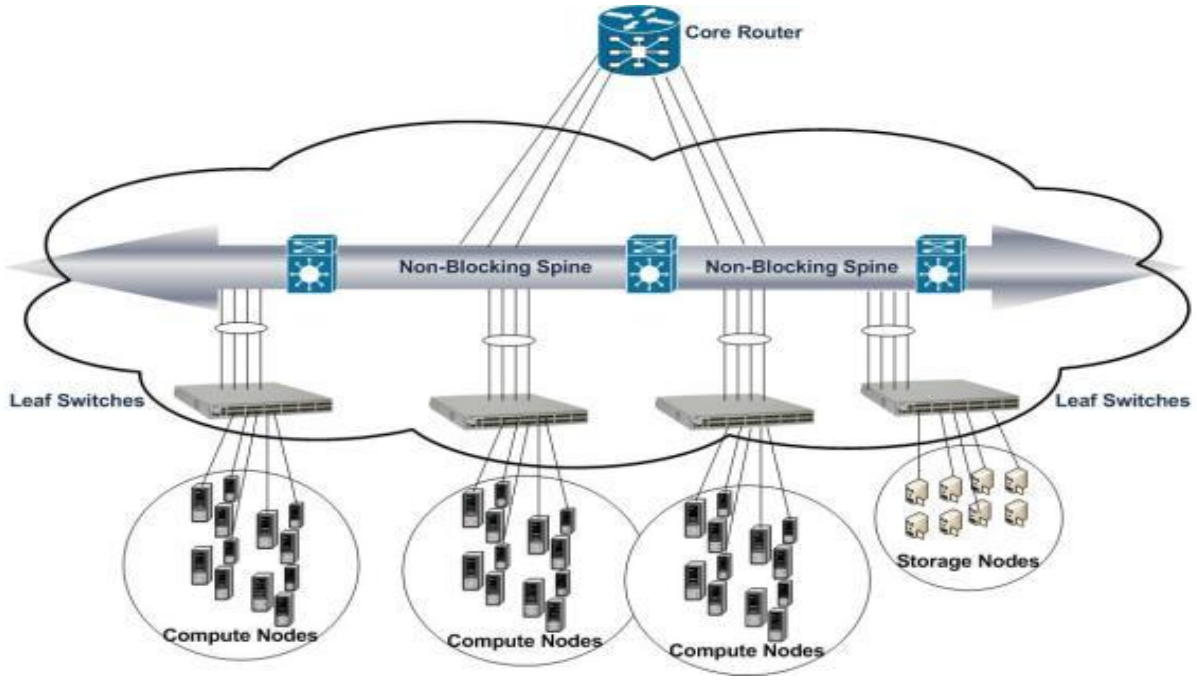
Scalable Network Architecture

The traditional three-tier topology of enterprise networks (access, aggregation and core) is changing: the access layer is becoming subsumed into the hosts, in the form of virtual switches within virtual machines or blade switches inside servers, mandating higher speed connectivity and uniformity of performance in the rest of the network.

The Arista switches offer a two layer architecture composed of *Cloud leaves* and *Cloud spines* (where leafs control the traffic between servers while spines forward traffic along optimal paths among switches) eliminates the access layer of the traditional network design into a simpler two-tier structure directly interfacing with the core routers.

This two-tiered Cloud Leaf and Spine architecture allows connections scaling from 100's to 10,000+ servers enabling a "pay as you grow" model. At the spine, routing between nodes that have the highest traffic exchange is desired. At the leaf, line rate performance enabling scale-out application deployments is highly desirable. The necessity of equal access to bandwidth and resources, without complex provisioning tools or processes, is ensured by the high speed and density and extremely low latency of the Arista products.

[1] For more information on EOS download the white paper at: http://www.aristanetworks.com/en/EOSWhitepaper.pdf



Two-tier Cloud and Leaf architecture

State-Of-The-Art Solution For The Datacenter

The Arista switches offer a broad spectrum of redundancy and resiliency attributes that make it the optimal for in a datacenter, such as:

- Redundant, hot-swappable fans, power supplies, and management ports;
- Front-to-back and back-to-front airflow depending on DC design;
- A modern, modular and extensible OS (EOS);
- Optimized form factor: 1 rack unit (RU) for 24 and 48-port models;
- Power efficiency.

True Cloud Networking Platform

The key to the success of rolling out scalable, efficient and highly available cloud services is the adoption of virtualization technologies; Arista's flexible and extensible EOS can enable fast reconfiguration options to a virtualized management, rapidly adjusting to scale-up/scale-down needs depending on the application requirement and traffic patterns; the high density, non-blocking architecture of the products that ensures consistent low-latency data switching has been designed to meet the needs of a new set of applications and environments, such as:

- Cloud hosting and PaaS providers;
- Market data and electronic trading;
- High scale web environments and analytics (such as Hadoop);
- Large scale data processing;
- Virtualized environments;
- Cloud storage and Video content creation and delivery.

Enable Green Infrastructure

With the average cost per kilowatt-hour at ten cents, power consumption and space requirements for large switches can become a significant OpEx item for IT departments and large cloud deployments, up to a few million dollars annually or nearly the network's capital cost. The Arista switches offer significant savings through its compact 1 rack unit (RU) design for flexible mounting as a top-of-rack option and energy-efficient 1+1 hot-swappable power supplies. In addition, by enabling an end-to-end 10GbE infrastructure, the switches guarantee a significantly higher server utilization that leads to much greater data center power efficiency.

For further information or discuss an evaluation, please contact KHIPU Networks;

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