Arista Network Control Module

Assure Performance through Network Aware Decisions

NETWORK AWARE DECISIONS

Application workloads are no longer restricted to a host, cluster or individual data center. With Arista data center operators are empowered with an open and programmable network that minimizes bottlenecks and easily scales to tens of thousands of compute and storage nodes.

To assure application performance operators must now manage the tradeoff between: 1) Placing workloads that communicate frequently close to each other to reduce "east-west" traffic latency and 2) Satisfying workload compute and storage demands to assure performance.

Arista provides a scalable, reliable and extensible network. VMTurbo controls workload movements managing the tradeoffs between compute, storage and network resources. The Arista Network Control Module provides network aware workload placement decisions that assure application performance while utilizing the infrastructure as efficiently as possible.

KEY BENEFITS

- Assure application performance by placing "chatty" workloads close to each other reducing inter application tier latency
- Auto discover and group workloads into dynamic Virtual Pods (vPods) based on frequency of communication (sFlow)
- Extend Operations Manager to the network layer through Arista Extensible Operating System (EOS) integration, auto discovering network topology
- Maximize the value of high bandwidth top of rack switches and ports
- Shape traffic flow and minimize buffer overflow risk through Latency Analyzer (LANZ) integration

ARISTA AND VMTURBO SOLUTION

The Arista Network Control Module extends Operations Manager into the Arista EOS network layer to manage the tradeoffs between compute and storage loads vs. localizing network traffic flow.

- Increase workload mobility
  - Realize the full value of Arista open and programmable network allowing VMs to take advantage of the entire data center, without introducing the risk of latency due to high volumes of east-west traffic
  - Reduce inter application tier latency by placing workloads that communicate frequently close together without sacrificing access to compute and storage resources
  - Dynamically group workloads into virtual pods (vPod) based on frequency of communication (sFlow) eliminating the need to define affinity rules
  - Auto discover network topology trough VM Tracer (leveraging EOS APIs), optimizing for intra-host or hosts that share a switch (dPod) vs. cross-switch flow
- Mitigate buffer overflow risk
  - Shape traffic flow to reduce port congestion and buffer overflow based on real-time Latency Analyzer (LANZ)
  - Intelligently localize traffic to appropriate hosts maximizing port utilization and value of top of rack switches
  - Reduce the risk of top of the rack congestion introduced by network virtualization and seamless workload mobility

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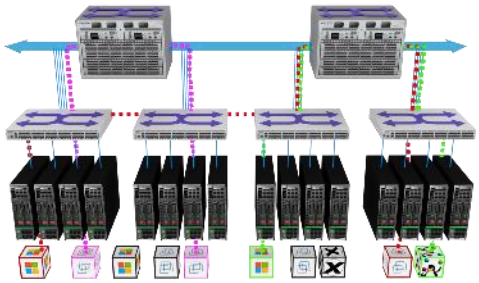
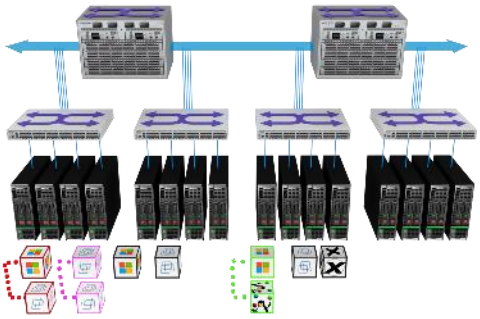
NETWORK CONTROL – BEFORE AND AFTER

BEFORE



AFTER



Without the Arista Network Control Module frequently communicating workloads may be located across the data center increasing east-west latency. With it frequently communicating workloads are placed closer together reducing latency and assuring performance.

LEARN MORE

- Download a free trial of Operations Manager for 30 days – at vmturbo.com/download
- For more information or to purchase VMTurbo products, call +1 781-373-3540, Email sales@vmturbo.com visit vmturbo.com, or locate a reseller at vmturbo.com/company/channel-partners

ABOUT VMTURBO

VMTurbo's Software-Driven Control platform enables organizations to assure application performance while maximizing infrastructure efficiency by managing their cloud and enterprise virtualization environments.

The VMTurbo platform first launched in August 2010 and since that time more than 30,000 users worldwide have deployed the platform, including JP Morgan Chase, Aetna, Colgate-Palmolive and Salesforce.com. Using VMTurbo, our customers ensure that applications get the resources they need to operate reliably, while utilizing their most valuable infrastructure and human resources most efficiently.