Solution Brief

virtana

Cisco Nexus Data Fabric Observability

Virtana's Cisco Nexus integration extends Virtana Platform's data fabric observability to the Cisco Nexus switch series product lines. Cisco Nexus data center switches provide Ethernet switching capabilities for a hybrid cloud networking foundation.

The integration provides singular visibility into the health, utilization, performance, and capacity of the Cisco Nexus switches and components and correlates Cisco Nexus metrics with data collected from related compute and storage components in the infrastructure, and to the applications running on that infrastructure.

Use Cases

Our Cisco Nexus integration supports a wide range of switch monitoring use cases across health, utilization, performance, and capacity:

- View the logical and physical connectivity between Cisco Nexus switches and external components like hosts, routers, and storage.
- Understand which applications are consuming resources in the Nexus switching environment.
- View the application's data path from server to switch to storage.
- See the current state of individual switch component health, utilization, and capacity.
- Forecast short- and long-term capacity trends for the switch and individual components.
- Receive alerts when the health or utilization of a switch or switch component is negatively impacting application performance.
- Receive alerts when flow latency exceeds a set threshold or SLA.
- View network errors related to the physical and logical components of the Cisco Nexus domain.
- Integrate Cisco Nexus metrics with metrics from related interconnected infrastructure.

Value of the Integration

- Ensures optimal performance and availability of Cisco Nexus switches for business-critical applications and workloads.
- Provides predictive capacity forecasting to forecast time to needed expansion or refresh.
- Optimizes Cisco Nexus resources by monitoring workload metrics and resource usage to arrive at the ideal configuration for your application workloads.
- Provides a comprehensive understanding of Application Service Delivery in a hybrid cloud infrastructure utilizing Cisco Nexus switches.

Discovery and Data Collection

The integration connects to Cisco NX-API using read only access. Data is collected at specified polling intervals and is imported into VirtualWisdom for use in inventory, topology, alerting, analytics, and reports.

VirtualWisdom discovers Cisco Nexus switches, CPU cores, ports. network virtual interfaces, VLANs, line cards/modules, port channels, and virtual device context.

Over ninety-five unique metrics related to Cisco Nexus switch health, utilization, performance, and capacity are collected by the integration, including the following:

- Average, min, and max network bytes received or sent rate.
- Average, min, and max network received or sent packet rate.
- Average inbound/outbound IO size.
- Average, min, and max received or sent error rate.
- Average, min, and max sent packet collision and carrier loss rates.
- Unicast, multicast, and broadcast bytes received/sent rate.
- CPU time.
- Free and used memory.
- Health warnings and errors, fan errors, and PSU errors.

Capabilities Powered by the Cisco Nexus Integration

With Virtana discovery and dependency mapping for Cisco Nexus, see Nexus switch infrastructure in the context of its relationships to business-critical applications and other infrastructure components. You can view relationships and easily traverse hierarchies to expose active alarms in a data path. Understand application health by filtering the infrastructure view to show applications using Cisco Nexus switches and compare trends in Cisco Nexus resource utilization and capacity.

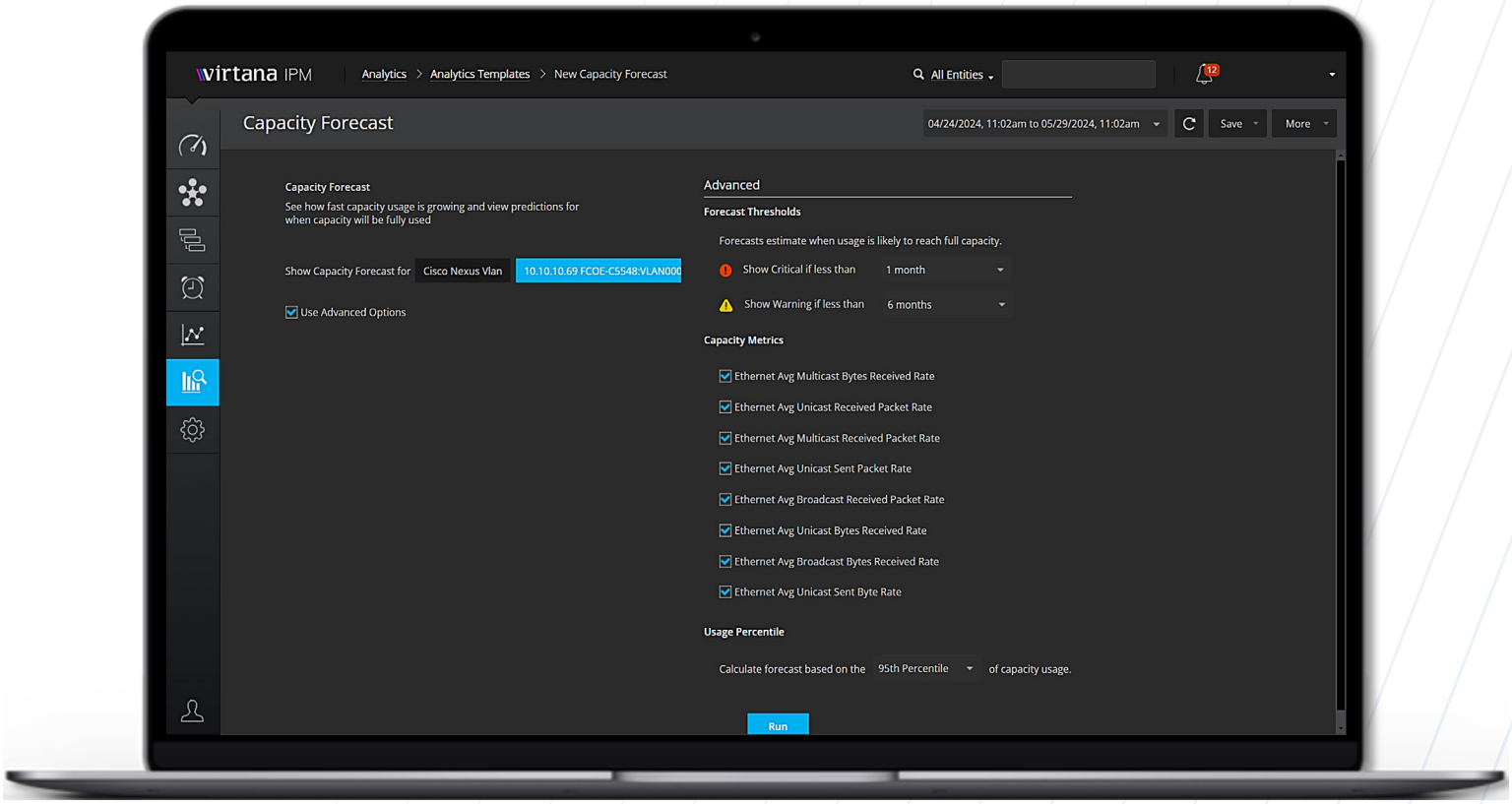
Our rich event intelligence capabilities let you monitor Cisco Nexus switch infrastructure and reveal deviations from cyclical workload trends, using data captured and retained over weeks and months.

Our Capacity Forecast alerting warns you when Cisco capacity utilization is running high so you can avoid the availability and performance impact that comes from running out of capacity unexpectedly.

Our flexible event intelligence also lets you create alerts by combining Cisco Nexus entities and metrics.

By using the Capacity Forecast analytic, you can predict time-to-zero for capacity based on historical capacity data. Our correlation engine can be used to identify and troubleshoot anomalous events that occur in Cisco Nexus infrastructure.

Quickly start tracking Cisco Nexus health and utilization through standard report templates that are included with your Cisco Nexus integration.



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