

Dell EMC Unity XT Solution Brief

Virtana's Dell EMC Unity integration extends VirtualWisdom data collection, monitoring, and visibility to Unity XT, Dell EMC's mid-range storage platform that is designed for performance, optimized for efficiency, and built to handle multi-protocol, hybrid cloud workloads.

The integration provides singular visibility into the health, utilization, performance, and capacity of the Unity XT array, and correlates Unity XT metrics with data collected from related compute and network components in the infrastructure, and to the applications running on that infrastructure.

Use Cases

Our Unity XT integration supports a wide range of storage monitoring use cases across health, utilization, performance, capacity, and other domains:

- View how much storage an application consumes.
- See which initiator consumes the most resources on an array.
- View latency metrics at the host, volume, and application level.
- Detect whether any replication tasks are causing performance degradation.
- See the entire data path from host, through the switch to a Unity port, and to volumes associated with the host.
- Determine if a host has multiple paths to its storage.
- See when storage capacity will run out.
- Monitor current and historical capacity while considering compression and deduplication.
- View firmware versions on arrays and array components.
- Tag arrays with custom properties.

Value of the Integration

- Ensures optimal performance and availability of Unity XT storage for business-critical applications and workloads.
- Provides predictive capacity forecasting to forecast time to needed expansion or refresh.
- Optimizes Unity XT resources by monitoring workload metrics and resource usage to arrive at the ideal configuration for your workloads.

Discovery and Data Collection

The integration connects to the Dell EMC Unisphere data storage manager via REST API using read only access. Data is collected at specified polling intervals then imported into VirtualWisdom to power inventory and topology views, alerting, analytics, and reporting.

VirtualWisdom discovers Unity systems, storage processors, pools, file systems, LUNs, hosts, and Ethernet and Fibre Channel ports.

Over 350 unique metrics related to Unity XT health, utilization, performance, and capacity are collected, including the following:

- Average latency per read or write operation.
- Average read and write IOPS.
- Average read and write IO size.
- Average read and write byte rate.
- Network link layer statistics: network bytes received/sent rate, packet rate, IO size, error counts.
- NFSv4 and SMBv3 metrics: IOPS, read/write ECT.
- Average % utilized and free capacity.
- Average used and free capacity.
- Total usable and effective capacity.



Capabilities Powered by the Unity XT Integration

With Virtana topology for Unity XT, see Unity storage 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 Unity storage and compare trends in Unity resource utilization and performance.

Our rich alerting capabilities let you monitor Unity XT storage infrastructure and reveal deviations from cyclical workload trends, using data captured and retained over weeks and months. Our Capacity Forecast alerting warns you when Unity system, storage processor, and pool entities are approaching 100% capacity utilization so you can avoid the availability and performance impact that comes from running out of capacity unexpectedly.

Our flexible alerting also lets you create alerts on any monitored Unity component and metric.

By using the Capacity Forecast analytic, you can predict time-to-zero for capacity based on historical capacity data. Event Advisor and Trend Matcher analytics can be used to identify and troubleshoot anomalous events that occur in Unity XT infrastructure.

Quickly start tracking Unity XT utilization and performance through standard report templates that are included with your Unity XT integration.

