Solution Brief

virtana

Pure Storage Flash Array Solution Brief

Virtana's Pure Storage Flash Array integration extends Virtana's Storage Observability to Flash Array storage, Pure Storage's all-flash scale out solution for unified block and file storage.

The integration captures capacity, usage, performance, and health information from Flash Array storage. It is also intended to correlate data to interrelated, but external components in the shared infrastructure, and ultimately to the applications that use them.

Use Cases

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

- View which Flash Array resources an application consumes.
- See which initiator consumes the most resources on an array.
- Forecast short- and long-term capacity trends and see when capacity will run out.
- Identify where and when capacity adjustments should be made.
- See how deduplication, compression and thin provisioning are impacting storage utilization.
- View latency metrics at the host, storage, and application level.
- Show the entire data path from host, through the switch to a Flash Array port, and to the LUNs associated with the host.
- View firmware versions on arrays and array components.
- Tag arrays with custom properties.
- Integrate and correlate metrics from the Flash Array domain with metrics from related, interconnected infrastructure to gain a complete understanding of Application Service Delivery.

Value of the Integration

- Ensures optimal performance and availability of Flash Array storage for business-critical applications and workloads.
- Provides predictive capacity forecasting to forecast time to needed expansion or refresh.
- Optimizes Flash Array 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 Purity management software using read only access. Data is collected from the Pure Storage Flash Array at specified polling intervals and is imported into VirtualWisdom for use in inventory, topology, alerting, analytics, and reports.

VirtualWisdom discovers Flash arrays, controllers, pods, volumes, snapshots, hosts, and host groups.

Over 220 metrics related to Flash Array utilization, performance, and capacity are collected, including the following:

- Avg, min, and max % utilized and free capacity.
- Avg, min, and max used and free usable capacity.
- Avg, min, and max used and free effective capacity.
- Provisioned capacity.
- Compression efficiency.
- Avg, min, and max read and write byte rate and IOPS.
- Avg bytes per read and write operation.
- Avg latency per read and write operation.
- Array total load.
- Avg operation queue length.
- Avg remote latency per sync write operation.
- Avg sync replication write byte rate, IOPS, and IO size.

Capabilities Powered by the Flash Array Integration

With Virtana topology for Flash Array, see Flash Array 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 Flash Array storage and compare trends in Flash Array resource utilization and performance.

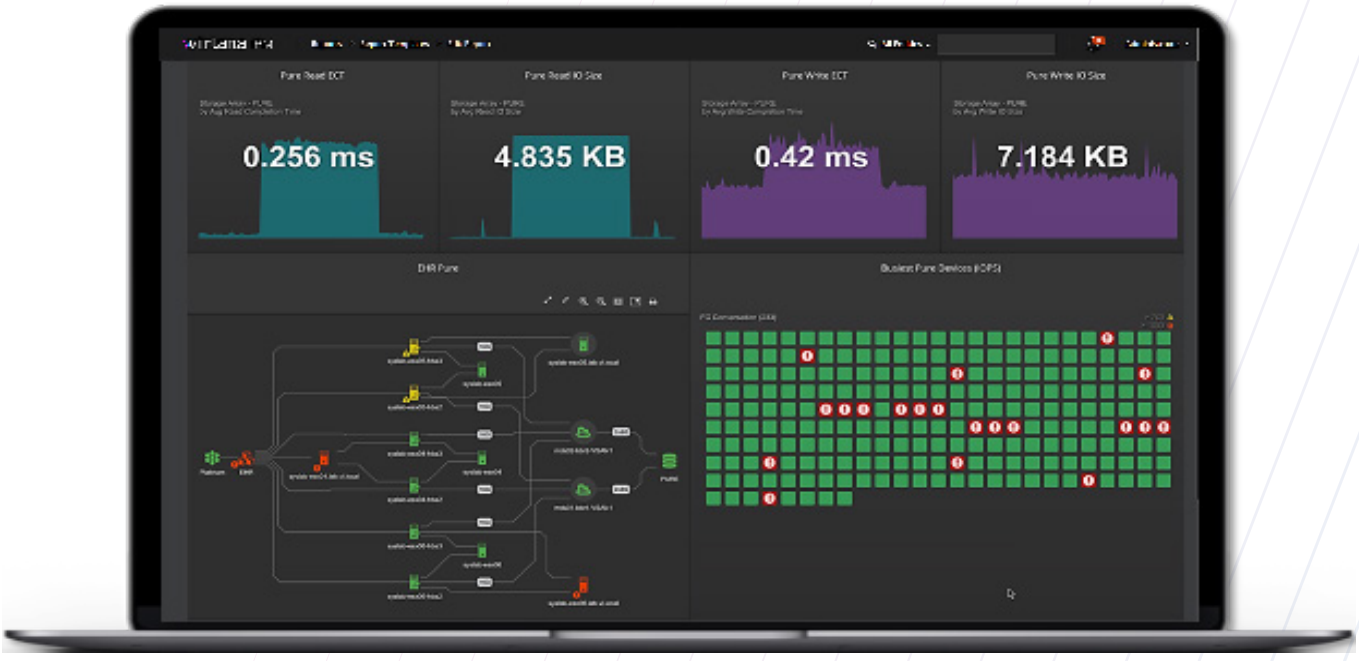
Our rich alerting capabilities let you monitor Flash Array storage infrastructure and reveal deviations from cyclical workload trends, using data captured and retained over weeks and months. Our Capacity Forecast alerting warns you when Flash Array arrays, pods, volumes, snapshots, and hosts are approaching 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 custom alerts on monitored Flash Array components and metrics.

By using the Capacity Forecast analytic, you can predict time-to-zero for capacity based on historical capacity data. Our Capacity Auditor analytic provides an overview of usage across various Flash Array components and identifies where and when capacity adjustments should be made.

Event Advisor and Trend Matcher analytics can be used to identify and troubleshoot anomalous events that occur in Flash Array storage infrastructure.

Quickly start tracking Flash Array utilization, performance, and capacity through standard report templates that are included with your Flash Array integration.



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