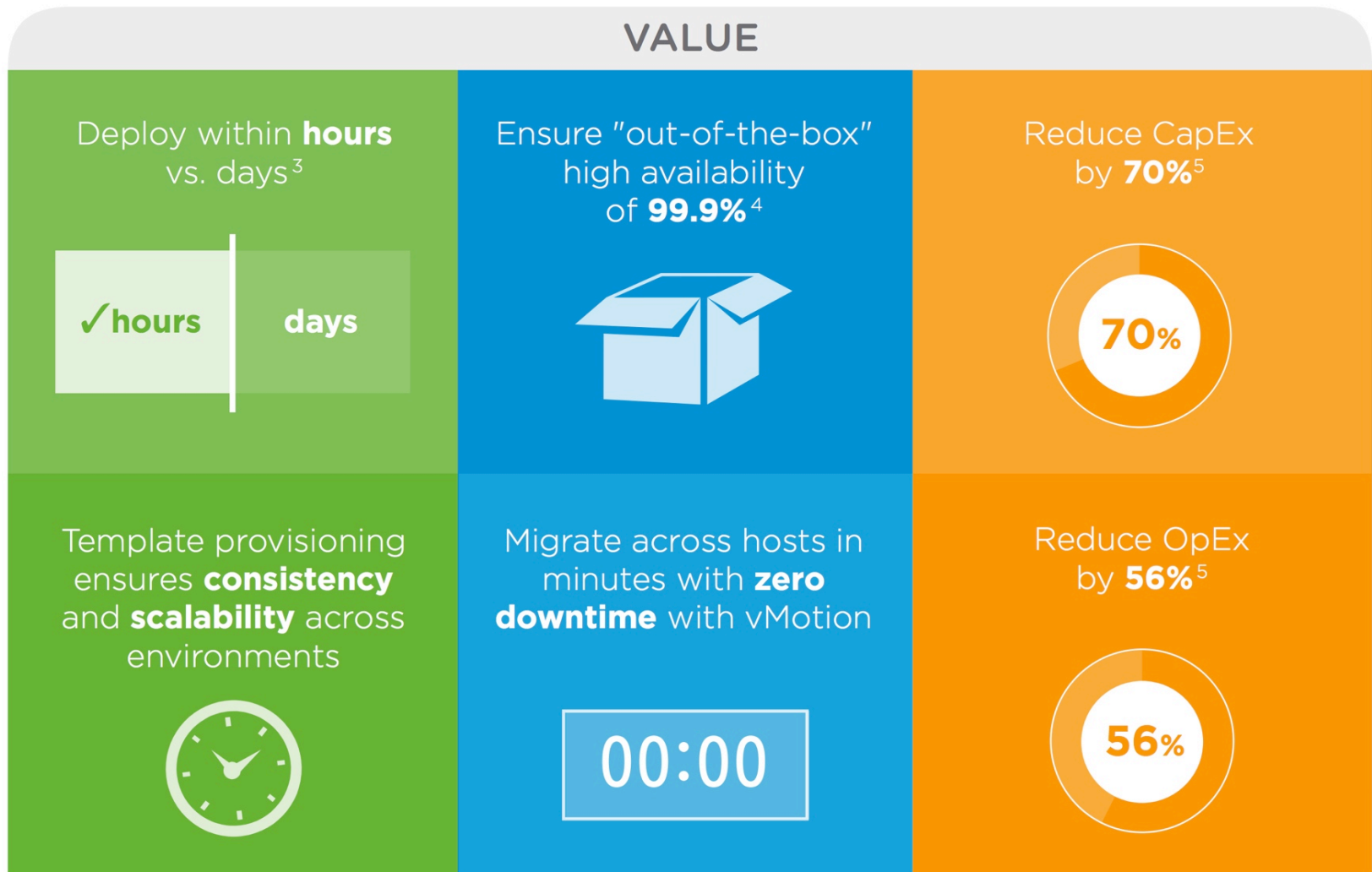# Blue Medora
VMware vCenter Operations Manager Management Pack for SAP HANA

Solution Overview

Production SAP HANA workloads are moving onto VMware

VALUE

Deploy within **hours** vs. days[3]

✓ hours | days

Ensure "out-of-the-box" high availability of **99.9%**[4]

Reduce CapEx by **70%**[5]

70%

Template provisioning ensures **consistency** and **scalability** across environments

Migrate across hosts in minutes with **zero downtime** with vMotion

00:00

Reduce OpEx by **56%**[5]

56%

The value of running SAP HANA on VMware

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VMware vCenter Operations MP for SAP HANA - Overview

SAP HANA integration with vCenter Operations delivers automated correlation of performance, health, and availability data for SAP HANA workloads

Overview

- Makes available SAP HANA related performance, health, and availability Key Performance Indicators within vC Ops

- Includes out-of-the-box dashboards, supermetrics, metrics, and metrics collections for SAP HANA

- Comprehensive relationship mapping of SAP HANA workloads running on VMware vSphere

- Provides useful info for SAP HANA workloads running on physical environments

Benefits

- Gain enterprise-wide visibility into SAP HANA workloads

- Greatly reduce troubleshooting times, and simplify security & compliance management

- Integration with between vC Ops and SAP HANA delivers reduced MTTI & MTTR

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How the MP for SAP HANA extends VMware vC Ops

- Introduces **4 new SAP HANA-focused vC Ops Resource Kinds**
  - SAP HANA System, SAP HANA Host, SAP HANA Service, and SAP HANA Disk

- **Extends vC Ops by adding 300 – 400 SAP HANA specific metrics** including numerous synthetic metrics not available within SAP HANA Studio

- Provides **comprehensive relationship mapping functionality**
  - Between SAP HANA resource kinds themselves
  - Between SAP HANA Hosts and VMware virtual machine
    - With the VMware Virtual Machine mapping, all the other VMware relationships to the ESX Host, Datastores, Cluster, etc are provided

- **Adds 6 SAP HANA Out-of-the-Box Dashboards** designed for troubleshooting, diagnostics, and analysis

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Insights into SAP HANA on Physical, Virtual, or the Cloud
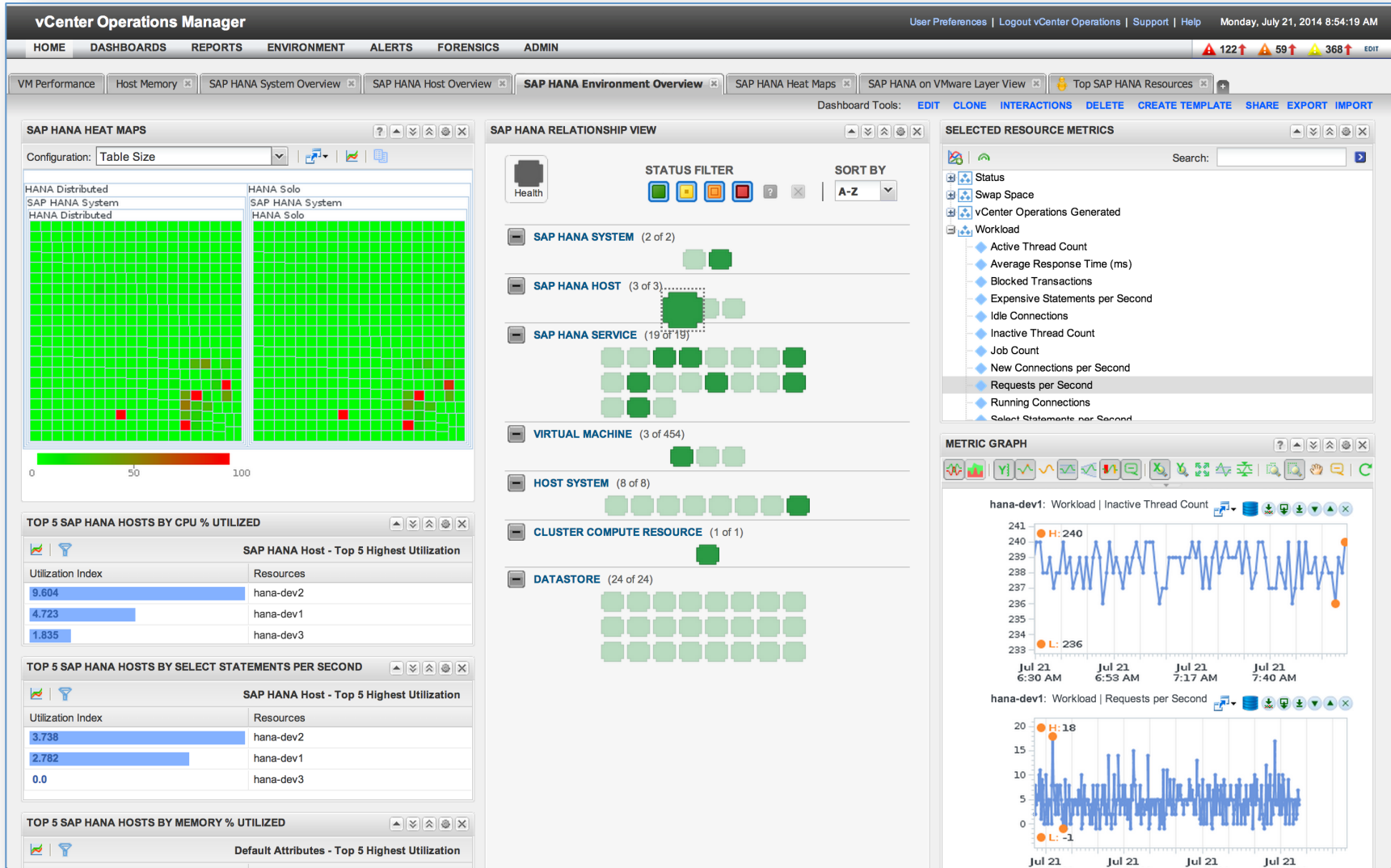
Visualize SAP HANA on VMware component relationships
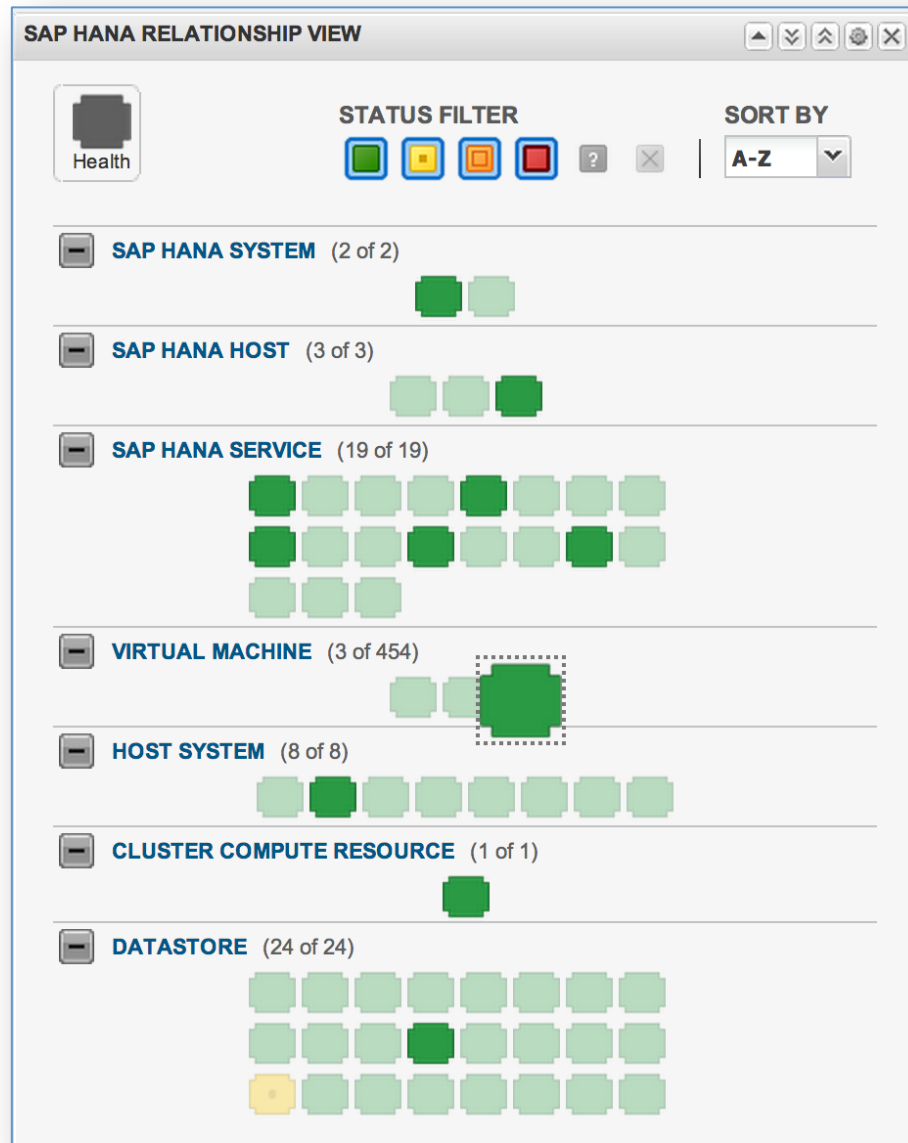
Understand SAP HANA System (Cluster) Status

Visualize SAP HANA Topology and VMware Relationships

Drill into individual SAP HANA Hosts and Services

Identify top SAP HANA bottlenecks via "Top N" lists

Use Heat maps to look across the entire SAP HANA estate
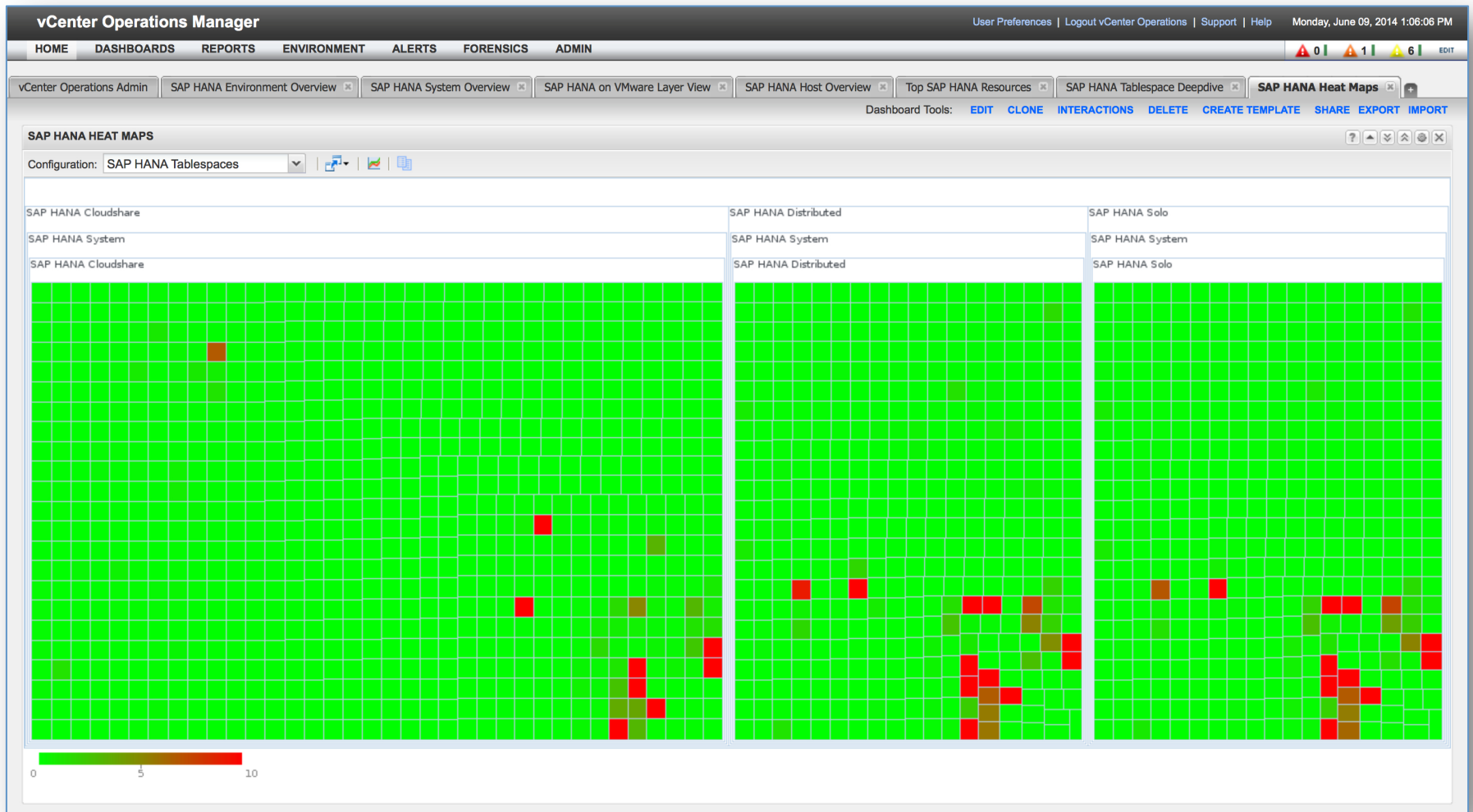
Correlate performance across all of the HANA on VMware layers

Monitor Critical SAP HANA Performance Metrics
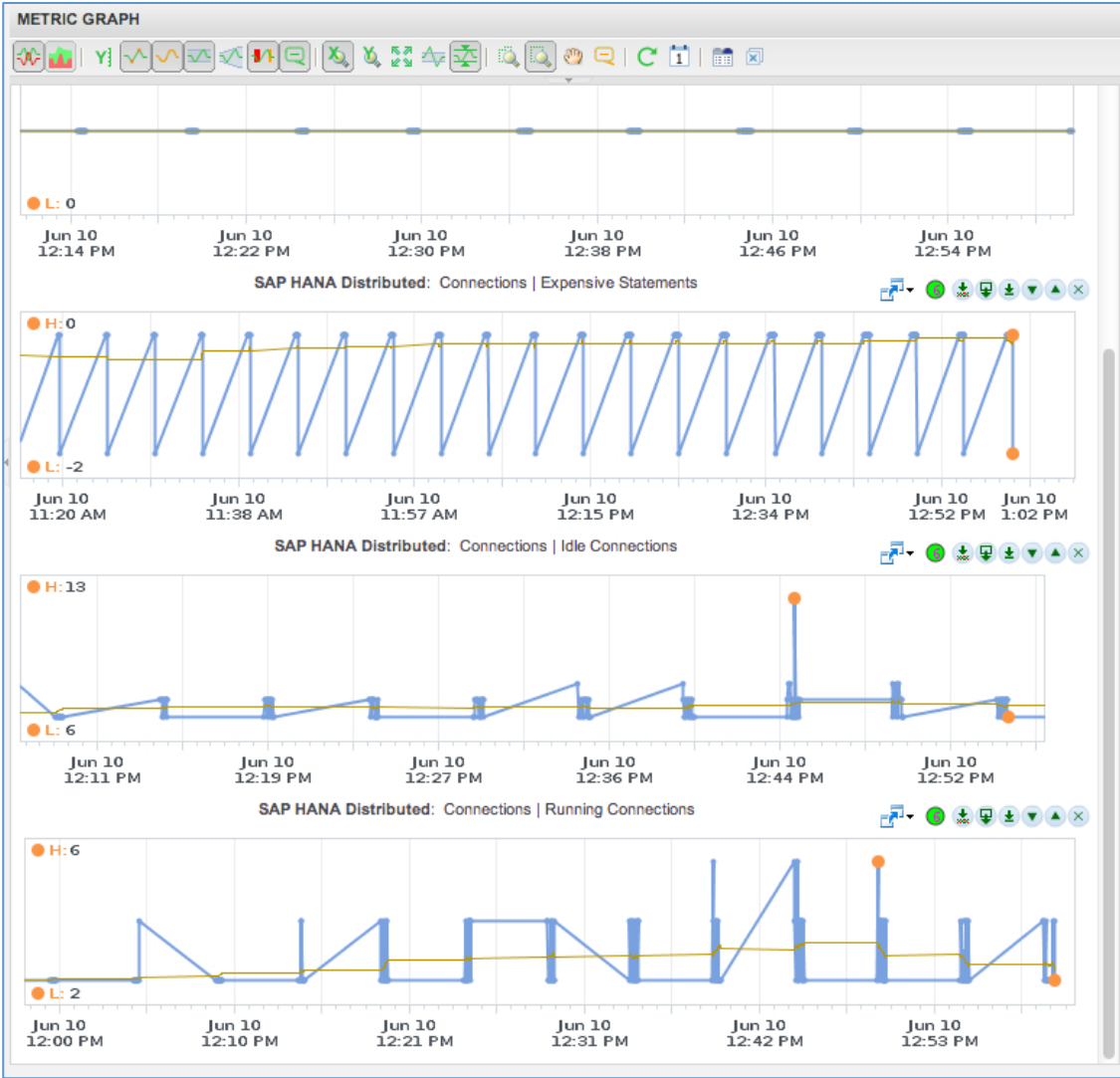
Sampling of metrics collected by vC Ops MP for SAP HANA

Example SAP HANA System (Cluster) Metrics

Avg CPU %	Avg Memory %	Blocked Transactions	Expensive Statements
Idle Connections	Running Connections	Inactive Hosts	Running Hosts
License Days Remaining	Used Memory	Table Record Count	Table Size (MB)
Table Size Change (MB/s)	Average Response Time (ms)	Job Count	Requests per Second

Example SAP HANA Host Metrics

Cache Entry Count	Cache Hits per Second	Total Cache Size (MB)	CPU Util %
Database CPU %	DB Memory Usage (MB)	Network Data Received (Mbit/s)	Network Data Sent (Mbit/s)
Uptime (Hrs)	Swap Space % Util	Total Swap Space Used	DB Average Response Time (ms)
DB Blocked Transactions	DB Expensive Statements (per sec)	DB Idle Connections	DB Inactive Thread Count
DB New Connections per sec.	DB Requests per sec.	DB Running Connections	DB Select Statements per sec
DB Update Statements per sec.	DB Record Lock Count	DB Active Thread Count	DB Job Count

Example SAP HANA Service Metrics

Cache Entry Count	Cache Hits per Second	Total Cache Size (MB)	Used Memory (MB)
Memory Allocation (MB)	Memory Utilization (of Allocation)	Garbage Collection - Waiters per sec.	Garbage Collection - Savepoint per sec.
Blocked Transactions	Expensive Statements (per sec)	Idle Connections	Inactive Thread Count
New Connections per sec.	Requests per sec.	Running Connections	Select Statements per sec
Update Statements per sec.	Record Lock Count	Active Thread Count	Job Count

Example SAP HANA Disk Metrics

Read Size (MB/s)	Reads per Second	Total Size (GB)	Used Size (GB)
Utilization %	Write Size (KB/s)	Writes Per Second	Host

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vCOPs MP for SAP HANA Technical Details

- Remote agentless data collection

- Collects data from SAP HANA via JDBC connection

- Management Pack requires a Role with read-only permissions to the SAPA HANA statistics server
  - Refer to SAP HANA Doc for more details on creating the role

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vCOPs MP for SAPA HANA Pre-requisites

- ■ VMware vC Ops Enterprise Edition
  - • v5.8+

- ■ SAP HANA
  - • SP6+

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Licensing and Support details

- Licensing computed via 128GB increments of memory within monitored SAP HANA hosts that the Management Pack is configured to collect data for

- Contact sales@bluemedora.com for pricing details

- Support Options
  - Standard Support -> 8:00am – 5:00pm (US EDT) Phone / Email / Web
  - Premium Support -> 24x7x365 Phone / Email / Web

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How to evaluate the vC Ops MP for SAP HANA

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