

# BindPlane for Microsoft Azure Monitor

# What we do

## Monitoring Data Acquisition

We connect monitoring and analytic engines to customer IT stacks



### Agentless

Always on, always updated, API-based



### Dimensional data

Exploit deeper visibility and relational “dimensionality”



### Make Monitoring better

Our integrations enhance monitoring engines, not replace them



### Pure data

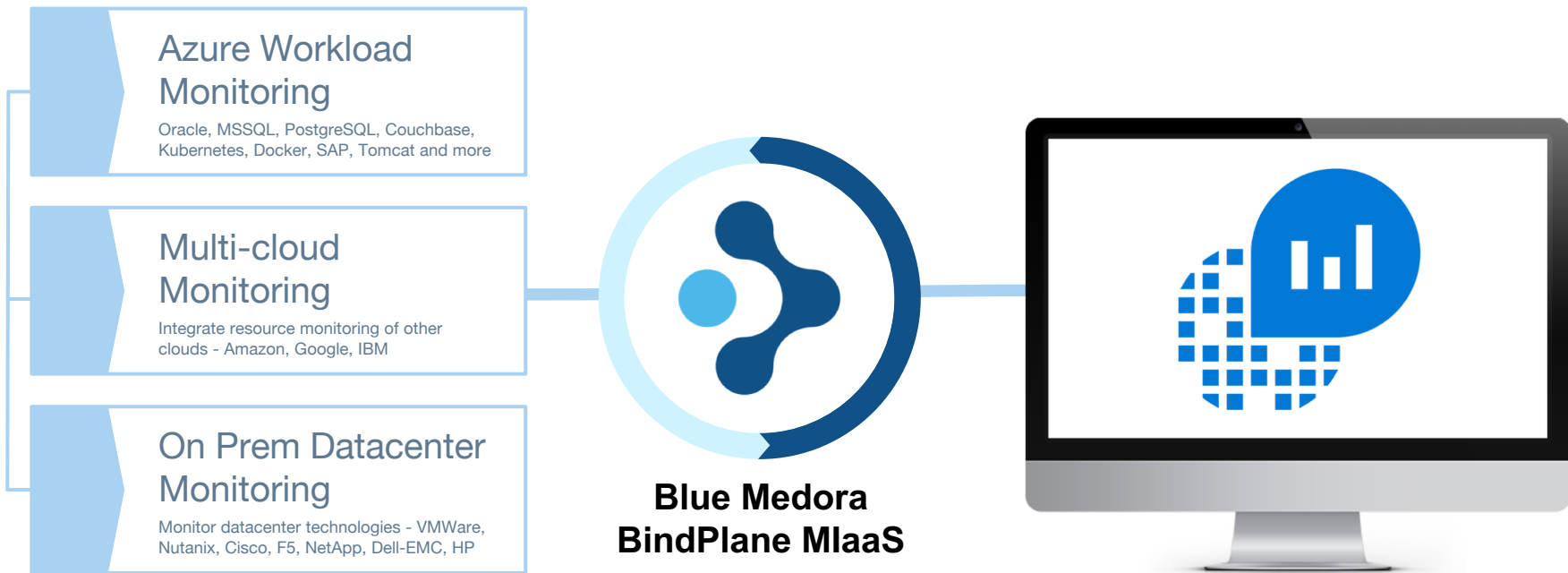
We only deliver high quality data to enable advanced analytics



### Seamless

Monitor more things for more customers with no impact to experience

# Widening Azure Monitor / Log Analytics with a single integration...



**~200+ enterprise  
technologies in 2018**

# Our Value



## Rapid Root Cause Analysis

Empower customers to move past symptoms to quickly find the root cause.



## Simplify Tools

Full visibility in Azure Monitor allows clear concise remediation of issues.



## Proactive Problem Resolution

Shift from reactive to proactive approach to management and monitoring.

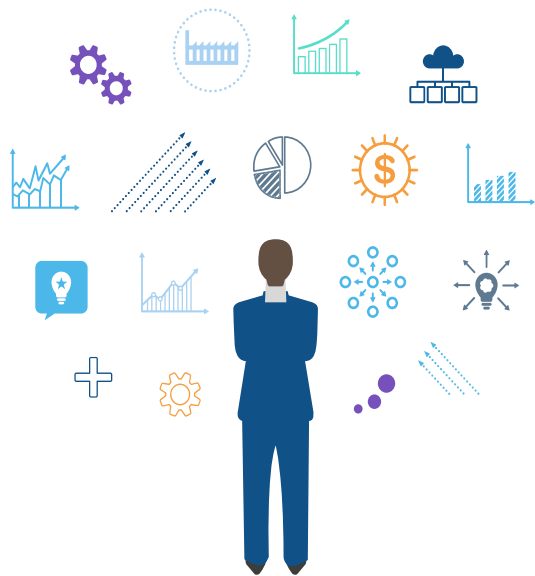



## Expand Monitoring to Azure Workloads


Leverage the strength of the Microsoft Azure Monitor, Application and Workload Insights with the breadth of data providers from Blue Medora BindPlane



# The best tool is the one you already love



 You've got the data.

 You've got the technology

## Full stack visibility

01

Install the agentless collector



02

Select the key technologies running in your stack

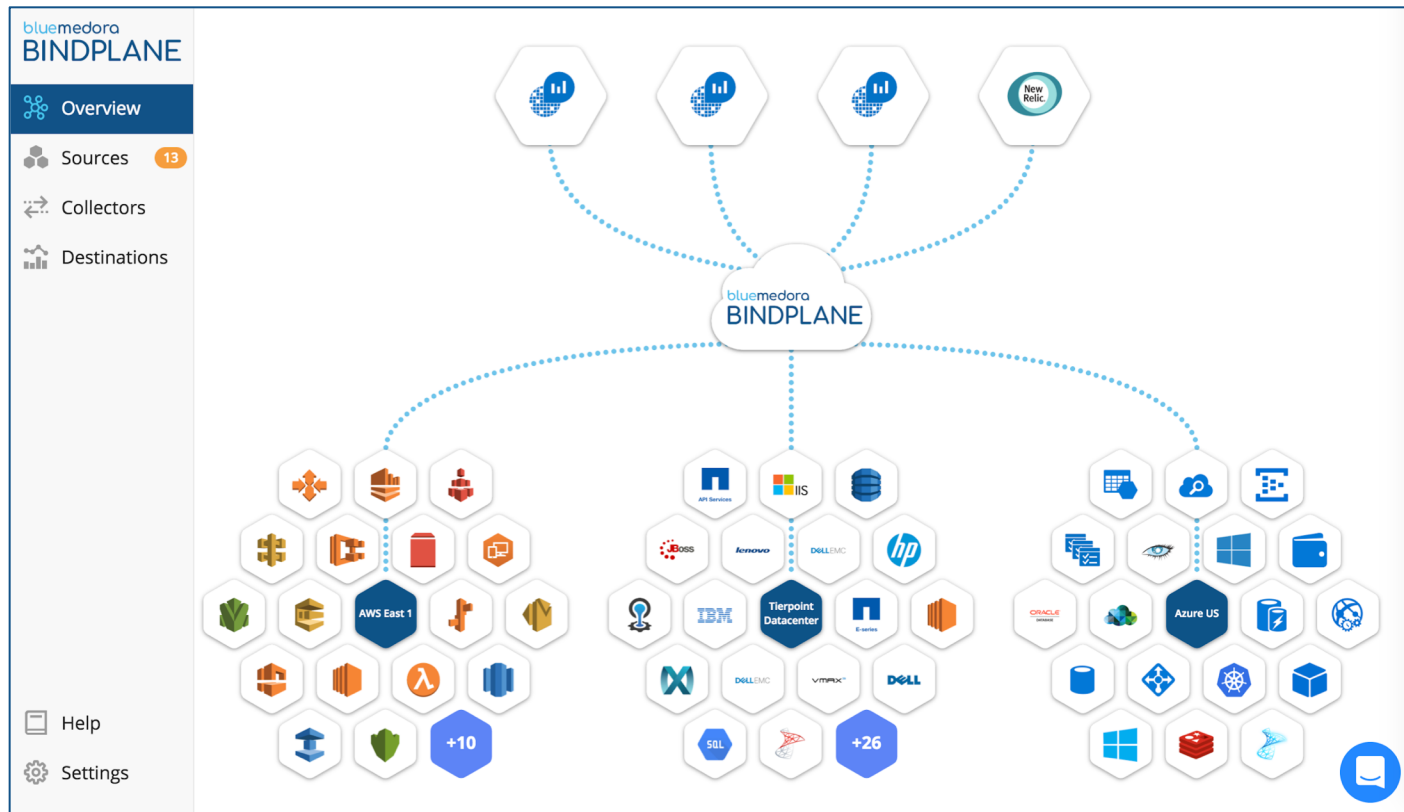


03

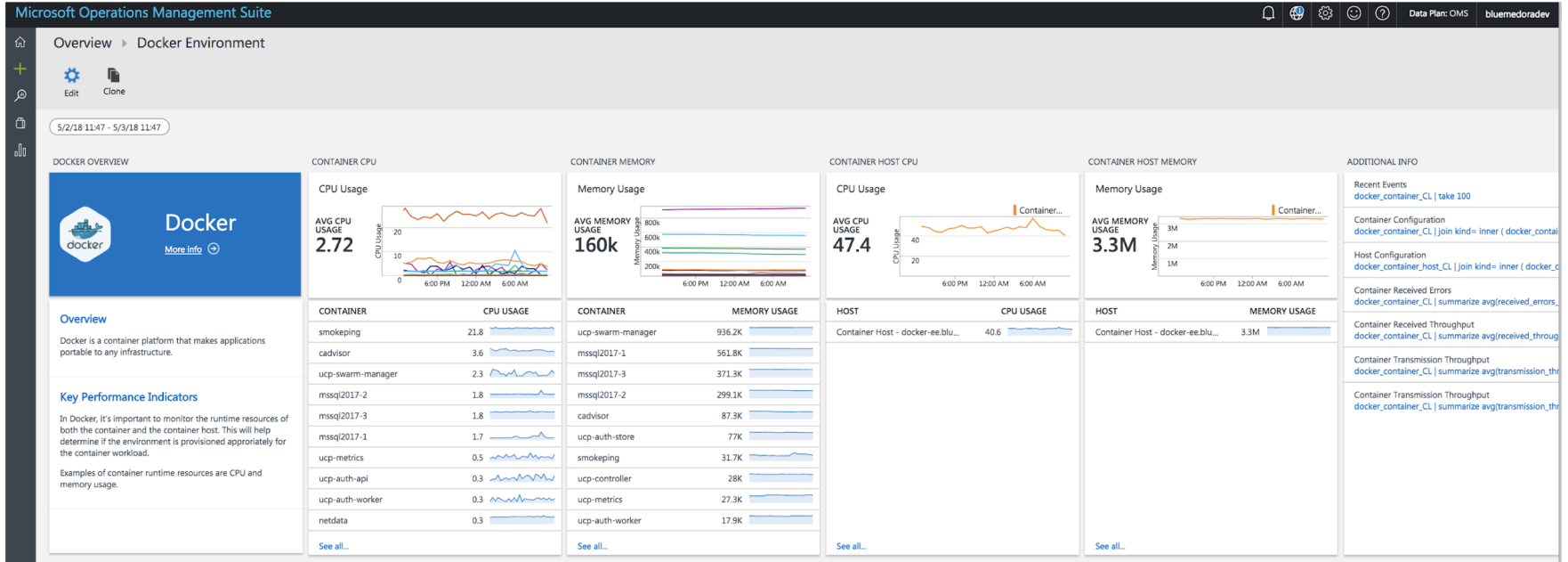
Connect Azure Monitor



# BindPlane: Monitoring Integration as a Service



# Docker (cAdvisor)

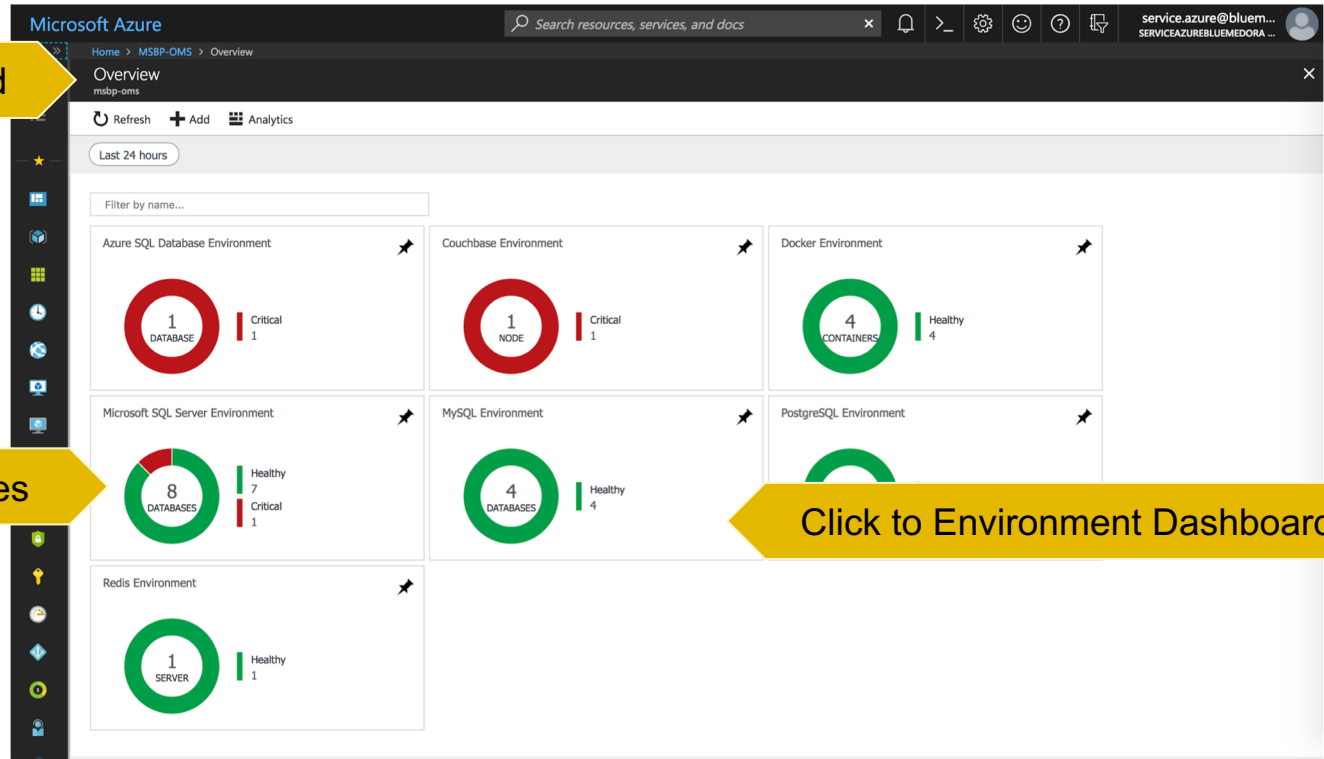


# Azure Workload Monitoring with BindPlane

Dashboards Included

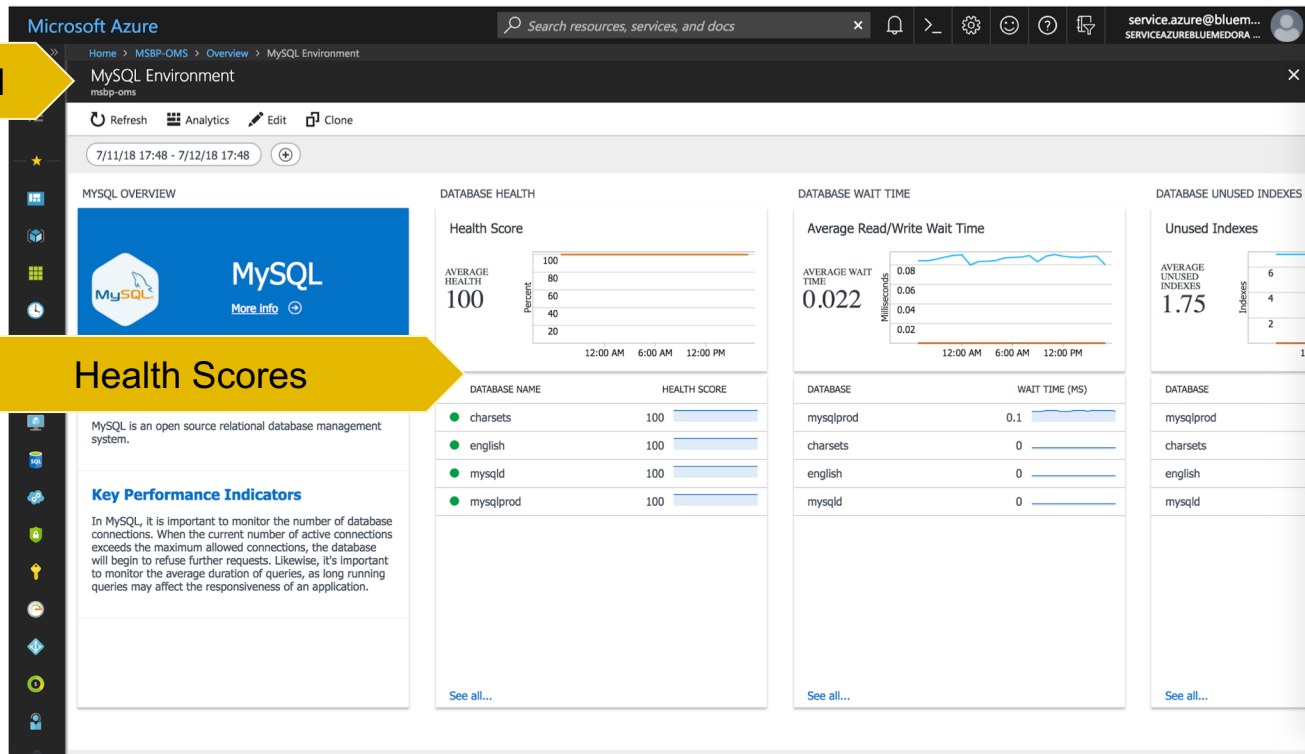
Health Scores

Click to Environment Dashboard



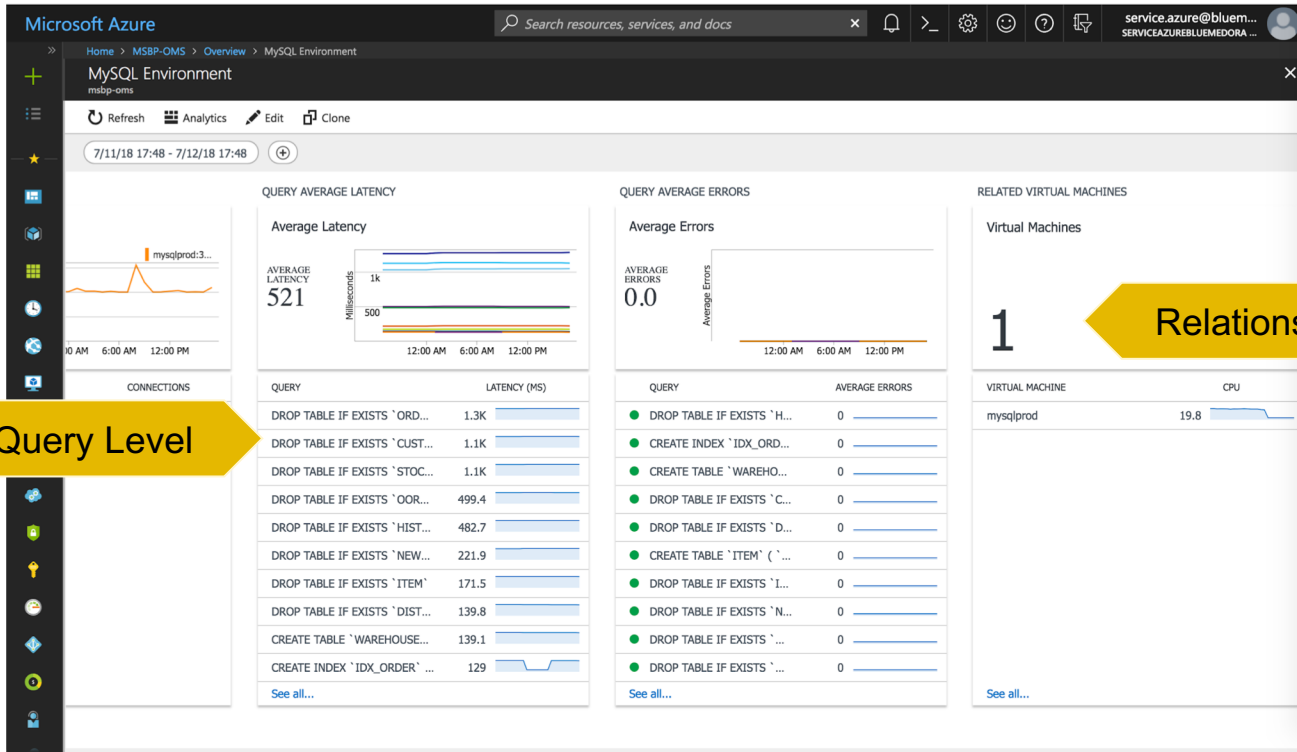
# Azure Workload Monitoring with BindPlane

Dashboards Included



Health Scores

# Azure Workload Monitoring with BindPlane

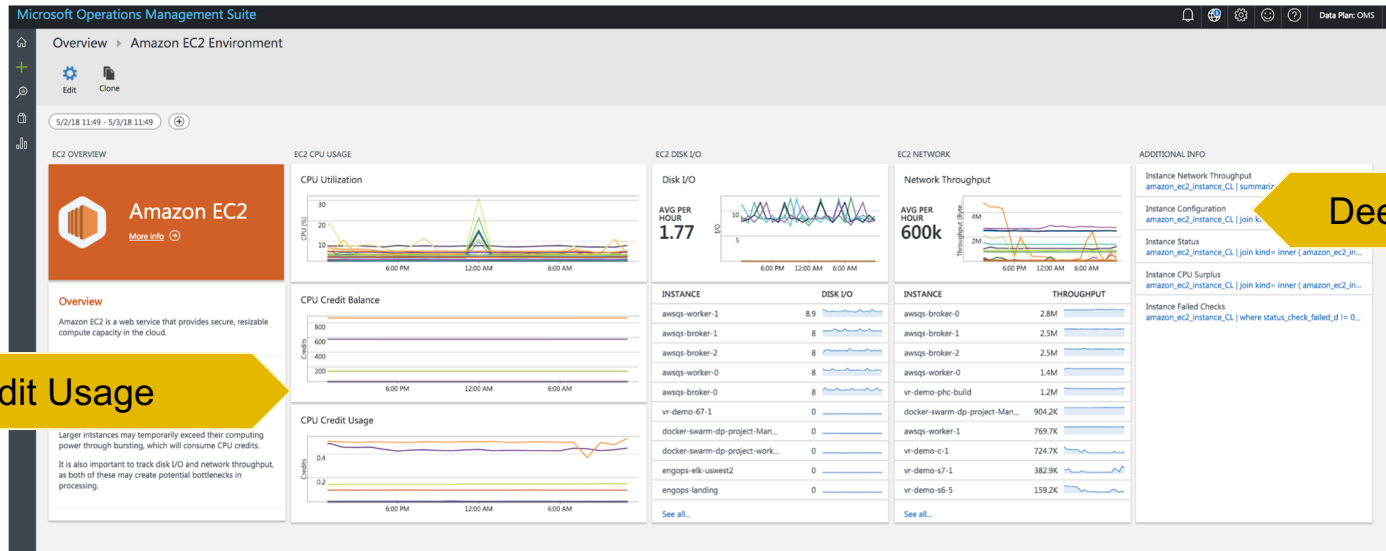


Depth to Query Level

1

Relationship to Azure VM

# Multi-Cloud Monitoring with BindPlane



Credit Usage

Deep Config Data

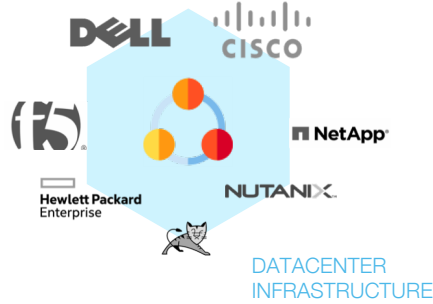


# On Premise Datacenter Monitoring with BindPlane

Migrate from SCOM

Support Hybrid Cloud

Cloud vs. On Prem Compare



Microsoft Operations Management Suite

Overview > VMware vCenter Environment

VMWARE VCENTER OVERVIEW

VMware vCenter

HOST DISTRIBUTION

7 Hosts 702 Virtual Machines

HOST	VIRTUAL MACHINES
esxi-inf-ord-02.bluededora.loc...	124
esxi-inf-ord-04.bluededora.loc...	122
esxi-inf-ord-01.bluededora.loc...	104
esxi-inf-ord-06.bluededora.loc...	95
esxi-inf-ord-07.bluededora.loc...	94
esxi-inf-ord-05.bluededora.loc...	86
esxi-inf-ord-03.bluededora.loc...	85

See all...

Relationship Mapping

VIRTUAL MACHINE RELATIONSHIPS

Relationships

46 TOTAL

- kubernetes pod 34
- kubernetes node 5
- couchbase node 3

ENTITY TYPE	VM	COUNT
kubernetes_p...	kube-node1	29
kubernetes_p...	kube-master	5
oracle_datab...	ora12-ref-1.bl...	1
postgresql_in...	pgsql10-ref-0...	1
mysql_instance	mysql57-ref-0...	1
couchbase_n...	cb50-rh7-3.bl...	1
couchbase_n...	cb50-rh7-2.bl...	1
couchbase_n...	cb50-rh7-1.bl...	1
kubernetes_n...	kube-node2	1
kubernetes_n...	kube-node3	1

See all...

VIRTUAL MACHINE CPU

CPU Utilization

AVG CPU 7.87%

80  
60  
40  
20  
CPU Usage

Apr 27 Apr 29 May 1

VIRTUAL MACHINE	CPU USAGE
jenkins-slave-1.bluededora.loc...	62.3
ex-uno-collect-4-2.bluededora...	54.5
ora-rac-12-qa-1.bluededora.lo...	35.2
pa80	34.9
netScaler-ref-ha1	34
ex-uno-collect-1.bluededora.l...	32.4
netScaler-ref-ha2	31.9
ora-rac-12-qa-2.bluededora.lo...	29.9
ucspe-252	26.9
oem-ref-oms.bluededora.local...	24

See all...



# Blue Medora history

**1st**

## Category Defining

The first  
Monitoring  
Integration as a  
Service (MaaS)  
provider

**150+**

## Breadth

Large and  
growing catalog  
of endpoint  
integrations

**350+**

## Proven

Enterprise  
customers like  
BOSCH,  
Safeway, JP  
Morgan Chase



# Next Steps



## Schedule a Demo

BindPlane is in free preview until the end of August.  
To schedule a demo and activate a free preview account, contact:

Daniel Jefferies, Director of Platform Products  
[daniel.jefferies@bluemedora.com](mailto:daniel.jefferies@bluemedora.com)



## Learn More

BindPlane Pitch at Microsoft - <https://youtu.be/bo1s9r0-MYw?t=42s>

BindPlane for Microsoft product page -  
<https://bluemedora.com/products/bindplane-for-microsoft/>

Backup

# Customer perspective

## Ryan Schuttloffel

System Engineer,  
Border States



“  
Amazement. I now have an entire systems view,  
which is rare. I have to check my phone a whole  
lot less over evenings and weekend.”



## Richard Esteve

Tech Leader,  
Orange Business Services



“  
To effectively manage their IT environments,  
our customers require an understanding of  
what is happening across the environment.  
Blue Medora’s out-of-the-box dashboards  
provide exactly that, which is greatly improving  
our overall customer experience.”

## Ron Kozakowski

Data Services Manager,  
Alliant Credit Union





“  
We can show our development department  
things on their servers that we could never  
have done before.”

# MSFT Log Analytics for Multi-Cloud (Preview Launched in May)

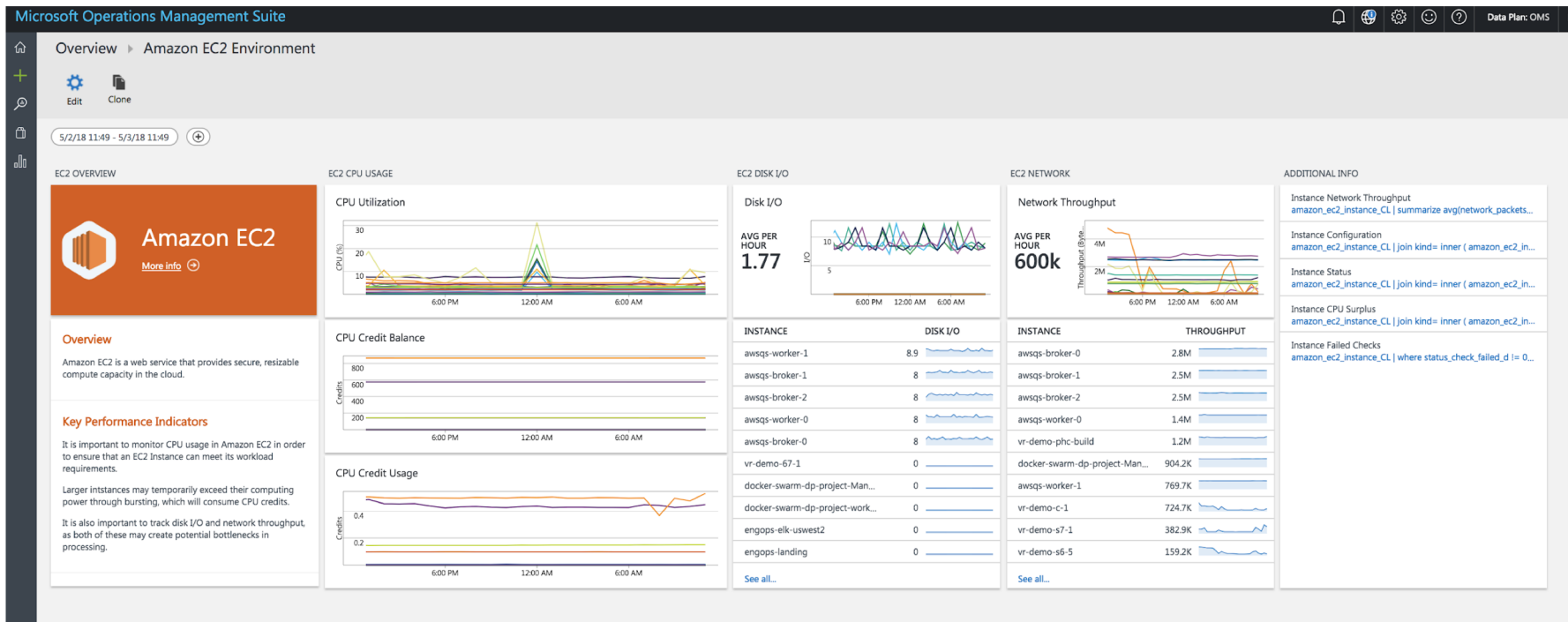


# Deep Insights for 38 distinct AWS Services

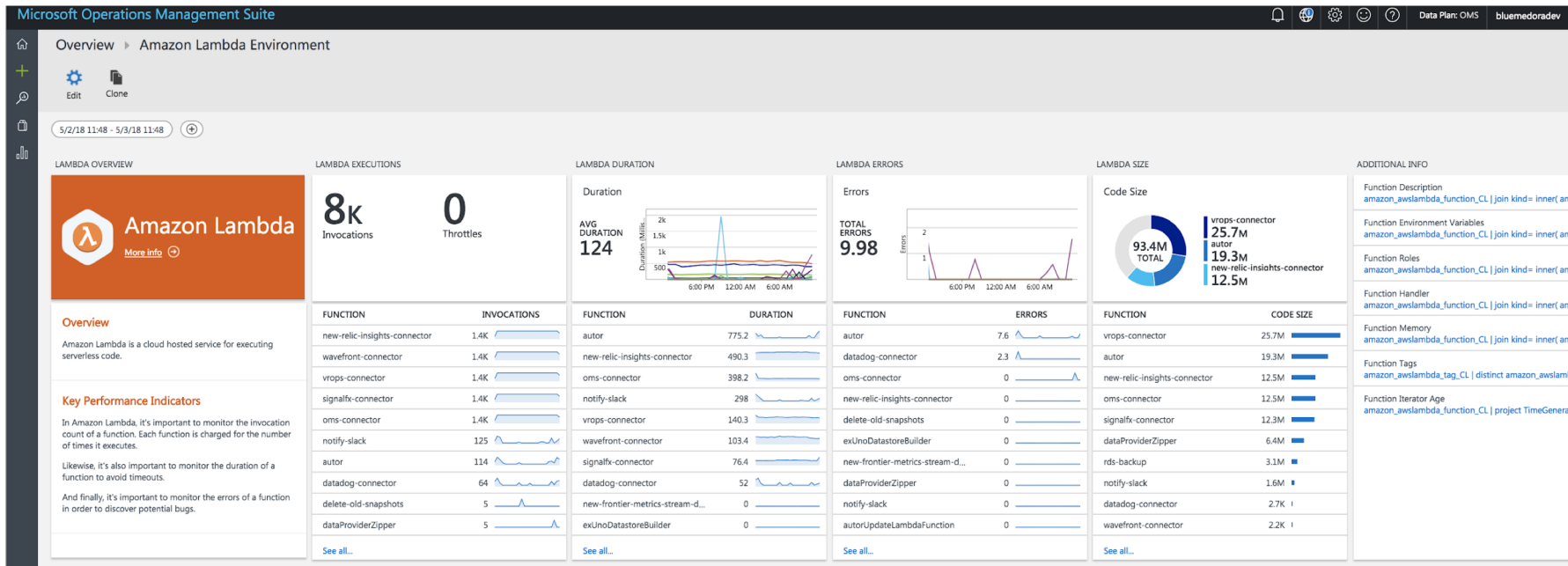


 Amazon Elastic Compute (EC2)	 AWS Key Management Service (KMS)	 Amazon Route 53	 Amazon ElastiCache Memcached	 Amazon DynamoDB
 Amazon Simple Storage (S3)	 Amazon Elasticsearch	 Amazon Kinesis Analytics	 Amazon ElastiCache Redis	 Amazon RDS - Oracle DB
 Amazon Elastic Load Balancer (ELB)	 AWS Billing / Budget	 Amazon Kinesis Firehose	 AWS Elastic Beanstalk	 Amazon RDS - Microsoft SQL Server
 Amazon Simple Queue Service (SQS)	 Amazon VPC	 Amazon Kinesis Video Streams	 Amazon Auto Scaling	 Amazon RDS - PostgreSQL
 Amazon Simple Notification Service (SNS)	 Amazon CloudFront	 Amazon Kinesis	 AWS OpsWorks	 Amazon RDS - MySQL
 Amazon CloudSearch	 Amazon WorkSpaces	 Amazon API Gateway	 Amazon Glacier	 Amazon RDS - MariaDB
 Amazon Elastic Block Storage (EBS)	 Amazon EC2 Container Service	 Amazon Simple Email Service (SES)	 Amazon Elastic File System (EFS)	 Amazon RDS - Aurora

# Enabling drill-down into AWS EC2

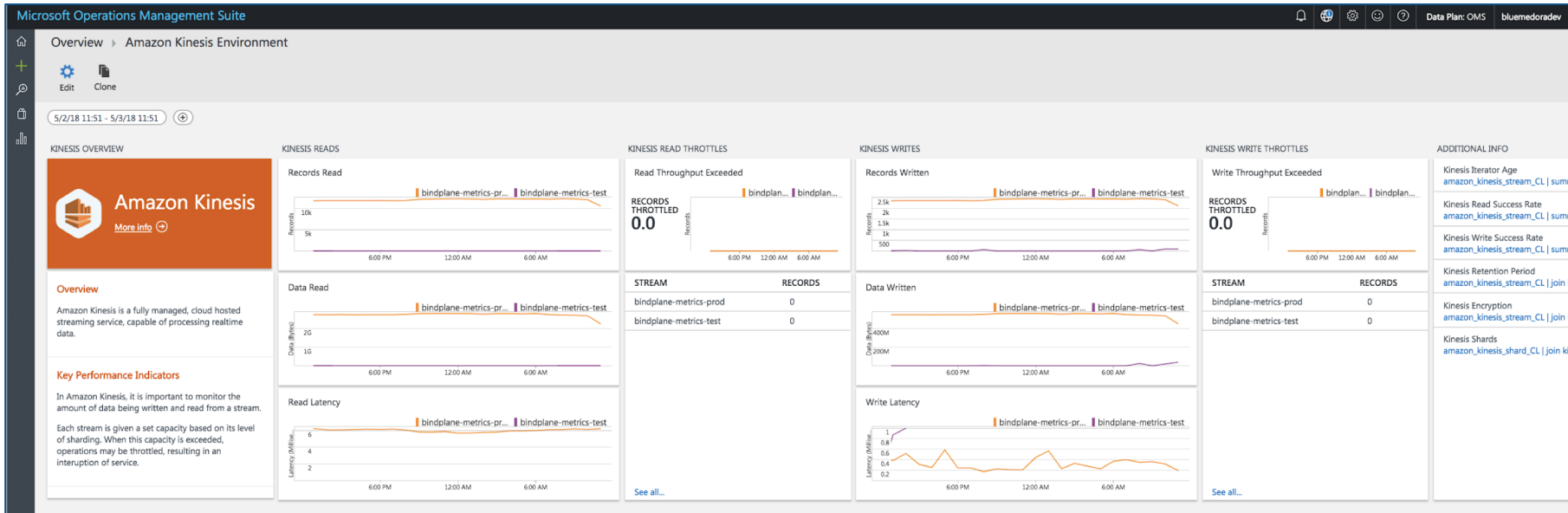


# Enabling drill-down into AWS Lambda





# Enabling drill-down into AWS Kinesis



# Google Cloud SQL

Overview > Google Cloud SQL Environment

Edit
 Clone

5/2/18 11:44 - 5/3/18 11:44

GOOGLE CLOUD SQL OVERVIEW

**Google Cloud SQL**  
[More info](#)

Overview

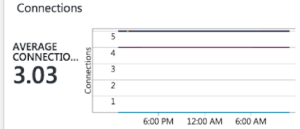
Google Cloud SQL is a fully-managed database service for administering relational databases on Google Cloud.

Key Performance Indicators

In Google Cloud SQL, it is important to monitor the number of connections to a database instance. This will help indicate the load on an instance and gauge its current scale.

Likewise, it's also important to monitor the queries and operations of an instance. Abnormally high transactions can have an adverse effect on the responsiveness of the database.

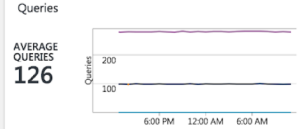
INSTANCE CONNECTIONS



INSTANCE	CONNECTIONS
mysql-test-1	5
mysql-test-1-falover	4
postgres-test-1	0

[See all...](#)

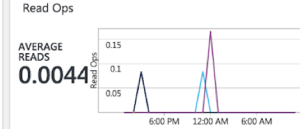
QUERY COUNT



INSTANCE	QUERIES
mysql-test-1-falover	278.9
mysql-test-1	98.3
postgres-test-1	0

[See all...](#)

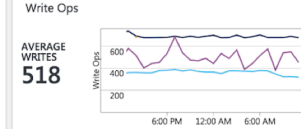
INSTANCE READS



INSTANCE	READ OPS
mysql-test-1-falover	0
mysql-test-1	0
postgres-test-1	0

[See all...](#)

INSTANCE WRITES



INSTANCE	WRITE OPS
mysql-test-1	678
mysql-test-1-falover	452
postgres-test-1	319.6

[See all...](#)

ADDITIONAL INFO

- Recent Events  
[google\\_cloudsql\\_instance\\_CL | take 100](#)
- Instance Configuration  
[google\\_cloudsql\\_instance\\_CL | join kind= inner \( goog](#)
- Instance Tier  
[google\\_cloudsql\\_instance\\_CL | join kind= inner \( goog](#)
- Instance Location  
[google\\_cloudsql\\_instance\\_CL | join kind= inner \( goog](#)
- Instance Memory  
[google\\_cloudsql\\_instance\\_CL | summarize avg\(memor](#)
- Instance CPU  
[google\\_cloudsql\\_instance\\_CL | summarize avg\(cpuUtil](#)

# Google Compute

## Overview ▶ Google Compute Environment

Edit Clone

5/2/18 11:53 - 5/3/18 11:53

### GOOGLE COMPUTE OVERVIEW



More info

#### Overview

Google Compute Engine is a cloud hosted service that delivers virtual machines running in Google's data centers and worldwide fiber network.

#### Key Performance Indicators

In Google Compute, it is important to monitor runtime resources, such as CPU, network traffic, and disk.

Contention in these resources will inevitably degrade the performance of applications running on a Google Compute instance.

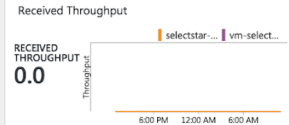
### INSTANCE CPU



INSTANCE	CPU
selectstar-collector	0
vm-selectstar-collector-again	0

[See all...](#)

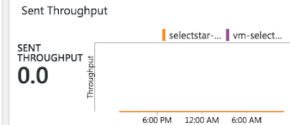
### INSTANCE RECEIVED THROUGHPUT



INSTANCE	RECEIVED THROUGHPUT
selectstar-collector	0
vm-selectstar-collector-again	0

[See all...](#)

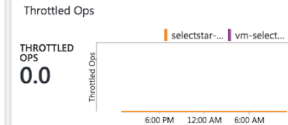
### INSTANCE SENT THROUGHPUT



INSTANCE	SENT THROUGHPUT
selectstar-collector	0
vm-selectstar-collector-again	0

[See all...](#)

### DISK THROTTLES



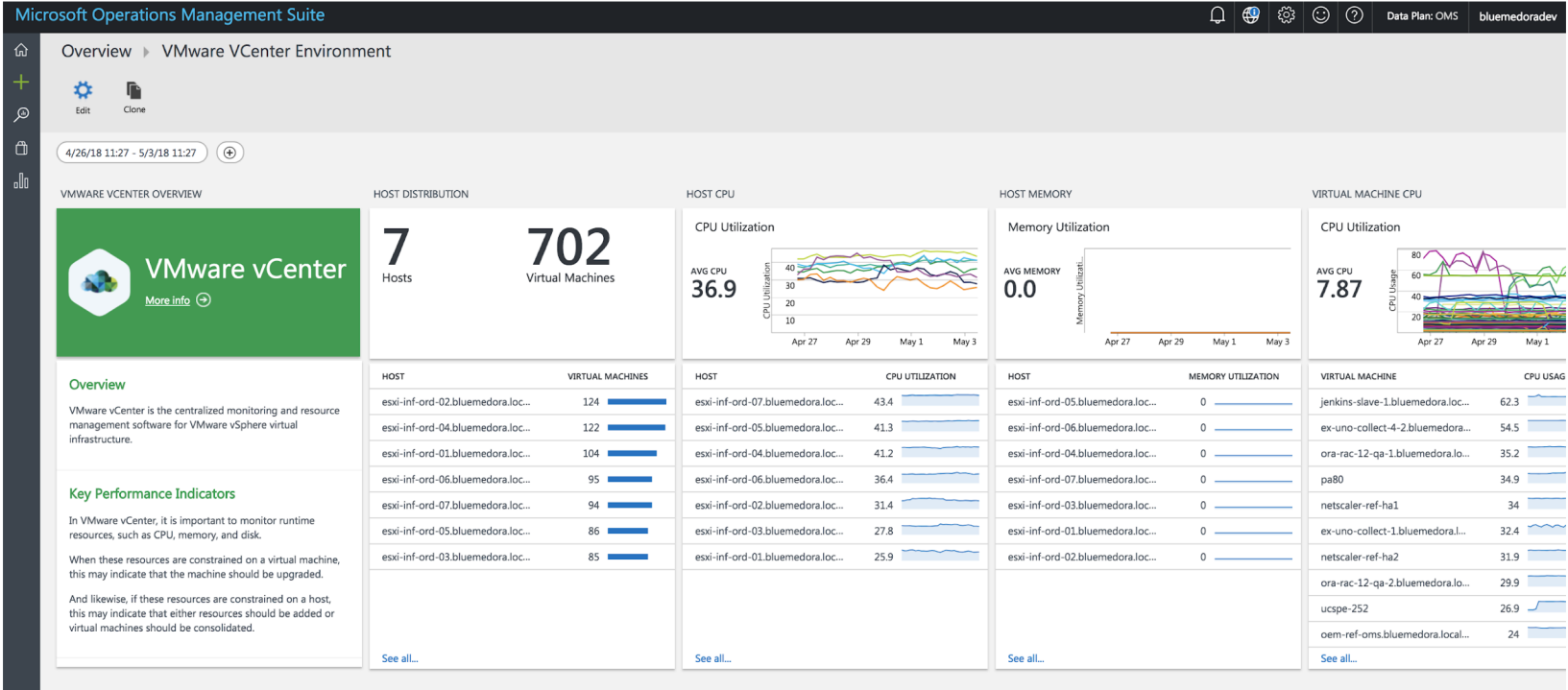
INSTANCE	THROTTLED OPS
selectstar-collector	0
vm-selectstar-collector-again	0

[See all...](#)

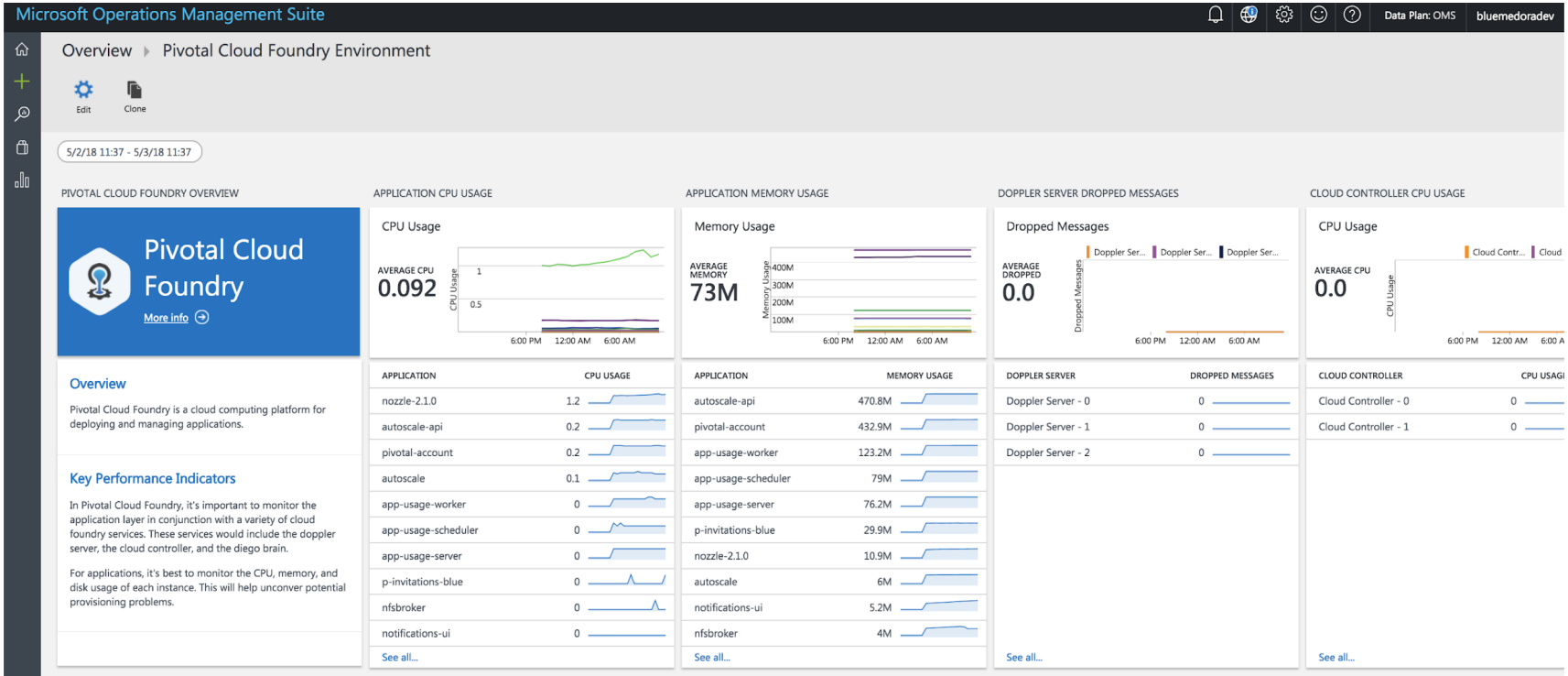
### ADDITIONAL INFO

- Recent Events  
[google\\_computeengine\\_instance\\_CL | take 100](#)
  - Instance Configuration  
[google\\_computeengine\\_instance\\_CL | join kind= inner \( goog](#)
  - Instance Location  
[google\\_computeengine\\_instance\\_CL | join kind= inner \( goog](#)
  - Disk Configuration  
[google\\_computeengine\\_disk\\_CL | join kind= inner \( goog](#)
  - Disk Throughput  
[google\\_computeengine\\_disk\\_CL | summarize avg\(writ](#)
- avg(memor  
avg(cpuUtil

# VMware vSphere



# Pivotal Cloud Foundry



# PostgreSQL

Microsoft Operations Management Suite

🔔 🌐 ⚙️ 😊 ❓ Data Plan: OMS bluemedoradev

Overview PostgreSQL Environment



5/2/18 11:43 - 5/3/18 11:43

## POSTGRESQL OVERVIEW

### PostgreSQL

[More info](#)

### Overview

PostgreSQL is an open source relational database management system.

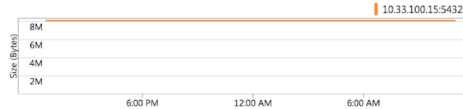
### Key Performance Indicators

In PostgreSQL, it's important to monitor table operations, as errant row inserts can quickly inflate the size of the database.

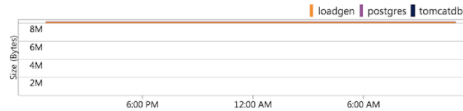
Furthermore, it's also important to monitor the executions of a query. If a resource intensive query executes at a rapid pace, this may hinder the responsiveness of the database.

## POSTGRESQL SIZE

### Instance



### Database Size



### Table Size



## DATABASE OPERATIONS

0 Row Inserts

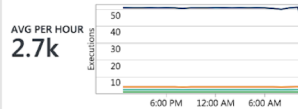
0 Row Deletes

DATABASE	TOTAL OPERATIONS
loadgen	7.2K
postgres	4.4K
tomcatdb	2.3K

[See all...](#)

## QUERY EXECUTIONS

### Total Executions



QUERY	AVG TIME (MS)
SELECT typinput=\$2::regpr...	0.1
select exists(SELECT \$1 FR...	0
SELECT n.nspname = ANY(...	0
SET extra_float_digits = 3	0
SET application_name = 'Bl...	0
SHOW server_version_num	0

[See all...](#)

## ADDITIONAL INFO

- Session Wait Time  
[postgresql\\_session\\_CL | summarize max\(waiting\\_d\) by postgre...](#)
- Session by Application  
[postgresql\\_session\\_CL | summarize count\(\) by application\\_name...](#)
- Index Rates  
[postgresql\\_index\\_CL | project postgresql\\_index\\_name\\_s, postgre...](#)
- Instance Configuration  
[postgresql\\_configuration\\_CL | distinct postgresql\\_instance\\_nam...](#)
- Replication Delay  
[postgresql\\_replication\\_CL | summarize avg\(replication\\_delay\\_d\) ...](#)
- Tablespace Size  
[postgresql\\_tablespace\\_CL | summarize avg\(spc\\_size\\_d\) by postgre...](#)
- Function Calls  
[postgresql\\_function\\_CL | summarize avg\(avg\\_time\\_d\), sum\(calls\\_...](#)


# Kubernetes

Microsoft Operations Management Suite Data Plan: OMS bluemedora.dev

Overview ▶ Kubernetes Environment

5/2/18 11:40 - 5/3/18 11:40

### KUBERNETES OVERVIEW



## Kubernetes

[More info](#)

**Overview**

Kubernetes is an open-source system for managing containerized applications.

**Key Performance Indicators**

In Kubernetes, it is important to monitor the CPU and memory usage of the containers in a cluster. Resource contention in these areas will often affect the performance of an application.

Likewise, it's also important to monitor how often Kubernetes pods are restarting containers. Frequent restarts are an early indicator of potential pod problems.

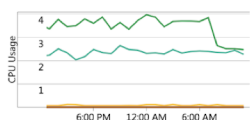
### CONTAINER DISTRIBUTION

**235**  
Pods

**42**  
Containers

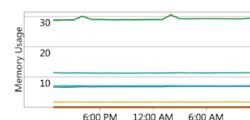
### CONTAINER CPU USAGE

AVG CPU  
**0.27**



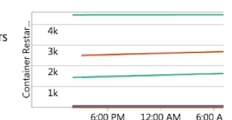
### CONTAINER MEMORY USAGE

AVG MEMORY  
**2.55**



### POD RESTARTS

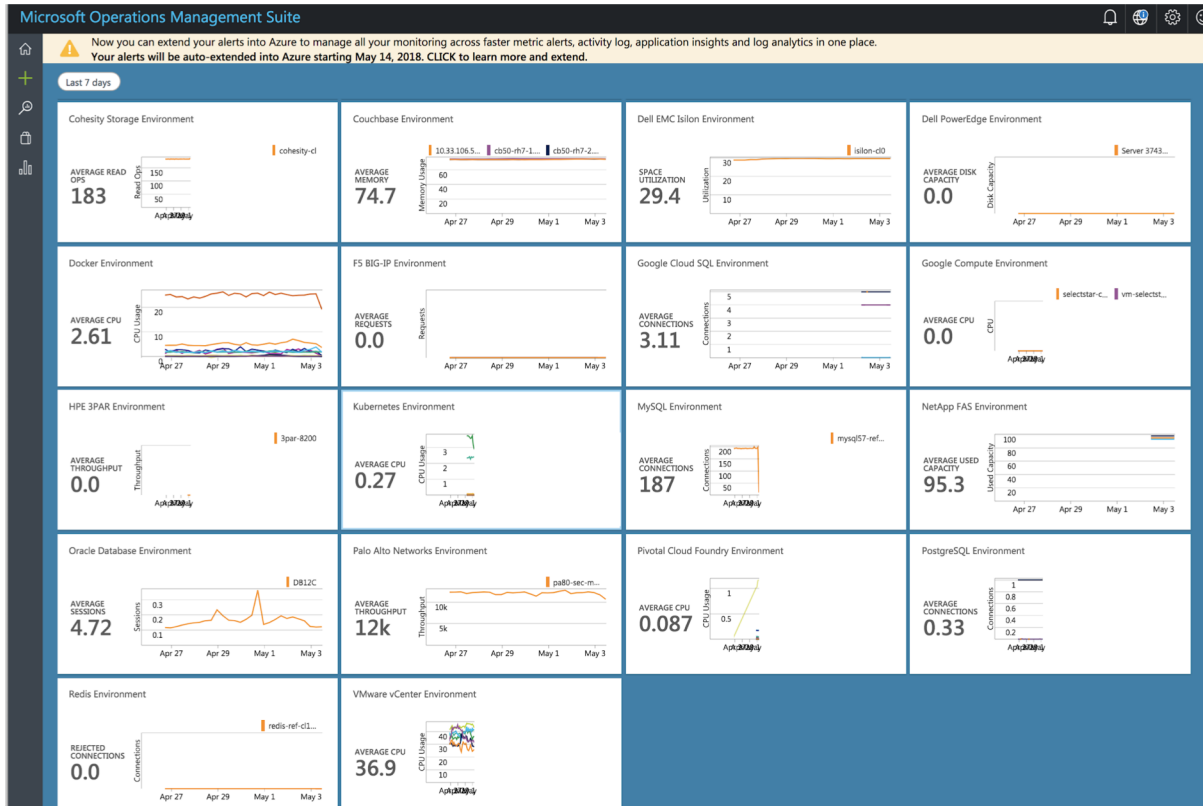
AVG RESTARTS  
**55.4**



POD	CONTAINER COUNT	CONTAINER	CPU USAGE	CONTAINER	MEMORY USAGE	POD	POD RESTART
kube-dns-v19-9sb84	3	heapster	2.5	heapster	29.4	etcd-server-kube-master	4.5K
kube-dns-v19-zfdg7	3	heapster-nanny	2.3	heapster-nanny	11.4	quoting-koala-monocular-api...	2.7K
kube-flannel-ds-9n2hb	2	monocular	0.1	healthz	7.2	plundering-ibex-monocular-ap...	2.7K
heapster-v1.2.0-757f46b777-8...	2	kubedns	0	kubedns	6.9	plundering-ibex-monocular-ap...	1.7K
test-ingress-nginx-ingress-cont...	2	cadvisor	0	monocular	1.7	quoting-koala-monocular-api...	1.7K
kube-flannel-ds-srz64	2	etcd-container	0	cadvisor	0	kube-apiserver-kube-master	57
kube-proxy-pdffr4	1	install-cni	0	install-cni	0	kube-flannel-ds-9n2hb	22
tiler-deploy-587df449fb-qr882	1	kube-apiserver	0	kube-apiserver	0	kube-scheduler-kube-master	10
quoting-koala-mongodb-6d87...	1	kube-flannel	0	kube-flannel	0	kube-proxy-f4gfx	9
quoting-koala-monocular-api...	1	kube-proxy	0	kube-proxy	0	plundering-ibex-monocular-ui...	0

[See all...](#)

# DataOps / PaaS / DevOps / On Prem Infrastructure






# Couchbase

Microsoft Operations Management Suite

Overview Couchbase Environment

5/2/18 11:41 - 5/3/18 11:41

### COUCHBASE OVERVIEW



## Couchbase

[More info](#)

#### Overview

Couchbase is an open-source, distributed NoSQL document database.

#### Key Performance Indicators

In Couchbase, it is important to monitor the memory of a cluster, as the vast majority of objects should be cached in memory for fast retrieval.

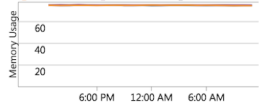
Because of this, it is also important to monitor the cache miss ratio of a bucket. This number represents how often a bucket was unable to find a requested object in the cache and was forced to read from disk.

Lastly, it's important to monitor the operations of a bucket, as this will indicate the general load of an environment.

### NODE MEMORY

#### Memory Usage

AVERAGE MEMORY **75.1**



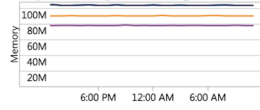
NODE	MEMORY USAGE
cb50-rh7-1.bluedora.localne...	75.3
cb50-rh7-2.bluedora.localne...	74.9
10.33.106.59:8091	74.7

[See all...](#)

### BUCKET MEMORY

#### Memory

AVERAGE MEMORY **91M**



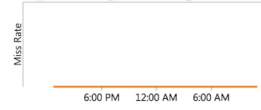
BUCKET	MEMORY
travel-sample	104M
beer-sample	90.3M
gamesim-sample	78.3M

[See all...](#)

### BUCKET CACHE

#### Cache Miss Rate

CACHE MISS RATE **0.0**



BUCKET	CACHE MISS RATE
beer-sample	0
gamesim-sample	0
travel-sample	0

[See all...](#)

### BUCKET OPERATIONS

#### Operations Per S

AVERAGE OPERATIONS **0.0**

BUCKET	OPERATIONS
beer-sample	0
gamesim-sample	0
travel-sample	0

[See all...](#)

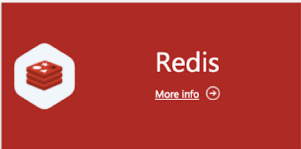
# Redis

## Overview > Redis Environment

⚙️ Edit  
📄 Clone

📅 5/2/18 11:59 - 5/3/18 11:59

### REDIS OVERVIEW



**Redis**  
[More Info](#)

#### Overview

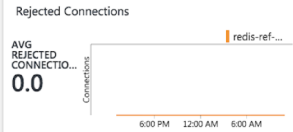
Redis is an open source, in-memory data structure store, used as a database, cache and message broker.

#### Key Performance Indicators

In Redis, it is important to monitor rejected connections. When rejected connections occur, this indicates that an application has been unable to communicate with the server, resulting in a disruption of service.

Likewise, it is also important to monitor the memory used by the Redis server. When memory exceeds the physical limit, the server will start swapping and performance will degrade.

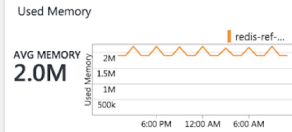
### SERVER REJECTIONS



SERVER	REJECTED CONNECTIONS
redis-ref-cl1-1.6379	0

[See all...](#)

### SERVER MEMORY



SERVER	MEMORY
redis-ref-cl1-1.6379	1.9M

[See all...](#)

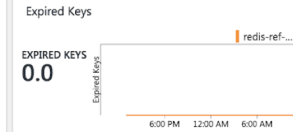
### SERVER EVICTED KEYS



SERVER	EVICTED KEYS
redis-ref-cl1-1.6379	0

[See all...](#)

### SERVER EXPIRED KEYS



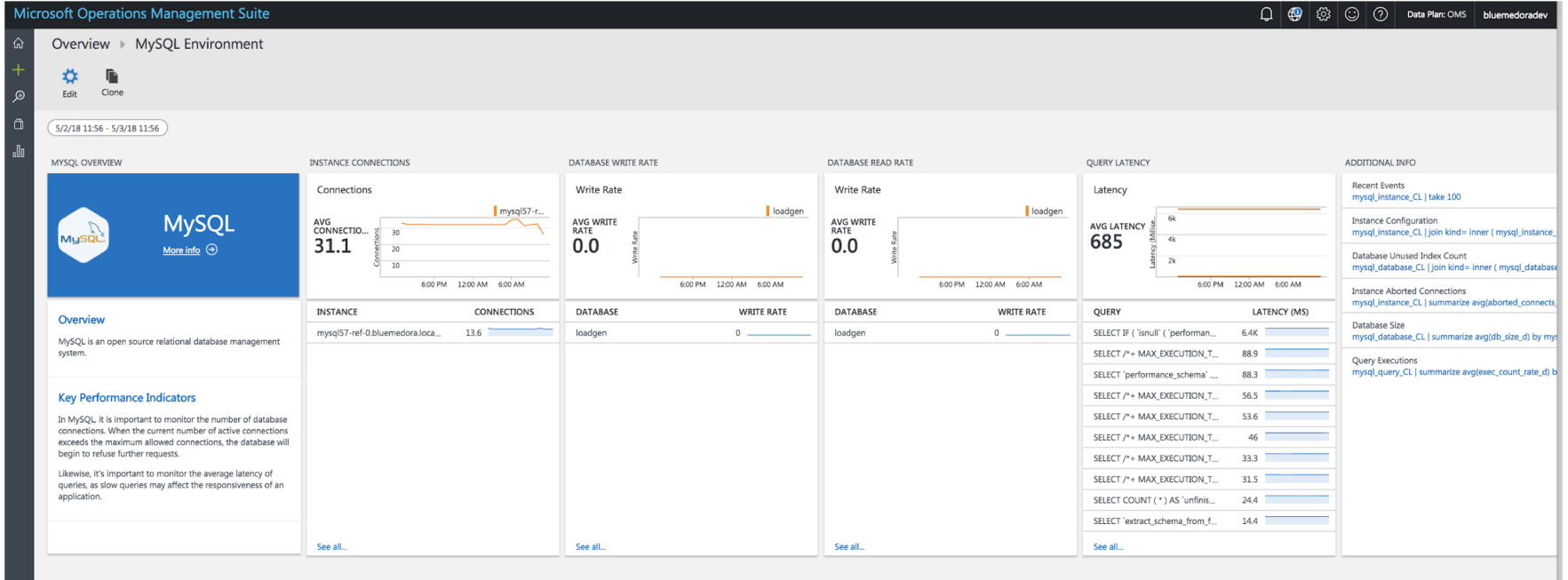
SERVER	EXPIRED KEYS
redis-ref-cl1-1.6379	0

[See all...](#)

### ADDITIONAL INFO

- Recent Events  
[redis\\_server\\_CL | take 100](#)
- Cluster Status  
[redis\\_cluster\\_CL | join kind= inner \( redis\\_cluster\\_CL | s](#)
- Cluster Size  
[redis\\_cluster\\_CL | join kind= inner \( redis\\_cluster\\_CL | s](#)
- Database Status  
[redis\\_database\\_CL | join kind= inner \( redis\\_database\\_o](#)
- Cluster Sent Messages  
[redis\\_cluster\\_CL | summarize avg\(cluster\\_stats\\_messag](#)
- Cluster Received Messages  
[redis\\_cluster\\_CL | summarize avg\(cluster\\_stats\\_messag](#)
- Cluster Instantaneous Ops  
[redis\\_cluster\\_CL | summarize avg\(avg\\_instantaneous\\_o](#)

# MySQL Database



# Dell Compute

Microsoft Operations Management Suite

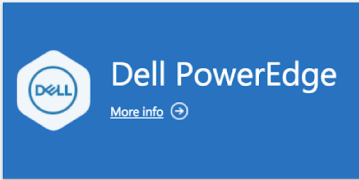
🔔 🌐 ⚙️ 😊 ❓ Data Plan: OMS bluemedoraev

Overview ▶ Dell PowerEdge Environment

⚙️ Edit 📄 Clone

5/2/18 11:45 - 5/3/18 11:45

DELL POWEREDGE OVERVIEW



**Dell PowerEdge**  
[More info](#)

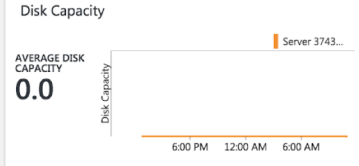
## Overview

Dell PowerEdge is a server line offered by Dell.

## Key Performance Indicators

In Dell PowerEdge, it is important to monitor runtime resources, such as CPU, memory, and disk.

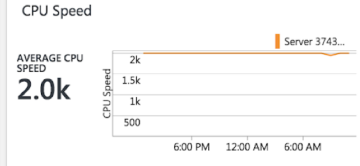
SERVER DISK CAPACITY



SERVER	DISK CAPACITY
Server 37434008593 t620-dev	0

[See all...](#)

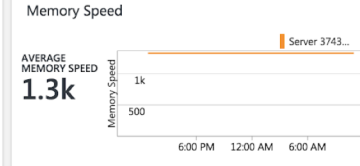
SERVER PROCESSOR SPEED



SERVER	CPU SPEED
Server 37434008593 t620-dev	2K

[See all...](#)

SERVER MEMORY SPEED



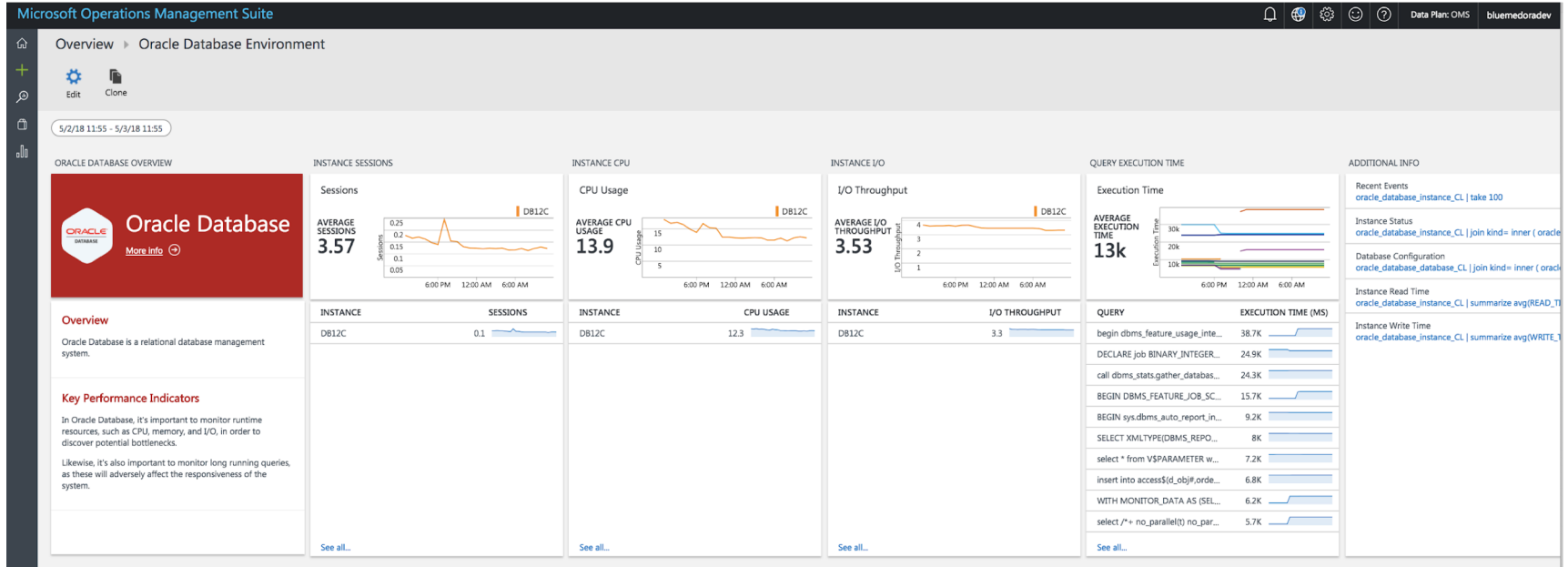
SERVER	MEMORY SPEED
Server 37434008593 t620-dev	1.3K

[See all...](#)

ADDITIONAL INFO

- Recent Events  
dell\_compute\_rack\_server\_CL | take 100
- Server Model  
dell\_compute\_rack\_server\_CL | join kind= inner (dell\_comp
- Server IP  
dell\_compute\_rack\_server\_CL | join kind= inner (dell\_comp
- Server OS  
dell\_compute\_rack\_server\_CL | join kind= inner (dell\_comp
- Server BIOS  
dell\_compute\_rack\_server\_CL | join kind= inner (dell\_comp

# Oracle Database



# Cisco Nexus



5/2/18 11:57 - 5/3/18 11:57

CISCO NEXUS OVERVIEW

**Cisco Nexus**  
More info

**Overview**

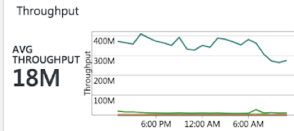
Cisco Nexus is a series of network switches designed for the traditional data center.

**Key Performance Indicators**

In Cisco Nexus, it is important to monitor the traffic of the switch.

When throughput exceeds the bandwidth of the switch, network packets will be dropped, resulting in lost data.

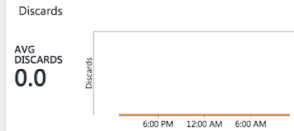
PORT THROUGHPUT



PORT	THROUGHPUT
sw-nx5010-1: FIC-A Port 6	275.6M
sw-nx5010-1: Ethernet1/20	10.5M
sw-nx5010-1: Uplink to 5524	10.4M
sw-nx5010-1: Cohesity Data Ne...	696.6K
sw-nx5010-1: Dell T620 VM Tra...	208.9K
sw-nx5010-1: FIC-B Port 6	11.5K
sw-nx5010-1: mgmt0	8.9K
sw-nx5010-1: FAS 3240 ISCSI Tr...	74.8
sw-nx5010-1: Ethernet1/5	0
sw-nx5010-1: Ethernet1/9	0

[See all...](#)

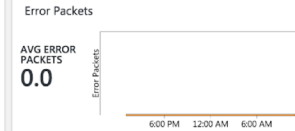
PORT DISCARDS



PORT	DISCARDS
sw-nx5010-1: FAS 3240 ISCSI Tr...	0
sw-nx5010-1: Cohesity Data Ne...	0
sw-nx5010-1: Ethernet1/10	0
sw-nx5010-1: Ethernet1/15	0
sw-nx5010-1: Ethernet1/19	0
sw-nx5010-1: Ethernet1/20	0
sw-nx5010-1: Ethernet1/2	0
sw-nx5010-1: Ethernet1/5	0
sw-nx5010-1: Ethernet1/8	0
sw-nx5010-1: Ethernet1/9	0

[See all...](#)

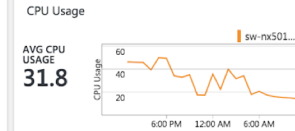
PORT ERROR PACKETS



PORT	ERROR PACKETS
sw-nx5010-1: FAS 3240 ISCSI Tr...	0
sw-nx5010-1: Cohesity Data Ne...	0
sw-nx5010-1: Ethernet1/10	0
sw-nx5010-1: Ethernet1/15	0
sw-nx5010-1: Ethernet1/19	0
sw-nx5010-1: Ethernet1/20	0
sw-nx5010-1: Ethernet1/2	0
sw-nx5010-1: Ethernet1/5	0
sw-nx5010-1: Ethernet1/8	0
sw-nx5010-1: Ethernet1/9	0

[See all...](#)

SWITCH CPU USAGE



SWITCH	CPU USAGE
sw-nx5010-1	14.3

[See all...](#)

ADDITIONAL INFO

- Recent Events  
[cisco\\_networking\\_port\\_CL | take 100](#)
- Switch Attached MAC  
[cisco\\_networking\\_switch\\_CL | join kind= inner \( cisco\\_r](#)
- Switch Model  
[cisco\\_networking\\_switch\\_CL | join kind= inner \( cisco\\_r](#)
- Switch IP  
[cisco\\_networking\\_switch\\_CL | join kind= inner \( cisco\\_r](#)
- Port Bandwidth  
[cisco\\_networking\\_port\\_CL | join kind= inner \( cisco\\_net](#)
- Port Configuration  
[cisco\\_networking\\_port\\_CL | join kind= inner \( cisco\\_net](#)
- Ports Down  
[cisco\\_networking\\_switch\\_CL | summarize avg\(port\\_stat](#)
- Ports in Error  
[cisco\\_networking\\_switch\\_CL | summarize avg\(port\\_stat](#)

# NetApp Storage

Overview ▶ NetApp FAS Environment



5/2/18 11:58 - 5/3/18 11:58

NETAPP FAS OVERVIEW

**NetApp FAS**  
More info ⓘ

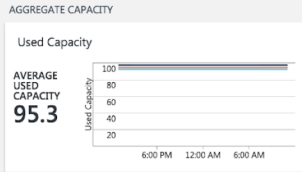
**Overview**

NetApp FAS is a fabric-attached storage system that can serve storage over a network using file-based protocols such as NFS, SMB, FTP, TFTP, and HTTP.

**Key Performance Indicators**

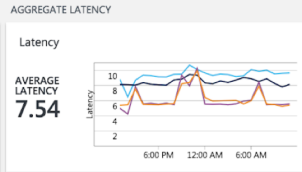
In NetApp FAS, it's important to monitor the capacity of the aggregates and volumes. When capacity is reached, the storage system will be unable to operate as expected.

Likewise, it's also important to monitor the latency of reads and writes. Highly latent operations will cause applications to appear unresponsive.



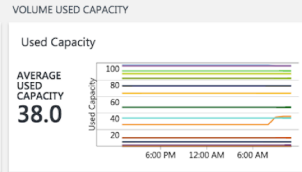
AGGREGATE	USED CAPACITY
aggr_1	98
aggr0_fas3240c_02_0	95
aggr0	95
aggr_2	93

[See all...](#)



AGGREGATE	LATENCY (MS)
aggr_2	9.6
aggr_1	8.2
aggr0	5.6
aggr0_fas3240c_02_0	5.4

[See all...](#)



VOLUME	USED CAPACITY
fas3240c_svm_iscsi_lun_epops...	97
netapp_iscsi_perf_vol	97
ucs_iscsi_vol	91
kraken6_lun_vol	88
ucs_nfs_vol	87
vol_nfs_vmware_thin	82
vol_nfs_vmware_cap	82
vol_temp_nfs_jon	73
vcsa_test_vvol1	64
vol_nfs_qos	47

[See all...](#)



VOLUME	LATENCY (MS)
netapp_iscsi_perf_vol	57.7
ucs_iscsi_vol	12.5
vol_nfs_vmware_thick	8.7
vol0	1.6
ucs_nfs_vol	0.3
vol_epops_nfs	0.1
DJ_Test	0.1
fas3240csvm_iscsi_root	0.1
vol_nfs_vmware_cap	0.1
fas3240cusc_iscsi_root	0

[See all...](#)

**ADDITIONAL INFO**

Recent Events  
[netapp\\_apiservices\\_aggregate\\_CL | take 100](#)

Aggregate Reads  
[netapp\\_apiservices\\_aggregate\\_CL | summarize avg\(ave](#)

Aggregate Writes  
[netapp\\_apiservices\\_aggregate\\_CL | summarize avg\(ave](#)

Aggregate Utilization  
[netapp\\_apiservices\\_aggregate\\_CL | summarize avg\(uti](#)

Volume Reads  
[netapp\\_apiservices\\_volume\\_CL | summarize avg\(read\\_](#)

Volume Writes  
[netapp\\_apiservices\\_volume\\_CL | summarize avg\(write\\_](#)

Volume Available Size  
[netapp\\_apiservices\\_volume\\_CL | summarize avg\(size\\_](#)