



# At-scale VMs Compete Analysis

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Disclaimer: The compete analysis focused on information architecture and data visualization design.

# Executive summary

Datadog, Dynatrace, GCP, Splunk and New Relic (5) were shortlisted to run compete analysis due to their wide offering of capabilities to display full observability at scale. Among the five, GCP fares the worst in terms of offerings. Other competitors worth mentioning for its unique offerings are SolarWinds (*Recommendations per VM host or cluster*), IBM (*3D infrastructure map*).

## Key findings:

1. **Single pane of glass.** With exception of Google Cloud Platform (GCP), the other four integrate both infrastructure and application monitoring for faster troubleshooting.
2. **Sort/filters functions.** Display at the top of the dashboard
3. **Data visualization.** Heat map is generally the preferred because it displays a high-density overview which lets users quickly identify which VMs at risk.
4. **Headliners.** Show key health metrics of VMs/Hosts/Instances to get a clear picture of the system. Selecting any metric will filter to display relevant info.
5. **Metric charts.** Data sorting to manipulate data to get insights. Offers linked entities, traces and logs to gain greater visual transparency into data.

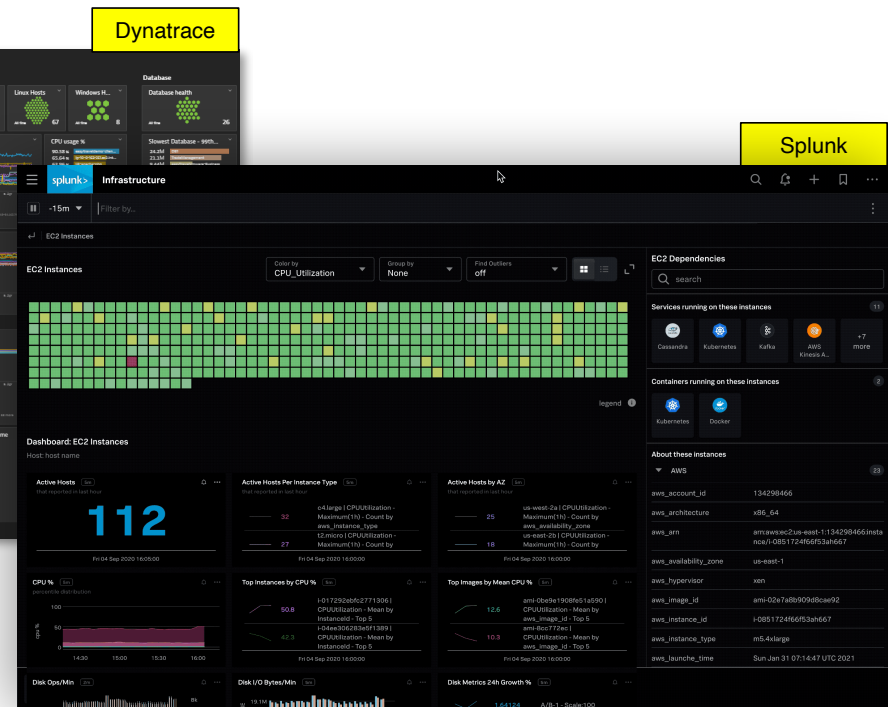
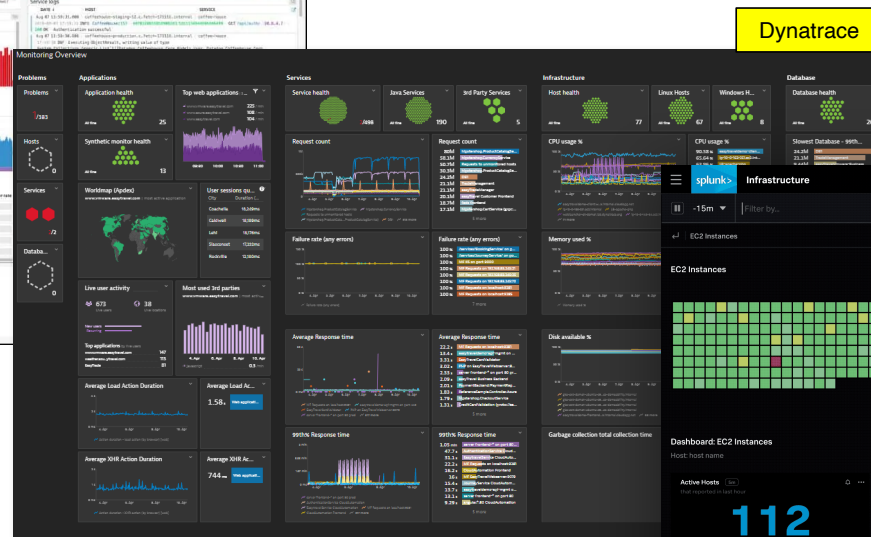
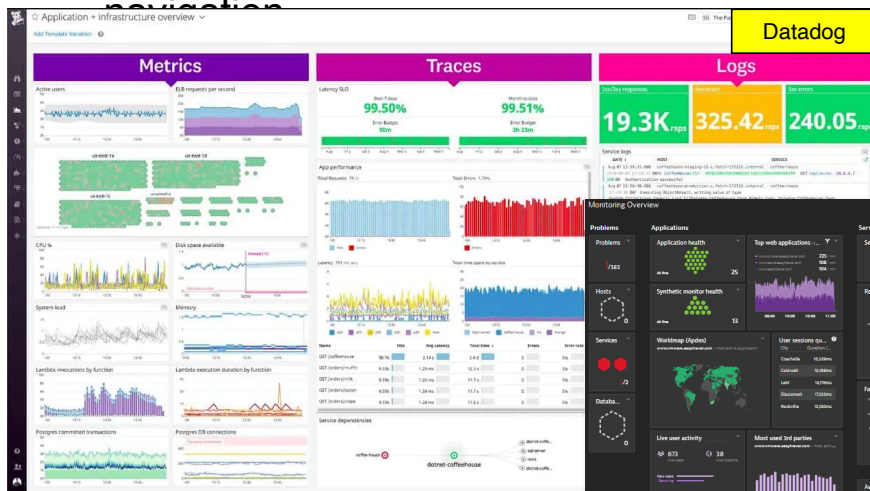
# Compete matrix

Y: Yes N: No

Competitors	VMs / Hosts / Instances status	Alerts	CPU	Memory	Network	Storage / Disk/ IO	Differentiators
Datadog	Y - VMs running, VMs in scale sets, Azure VM monitors, Failed VMs, Avg running VMs by region	Y – Warning, No data	Y	Y	Y	Y	<a href="#">Datadog Agent</a> : The Datadog Agent is software that runs on your hosts. It collects events and metrics from hosts and sends them to Datadog, where you can analyze your monitoring and performance data.
Dynatrace	Y - Host health, Linux Hosts, Windows Hosts	Y - Critical	Y	Y	Y	Y	Dynatrace brand alerts as <a href="#">problem notification</a> . A single problem that contains all incidents that share the same root cause.
Google Cloud Monitoring	Y – Virtual machines	Y	Y	Y	N	Y	<a href="#">Google Cloud Monitoring GPU performance on Linux/Windows VMs</a> - To help with better utilization of resources, you can track the GPU usage rates of your virtual machine (VM) instances. When you know the GPU usage rates, you can perform tasks such as setting up managed instance groups that can be used to auto-scale resources.
Splunk	Y - Active Hosts, Active hosts per Instance Type, Active hosts by AZ	Y - Critical, Major, Minor, Warning, Info	Y	Y	Y	Y	Splunk has a dependencies section to indicate what services or containers are running on these instances.
New Relic	Y - Active Hosts, Active hosts per Instance Type, Active hosts by AZ	Y - Known as Events	Y	Y	Y	Y	New Relic offers the most extensive options to visualize data namely List (Table), Navigate and Lookout e.g. List, Navigate, Lookout. <a href="#">Demo</a>
Honorable mentions							
Solarwinds	Y	Y	Y	Y	Y	Y	<a href="#">SolarWinds Virtualization Recommendations resource</a> - Lists all active and predictive recommendations listed per VM host or cluster. Select the recommendations link to troubleshoot all recommendations.
IBM	Y	Y	Y	Y	Y	Y	Use 3D data-viz for at scale monitoring. Allow users to switch modes e.g. Container, Pod, Node and Host. Focuses mainly on AKS.

# 1. Single pane of glass

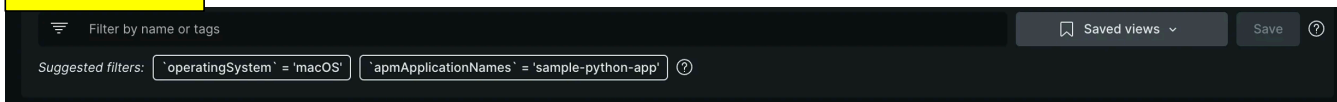
While Datadog, Dynatrace, Splunk and New Relic offers full stack and/or integrated infrastructure + application monitoring, the difference lies in how they design the information architecture and ease of navigation



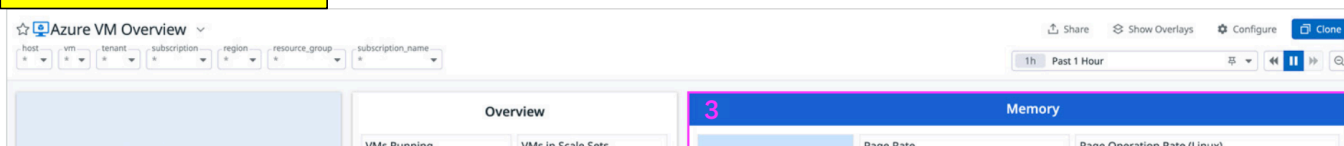
# 2. Pivot

Sort/filter functions are critical features which enables users to manipulate data to get insights much easier. All 5 offer these functions both from macro (entire monitoring of all features) and micro (individual monitoring of a feature) within the monitoring system.

## New Relic 2024



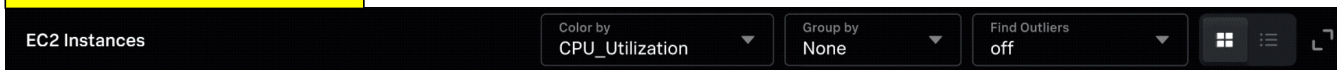
## Datadog Azure VM integration



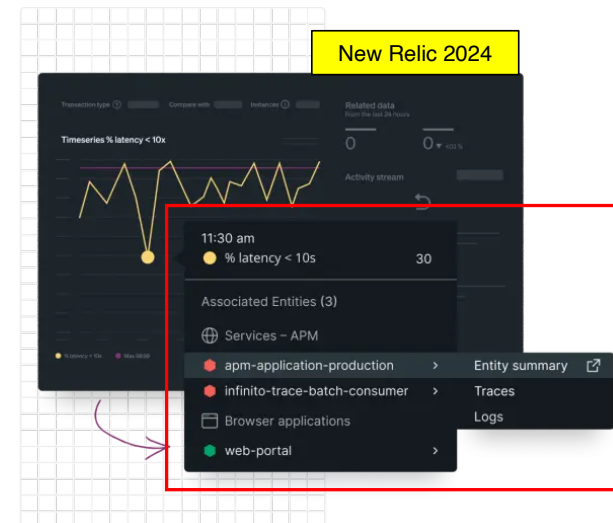
## Datadog infrastructure monitoring



## Splunk infrastructure monitoring

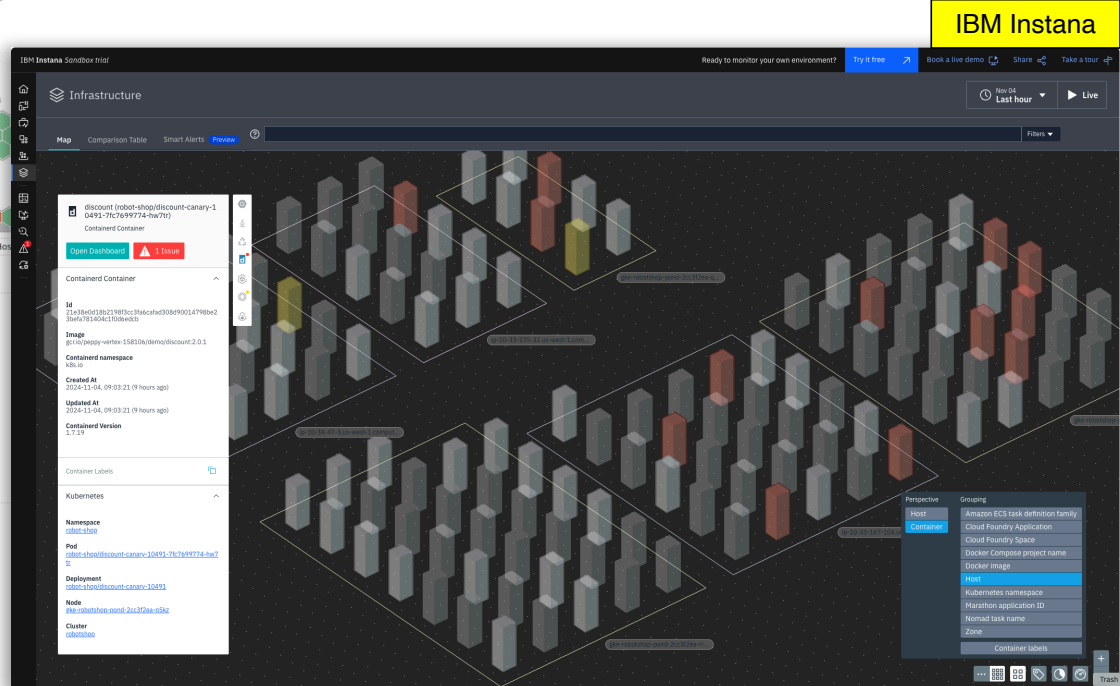


## New Relic 2024



# 3. Data visualization

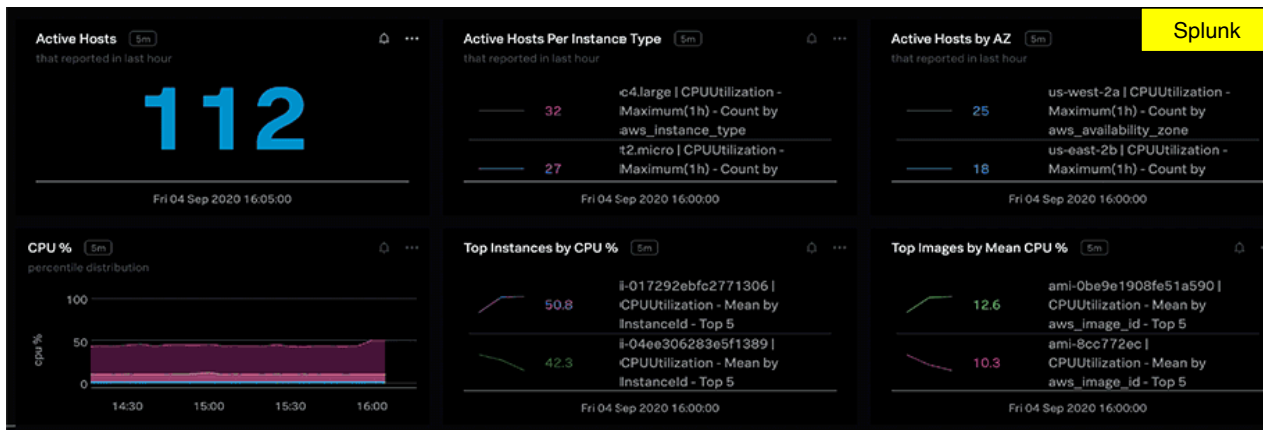
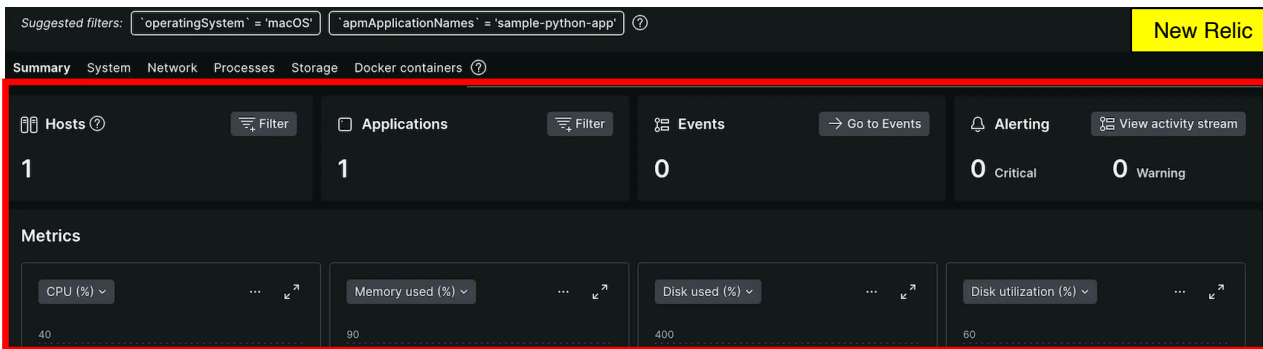
Datadog and New Relic stand out for its innovative use of data visualization. Datadog allows users to zoom in and out of the heat map to zero in issues to deep dive. New Relic offers various types of data-viz e.g. List (Table), Navigate and Lookout. Honorable mention: IBM Instana uses a 3D data-viz map.



Demo: Datadog-hostmap-compressed.mp4

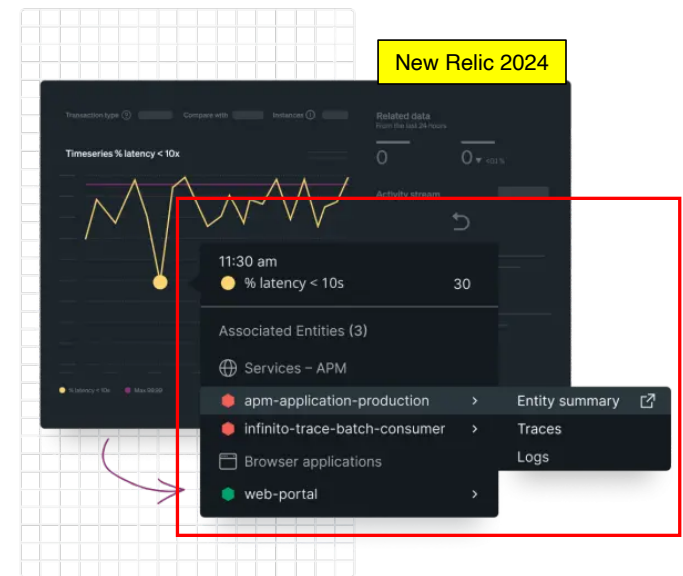
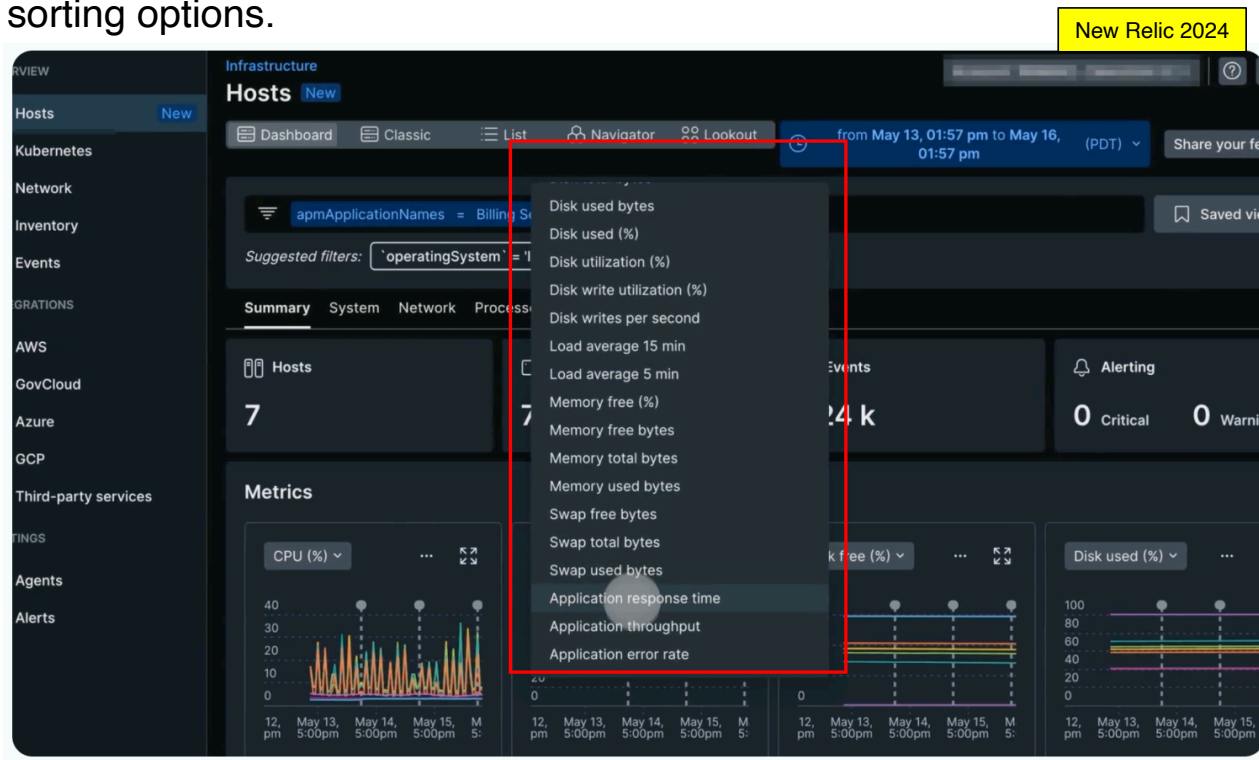
# 4. Headliners (Key metrics)

All 5 displays these key metrics namely: Alerts, Events, CPU, Memory, Network, Storage/Disk I/O. They surface the most critical and relevant key metrics/issues. Datadog lists VMs by top 5, 10 or 50 VMs



# 5. Metric charts

All 5 have offers **more** chart options which allows user to manipulate data e.g. Clone/delete/edit widget, convert to alert chart, show/hide legend ... They provide relevant tools to guide users to dive into logs and traces in their diagnose and troubleshooting journey. New Relic offers some of the most extensive list of data sorting options.



# 6. Other competitors worth mentioning

SolarWinds Virtualization Manager (VMAN) – Recommendations per VM Host or cluster

Recommendations (0) **3** [ALL RECOMMENDATIONS](#) [EDIT](#) [HELP](#)

Grouped by: Clusters/Hosts with Recommendations

PROBLEMS BY PRIORITY   CLUSTERS/HOSTS WITH RECOMMENDATIONS   RECOMMENDATIONS

IBM Instana – 3D Infrastructure map

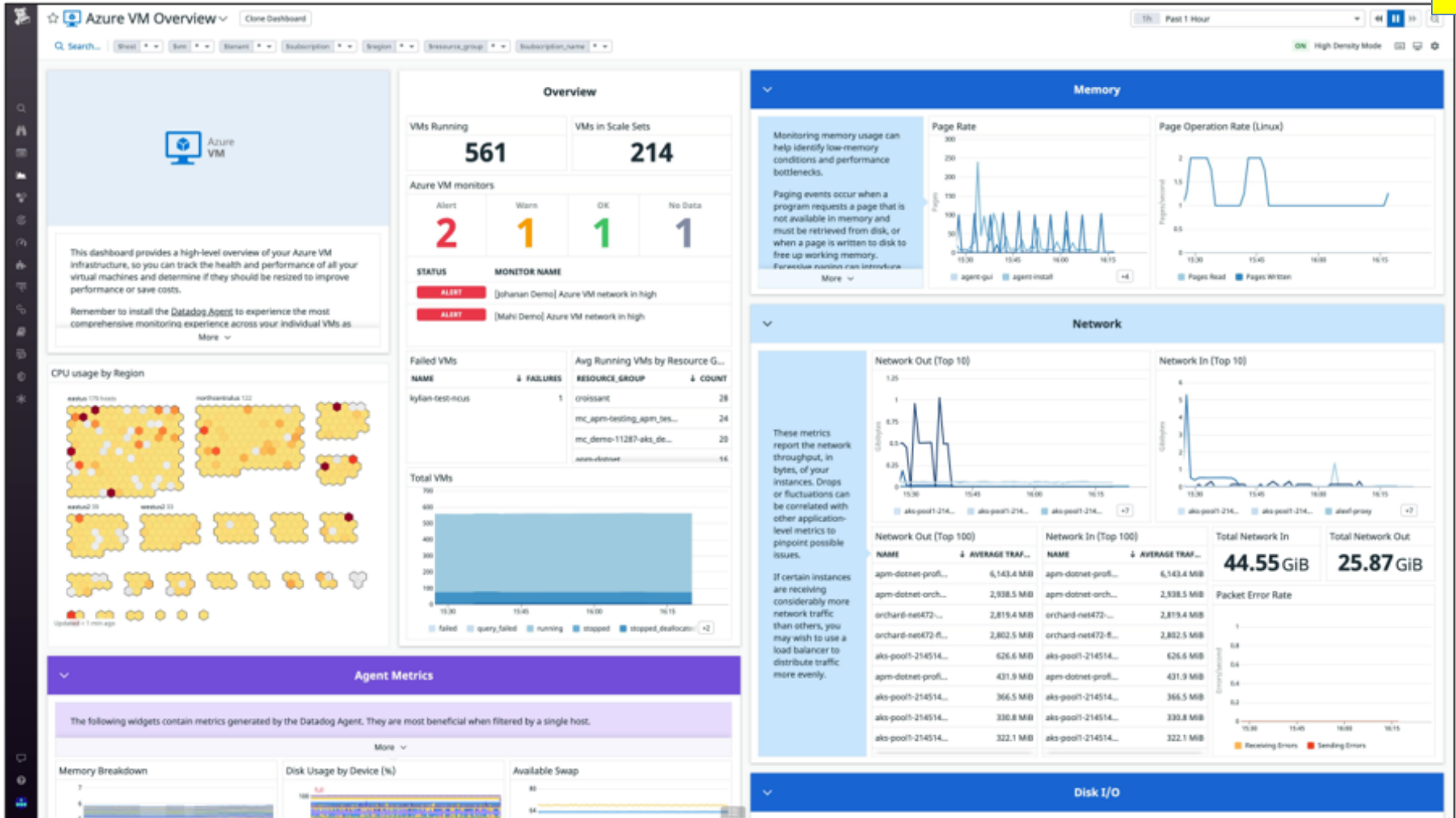
The screenshot displays the IBM Instana 3D Infrastructure map interface. The main view shows a 3D bar chart representing infrastructure components. A modal window is open, displaying an issue: "CONTAINER MEMORY USAGE IS GREATER THAN 50%". The issue details include a description to check memory usage and increase limits, a start time of 2024-11-04, 09:04:56, and a "View 1" button. The modal also shows container metadata such as ID, image, namespace, and creation/updated times. A context menu is visible over the 3D map, listing various grouping options like "Host", "Container", "Amazon ECS task definition family", etc.

# Datadog

[Datadog Infrastructure Monitoring | Datadog](#)

[Demo: Datadog-hostmap-compressed.mp4](#)

[Cheatsheet-AzureVirtualMachine.pdf](#)



Add Template Variables

### Metrics



### Traces



### Logs



## Monitoring VM Processes

Host Map Infrastructure List Containers **Processes** Serverless Network LIVE Mon, Nov 16, 8:13:19 am

Overview Distribution Metrics

Search Filter by Select tags Group by Select tags + Create Metric

**CORE**

**Command** Group

Filter 360 values

- 04-server-with-metrics
- ??[C
- ApplicationFrameHost
- CRON
- ConsoleClient
- Explorer
- FAHClient
- FAHCoreWrapper

**User** Group

Filter 84 values

- EC2AMAZ-ICV1U31\Ad...
- EC2AMAZ-ICV1U31\dda...
- EC2AMAZ-TU8PI3U\Ad...
- EC2AMAZ-TU8PI3U\dda...
- NT AUTHORITY\LOCAL ...
- NT AUTHORITY\NETWO...
- NT AUTHORITY\SYSTEM
- NT SERVICE\MSSQLFDL...

**Service** Group

**Env** Group

**Team** Group

Summary Graphs

Scatter Plot Timeseries

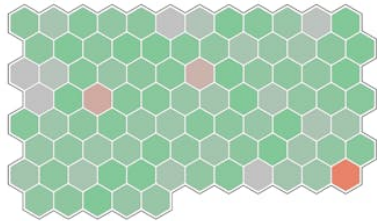
x-axis Avg Total CPU % on Log scale y-axis Avg RSS Memory on Log scale Showing 333 command groups by x-axis metric (Total CPU %)

Hide Controls Showing 1-50 of around 19K matching processes

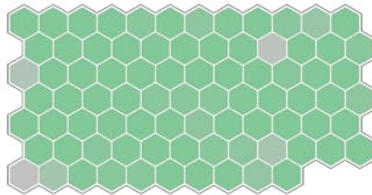
PROCESS	USERNAME	HOST	CPU %	RSS MEMORY	STARTED (AGO)
java com.datadog.demo.Application -Ddd.integration.jdbc.enabled=false -Ddd.profiling.continuo...	root	i-0c532d663ad02f446	32%	1 GB	4 hours
java com.datadog.demo.Application -Ddd.integration.jdbc.enabled=false -Ddd.profiling.continuo...	root	i-06f1a59f3ed2387ae	2%	1 GB	12 hours
java com.datadog.demo.Application -Ddd.integration.jdbc.enabled=false -Ddd.profiling.continuo...	root	i-061d89be3e5057e8f	30%	744 MB	2 hours
java com.datadog.demo.Application -Ddd.integration.jdbc.enabled=false -Ddd.profiling.continuo...	root	i-008121946e3dcb7fe	31%	794 MB	31 minutes

Hosts Filter by availability-zone x Fill by: % CPU utilized avg Size by: --

no availability-zone 89 hosts



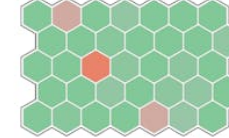
eastus 82



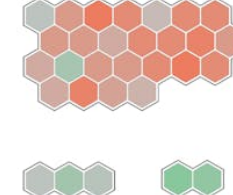
northcentralus 36



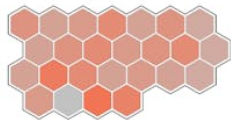
eastus-1 35



us-west3-a 25



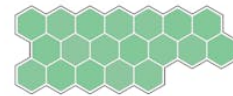
us-east1-c 25



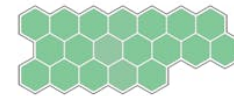
us-central1-a 19



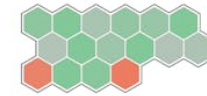
eastus2 19



centralus 19



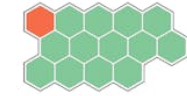
us-east4-a 16



westus2 15



eastus2-1 14



us-east-1b 13



us-east-1a 14



us-west1-c 10



us-east4-b 10



us-west1-b 10



us-central1-c 12



us-central1-b 12



francecentral 12



us-west-2c 10



### aks-agentpool-21451434-vmss000005

Aliases: aks-agentpool-21451434-vmss000005-demo-11287-aks-northcentralus, aks-agentpool-21451434-vmss000005, 1ae67fb7-c9fc-4693-b463-b788c0b70e20

View host in: [Dashboard](#) | [Networks](#) | [Processes](#) | [Containers](#)

#### Apps

- detected: apache
- detected: ssh agent azure
- docker error host jvm
- kubernetes kubernetes\_state log
- logs ntp postgresql proc
- redis runtime shopist system
- trace webstore

#### Agent

Datadog Agent: v7.26.0

#### System

GNU/Linux - 4 CPU - 4 vCPU - 10.240.0.18 - 16.79G - 260.89G

#### Container

Kubelet Version v1.18.10  
Docker Swarm inactive  
Docker Version 19.03.14+azure

#### Metrics (as of < 1 min ago)

% CPU utilized 100 %

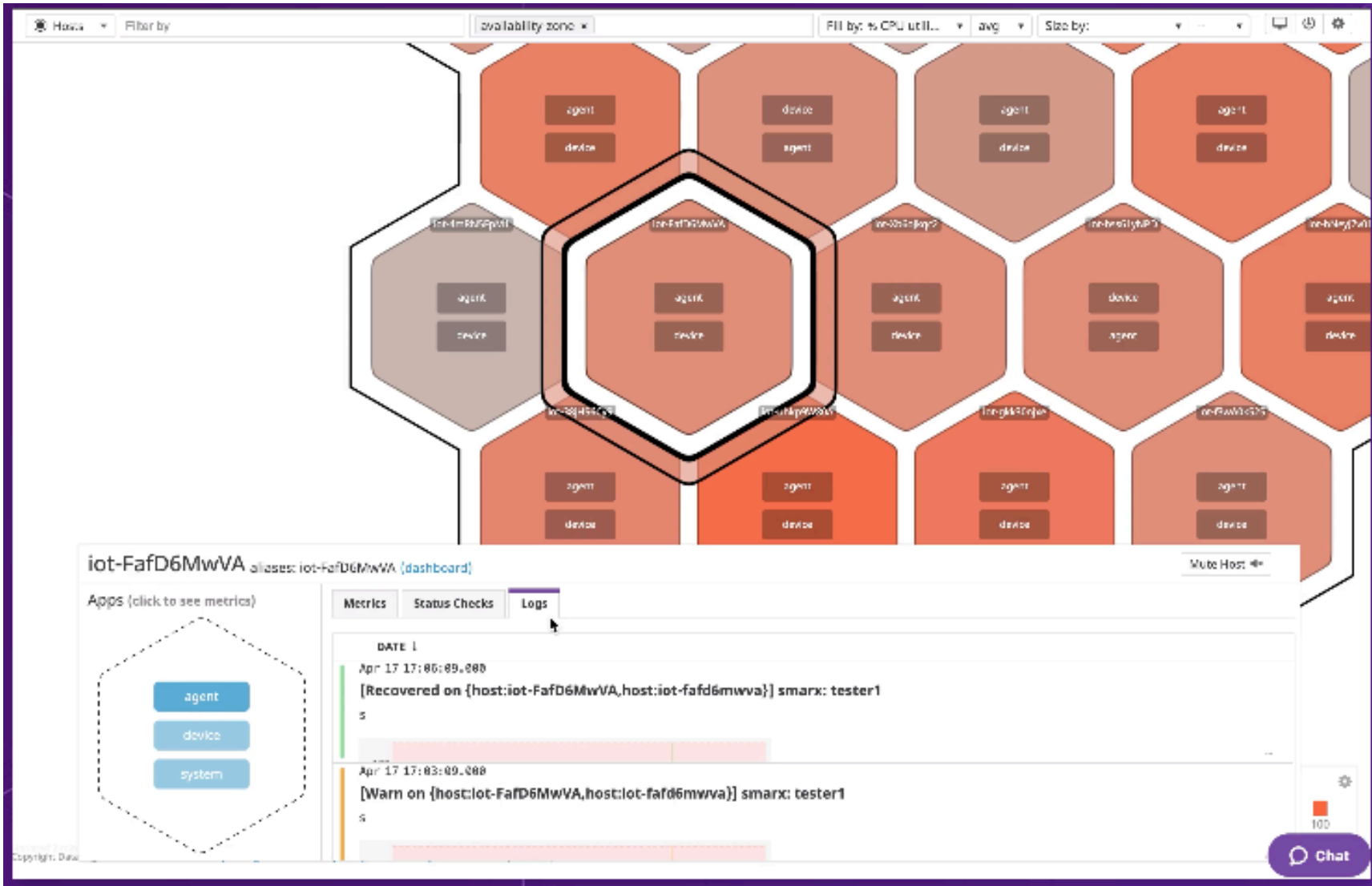
#### Tags

- Datadog
- cluster-name:demo-11287-aks-northcentralus
- cluster\_name:demo-11287-aks-northcentralus datadog\_app:shopist
- env:prod kube\_cluster\_name:demo-11287-aks-northcentralus
- host:aks-agentpool-21451434-vmss000005
- Azure
- availability-zone:northcentralus
- client\_id:f1504495-28da-4e99-85f6-a5e37a23c863 cloud\_provider:azure
- creationsource:vmssclient-aks-agentpool-21451434-vmss
- name:aks-agentpool-21451434-vmss\_28 operating\_system:linux

Mute Host

100

Updated < 1 min ago



# Dynatrace

[Get to Know Dynatrace](#)

Monitoring Overview

**Problems** 1/383

**Hosts** 0

**Services** 7/2

**Database** 0

**Applications**

- Application health: 25
- Synthetic monitor health: 13
- Worldmap (Apdex): www.cymrains.easytravel.com
- User sessions qu...: Coachella (18.269ms), Caldwell (18.589ms), Lehi (18.776ms), Stasconset (17.513ms), Rockville (12.805ms)
- Live user activity: 673 Live users, 38 Live locations
- Most used 3rd parties: 0.3 min
- Average Load Action Duration: 1.58s
- Average XHR Action Duration: 744ms

**Services**

- Service health: 7/498
- Java Services: 190
- 3rd Party Services: 5
- Request count: 80M
- Failure rate (any errors): 100%
- Average Response time: 22.2s
- 99th% Response time: 1.05 min

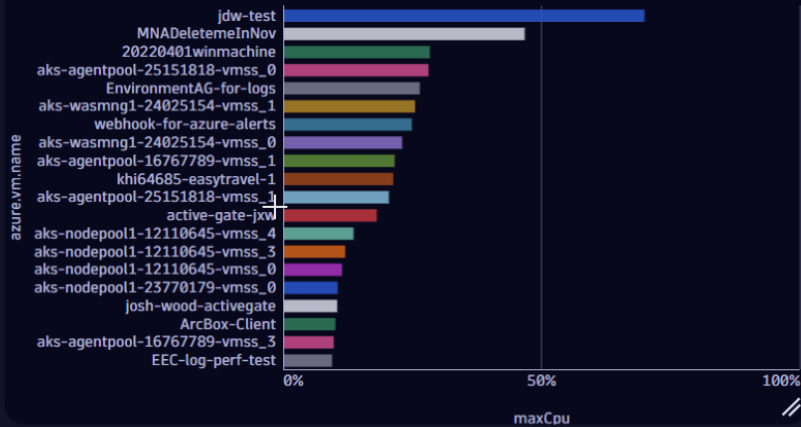
**Infrastructure**

- Host health: 77
- Linux Hosts: 67
- Windows H...: 8
- CPU usage %: 90.58%
- Memory used %: 90.68%
- Disk available %: 91.68%
- Garbage collection total collection time: 1.05 min

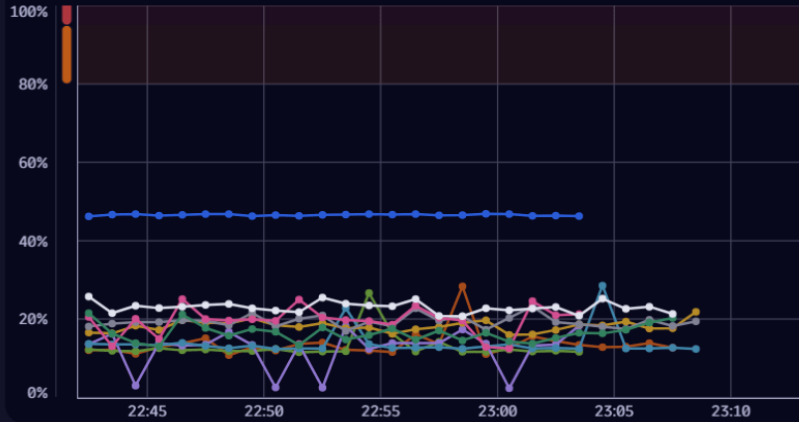
**Database**

- Database health: 26
- Slowest Database - 99th...: 24.2M
- Failed connections: 7 more
- Connection failure rate: 7 more
- Network status: 314 Vols/s
- Network metrics: 314 Vols/s

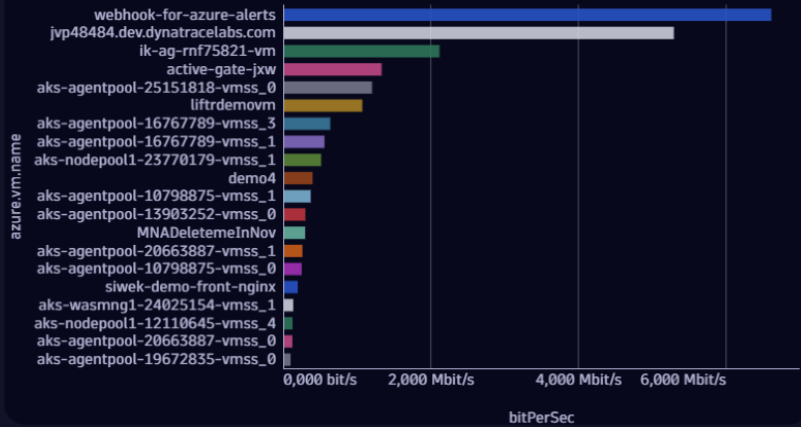
Top VM's by maximum CPU usage



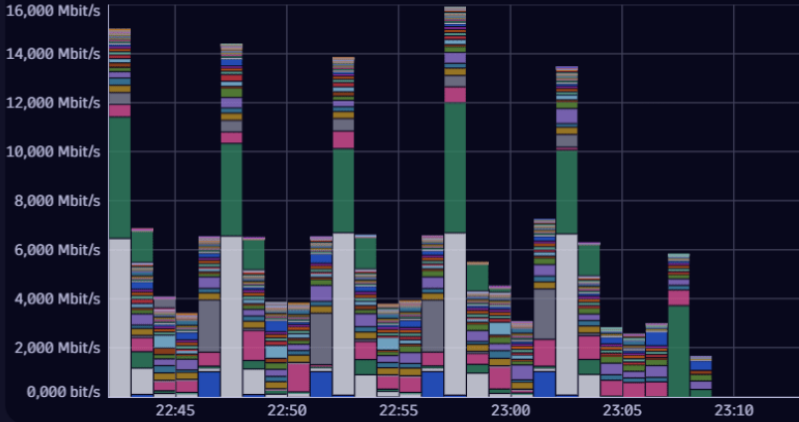
Trend of top VM's by maximum CPU usage



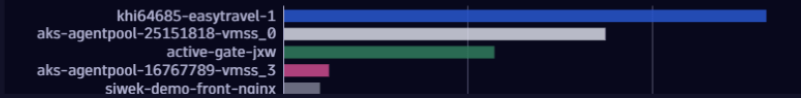
Top VM's by incoming network traffic



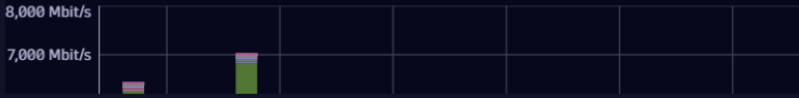
VM's with highest incoming network traffic trend



Top VM's by outgoing network traffic



VM's with highest outgoing network traffic trend



# Google Cloud Monitoring

[Observe and monitor VMs](#) | [Compute Engine Documentation](#) | [Google Cloud](#)

### VM instances

[CREATE INSTANCE](#) [IMPORT VM](#)

INSTANCES **OBSERVABILITY** INSTANCE SCHEDULES

- Overview
- CPU
- Processes
- Memory
- Network
- Disk
- Logs
  - All Logs
  - System Events
- Integrations
  - Add Integration
  - Configured

Dashboard: Predefined

Filters: instance\_name, machine\_type, zone, region, instance\_group

Time: Last 12 hours CET

#### CPU Utilization (Top 5 VMs)

Legend: a-demo (us-central1-f), b-demo (us-central1-a), c-demo (us-central1-f), d-demo (us-central1-c), test-1q31 (us-central1-a)

#### Memory Utilization (Top 5 VMs)

Legend: a-demo-with-ops-agent (us-west2-a), an-e2-custom-test-sc (us-central1-f), monitor-instance (us-central1-f), one-demo (us-central1-a)

#### Network Traffic (Top 3 Sent/Received)

Legend: sent: an-e2-custom-test-sc (us-central1-f), sent: instance-for-static-ip (us-central1-c)

#### Disk Utilization (Top 5 VMs)

Legend: a-demo-with-ops-agent (/dev/sda1), a-vm-test-with-op-agent (/dev/sda1), an-e2-custom-test-sc (/dev/sda1), monitor-instance (/dev/sda1)

#### Processes by CPU Usage (Top 5)

Legend: a-demo-with-ops-agent (/dev/sda1), a-vm-test-with-op-agent (/dev/sda1), an-e2-custom-test-sc (/dev/sda1), monitor-instance (/dev/sda1)

#### Disk Throughput (Top 3 Read/Write)

Legend: a-demo-with-ops-agent (/dev/sda1), a-vm-test-with-op-agent (/dev/sda1), an-e2-custom-test-sc (/dev/sda1)

# World Class VM Monitoring Experiences

## Monitoring VM Processes

**VM INSTANCES** | INVENTORY | OVERVIEW | CPU | MEMORY | DISK | NETWORK | **PROCESSES** | EXPLORE

Not all of your VMs have agents installed. Monitoring agents collect memory metrics, disk metrics, and more. Learn more [about agents](#) and how to [manage them across multiple VMs](#). [DISMISS](#)

### Top Processes by CPU (Total vCPUs)

query

**command\_label**

<input type="checkbox"/>	/opt/google-cloud-ops-agent/subagents/opentelemetry-c...	0.001
<input type="checkbox"/>	/usr/bin/google_osconfig_agent	0.0031
<input type="checkbox"/>	/usr/lib/google-cloud-ops-agent/fluent-bit --config /run/gc...	0.0008
<input type="checkbox"/>	C:\Program Files (x86)\Stackdriver\MonitoringAgent\Main...	0.0012

### Top Processes by Resident Memory (Total)

by command line (sum) | 10 sec interval (mean) | Top 10

**Name**

<input type="checkbox"/>	"C:\Program Files\Google\Cloud Operations\Ops Agent\bi...	0.13GiB
<input type="checkbox"/>	/opt/google-cloud-ops-agent/subagents/opentelemetry-c...	0.16GiB
<input type="checkbox"/>	/opt/stackdriver/collectd/sbin/stackdriver-collectd-C/etc...	-
<input type="checkbox"/>	/usr/bin/google_guest_agent	0.08GiB

### Top Processes by CPU per VM (Avg. vCPUs)

query

### Top Processes by Resident Memory per VM

by name, command line, zone, project id (sum) | 10 sec interval (mean) | Top 10

**Chart** | Top Processes by CPU % | Explore in Monitoring

Aug 2, 2021, 5:01:00 PM

1029	/jet/use/mysql_common/libexec/my...	14.77%
10733	php-fpm: pool www	1.67%
10738	php-fpm: pool www	1.66%
3079	php-fpm: pool www	1.65%
3134	php-fpm: pool www	1.65%
43 below		

**Running Processes Snapshot** | Displaying processes as of 5:24 PM GMT-

Filter | Filter processes

**Process instance snapshots (47)** | Documentation

Filter by

process.pid	process.executable.n...	process.executable.p...	process.command_lin...	process.owner	Process	Process CPU	Process memory	Details
2272	java.exe	C:\PROGRAM FILES...	C:\Program Files\Ec...	john.kowalski	org.gradle.launcher...	10.7%	210 MB	▼
2568	java.exe	C:\PROGRAM FILES...	C:\Program Files\Ec...	john.kowalski	org.gradle.launcher...	10.5%	217 MB	▼
3348	java.exe	C:\PROGRAM FILES...	C:\Program Files\Ec...	john.kowalski	org.gradle.launcher...	10.4%	217 MB	▼
24680	Zoom.exe	C:\PROGRAM FILES...	C:\Program Files\Z...	john.kowalski	Google Chrome	6.36%	248 MB	▼
22652	omadclient.exe	C:\WINDOWS\SYST...	C:\WINDOWS\sys...	SYSTEM	-	5.79%	46.2 MB	▼
7396	node.exe	C:\WORKSPACES\ID...	C:\workspaces/dev...	john.kowalski	js-language-service...	2.87%	608 MB	▼
8640	SystemSettings.exe	C:\WINDOWS\SUMM...	C:\Windows\Immer...	john.kowalski	Windows System	1.61%	101 MB	▼
1380	dwm.exe	C:\WINDOWS\SYST...	dwm.exe	DWM-1	Windows System	1.41%	162 MB	▼
15584	WUDFHost.exe	C:\WINDOWS\SYST...	C:\Windows\Syste...	LOCAL SERVICE	-	1.39%	133 MB	▼
25220	SenseNdr.exe	C:\PROGRAM FILES...	C:\Program Files\W...	LOCAL SERVICE	Windows Defender...	0.953%	8.75 MB	▼

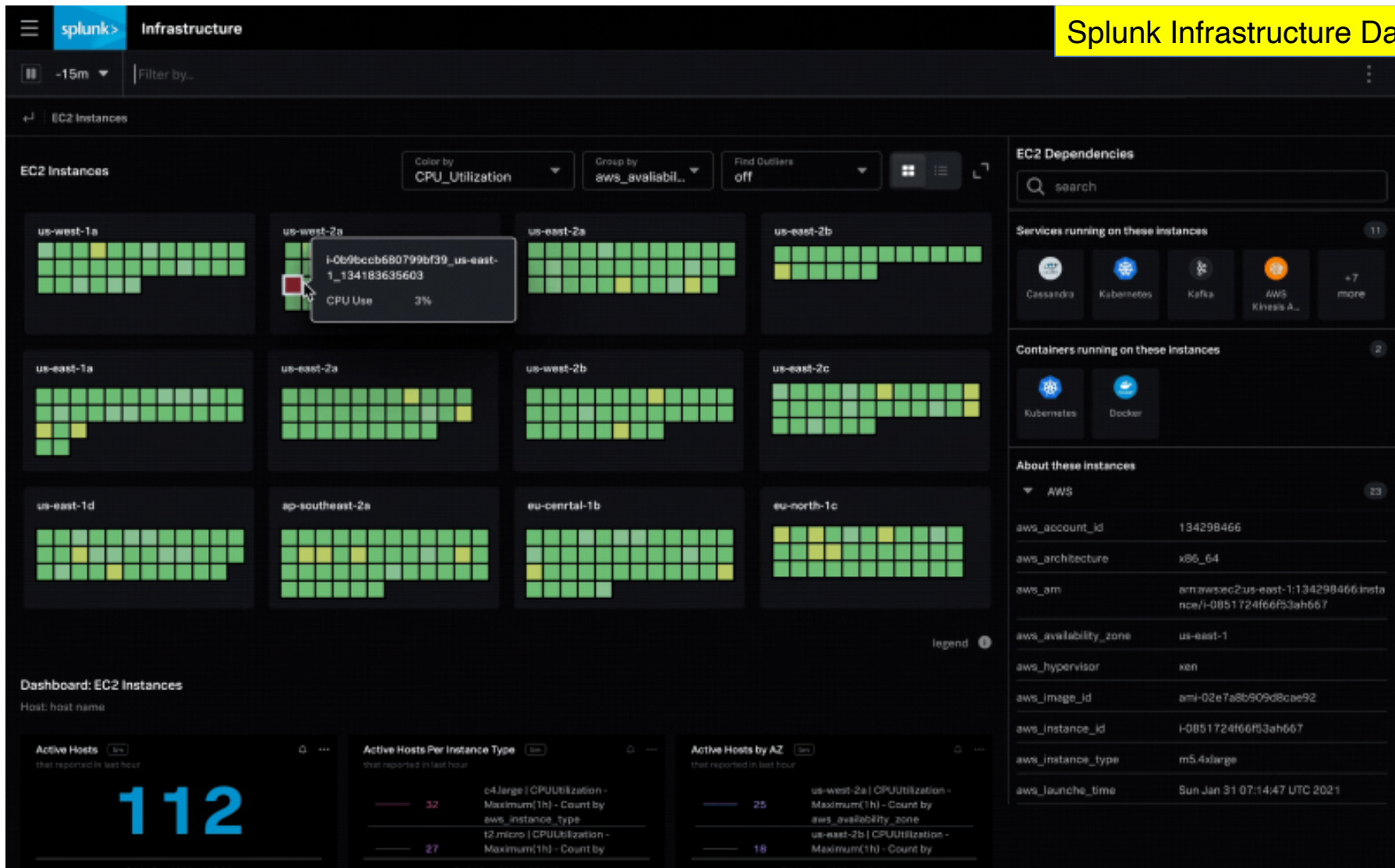
< 1 2 3 4 5 >

# Splunk

[Infrastructure Monitoring \(IM\) Tour](#)

[Splunk Infrastructure Monitoring & Troubleshooting workflow demo](#)

# Splunk Infrastructure Dashboard



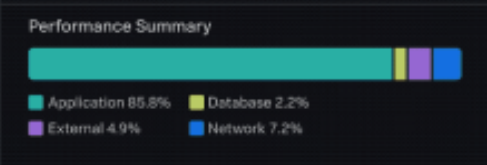
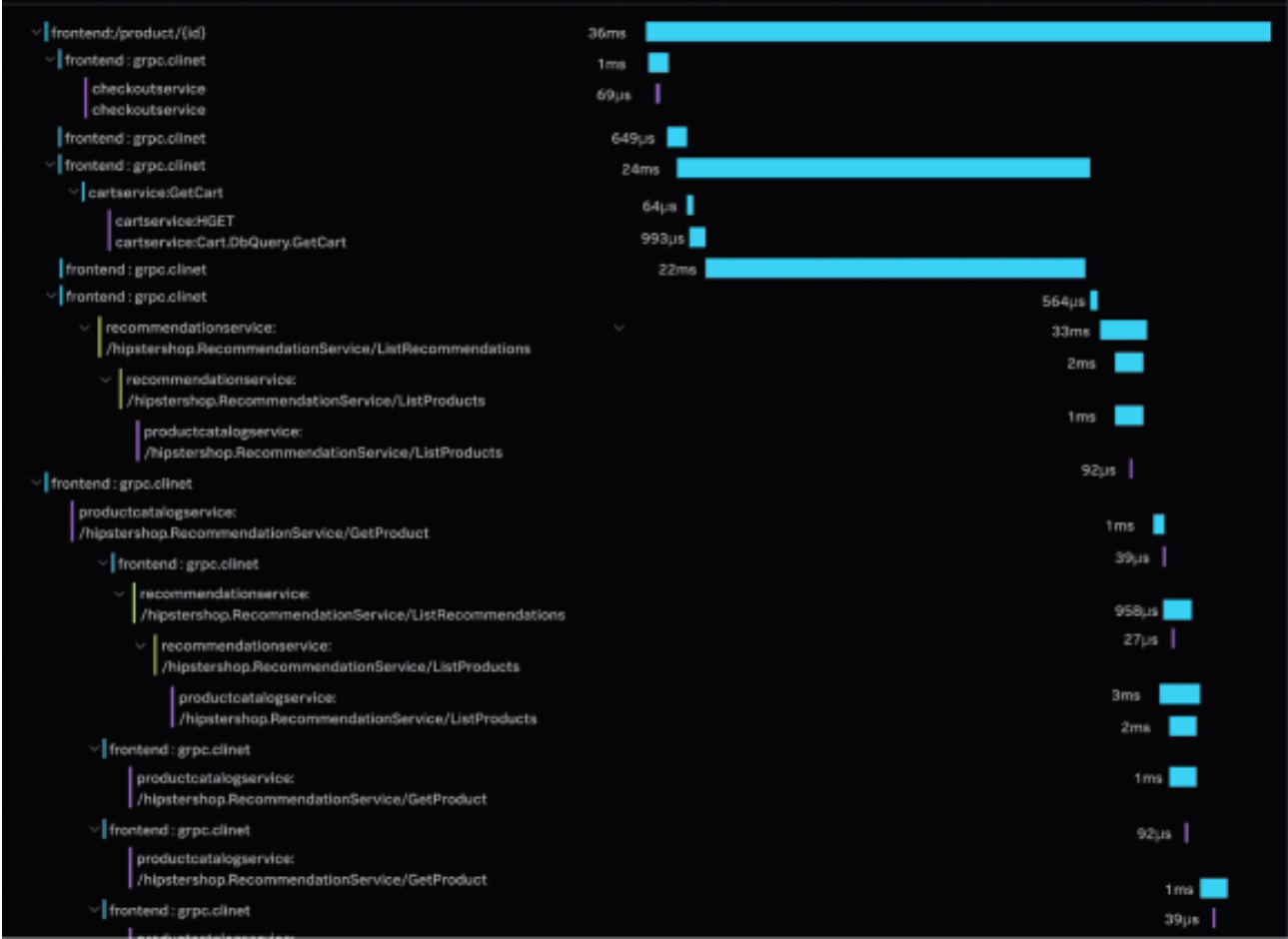
Infrastructure Monitoring (IM)  
Tour

[splunk-observability-metrics-logs-traces.gif](#)



Waterfall Span Performance

Service: Operation 0ms 9ms 18ms 27ms 36ms



Global Tags

Request Type: user

Workflow ID

Workflow Name: frontend/product/{id}

# New Relic

[New Relic Infrastructure \(2024\)](#)

[New Relic Observability Platform | New Relic \(2021\)](#)

[Introducing our new infrastructure monitoring experience - YouTube \(2021\)](#)

- Quick Find
- Add Data
- All Capabilities
- All Entities
- Dashboards
- APM & Services
- Logs
- Traces
- Synthetic Monitoring
- Alerts & AI
- Infrastructure**
- Kubernetes
- Browser
- Mobile
- Errors Inbox
- Apps
- Query Your Data
- ...
- Discussions
- Help
- Add User
- Upgrade Now
- Favour

- OVERVIEW
- Hosts** New
  - Kubernetes
  - Network
  - Inventory
  - Events
- INTEGRATIONS
- AWS
  - Azure
  - GCP
  - Third-party services
- SETTINGS
- Alerts

Infrastructure

**Hosts** New

Overview Classic List Navigator Lookout

Since 30 minutes ago (UTC) Share your feedback

Filter by name or tags

Suggested filters: `'operatingSystem' = 'macOS'` `'apmApplicationNames' = 'sample-python-app'`

Summary System Network Processes Storage Docker containers

Hosts

1

Filter

Applications

1

Filter

Events

0

Go to Events

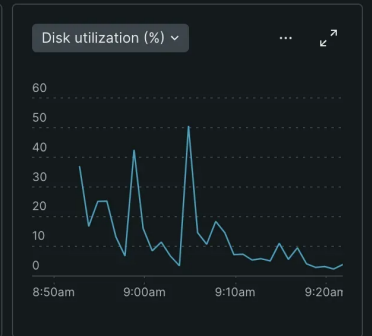
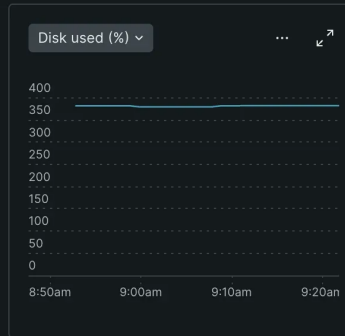
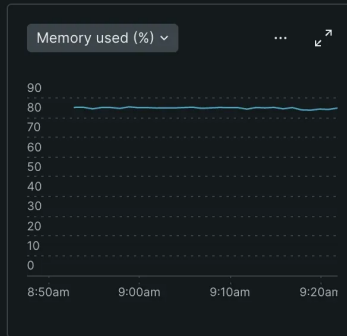
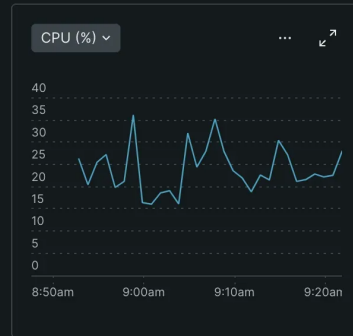
Alerting

0 Critical

View activity stream

0 Warning

Metrics



Summary

View	Name	Applications	Agent version	CPU usage (%)	Memory usa...	Storage usag...	Network tran...	Network rece
<span style="color: blue;">●</span>	<span style="color: grey;">●</span> Dhees-Macbook.local	1 application	1.48.5	23.57%	84.58%	43.17%	1.1 kB/s	4.19 kB/ ...

- Overview
- Hosts New
- Kubernetes
- Network
- Inventory
- Events
- Configurations
- AWS
- GovCloud
- Azure
- GCP
- Third-party services
- Settings
- Agents
- Alerts

# Infrastructure Hosts New

Dashboard Classic List Navigator Lookout

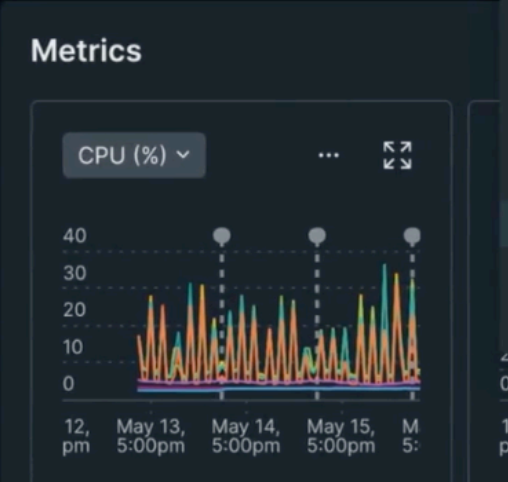
from May 13, 01:57 pm to May 16, 01:57 pm (PDT) Share your feedback

apmApplicationNames = Billing S

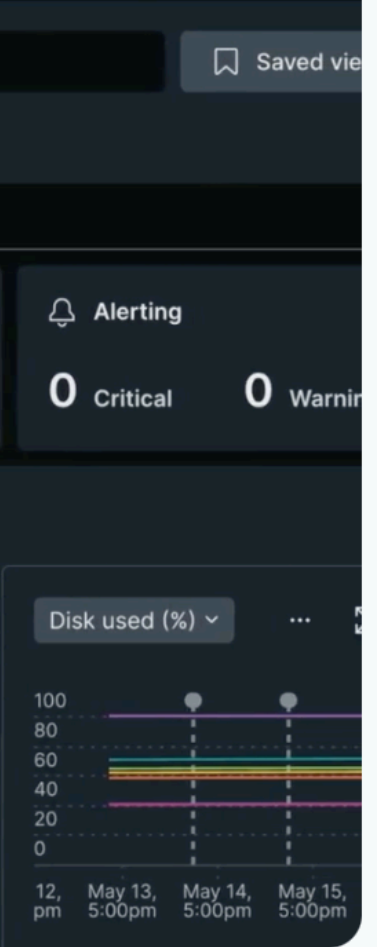
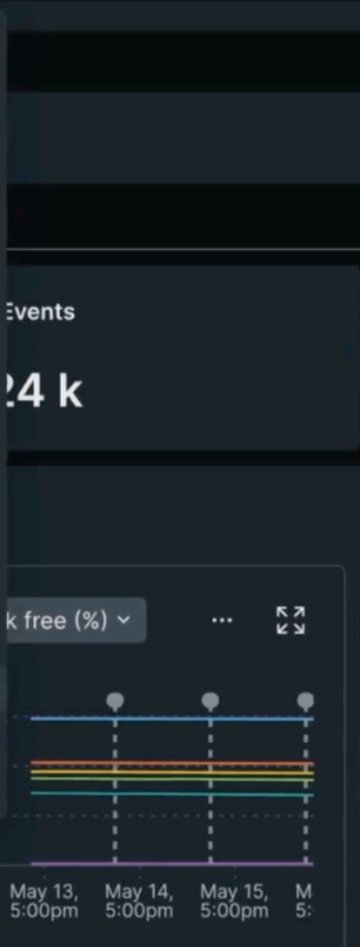
Suggested filters: `'operatingSystem' = 'l`

Summary System Network Process

Hosts 7



- Disk used bytes
- Disk used (%)
- Disk utilization (%)
- Disk write utilization (%)
- Disk writes per second
- Load average 15 min
- Load average 5 min
- Memory free (%)
- Memory free bytes
- Memory total bytes
- Memory used bytes
- Swap free bytes
- Swap total bytes
- Swap used bytes
- Application response time
- Application throughput
- Application error rate



# New Relic 2023

The screenshot displays the New Relic Infrastructure Hosts dashboard. The main area features a grid of host health indicators, with a tooltip for a host named 'ip-172-...' showing CPU usage alerts. The left sidebar contains navigation options like 'Hosts', 'Kubernetes', and 'Network'. The top navigation bar includes 'Dashboard', 'Classic', 'List', 'Navigator', and 'Logout'.

The screenshot displays the New Relic Issues & Activity panel. It shows a list of critical incidents, including 'Error percentage > 25% for at least 5 minutes on "Billing Service"' and 'CPU % > 55.0 for at least 5 minutes on "ip-172-..."'. A line graph shows CPU usage over time, with a shaded area indicating the incident duration.

entityType = Service Filter entities by name, types, ...

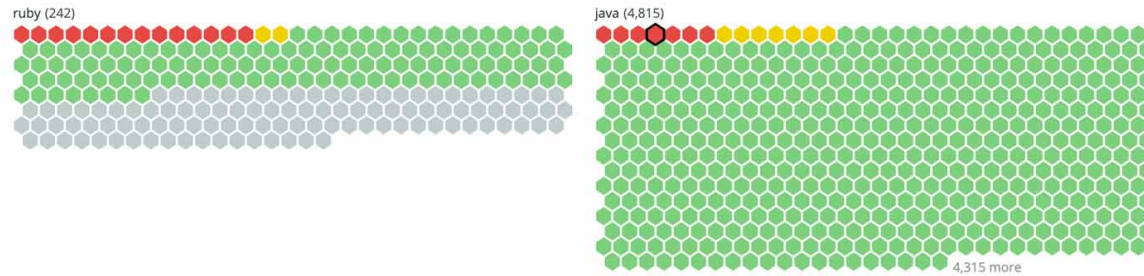
Since 30 minutes ago List Navigator Lookout

- YOUR SYSTEM
- All entities (2610702)
  - APM/Services (8742)**
  - Hosts (40758)
  - Containers (1743054)
  - Mobile applications (205)
  - Browser applications (154)
  - Secure credentials (389)
  - Synthetic monitors (2323)
  - Workloads (368)
- OTHER ENTITIES
- ETCD clusters (67)
  - Kubernetes API servers (67)
  - REDIS clusters (26)
- AMAZON WEB SERVICES
- Account Costs (379)
  - Account Costs (37)
  - Account Service Costs (2885)
  - API Gateway APIs (506)
  - API Gateway resources (16)

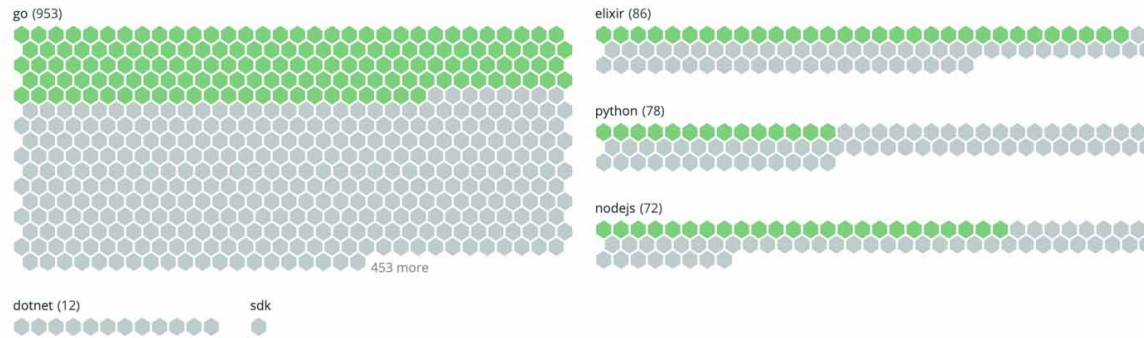
6,259 entities grouped by language and sorted by health

Show only alerting entities Latest data

### Alerting 30 out of 5,057 entities alerting across 2 groups



### Operational 1,202 entities across 6 groups



**cserv-depot**  
Service | FooBar, Inc.  
[See entity details](#)

Activity

**Critical violation opened** 3:37 pm

**cserv-depot**  
CPU utilization time > 80 for at least 5 minutes on 'cserv-depot (depot-5946dcf66-5kcvb)'

Tags

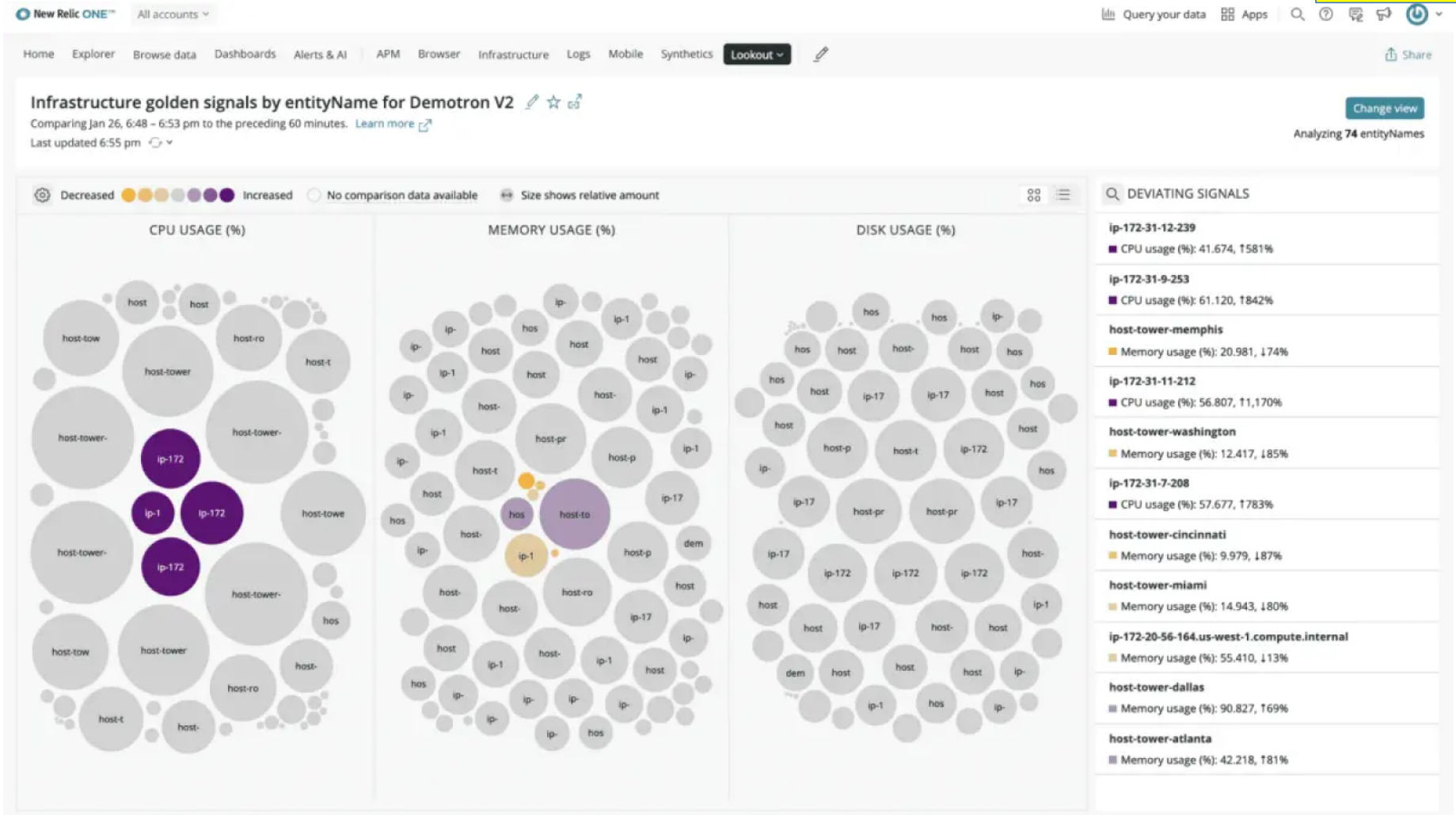
Metrics

Related entities [Add/edit related entities](#)

- Workloads (14)
- Services that call cserv-depot (3)
- Services called by cserv-depot (8)
- Databases (1)

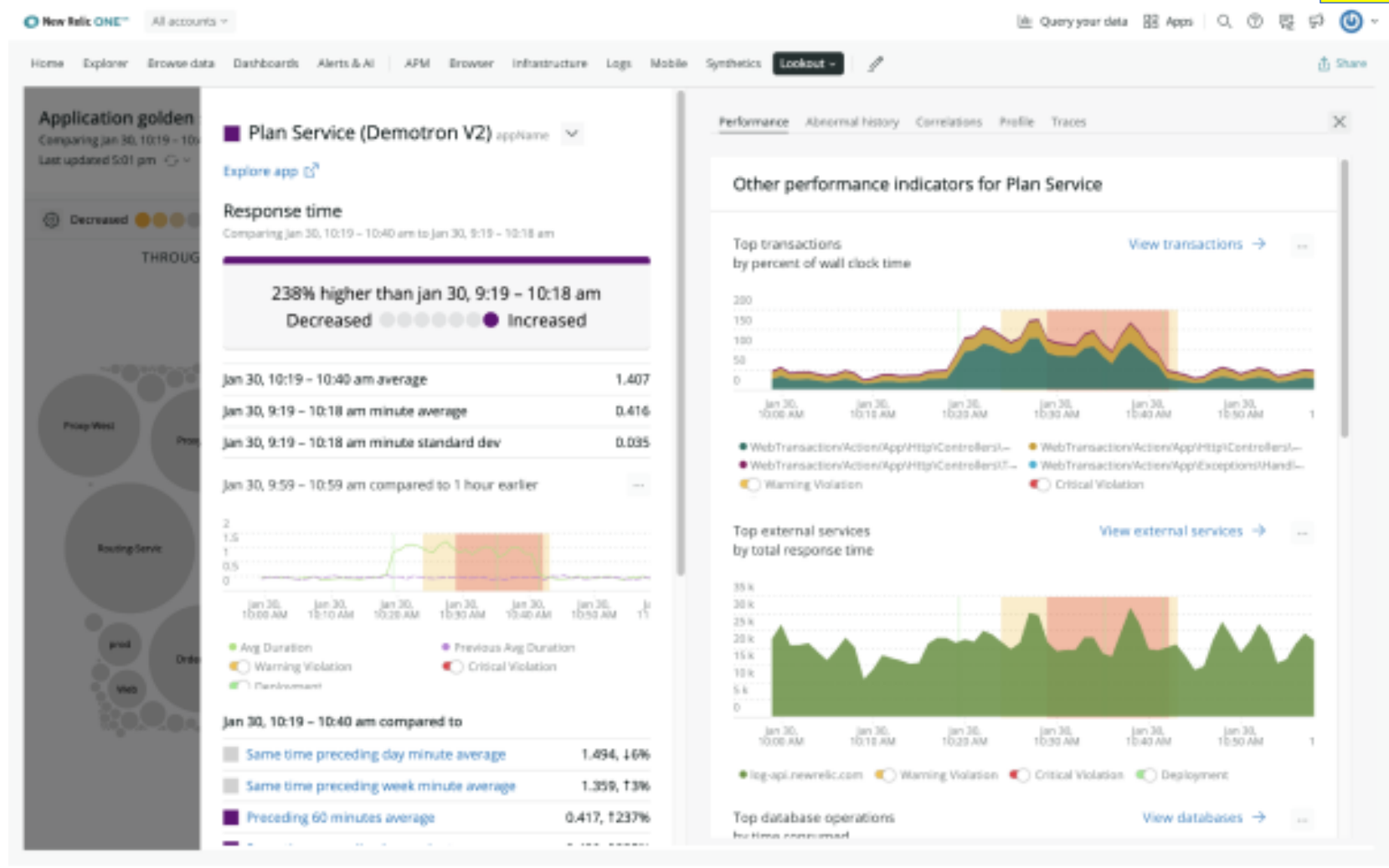
[New Relic Observability Platform | New Relic](#)

[Introducing our new infrastructure monitoring experience - YouTube](#)



[New Relic Observability Platform | New Relic](#)

[Introducing our new infrastructure monitoring experience - YouTube](#)



[New Relic Observability Platform | New Relic](#)

[Introducing our new infrastructure monitoring experience - YouTube](#)

# SolarWinds

[Explore your VMAN environment](#)

Virtualization Summary

### Virtualization Assets

VIRTUALIZATION SETTINGS EDIT HELP

- VMware
  - 10.199.14.118
    - Montreal
- Hyper-V
  - HVCluster1
    - MON-VMAN-VM-01
- Nutanix
  - TestCluster

### Virtualization Asset Summary

EDIT HELP

**Overall**

Number of Hosts	9
Number of VMs	43 running, 73 total
Total Number of Physical CPU Cores	108
Total RAM	452.0 GB
Last Poll	0 minutes ago

**VMware**

Number of Virtual Centers	1
Number of Clusters	2 total, 1 vSAN
Resource Pools	0
ESX Hosts	8 clustered, 0 non-clustered
Number of VMs	39 running, 59 total
Total Number of Physical CPU Cores	100
Total RAM	404.0 GB
Last Poll	6 minutes ago

### Getting Started with Virtualization Manager

REMOVE RESOURCE

Read the getting started guide (PDF or online documentation).

Monitor your VMware, Hyper-V or Nutanix environment.

VMware, Hyper-V or Nutanix environment can be monitored in Orion by adding your VMware, Hyper-V or Nutanix entities in the add node wizard. Once added, Virtualization Manager will automatically poll all associated VMs. Click the 'Add VMware, Hyper-V or Nutanix entities' button or go to Settings > All Settings > Add VMware, Hyper-V or Nutanix entities.

**ADD VMWARE, HYPER-V OR NUTANIX ENTITIES**

- Configure Recommendations **0/2 Completed**
- Use Orion Poller **1/2 Completed**
- Capacity Planning **0/2 Completed**

### Recommendations (0)

ALL RECOMMENDATIONS EDIT HELP

Grouped by: Clusters/Hosts with Recommendations

PROBLEMS BY PRIORITY    CLUSTERS/HOSTS WITH RECOMMENDATIONS    RECOMMENDATIONS

### Potential Virtualization Issues (148)

ALL ACTIVE ALERTS EDIT HELP

Alert Legend

- 31 VMs with Old Snapshots
- VMs with snapshots created more than 3...

### All Active Virtualization Alerts (23)

ALL UNACKNOWLEDGED ALERTS

ALL ACTIVE ALERTS EDIT HELP

Alert Legend

ALERT NAME	MESSAGE	TRIGGERING OBJECT	ACTIVE TIME
VM Phantom Snapshot Files	Finds VMSN files ...	iSCSI:HPStore01	6h 34m
VM Phantom Snapshot Files	Finds VMSN files ...	vsanDatastore	6h 34m
Cluster memory utilization	Memory utilizati...	vSAN Cluster	7h 29m
Datastore Overallocation	Fires when the to...	iSCSI0	7h 49m
Datastore Overallocation	Fires when the to...	MON-VMAN-VM-...	7h 49m
Host memory utilization	Memory utilizati...	lab-vm-an-vs-an-0...	7h 50m
Guest storage space utilization	Amount of disk s...	Nutanix CE - DO ...	8h 5m
Guest storage space utilization	Amount of disk s...	lhuf_withSQL_a	8h 5m
Guest storage space utilization	Amount of disk s...	HomePage_Caco...	8h 5m
Datastore Overallocation	Fires when the to...	iSCSI:NetApp01	8h 5m

Page 1 of 3    Items on page 10    Show all

Displaying objects 1 - 10 of 23

### VMware Events

ANALYZE LOGS EDIT HELP

17 Sep, 10:10:56 AM    Last hour    17 Sep, 11:10:56 AM

50    0    1251

Search...

Explore your VMAN environment

# IBM Instana

<https://play-with.instana.io/>

The screenshot displays the IBM Instana Infrastructure monitoring interface. The main view is a 3D bar chart representing container metrics across various hosts. A sidebar on the left provides detailed information for a selected container.

**Container Details:**

- discount (robot-shop/discount-canary-10491-7fc7699774-hw7tr)**  
Containerd Container
- Open Dashboard** | **1 Issue**
- Containerd Container**
- Id:** 21e38e0d18b2198f3cc3fa6cafad308d90014798be23bfa781404c1f06edcb
- Image:** gcr.io/peppy-vertex-158106/demo/discount:2.0.1
- Containerd namespace:** k8s.io
- Created At:** 2024-11-04, 09:03:21 (9 hours ago)
- Updated At:** 2024-11-04, 09:03:21 (9 hours ago)
- Containerd Version:** 1.7.19
- Container Labels:**
- Kubernetes:**
- Namespace:** robot-shop
- Pod:** robot-shop/discount-canary-10491-7fc7699774-hw7tr
- Deployment:** robot-shop/discount-canary-10491
- Node:** gke-robotshop-pond-2cc3f2ea-g5kz
- Cluster:** robotshop

**Grouping Menu:**

- Perspective: Host, Container
- Grouping: Amazon ECS task definition family, Cloud Foundry Application, Cloud Foundry Space, Docker Compose project name, Docker image, Host, Kubernetes namespace, Marathon application ID, Nomad task name, Zone, Container labels

<https://play-with.instana.io/>

**Grafana**

# Grafana community dashboard

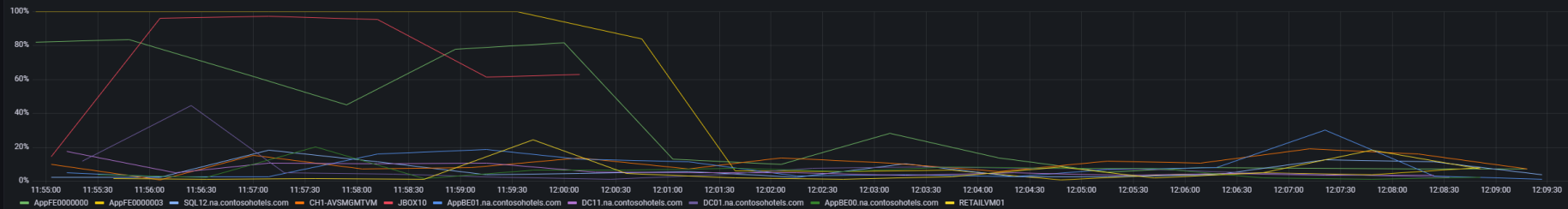
How to activate this dashboard

Not seeing data in this dashboard?

- Try selecting more than one or a different Resource group
  - Change the workspace

## CPU Utilization %

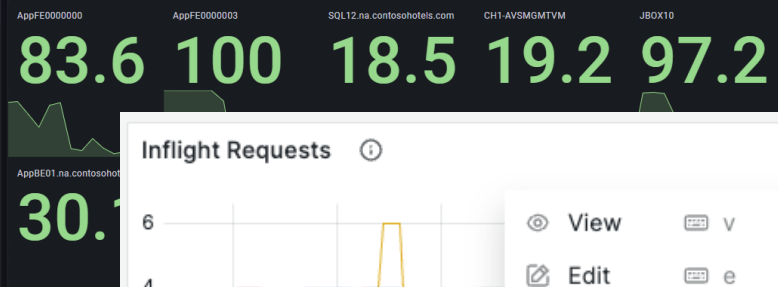
Average CPU Utilization %



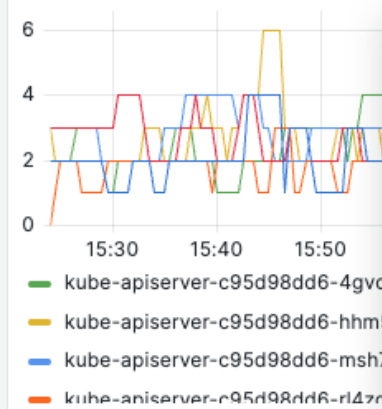
### CPU Utilization % Statistics

Computer	Average	P50th	P90th	P95th	Max
JBOX10	71.3	63.1	97.2	97.2	97.2
AppFE0000003	44.5	6.46	100	100	100
AppFE0000000	37.5	13.9	82.1	83.6	83.6
CH1-AVSMGMTVM	10.5	10.8	16.2	19.2	19.2
AppBE01.na.contosohotels.com	8.56	5.10	18.8	30.1	30.1
DC01.na.contosohotels.com	8.04	5.08	11.9	44.8	44.8
DC11.na.contosohotels.com	7.31	4.93	17.5	17.6	17.6
SQL12.na.contosohotels.com	6.56	3.95	12.5	18.5	18.5
AppBE00.na.contosohotels.com	5.89	5.68	8.30	20.1	20.1
RETAILVM01	5.73	1.85	18.2	24.4	24.4

### Max CPU Utilization % and trend lines

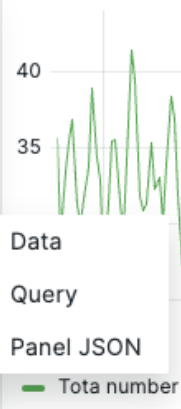


### Inflight Requests



- View (v)
- Edit (e)
- Share (p s)
- Explore (x)
- Inspect (i)
- More...
- Remove (p r)

### API Server HTT



- Data
- Query
- Panel JSON
- Tota number

# Azure Monitor

At scale experience not available

Home > Monitor

## Monitor | Virtual Machines

Search Refresh Provide Feedback

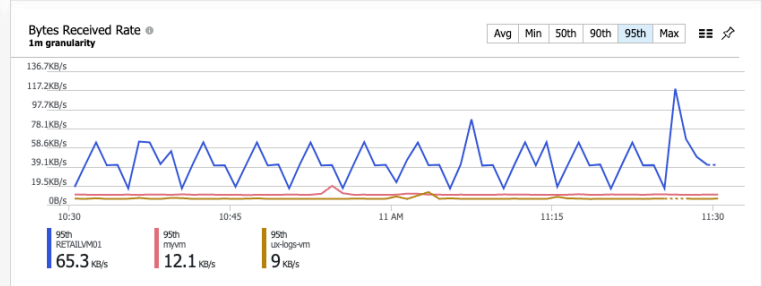
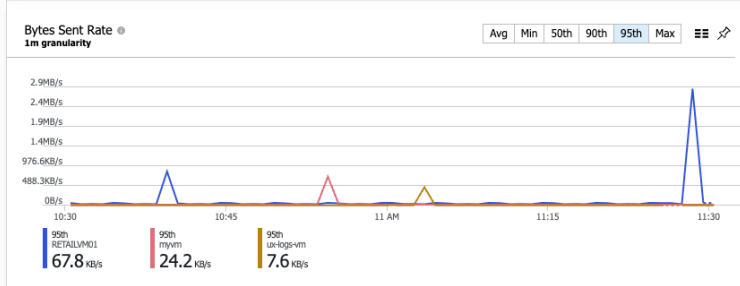
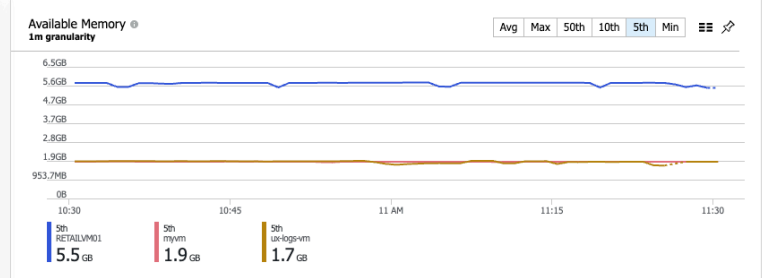
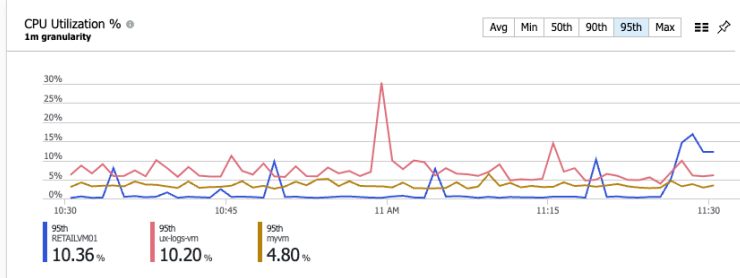
- Overview
- Activity log
- Alerts
- Metrics
- Logs
- Change Analysis
- Service health
- Workbooks
- Investigator (preview)
- Insights
  - Applications
  - Virtual Machines**
  - Storage accounts
  - Containers
  - Networks
  - SQL (preview)
  - Azure Cosmos DB
  - Key Vaults
  - Azure Cache for Redis
  - Azure Data Explorer Clusters
  - Log Analytics workspaces
  - Azure Stack HCI
  - Service Bus (preview)
  - Insights Hub
  - Managed Services
    - Managed Prometheus
    - Azure Managed Grafana

Get started Overview **Performance** Map

Subscription: Fabrikam Main Resource Group: All Type: All Time range: Last hour as of 23 Oct 11:30

View Workbooks Azure Hybrid

Top N Charts Aggregate Charts Top N List



Design Quality issue - Viewer mode experience in Single Virtual Machine Insights (VMI).docx

??

**LPAR RRD**

CPU CPU VMs MEMORY SERVER CPU READY LAN VM SPACE

Filter...

- DASHBOARD
- CUSTOM GROUPS
  - Reporter
- IBM Power Systems
  - VMware
    - Heatmap
    - Resource Configuration Advisor
    - Datastores TOP
    - VM TOP
- CoolHousing\_PRG
- Merit\_OL
  - Totals
  - Historical reports
  - VM TOP
- Cluster: ClusterOL
  - Totals
  - Resource Pool
  - ESXi
  - VM
  - Datastores: Datacenter OL
    - NFS-PRG-backup
    - NFS-VMbackup-PRG

Merit\_OL | Cluster: ClusterOL

VMs aggregated : last day

VMs aggregated : last week

Utilization in CPU GHz

Server	Lpar	Avg	Max
10.22.111.2	vmpewu	0.50	4.59
10.22.111.13	ecs02	4.41	4.50
10.22.111.2	SANnav	3.54	3.98
10.22.111.13	noe01	2.76	3.58
10.22.111.2	EMC isilon-02	2.87	3.01
10.22.111.13	ovms01	1.91	2.81
10.22.111.13	ovms02	1.86	2.80

Utilization in CPU GHz

Server	Lpar	Avg	Max
10.22.111.13	noe01	3.09	9.28
10.22.111.13	ecs02	4.36	4.48
10.22.111.2	SANnav	3.42	3.99
10.22.111.2	EMC isilon-02	2.36	2.94
10.22.111.13	ovms01	1.85	2.79
10.22.111.13	ovms02	0.46	2.77
10.22.111.2	hcp	2.69	2.75