



GET STARTED

# VMware vRealize Network Insight Search Query Posters

Get Deeper Insights from  
Your Infrastructure, Faster



## Introduction

As a VMware admin, you know VMware vRealize® Network Insight™ provides a robust search for all of the entities in your environment. It has property and entity terms, as well as aggregate function terms you can tune for best-results infrastructure to cloud to branch planning and analysis.

But we're all busy. And with so little time and so many questions, our team came up with a series of vRealize Network Insight search query cheat sheets to inspire you while getting to insights faster.

Download, view, and display one. Or download, view, and display them all. As a go-to resource or simply an office conversation starter, each guide includes everything you need for results.

### Search Guide Topics

1. Flows
2. PKS – Kubernetes
3. VMware NSX – T
4. VMware NSX® Data Center for vSphere®
5. VMware SD-WAN™ by VeloCloud®
6. Virtual machine

## Ready Queries

**Build your own query**

- Filters:
  - =, !=, like, not like
  - in, not in (membership)
  - is set, is not set (existence)
  - >, < (numeric), AND, OR (logical)
- Aggregation: SUM(), MAX(), MIN(), AVG()
- Modifiers: GROUP BY, ORDER BY
- Projection: LIST(), COUNT()

**NSX-T Logical Port**

- Multicast Broadcast Rx Bytes
- Multicast Broadcast Tx Bytes
- Multicast Broadcast Tx Packets
- Network Rate
- Network Rx Rate
- Rx Packet Drop Ratio
- Rx Packets
- Total Rx Bytes
- Total Tx Bytes
- Tx Packet Drop Ratio
- Tx Packets
- Unicast Packets Rx
- Unicast Packets Tx
- Unicast Rx Bytes
- Unicast Tx Bytes

**NSX-T Firewall**

- Change
- Event
- Exclusion
- Firewall Status
- Manager
- Mode
- Name
- Problem
- Published Version
- Rule Count
- RuleSets Type
- Tag
- Translated VM
- Vendor
- Vendor ID
- Version

**NSX-T Manager**

- Change
- Event
- FGDN
- Host Name
- IP Address
- Kernel version
- Manager
- NSX-T IP Address
- VC Managers
- Version

**NSX-T Logical Switch**

- Change
- Creator
- Event
- NSX-T Logical Ports
- Problem
- Scope
- Tag
- Traffic Type
- Transport Zone
- VM Count
- VNI
- Vendor ID
- manager

**NSX-T Fabric Network**

- Change
- Creator
- Default Gateway
- Event
- Host Count
- Hosts
- Manager
- NSX Policy Segment
- NSX-T Logical Switch
- Name
- Network
- Problem
- Scope
- Tag
- Traffic Type
- VLAN
- VM Count
- VNI
- Vendor ID
- Vlan ID

**NSX-T Transport Zone**

- Change
- Event
- Host Switch Mode
- Host Switch Name
- Manager
- Name
- Problem
- Type
- Vendor ID
- manager

**NSX-T Edge Cluster**

- Change
- Deployment Type
- Event
- Member Node Type
- Members
- Manager
- Name
- Problem
- Vendor ID
- manager

**NSX-T Service**

- Change
- Event
- Location
- Manager
- Name
- Port
- Problem
- Protocol
- Source Port
- Vendor ID

**NSX-T Policy Based VPN**

- Change
- Enabled
- Event
- Local Address
- Local Endpoints
- Local Network
- Local Network
- Manager
- Peer VPN Connection
- Peer VPN Gateway
- Peer VPN Session
- Problem
- Remote Endpoints
- Remote Network
- Remote Private Address
- Remote Public Address
- Remote Public Address
- Tier0 name

**NSX-T Service Group**

- Change
- Manager
- Name
- Problem

**NSX-T Router**

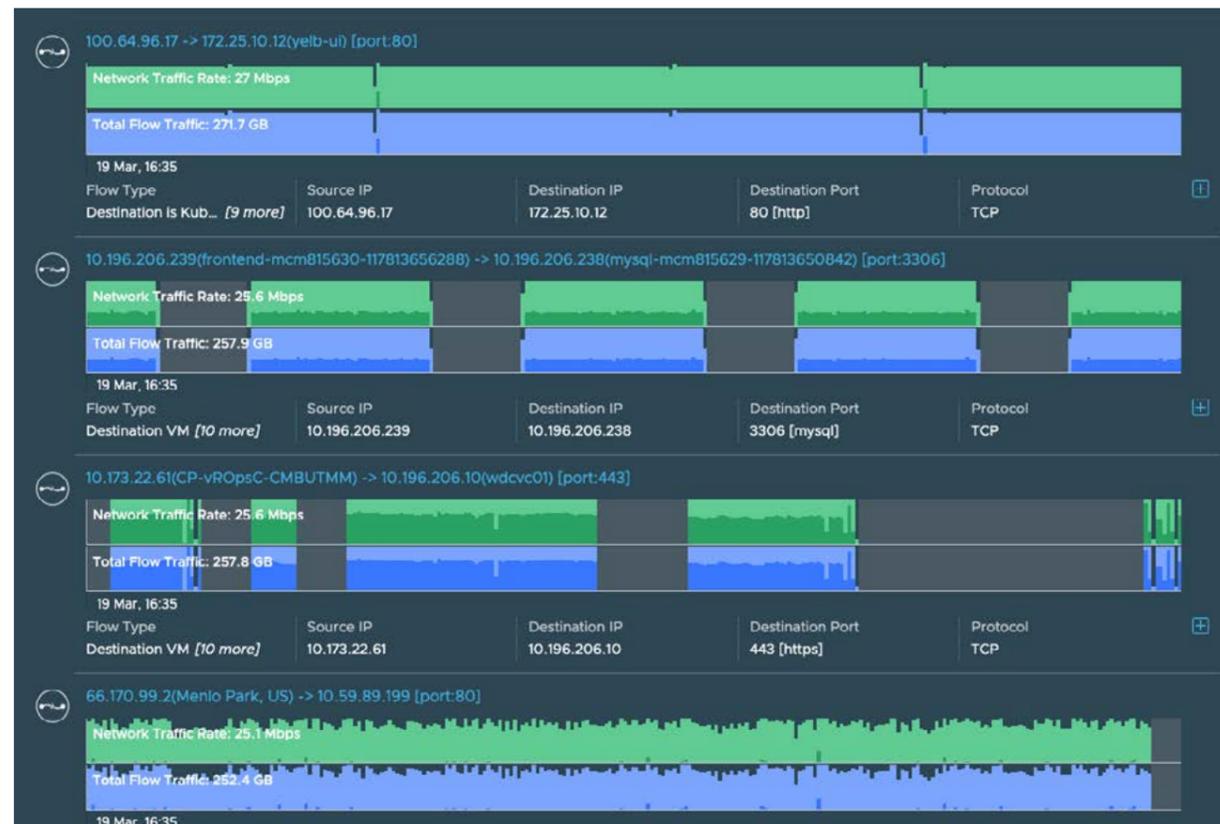
- Advertise NAT Routes
- Advertise NSX Connected Routes
- Advertise Static Routes
- Change
- Distributed Router
- ECMP
- Edge Cluster
- Event
- Fallover Mode
- HA Mode
- Unid Routers
- Manager
- Name
- OSPF
- OSPF Area ID
- OSPF Area Type
- Problem
- Router Interface
- Router Interface Count
- Routing Advertisement
- Enabled
- Scope
- Service Router
- Tag
- Tier Router Type
- VRF
- Vendor ID

**NSX-T Logical Port**

- Administrative Status
- Attachment Type
- Change
- ConnectedTo
- Event
- Manager
- NSX-T L2 Network
- NSX-T Logical Switch
- Name
- Numbered Network
- Interface
- Location
- Operational Status
- Problem
- Scope
- Tag
- VM
- Vendor ID
- Vnic

- Choose sample queries in grey
- View properties to search in green
- Find metrics delivered in blue

## Visual Results

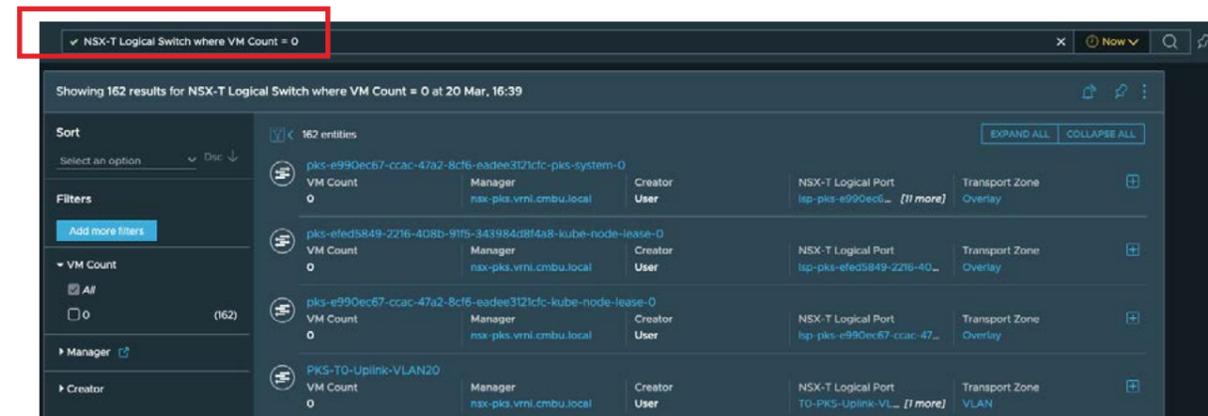


- View tables and graphs
- Sort options
- Filter results



## How to Get Started

When you need results fast, select the search feature in vRealize Network Insight and start typing in the syntax highlighted on a poster.



### These are sample searches:

- Discover which VMs have too many snapshots by entering this query: Top 10 vms by snapshot count
- Identify the top talkers from this VM by entering the following: sum(-bytes) of flows where Flow Type = 'Src is VM' and Flow Type = 'Dst is Internet'
- Find out which countries your customers are coming from by entering this query: flow group by Destination Country
- Discover Kubernetes PODs that are failing due to image errors by entering the following: Kubernetes events where Event code = 'Image-PullBackOff' in last 24 hours
- Identify unstable internet connections in your SD-WAN by entering this code: SD-WAN Link where Connectivity State != 'Stable'

# Flows Search Poster

## Sample Queries

- flow where bytes > 100 gb
- flow group by vm
- top 5 flow order by packets
- flow group by Destination Country
- count of flow group by Destination IP Address
- Internet traffic by source VM:** sum(bytes) of flows where Flow Type = 'Internet' group by source vm order by sum(bytes)
- Internet traffic:** flows where Flow Type = 'Source is Internet' and Flow Type = 'Destination is VM' order by bytes
- Sum of bytes between VM & internet:** Sum(bytes), sum(src bytes), sum(dest bytes) of flows where Flow Type = 'Source is VM' and flow type = 'Destination is Internet'
- Total VTEP traffic:** sum(bytes) of flows where Flow Type = 'Source is VTEP' or Flow Type = 'Destination is VTEP'
- VTEP traffic grouped by VMKNIC:** sum(bytes) of flows where Flow Type = 'Source is VTEP' or Flow Type = 'Destination is VTEP' group by IP
- Top VM pair by total bytes:** sum(bytes) of flows group by src vm, dest vm order by sum(bytes)
- Aggregated traffic series for matching flows:** series( sum( byte rate )) of flows where host = 'myhost.abccorp.com' and (flow type = 'source is vm' or flow type = 'destination is vm')
- VM flow between hosts:**
  - flow where Flow Type = 'VM-VM' and Flow Type = 'Diff Host' order by bytes
  - sum(bytes) of flow where Flow Type = 'VM-VM' and Flow Type = 'Diff Host' group by vm order by sum(bytes)

## NSX-V Firewall - Configuration Properties

NSX Manager	Flow	Destination IPSet
Name	HIP Profile	Destination Negate
Packet Type	IP Address	Destination Security Group
Port	Status	Destination Vm
Port Range	Target	Destination Zone
Port Range	Target Negation	Device Group
Port Range Display	Vendor	Direct Destination Address
Problem	Vendor	Direct Destination Address Group
Protocol	vm series	Direct Destination IPSet
Protocol Port Range	Indirect Source IPSet	Direct Destination Security Group
Rule ID	Indirect Source Security Group	Direct Security Group
Rule Type	Logging Enabled	Direct Source Address
Scope	Manager	Direct Source Address Group
Section ID	Manager Model	Direct Source IPSet
Section Name	Manager Serial	Direct Source Security Group
Security Group	Manager Version	Direction
Sequence ID	Action	IPSet
Service	Application	Indirect Destination Address
Service	Application ID GUID	Indirect Destination Address Group
Service Any	Appliedto	Indirect Destination IPSet
Service Profile	Category	Indirect Destination Security Group
Shared	Change	Indirect Security Group
Source	Configured Destination	a Source Address
Source Negate	Configured Source	Indirect Source Address Group
Source Security Group	Destination	Source Address
Source User	Destination Address	Source Address Group
Source Vm	Destination Address Group	Source Any
Source Zone	Destination Any	Source IP
Event	Destination IP	Source IPSet

## NSX-V Policy Firewall - Configuration Properties

- Change
- Event
- Exclusion
- Firewall Status
- Manager
- Model
- Name
- Problem
- Published Version
- Rule Count
- RuleSets Type
- Rules
- Serial
- Spoofguard Status
- Vendor
- Vendor ID
- Version

## NSX-V Manager - Metrics

- Incomplete tcp flow drop count
- Outbound expire flow drop count
- Wrong collector flow drop count

## NSX-V Controller - Configuration Properties

- Activated
- Change
- Enabled
- Event
- ID
- IP Address
- Join Status
- Ldr
- Majority Status
- Manager
- Master
- NSX Manager
- Name
- Network Address
- Problem
- Role Name
- Scope
- Status
- Upgrade Available
- VM
- VXLAN
- Vendor ID
- Version

## NSX-V Security Group - Configuration Properties

- All Direct Child Group
- All Parents
- Change
- Child
- Direct Destination RuleSets Type
- Direct Incoming Rules
- Direct Outgoing Rules
- Direct Source RuleSets Type
- Event
- Excluded
- IP Address
- IPSet
- Incoming Rule Count
- Indirect Destination RuleSets Type
- Indirect Incoming Rule Count
- Indirect Incoming Rules
- Indirect Outgoing Rule Count
- Indirect Outgoing Rules
- Indirect Source RuleSets Type
- Manager
- Manager Model
- Manager Serial
- Manager Version
- Member
- Member
- NSX Manager
- Name
- Outgoing Rule Count
- Problem
- Region
- Rule Count
- Security Tag
- Translated VM
- Vendor
- Vendor ID

## NSX-V Manager - Configuration Properties

- Backup Enabled
- Change
- Event
- IP Address
- Model
- NTP Server Configured
- Name
- Problem
- Serial
- Syslog Server Configured
- Transport Zone
- VM
- Vendor
- Version

## NSX-V Policy Based VPN - Configuration Properties

- Change
- Enabled
- Event
- Local Address
- Local Address
- Local Endpoints
- Local Network
- Local Network
- Manager
- Peer VPN Connection
- Peer VPN Gateway
- Peer VPN Session
- Problem
- Remote Endpoints
- Remote Network
- Remote Network
- Remote Private Address
- Remote Private Address
- Remote Public Address
- Remote Public Address
- Tier0
- name

## NSX-V IPSet - Configuration Properties

- All Parents
- Change
- Event
- IP Address
- IP Address
- IP Range
- IP Address Range end
- IP Address Range start
- Translated VM
- Vendor ID
- Network Address
- Problem
- Scope
- Scope
- Tag
- Manager
- NSX Manager
- Name
- Netmask
- Indirect Incoming Rules
- Indirect Outgoing Rules
- Direct Destination RuleSets Type
- Direct Incoming Rules
- Direct Outgoing Rules
- Direct Parent Security Group
- Direct Source RuleSets Type
- Indirect Destination RuleSets Type
- Indirect Source RuleSets Type

# PKS - Kubernetes Search Poster

## Sample Queries

### Common Queries

**Search Flows:** flows where Kubernetes Object = Object name  
Example: flows where Kubernetes Cluster = 'Production'

**View the service scale:**  
kubernetes pods group by Kubernetes Services

**View the node load:**  
kubernetes Pods group by Kubernetes Node

**View the node health:**  
MemoryPressure and PIDPressure and DiskPressure and Ready of Kubernetes Node

**View flow compliance:**  
flows from Kubernetes Object name of the object to Kubernetes Object name of the object  
Example:

flows from Kubernetes Namespace'PCI' to Kubernetes Namespace'Non-PCI'

**View the Path topology:**  
Kubernetes service service name to Kubernetes service service name  
Kubernetes service service name to Kubernetes pod pod name  
Kubernetes pod pod name to Kubernetes pod pod name

### Kubernetes events

kubernetes events where Problem Entity = '<pod/namespace/node Name>'

kubernetes events where Event code = 'ImagePullBackOff' in last 24 hours

kubernetes events where problem entity.Kubernetes Cluster = '<cluster-a>'

### View Application

application where virtual member = 'service-a'  
application where virtual member = 'service-a' and virtual member.Kubernetes Namespace = 'namespace-b'  
count of applications where Virtual Member in (kubernetes services)

list (virtual member) of applications where Name = 'app-1' and virtual member.Kubernetes Cluster is set

### View Tier Information

tier where virtual member = 'service-a' and virtual member.Kubernetes Namespace = 'namespace-b'

### Flows

flows where firewall action = 'DROP' group by Kubernetes Service  
flows where firewall action = 'DROP' group by source Kubernetes Namespace  
flows where firewall action = 'DROP' and Flow Type = 'Destination is Internet'

### Packet drops group by kubernetes pod

nsx-t logical port where (ConnectedTo in (Kubernetes Pods where kubernetes cluster is set)) and Rx Packet Drops > 0 group by ConnectedTo order by max(Rx Packet Drops)

### Packet drops group by kubernetes node

nsx-t logical port where (ConnectedTo in (Kubernetes Nodes where kubernetes cluster is set)) and Rx Packet Drops > 0 group by ConnectedTo order by max(Rx Packet Drops)

### Packet drops by kubernetes namespace

nsx-t logical switch where Rx Packet Drops > 0 and Tag like 'ncp/project:' order by Rx Packet Drops

### Packet drops group by kubernetes services

nsx-t logical port where (ConnectedTo in (Kubernetes Pods where kubernetes cluster is set)) and Rx Packet Drops > 0 group by ConnectedTo.Kubernetes service order by max(Rx Packet Drops)

### Kubernetes Objects

**Nodes :**  
kubernetes nodes where Ready != 'True'  
kubernetes node where Virtual Machine = 'vm-a'

**Flows:**  
flows where kubernetes service is set  
flows where source kubernetes node = 'a'

**Services:**  
kubernetes pods where kubernetes services is not set  
kubernetes pods group by Kubernetes Services, Kubernetes Cluster

**Namespace:**  
kubernetes namespace where L2 Networks = 'a'  
list(Kubernetes Node) of Kubernetes Pod where Kubernetes Namespace = 'a'

**Pod:**  
NSX-T Logical port where connectedto.modelKey in (modelKey of kubernetes nodes) order by Tx Packets desc  
NSX-T Logical port where connectedto.modelKey in (modelKey of kubernetes pods) and Rx Packet Drops > 0 new kubernetes pod in last 1 hour

Show <config Property> of kubernetes object

### Supported properties for Configuration Queries

Group by – Ex: kubernetes pods group by kuberentes services

### Aggregate Functions

max, min, sum, avg  
Ex: sum(MemoryPressure) of kubernetes node

## Configuration Properties

### Kubernetes Service

Annotations Key  
Annotations Key Value  
Change  
Cluster IP  
Cluster IPAddress  
Cluster Netmask  
Cluster Network Address  
Creation Time  
Event  
External IP  
External IPAddresses  
External Netmask  
External Network Address  
Kubernetes Cluster  
Kubernetes Namespace  
Label  
Label Key  
LoadBalancer IP  
LoadBalancer IP Address  
LoadBalancer Netmask  
LoadBalancer Network Address  
Manager  
Name  
Node Port  
Port  
Port Name  
Problem  
Protocol  
Selectors  
Selectors Key  
Target Port  
Type  
Vendor ID  
modelKey

### Kubernetes Service - Metrics

Nodes count  
Pods count

### Kubernetes Node

Annotations Key  
Annotations Key Value  
Change  
Creation Time  
DiskPressure  
Event  
HOST  
IP Address  
IPAddress  
Kube-Proxy Version  
Kubelet Version  
Kubernetes Cluster  
Label  
Label Key  
Logical Port  
Manager  
MemoryPressure  
Name  
Node Condition Status  
Node Condition Status Message  
Node Condition Status Type  
OS Image  
OutOfDisk  
PIDPressure  
Problem  
Ready  
Roles  
Vendor ID  
Virtual Machine  
modelKey

### Kubernetes Cluster

Change  
Data Source Type  
Enabled  
Event  
NI Collector  
NSX Manager  
Name  
Problem  
URL

## Kubernetes Namespace

Annotations Key  
Annotations Key Value  
Change  
Creation Time  
Event  
Kubernetes Cluster  
L2 Networks  
Label  
Label Key  
Manager  
Name  
Problem  
Router  
Vendor ID  
modelKey  
status

## Kubernetes Pod

Annotations  
Annotations Key  
CIF  
Change  
Containers  
Creation Time  
Event  
HOST  
IP Address  
IPAddress  
Kubernetes Cluster  
Kubernetes Namespace  
Kubernetes Node  
Kubernetes Services  
Label  
Label Key  
Logical Port  
Manager  
Name  
Kubernetes Pod Name

## PKS Data Source

Change  
Enabled  
Event  
NSX Manager  
Problem  
URL

# NSX-T Search Poster

## Sample Queries

nsx-t logical switch where Tx Packet Drops > 0  
 top 10 nsx-t firewall rules order by sum(bytes)  
 top 10 router interfaces order by Total Tx bytes  
 nsx-t logical port where Rx Packer drops > 0  
 nsx-t controllers where Management Connection Status != 'Connected'  
 nsx-t manager where VC Managers Count > 1  
 nsx-t edge cluster where Deployment Type = 'VIRTUAL\_MACHINE'

## Firewall

top 10 nsx-t firewall rule order by Hit Count  
 flows where firewall rule is not set  
 nsx-t firewall rule where Flow Packets = 0 in last 30 days  
 new nsx-t firewall rule in last 30 days

## Flows

flow where application = app1  
 flow where application = app1 and tier = Web  
 flow where bytes > 100 gb  
 flow group by vm  
 top 5 flow order by packets  
 flow group by Destination Country  
 count of flow group by Destination IP Address

## Internet traffic by source VM

sum(bytes) of flows where Flow Type = 'Internet' group by source vm  
 order by sum(bytes)

## Internet traffic

flows where Flow Type = 'Source is Internet' and Flow Type = 'Destination is VM' order by bytes

## Top VM pair by total bytes

sum(bytes) of flows group by src vm, dest vm order by sum(bytes)

## Build your own query

**Filters:**  
 • =, !=, like, not like  
 • in, not in (membership)  
 • is set, is not set (existence)  
 • >, < (numeric), AND, OR (logical)  
**Aggregation:**  
 SUM(), MAX(), MIN(), AVG()  
**Modifiers:** GROUP BY, ORDER BY  
**Projection:** LIST(), COUNT()

## NSX-T Data Source

Change  
 Enabled  
 Event  
 IPFIX Enabled  
 Latency Enabled  
 NI Collector  
 Name  
 Problem  
 URL

## NSX-T Logical Switch

Change  
 Creator  
 Event  
 NSX-T Logical Ports  
 Problem  
 Scope  
 Tag  
 Traffic Type  
 Transport Zone  
 VM Count  
 VNI  
 Vendor ID  
 manager

## NSX-T Manager

Change  
 Event  
 FQDN  
 Host Name  
 IP Address  
 Kernel version  
 Manager  
 NSX-T IP Address  
 Name  
 Problem  
 VC Managers  
 Version

## NSX-T Distributed Router

Change  
 Event  
 Logical Router  
 Manager  
 Name  
 Problem  
 Router Interface  
 Router Interface Count  
 Tier Router Type  
 VRF  
 Vendor ID

## NSX-T Firewall Metrics

Flow Bytes  
 Flow Packets  
 Hit Count  
 Session Count

## NSX-T Logical Port

Multicast Broadcast Rx Bytes  
 Multicast Broadcast Rx Packets  
 Multicast Broadcast Tx Bytes  
 Multicast Broadcast Tx Packets  
 Network Rate  
 Network Rx Rate  
 Network Tx Rate  
 Rx Packet Drop Ratio  
 Rx Packet Drops  
 Rx Packets  
 Total Rx Bytes  
 Total Tx Bytes  
 Tx Packet Drop Ratio  
 Tx Packet Drops  
 Tx Packets  
 Unicast Packets Rx  
 Unicast Packets Tx  
 Unicast Rx Bytes  
 Unicast Tx Bytes

## NSX-T Manager

Incomplete tcp flow drop count  
 Outbound expire flow drop count  
 Wrong collector flow drop count

## NSX-T Service

Change  
 Event  
 Location  
 Manager  
 Name  
 Port  
 Problem  
 Protocol  
 Source Port  
 Vendor ID

## NSX-T Firewall

Change  
 Event  
 Exclusion  
 Firewall Status  
 Manager  
 Model  
 Name  
 Problem  
 Published Version  
 Rule Count  
 RuleSets Type  
 Rules  
 Serial  
 Vendor  
 Vendor ID  
 Version

## NSX-T Layer2 Network

Change  
 Creator  
 Default Gateway  
 Event  
 Host Count  
 Hosts  
 Manager  
 NSX Policy Segment  
 NSX-T Logical Switch  
 Name  
 Network  
 Problem  
 Scope  
 Tag  
 Traffic Type  
 VLAN  
 VM Count  
 VNI  
 Vendor ID  
 Vlan ID

## NSX-T Logical Port

Administrative Status  
 Attachment Type  
 Change  
 ConnectedTo  
 Event  
 Manager  
 NSX-T L2 Network  
 NSX-T Logical Switch  
 Name  
 Numbered Network  
 Interface  
 Operational Status  
 Problem  
 Scope  
 Tag  
 VM  
 Vendor ID  
 Vnic

## NSX-T Security Group

All Direct Child Group  
 All Parents  
 Change  
 Child  
 Direct Destination RuleSets Type  
 Direct Incoming Rules  
 Direct Outgoing Rules  
 Direct Source RuleSets Type  
 Event  
 Incoming Rule Count  
 Indirect Destination RuleSets Type  
 Indirect Incoming Rule Count  
 Indirect Incoming Rules  
 Indirect Outgoing Rule Count  
 Indirect Outgoing Rules  
 Indirect Source RuleSets Type  
 Linked SG  
 Manager  
 Manager Model  
 Manager Version  
 Member  
 Member  
 Name  
 Outgoing Rule Count  
 Problem  
 Region  
 Rule Count  
 Scope  
 Tag  
 Translated VM  
 Vendor  
 Vendor ID

## NSX-T IPSet

All Parents  
 Change  
 Direct Destination RuleSets Type  
 Direct Incoming Rules  
 Direct Outgoing Rules  
 Direct Parent Security Group  
 Direct Source RuleSets Type  
 Event  
 IP Address  
 IP Range  
 Indirect Destination RuleSets Type  
 Indirect Incoming Rules  
 Indirect Outgoing Rules  
 Indirect Source RuleSets Type  
 Manager  
 NSX Manager  
 Name  
 Netmask  
 Network Address  
 Problem  
 Scope  
 Scope  
 Tag  
 Translated VM  
 Vendor ID

## NSX-T Transport Zone

Change  
 Event  
 Host Switch Mode  
 Host Switch Name  
 Manager  
 Name  
 Problem  
 Type  
 Vendor ID

## NSX-T Firewall

Destination Address Group  
 Destination IPSet  
 Destination NSGroup  
 Destination NSX-T IPSet  
 Destination Negate  
 Destination Security Group  
 Direct Destination Address  
 Direct Destination Address Group  
 Direct Destination IPSet  
 Direct Destination NSGroup  
 Direct Destination NSX-T IPSet  
 Direct Destination Security Group  
 Direct Source Address Group  
 Direct Source Address  
 Direct Source IPSet  
 Direct Source NSGroup  
 Direct Source NSX-T IPSet  
 Direct Source Security Group  
 Indirect Destination Address  
 Indirect Destination Address Group  
 Indirect Destination IPSet  
 Indirect Destination NSGroup  
 Indirect Destination NSX-T IPSet  
 Indirect Destination Security Group  
 Indirect NSGroup  
 Indirect NSX-T IPSet  
 Indirect Security Group  
 Indirect Source Address  
 Indirect Source Address Group  
 Indirect Source IPSet  
 Indirect Source NSGroup  
 Indirect Source NSX-T IPSet  
 Indirect Source Security Group  
 Logging Enabled  
 Source Address Group

## NSX-T Policy Based VPN

Change  
 Enabled  
 Event  
 Local Address  
 Local Address  
 Local Endpoints  
 Local Network  
 Local Network  
 Manager  
 Peer VPN Connection  
 Peer VPN Gateway  
 Peer VPN Session  
 Problem  
 Remote Endpoints  
 Remote Network  
 Remote Network  
 Remote Private Address  
 Remote Private Address  
 Remote Public Address  
 Remote Public Address  
 TierO  
 name

## NSX-T Edge Cluster

Change  
 Deployment Type  
 Event  
 Member Node Type  
 Members  
 Name  
 Problem  
 Vendor ID  
 manager

Source Security Group  
 Action  
 Application  
 Application ID GUID  
 Appliedto  
 Category  
 Change  
 Destination  
 Destination Address  
 Destination Any  
 Destination IP  
 Destination Vm  
 Destination Zone  
 Device Group  
 Direct NSGroup  
 Direct NSX-T IPSet  
 Direct Security Group  
 Direction  
 Event  
 HIP Profile  
 IP Address  
 IPSet  
 Manager  
 Manager Model  
 Manager Serial  
 Manager Version  
 NSGroup  
 NSX Manager  
 NSX Policy Firewall Rule  
 NSX-T IPSet  
 Name  
 Packet Type  
 Port  
 Port Range  
 Port Range

## NSX-T Transport Node

Change  
 Control Status  
 Deployment Type  
 Edge Cluster  
 Event  
 Fabric Node  
 Maintenance Mode  
 Management Status  
 Name  
 Netmask  
 Network Address  
 Node Type  
 Pnic Status  
 Problem  
 Roll-up status  
 Transport Zones  
 Tunnel Status  
 Vendor ID  
 manager

## NSX-T Fabric Node

Change  
 Deployment Type  
 Event  
 IP Addresses  
 IP Source  
 Name  
 Netmask  
 Network  
 Node Type  
 OS Type  
 OS Version  
 Problem  
 Transport Node  
 Vendor ID

Port Range Display  
 Problem  
 Protocol  
 Protocol Port Range  
 Rule ID  
 Rule Type  
 Scope  
 Section ID  
 Section Name  
 Security Group  
 Sequence ID  
 Service  
 Service Any  
 Service Profile  
 Shared  
 Source  
 Source Address  
 Source Any  
 Source IP  
 Source IPSet  
 Source NSGroup  
 Source NSX-T IPSet  
 Source Negate  
 Source User  
 Source Vm  
 Source Zone  
 Status  
 Target  
 Target Negation  
 Vendor  
 Vendor  
 firewall type  
 vm series

## NSX-T Service Group

Change  
 Manager  
 Name  
 Problem

## NSX-T Router

Advertise NAT Routes  
 Advertise NSX Connected  
 Routes  
 Advertise Static Routes  
 Change  
 Distributed Router  
 ECMP  
 Edge Cluster  
 Event  
 Failover Mode  
 HA Mode  
 Linked Routers  
 Manager  
 Name  
 OSPF  
 OSPF Area ID  
 OSPF Area Type  
 Problem  
 Router Interface  
 Router Interface Count  
 Routing Advertisement  
 Enabled  
 Scope  
 Service Router  
 Tag  
 Tier Router Type  
 VRF  
 Vendor ID

# VMware NSX® Data Center for vSphere® Search Poster

## Sample Queries

top 10 nsx-v firewall rules order by connection count  
 sum(bytes) of flows where Flow Type = 'Src is VM' and Flow Type = 'Dst is Internet'  
 sum(Session Count) of flows group by firewall rule order by sum(session count) where firewall ruleid = 1032  
 host group by Firewall Status  
 host group by Hostprep Feature Status  
 host group by Hostprep Feature Version  
 vmware vm group by Firewall Rule  
 NSX-V Controller group by Ldr Count  
 NSX-V Controller group by Upgrade Available  
 Security group where Indirect Incoming Rules is not set and Indirect Outgoing Rules is not set and Direct Incoming Rules is not set and Direct Outgoing Rules is not set

[Un-Protected Flows](#)  
 Flows where firewall rule is not set  
[List of firewall rules which are not hit by any flow in last 30 days](#)  
 NSX firewall rule where flows is not set in last 30 days  
[Flows hitting specific rule id's / firewall rules/specific security group/specific application](#)  
 Flow where rule id in (1011, 1012, 1013)  
 Flow where firewall rule like rule1  
 Flow where security group like sg1  
[Flows hitting on an application.](#)  
 Flow where application = app1  
 Flow where application = app1 and tier = TierName

[New Firewall rules](#)  
 New firewall rules in last 24 hours  
 New firewall rules in last 30 days

## NSX-V Controller - Configuration Properties

Activated  
 Change  
 Enabled  
 Event  
 ID  
 IP Address  
 Join Status  
 Ldr  
 Majority Status  
 Manager  
 Master  
 NSX Manager  
 Name  
 Network Address  
 Problem  
 Role Name  
 Scope  
 Status  
 Upgrade Available  
 VM  
 VXLAN  
 Vendor ID

Version

## NSX-V Manager - Configuration Properties

Backup Enabled  
 Change  
 Event  
 IP Address  
 Model  
 NTP Server Configured  
 Name  
 Problem  
 Serial  
 Syslog Server Configured  
 Transport Zone  
 VM  
 Vendor  
 Version

## NSX-V IPSet - Configuration Properties

All Parents  
 Change  
 Event  
 IP Address  
 IP Address  
 IP Range  
 IP Address Range  
 end  
 IP Address Range  
 start  
 Translated VM  
 Vendor ID  
 Network Address

Problem  
 Scope  
 Scope  
 Tag  
 Manager  
 NSX Manager  
 Name  
 Netmask  
 Indirect Incoming  
 Rules  
 Indirect Outgoing  
 Rules  
 Direct Destination RuleSets  
 Type Direct Incoming Rules  
 Direct Outgoing Rules  
 Direct Parent Security Group  
 Direct Source RuleSets Type  
 Indirect Destination RuleSets  
 Type Indirect Source RuleSets  
 Type

## NSX-V Security Group - Configuration Properties

All Direct Child Group  
 All Parents  
 Change  
 Child  
 Direct Destination RuleSets  
 Type  
 Direct Incoming Rules  
 Direct Outgoing Rules  
 Direct Source RuleSets  
 Type Event  
 Excluded  
 IP Address  
 IPSet  
 Incoming Rule Count  
 Indirect Destination RuleSets  
 Type  
 Indirect Incoming Rule Count  
 Indirect Incoming Rules  
 Indirect Outgoing Rule Count  
 Indirect Outgoing Rules  
 Indirect Source RuleSets Type  
 Manager  
 Manager Model  
 Manager Serial  
 Manager Version  
 Member  
 Member  
 NSX Manager  
 Name  
 Outgoing Rule Count  
 Problem  
 Region  
 Rule Count  
 Security Tag  
 Translated VM  
 Vendor  
 Vendor ID

## NSX-V Policy Based VPN - Configuration Properties

Change  
 Enabled  
 Event  
 Local Address  
 Local Address  
 Local Endpoints  
 Local Network  
 Local Network  
 Manager  
 Peer VPN Connection  
 Peer VPN Gateway  
 Peer VPN Session  
 Problem  
 Remote Endpoints  
 Remote Network  
 Remote Network  
 Remote Private Address  
 Remote Private Address  
 Remote Public Address  
 Remote Public Address  
 TierO  
 name

## NSX-V Manager - Metrics

Incomplete tcp flow drop count  
 Outbound expire flow drop count  
 Wrong collector flow drop count

## NSX-V Firewall - Configuration Properties

NSX Manager  
 Name  
 Packet Type  
 Port  
 Port Range  
 Port Range  
 Port Range Display  
 Problem  
 Protocol  
 Protocol Port Range  
 Rule ID  
 Rule Type  
 Scope  
 Section ID  
 Section Name  
 Security Group  
 Sequence ID  
 Service  
 Service  
 Service Any  
 Service Profile  
 Shared  
 Source  
 Source Negate  
 Source Security Group  
 Source User  
 Source Vm  
 Source Zone  
 Event  
 Flow  
 HIP Profile  
 IP Address  
 Status

Target  
 Target Negation  
 Vendor  
 Vendor  
 vm series  
 Indirect Source IPSet  
 Indirect Source Security Group  
 Logging Enabled  
 Manager  
 Manager Model  
 Manager Serial  
 Manager Version  
 Action  
 Application  
 Application ID GUID  
 Appliedto  
 Category  
 Change  
 Configured Destination  
 Configured Source  
 Destination  
 Destination Address  
 Destination Address Group  
 Destination Any  
 Destination IP  
 Destination IPSet  
 Destination Negate  
 Destination Security Group  
 Destination Vm  
 Destination Zone  
 Device Group  
 Direct Destination Address  
 Direct Destination Address Group  
 Direct Destination IPSet  
 Direct Destination Security Group  
 Direct Security Group  
 Direct Source Address  
 Direct Source Address Group  
 Direct Source IPSet  
 Direct Source Security Group  
 Direction  
 IPSet  
 Indirect Destination Address  
 Indirect Destination Address Group  
 Indirect Destination IPSet  
 Indirect Destination Security Group  
 Indirect Security Group  
 Indirect Source Address  
 Indirect Source Address Group  
 Source Address  
 Source Address Group  
 Source Any  
 Source IP  
 Source IPSet

## NSX-V Policy Firewall - Configuration Properties

Change  
 Event  
 Exclusion  
 Firewall Status  
 Manager  
 Model  
 Name  
 Problem  
 Published Version  
 Rule Count  
 RuleSets Type  
 Rules  
 Serial  
 Spoofguard  
 Status Vendor  
 Vendor ID  
 Version

# SD-WAN™ by VeloCloud® Search Poster

## Sample Queries

VeloCloud Link	VeloCloud Edge
VeloCloud Profile	VeloCloud Cluster
VeloCloud Segment	VeloCloud Event
VeloCloud Datasource	VeloCloud Enterprise
VeloCloud Layer2 Network	SDWAN Application
VeloCloud Gateway	SDWAN Edges

Show <Config Property> of <VeloCloud Object> – show primary gateway of VeloCloud Edge  
 <VeloCloud Object> where <config property> = value  
**Supported properties for VM Configuration Queries**  
 Group by – Ex: VeloCloud Cluster group by edge  
 Order by – Ex: VeloCloud Gateway order by city  
**Aggregate Functions**  
 max, min, sum, avg  
 Ex: sum(memory), sum(cpu cores) of <VeloCloud Object>

Show <Metric> of <VeloCloud Object> – show Sys Uptime of VeloCloud Edge  
**Supported properties for VM metric Queries**  
 Group by is not available for metrics  
 Order by – Ex: <VeloCloud Object> order by cores  
**Aggregate Functions**  
 max, min, sum, avg  
 Ex: sum(cpu usage mhz), sum(active memory) of <VeloCloud Object>

## VeloCloud Link - Metrics

- Link Uptime
- VeloCloud Link State UP
- VeloCloud Bytes Received
- VeloCloud Bytes Sent
- VeloCloud Link Downstream Average Throughput
- VeloCloud Link Downstream Bandwidth
- VeloCloud Link Downstream Jitter
- VeloCloud Link Downstream Latency
- VeloCloud Link Downstream Packet Loss
- VeloCloud Link Transactional Quality Score
- VeloCloud Link Upstream Average Throughput
- VeloCloud Link Upstream Bandwidth
- VeloCloud Link Upstream Jitter
- VeloCloud Link Upstream Latency
- VeloCloud Link Upstream Packet Loss
- VeloCloud Link Video Quality Score
- VeloCloud Link Voice Quality Score
- VeloCloud Packets Received
- VeloCloud Packets Sent
- VeloCloud Total Bytes
- VeloCloud Total Packets

Total packets, Lost Packet Ratio , Retransmitted Packet Ratio of SDWAN Edge  
 Total packets, Lost Packet Ratio , Retransmitted Packet Ratio of SDWAN Edge Application where edge = 'Hillsboro, CA Hub'  
 Sd-wan edge where segment = 'Global'

## SD-WAN Application - Configuration Properties

- Category
- Change
- Description
- Enterprise
- Event
- Name
- Problem
- Vendor ID
- Vendor ID

## VeloCloud Enterprise - Configuration Properties

- Change
- Event
- Name
- Problem
- Profiles
- Segments
- Vendor ID

## VeloCloud Edge - Configuration Properties

- Activation State
- Build Number
- Change
- Device Family
- Edge State
- Enterprise
- Event
- Hub
- Latitude
- Links
- Longitude
- Model Number
- Name
- Primary Gateway
- Problem
- Profile
- Router Interface
- Secondary Gateway
- Segment
- Software Version
- Vendor
- Vendor ID
- wan

## VeloCloud Layer2 Network - Configuration Properties

- Change
- Default Gateway
- Event
- Host Count
- Interface
- Name
- Network
- Network Address
- End
- Network Address
- Start
- Problem
- SDWAN Edge
- Segment
- VM Count
- Vendor ID
- Vlan ID

## VeloCloud Link - Configuration Properties

- Backup State
- Change
- Connectivity State
- Edge
- Event
- Internet Service - Provider
- Interface
- Name
- Network Side
- Network Type
- Problem
- Service State
- Vendor ID
- ip address

## VeloCloud Edge - Metrics

- Bytes
- Bytes Rate
- Destination Bytes
- Edge Uptime
- Lost Packet Ratio
- Packets
- Retransmitted Packet Ratio
- Source Bytes
- VeloCloud Edge State UP
- VeloCloud Link Transactional Quality Score
- VeloCloud Link Video Quality Score
- VeloCloud Link Voice Quality Score

## VeloCloud Cluster Configuration Properties

- Change
- Description
- Edge
- Enterprise
- Event
- Name
- Problem
- Vendor ID

## VeloCloud Segment - Configuration Properties

- Change
- Description
- Enterprise
- Event
- Name
- Problem
- ProfileCount
- Type
- Vendor ID

## VeloCloud Logical Router - Configuration Properties

- Change
- Event
- Problem

## SD-WAN Edge Application - Configuration Properties

- Application
- Change
- Event
- Name
- Problem
- SDWAN Edge

## SD-WAN Edge Application - Metrics

- Bytes
- Bytes Rate
- Destination Bytes
- Lost Packet Ratio
- Packets
- Retransmitted Packet Ratio
- Source Bytes

## VeloCloud Wan - Configuration Properties

- discovery
- edge
- edgeInterface
- isp
- logicalId
- mode
- mtu
- publicIpAddress
- type

## VeloCloud Gateway - Configuration Properties

- Change
- City
- Continent
- Country
- Event
- IP Address
- Name
- Problem
- Region
- Vendor ID

## VeloCloud Profile - Configuration Properties

- Change
- Description
- Edge Count
- Enterprise
- Event
- Name
- Problem
- Vendor ID

## VeloCloud Manager - Configuration Properties

- Change
- Enterprises
- Event
- Name
- Problem
- Vendor ID

## VeloCloud Data Source - Configuration Properties

- Change
- Enabled
- Event
- Problem
- URL

## VeloCloud Site - Configuration Properties

- edges
- name
- vendorId

# Virtual Machine Search Guide

## Sample VM Queries

vms group by Operating System  
 Vms group by I2 network  
 Vms group by VMTools Status  
 Top 10 vms by snapshot count  
 Top 10 vms by CPU usage  
 Top 10 vms by memory usage  
 Top 10 vms by CPU Wait Rate  
 Top 10 vms by Max Packet Drops  
 vms where memory > 4096 mb  
 Vms where Max Latency > 5ms  
 vms where cpu usage rate < 70%  
 vms where cpu usage rate <= 70%  
 vms where memory >= 4096 mb  
 vms where name like 'app'  
 vms where name not like 'app'  
 vms where firewall rule is set  
 vms where firewall rule is not set  
 vm where name matches '\*. '\*  
 vm where name matches 'a.\*'  
 vm where Outgoing Port = 443  
 vm by vlan where vlan = "xyz"  
 show Max Network Rate of VM  
 show CPU Ready Rate of VM  
 show Memory Balloon of VM  
 show Memory Overhead of VM

## Security & Firewall

FirewallRule  
 FirewallStatus  
 IncomingRules  
 L2Network  
 L2NetworkCount  
 MacAddress  
 L2 Network  
 IP Address  
 IPSet  
 IPSet Count  
 Security Group  
 Security Group Count  
 Security Tag  
 Outgoing Port  
 Outgoing Rules  
 Incoming Port  
 Incoming Rules  
 Nsx  
 NSGroup  
 checkpoint host  
 nat device  
 Vlan  
 End Vlan

## Network

Default Gateway  
 Default Gateway Router  
 Default Gateway Router -  
 Interface  
 Network  
 Network Address  
 Network Address Count  
 Network Group  
 NSGroupCount  
 NSXPolicyGroup  
 NSXPolicyGroupCount  
 NSX-TIPSet  
 NSX-TIPSetCount  
 NSX-TLogicalPort  
 NSX-TLogicalPortCount

## Virtual Disk / VM Datastore - Config Properties

Change  
 Datastore  
 Event  
 Problem  
 VM  
 Backing Disk  
 Capacity  
 Change  
 Datastore  
 Device Name  
 Disk Format  
 Disk Mode  
 Event  
 File Name  
 Name  
 Name  
 Problem  
 Thin Provisioned  
 VM  
 Vcenter

## Snapshots Config Properties

RW IOPS  
 RW Throughput  
 Read IOPS  
 Read Latency  
 Read Throughput  
 Used Space  
 Write IOPS  
 Write Latency  
 Write Throughput

## Snapshot - Metrics

Snapshot Size

Show <config Property> of VM – show vxlan of vm VM where <config property> = value

Supported properties for VM Configuration Queries

Group by – Ex: vms group by host

Order by – Ex: vms order by cores

Aggregate Functions

max, min, sum, avg

Ex: sum(memory), sum(cpu cores) of vms

## Virtual Machine Configuration Properties

Tools Version	Host
VMTools Config Status	Tag
VMTools Status	Tag Key
Vcenter	ACI Application Profile
Vnic	Address
Vnic Count	Address Group
Vxlan	Address Range
Datacenter	Application
Datastore	Change
Datastore Count	Dns Server
Disconnected Vnic Count	Domain Name
Vendor	Endpoint Group
Vendor ID	Event
Version	Fqdn
Standard Switch	Operating System
StandardPortgroup	Other Names
Virtual Disk Capacity	Policy Group
Virtual Disks	Problem
Power State	Region
Resource Pool	Search Domain
SDDC Type	Serial
Snapshot Count	Service Nodes
Snapshot Create Time	Static IP
Snapshots	Tier
Switch Ports	Role
Switches	CPU Allocation Limit
Cluster	CPU Cores
Connected Vnics	CPU Reservation
Connection State	Memory
Dvpg	Memory Allocation
Dvs	Limit
Folder	Memory Reservation

## VM Datastore Metrics

Committed Space	Read Throughput
RW IOPS	Uncommitted Space
RW Throughput	Write IOPS
Read IOPS	Write Latency
Read Latency	Write Throughput

Show <Metric> of VM – show Sys Uptime of vm VM where <Metric> = value

Supported properties for VM metric Queries

Group by is not available for metrics

Order by – Ex: vms order by cores

Aggregate Functions

max, min, sum, avg

Ex: sum(cpu usage mhz), sum(active memory) of vms

## Virtual Machine Metrics

Sys Uptime	Rx Broadcast Packets
CPU Costop Rate	Rx Broadcast Ratio
CPU Costop Rate vCPU	Rx Packet Drop Ratio
CPU Costop Time	Rx Packet Drops
CPU Ready Rate	Rx Packets
CPU Ready Rate vCPU	Tx Broadcast Packets
CPU Ready Time	Tx Broadcast Ratio
CPU Run Rate	Tx Packet Drop Ratio
CPU Run Rate vCPU	Tx Packet Drops
CPU Run Time	Tx Packets
CPU Usage Mhz	Total Network Traffic
CPU Usage Rate	Total Packet Drop Ratio
CPU Wait Rate	Total Packet Drops
CPU Wait Rate vCPU	Total Packets
CPU Wait Time	Unicast Rx Packets
Memory Consumed	Unicast Tx Packets
Memory Overhead	Max Latency
Memory Swapin Rate	Max Network Rate
Memory Swapout Rate	Max Network Rx Rate
Memory Swapped	Max Network Tx Rate
Memory Usage Rate	Max Packet Drop Ratio
Memory Balloon	Max Packet Drops
Active Memory	Multicast Rx Packets
	Multicast Tx Packets
	Network Rate
	Network Rx Rate
	Network Tx Rate
Provisioned Space	
RW IOPS	
RW Throughput	
Read IOPS	
Read Latency	
Snapshot Size	Uncommitted Space
Committed Space	Write IOPS
Read Throughput	Write Latency
	Write Throughput

## Virtual Disk - Metrics

Change	Event
Child Snapshot Count	File Name
Child Snapshots	Manager
Create Time	Name
Current	Problem

vm where name matches '[a-z]vm-delta[0-9]'  
 vm where host in (host of vm where name = 'x')  
 vm where ip address in (192.168.91.11, 192.168.91.10)  
 series(sum(network usage)) of vms where name like 'app'  
 series(sum(memory usage)) of vms where name like 'db'  
 series(avg(cpu usage)), series(avg(memory usage)) of vms  
 vm where not in (vm where Power State = 'POWEREDON' in last 30 days)  
 L2 Network , vlan, ip address, default gateway of vms  
 flows where VM = 'Win2016-AD'  
 flows where Flow Type = 'Src is VM' and Flow Type = 'Dst is Internet' by bytes  
 flows where flow type = 'Source is VM'  
 sum(bytes) of flows where Flow Type = 'Src is VM' and Flow Type = 'Dst is Internet'

RETURN TO FRONT

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