

# PS Discovery Report

## for VMware vSphere



### Description

This report provides a summary overview of a selected VMware vSphere® infrastructure and its key components. It includes profiling of assets, resources, capacity, configuration and health for the purpose of rapidly understanding the virtual infrastructure.



DEVVC01.development.lan



22 April 2016 at 10:46:45

### Summary information

#### Environment

HOSTS	DATACENTERS	CLUSTERS	SHARED DATASTORES	VMS
5	1	2	7	466

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# vCenter

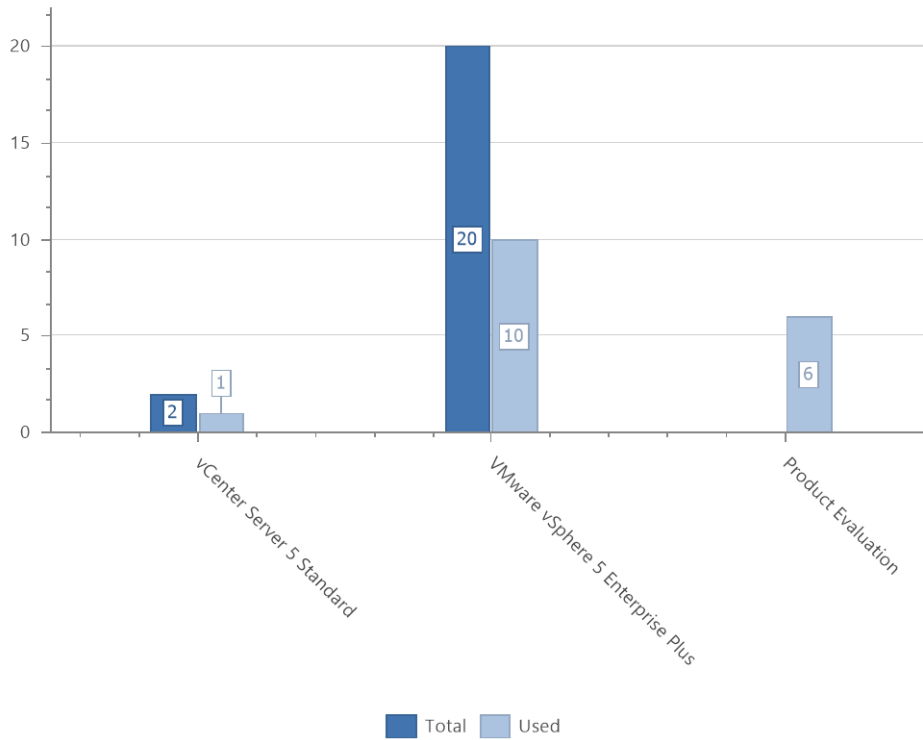
## vCenter overview

VMware vCenter® is available as a Microsoft Windows installation or a Linux virtual appliance provided by VMware. The version and O/S type of the vCenter server are detailed below.

OPERATING SYSTEM	BUILD	VERSION
win32-x64	2183111	5.5.0

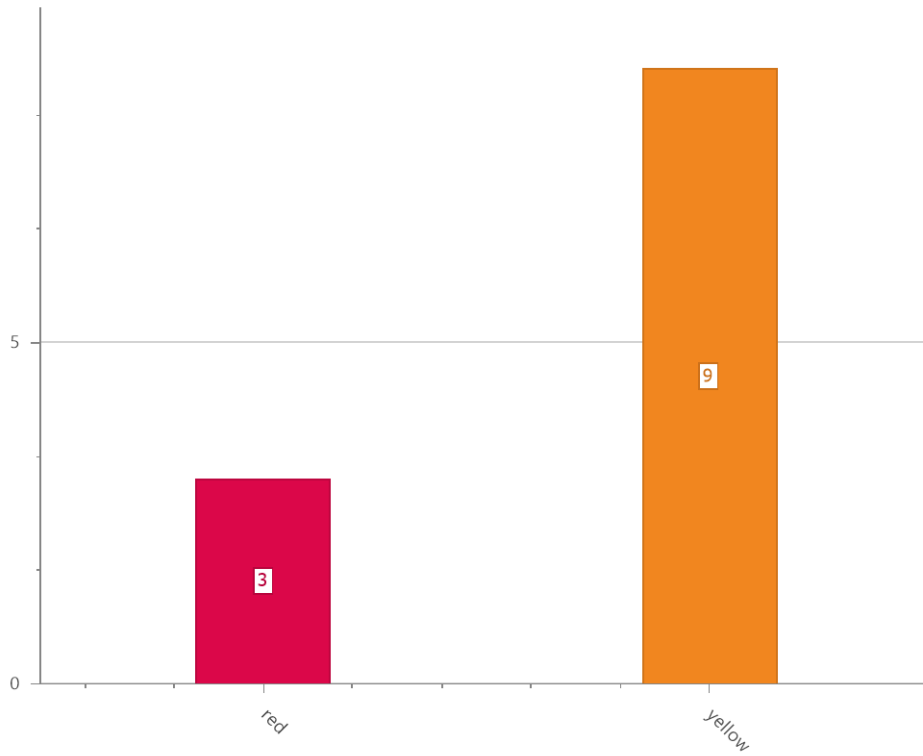
## vSphere licensing

vCenter manages the licenses for the vSphere infrastructure. The following table displays the configured license keys and their usage.

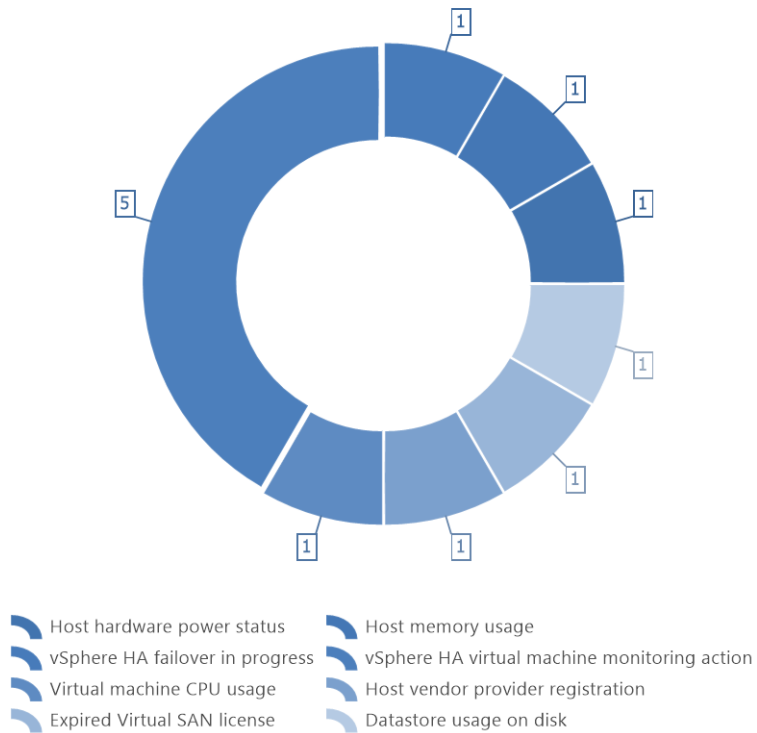


## vSphere alarms summary

Total vSphere alarms over the past 30 days.



## vSphere alarms (top 5)



# Hosts

## Host overview

The following table shows the hardware specification of each vSphere host.

HOSTNAME	VENDOR	H/W MODEL	CPU MODEL	MEM (GB)	CPUS	CORES	HBAS	NICS
devesxi04.development.lan	HP	ProLiant DL360 G5	Intel(R) Xeon(R) CPU E5345 @ 2.33GHz	16	2	8	6	4
devesxi03.development.lan	HP	ProLiant DL360 G5	Intel(R) Xeon(R) CPU E5405 @ 2.00GHz	32	2	8	4	4
devesxi02.development.lan	HP	ProLiant DL360 G5	Intel(R) Xeon(R) CPU E5405 @ 2.00GHz	32	2	8	5	4
devesxi01.development.lan	HP	ProLiant DL360 G5	Intel(R) Xeon(R) CPU E5405 @ 2.00GHz	32	2	8	4	4
devesxi05.development.lan	HP	ProLiant DL360 G5	Intel(R) Xeon(R) CPU E5345 @ 2.33GHz	16	2	8	6	4

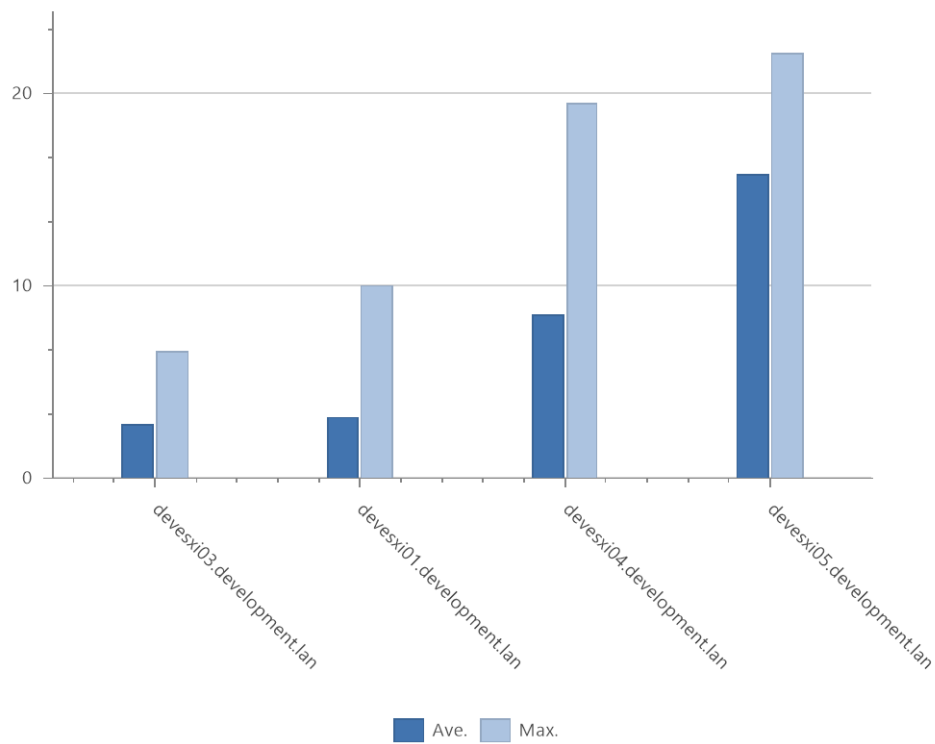
## Host status

The following table shows the current connection state, maintenance mode state and the power state of each host.

DATACENTER	CLUSTER	HOSTNAME	POWER STATE	CONNECTION STATE	IN MAINTENANCE MODE
Development1.Lan	Secondary	devesxi04.development.lan	poweredOn	connected	False
Development1.Lan	Primary	devesxi03.development.lan	poweredOn	connected	False
Development1.Lan	Primary	devesxi02.development.lan	poweredOn	connected	False
Development1.Lan	Primary	devesxi01.development.lan	poweredOn	connected	False
Development1.Lan	Secondary	devesxi05.development.lan	poweredOn	connected	False

## Host CPU utilization

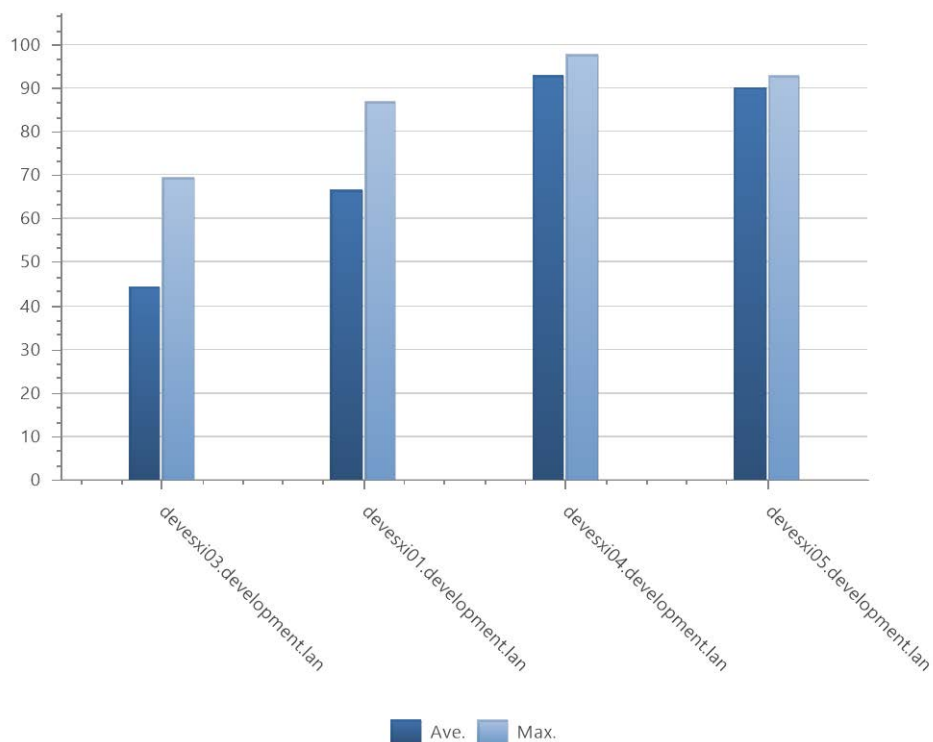
The following chart displays the average and maximum host CPU utilization in percentage.



ENTITY	AVERAGE	MIN	MAX
devesxi03.development.lan	2.76	0.97	6.6
devesxi01.development.lan	3.14	1.53	9.95
devesxi04.development.lan	8.5	5.62	19.42
devesxi05.development.lan	15.71	4.69	22

## Host memory utilization

The following chart displays the average and maximum host memory utilization in percentage.



ENTITY	AVERAGE	MIN	MAX
devesxi03.development.lan	44.22	29.39	69.2
devesxi01.development.lan	66.53	47.95	86.88
devesxi04.development.lan	92.91	81.59	97.4
devesxi05.development.lan	90.2	87.28	92.93

# Datacenters and clusters

## Datacenter inventory

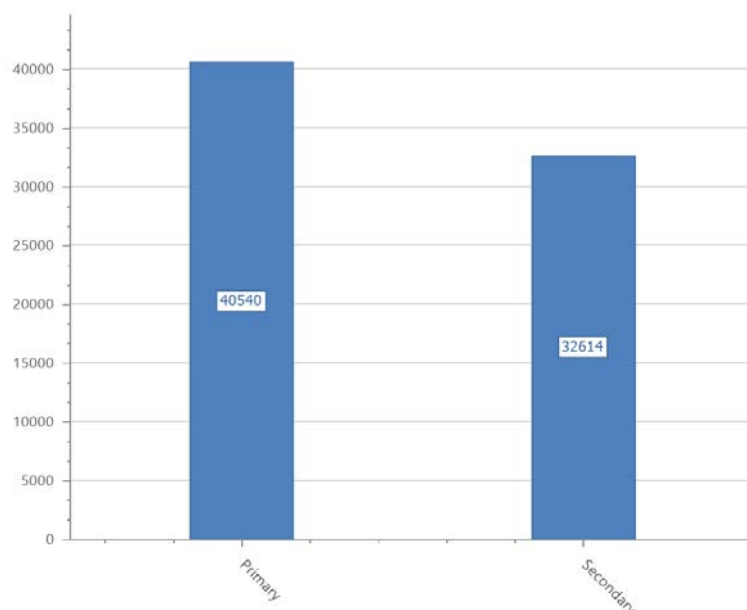
DATACENTER	CLUSTER	HOSTS
Development1.Lan	Primary	3
Development1.Lan	Secondary	2

## Cluster inventory

CLUSTER	HOSTNAME
Secondary	devesxi04.development.lan
Primary	devesxi03.development.lan
Primary	devesxi02.development.lan
Primary	devesxi01.development.lan
Secondary	devesxi05.development.lan

## Cluster CPU resources

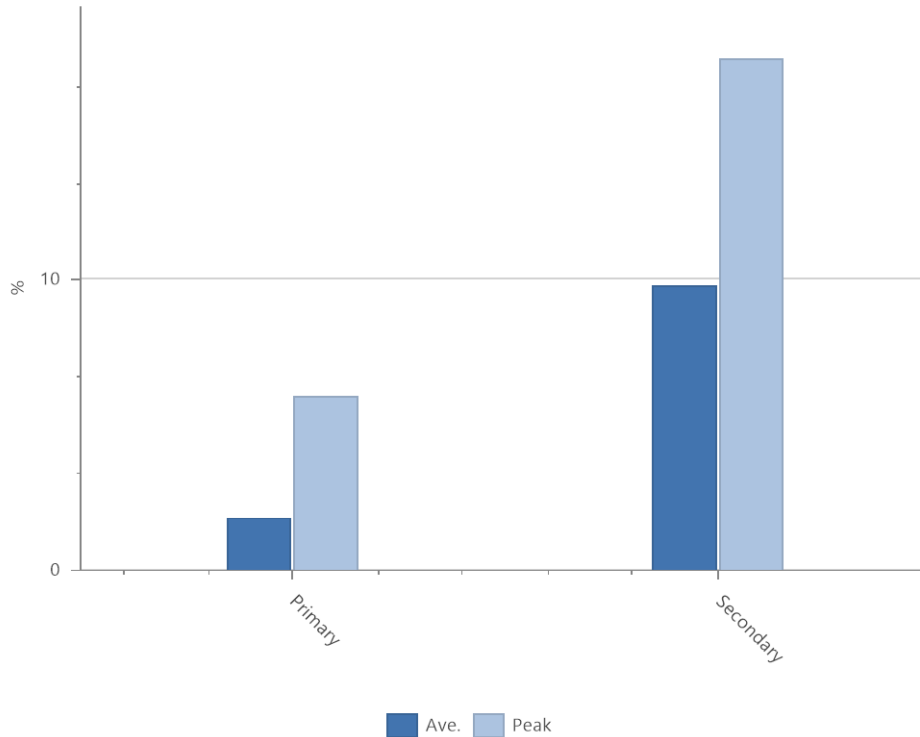
The following chart displays the amount of effective CPU resource available in MHz each cluster. The effective CPU amount takes in to account the cost of running the ESXi OS on each host within the clusters. This does not take in to account spare N + 1 capacity requirements.





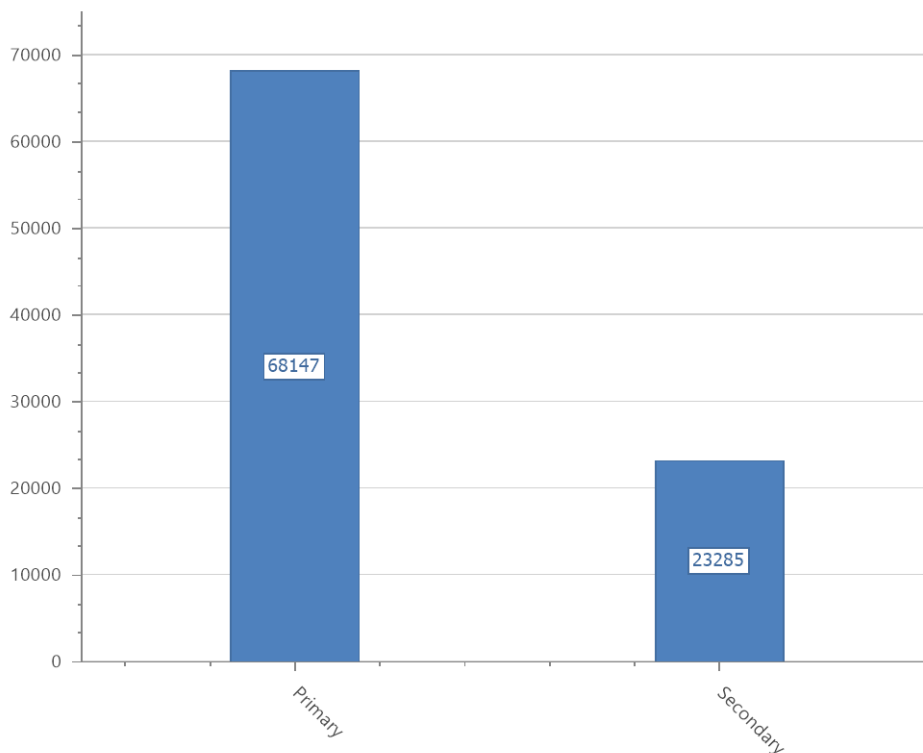
## Cluster CPU utilization

The chart below displays total observed CPU usage in MHz for each cluster, broken down into the overall average and observed peaks.



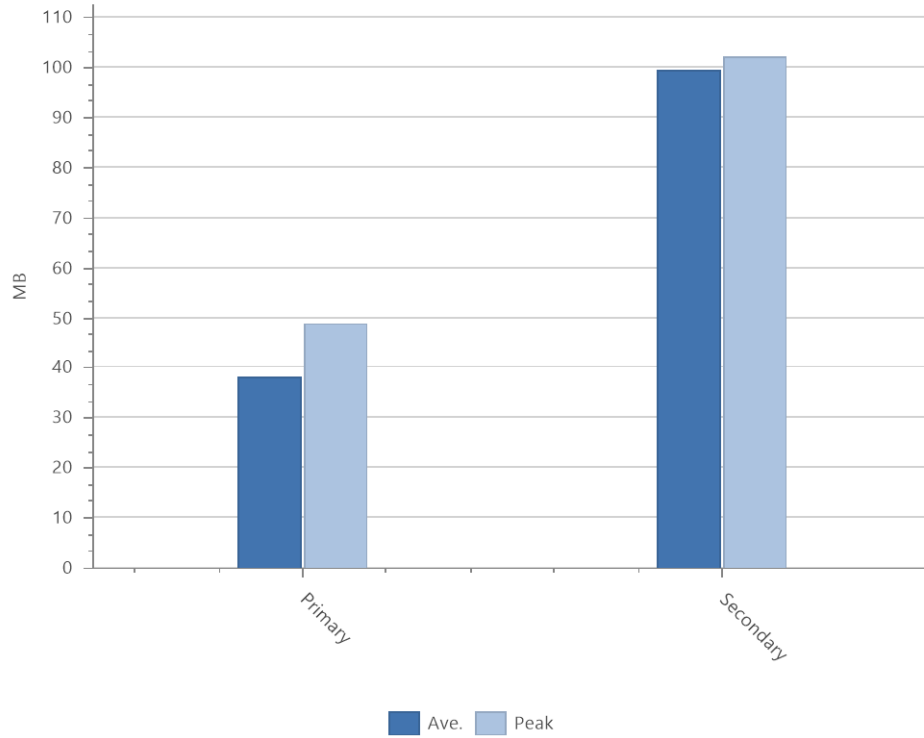
## Cluster memory resources

The following chart displays the effective memory available in each cluster (in MB).



## Cluster memory utilization

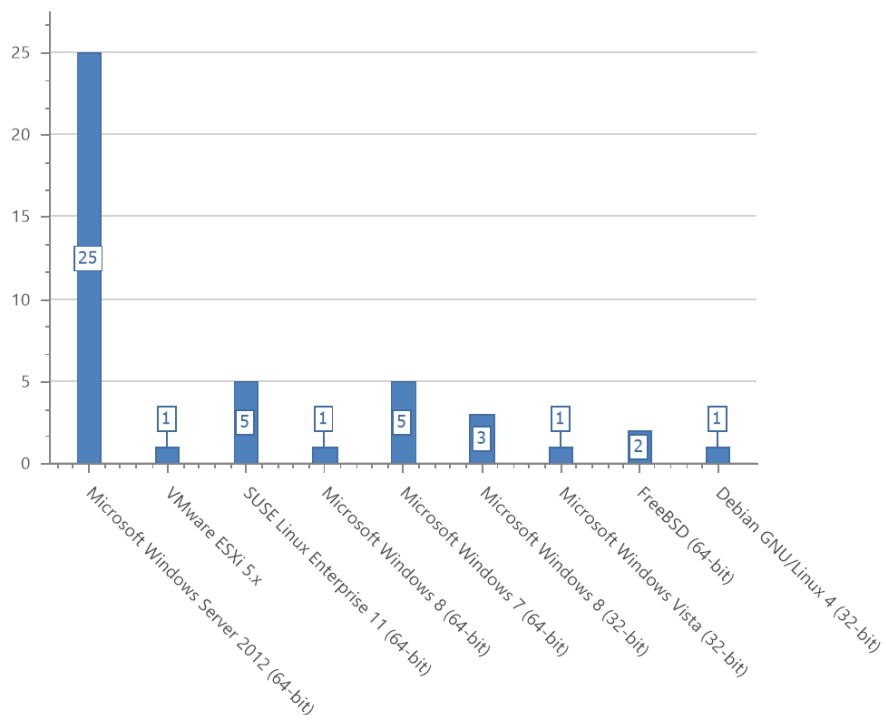
The chart below displays total observed memory usage in GB for each cluster, broken down into the overall average and observed peaks.



# VMs

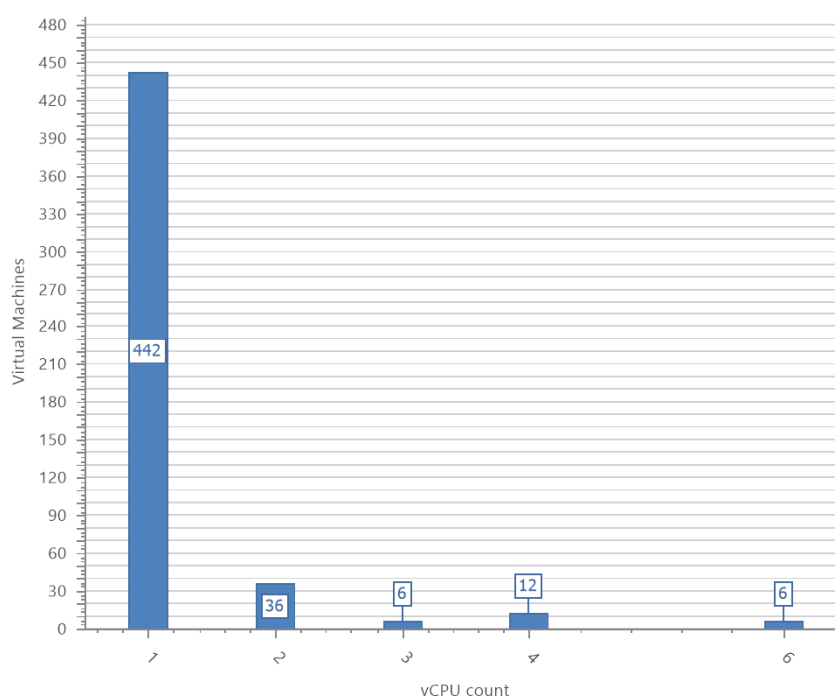
## VM operating systems

There may be virtual machines that not included here. If a virtual machine has not been powered up the guest o/s has not yet been recorded.



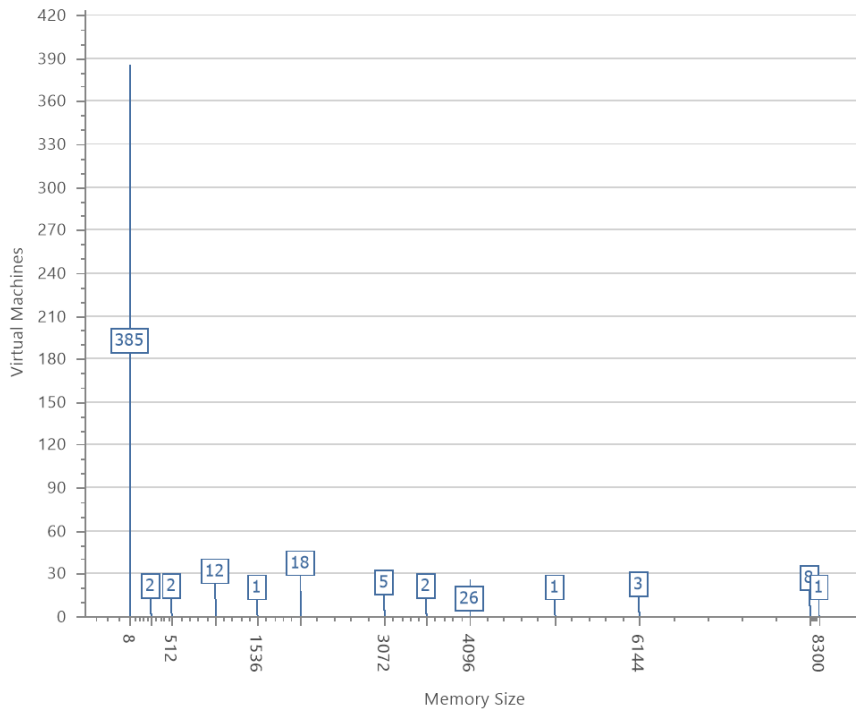
## VM vCPU

Virtual machines within the environment have different performance requirements and as such as variation in configured vCPUs and memory is normal. However, this should be balanced with applying standards and consistency across the environment. The tables below highlight the vCPU and memory configuration within the environment.



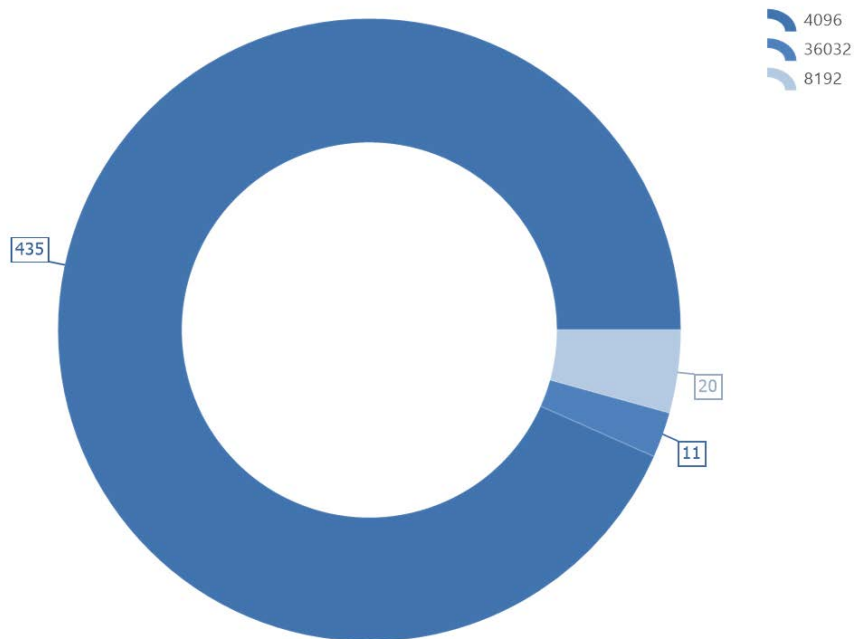
## VM memory

The chart below displays the distribution of memory allocated to virtual machines.



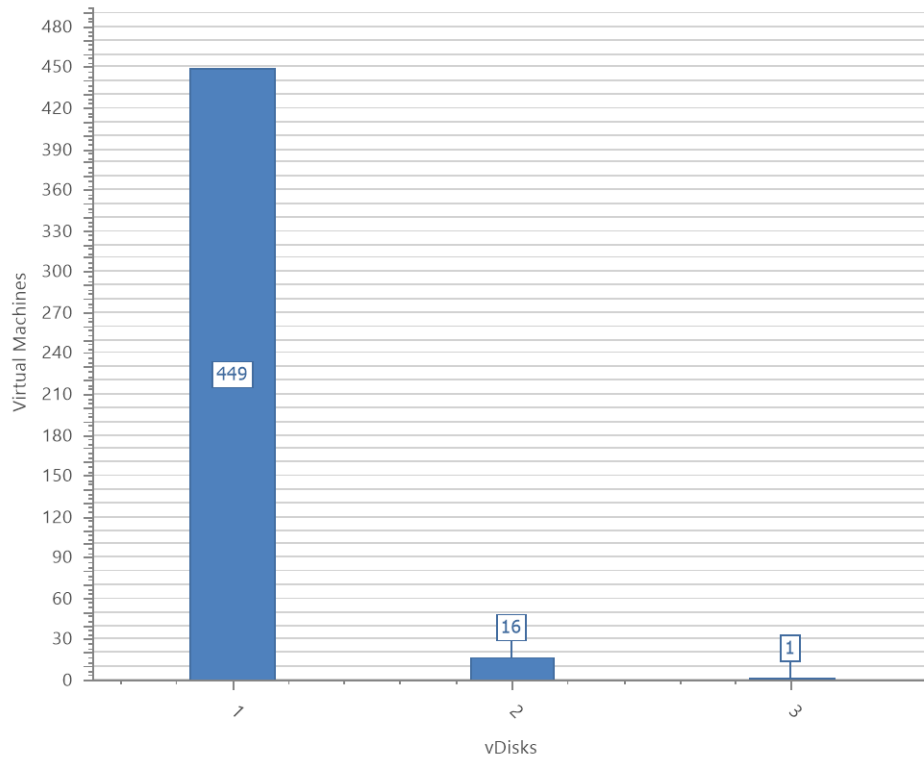
## VM video memory

The size of the video RAM affects the ability of virtual machines to produce video across certain resolutions and monitor sizes. The size of the video memory is defined within the virtual machine properties.



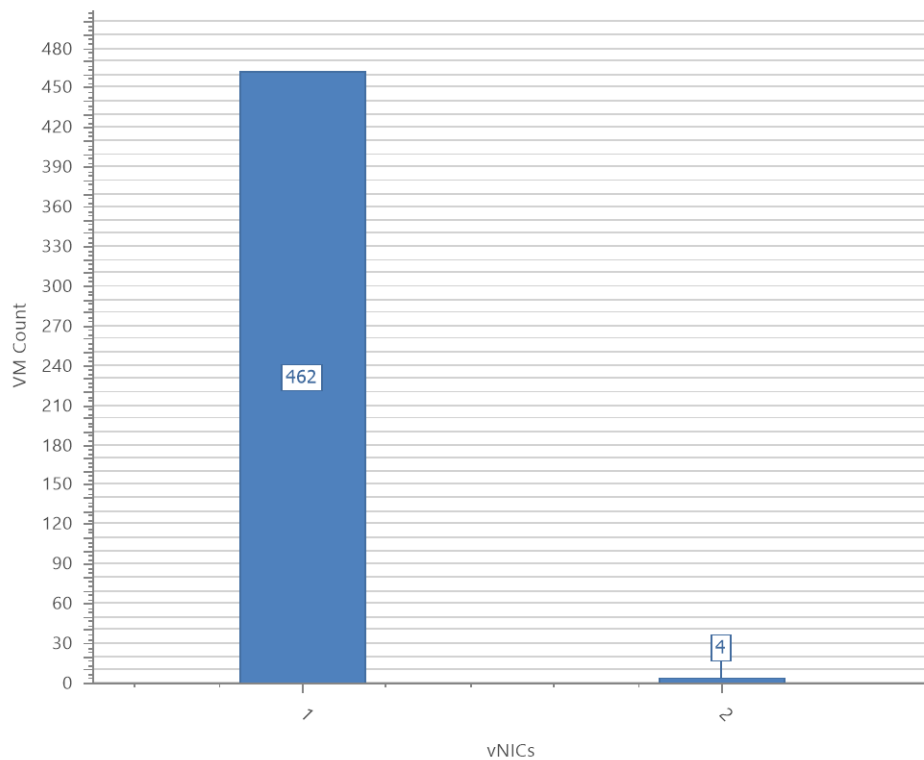
## VM disks

The number of virtual disks configured per virtual machine are shown below.



## VM network adapters

The chart below shows the distribution of network adapters across virtual machines.



# Storage

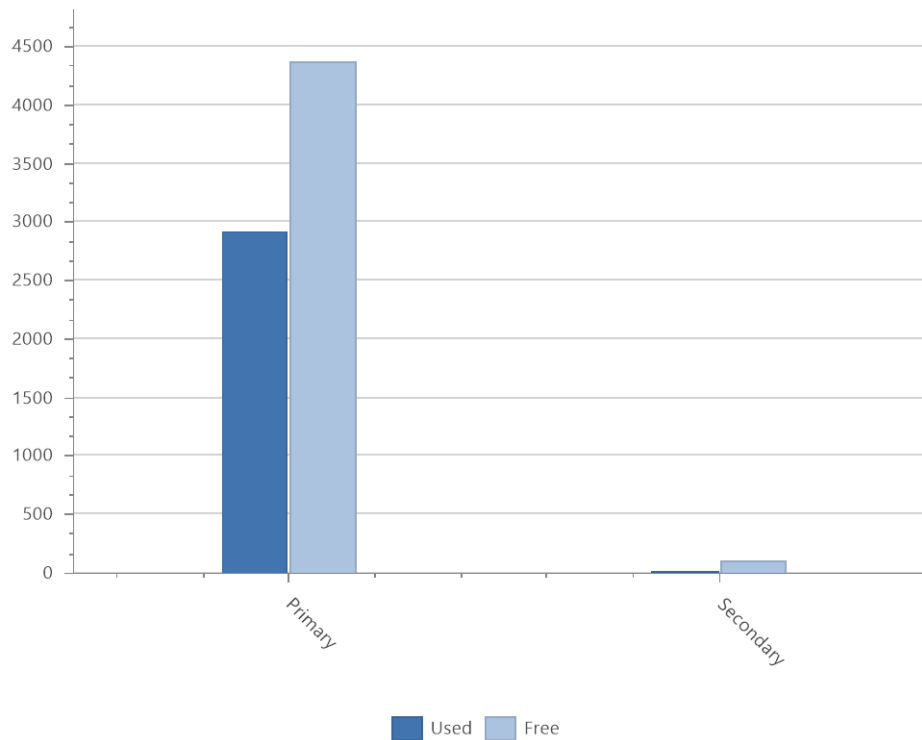
## Datastore capacity

The table below displays datastores, both local and shared, their capacity and remaining free space. It also shows whether they are overcommitted.

DATASTORE	CAPACITY (GB)	PROVISIONED (GB)	FREE SPACE (GB)	UNCOMMITTED	> 100% OVERCOMMITTED	ACCESSIBLE	TYPE
datastore1	61	105.4	9.86	54.26	True	True	VMFS
datastore1 (1)	61	0.95	60.05	0	False	True	VMFS
dev-msa1000-0	410	95.77	380.19	65.96	False	True	VMFS
dev-msa1000-1	610.5	478.74	508.79	377.03	False	True	VMFS
dev-templates-raid0	558	449.24	401.96	293.2	False	True	VMFS
dev-vd01-raid5	2511.75	3569.14	1593.96	2651.35	True	True	VMFS
dev-vd02-raid5	2511.75	2384.98	974.75	847.98	False	True	VMFS
devesxi04_local	60.75	120.91	44.05	104.21	True	True	VMFS
devesxi05_local	60.75	0.95	59.8	0	False	True	VMFS
esxi03-datastore	136.5	1.44	135.05	0	False	True	VMFS
iscsi-freenas-storage01	39.75	0.95	38.8	0	False	True	VMFS
nfs01	190.84	59.46	190.84	59.46	False	True	NFS
vsanDatastore	204.75	125.25	80.16	0.66	False	True	vsan

## Datastore capacity per cluster

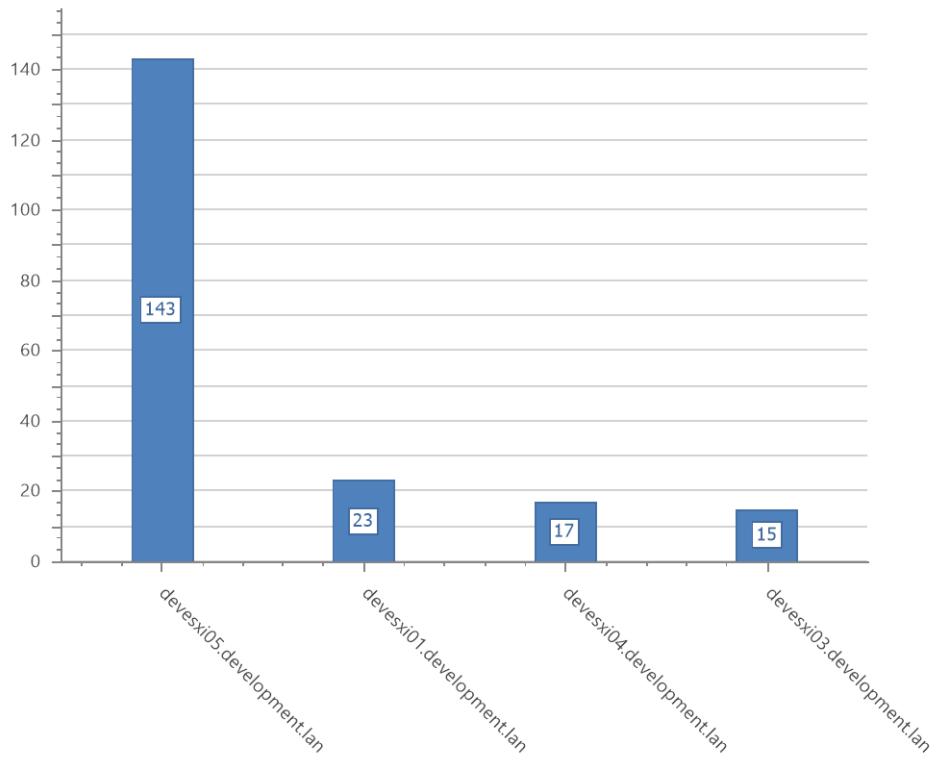
The chart and table below combines datastores that are presented to each cluster to give an overall view of used vs. free capacity.



CLUSTER	DATASTORE	USED SPACE	FREE SPACE (GB)
Primary	dev-msa1000-0	29.81	380.19
Primary	dev-msa1000-1	101.71	508.79
Primary	esxi03-datastore	1.44	135.05
Primary	datastore1 (1)	0.95	60.05
Primary	vsanDatastore	124.59	80.16
Primary	datastore1	51.14	9.86
Primary	nfs01	0	190.84
Primary	iscsi-freenas-storage01	0.95	38.8
Primary	dev-vd01-raid5	917.79	1593.96
Primary	dev-vd02-raid5	1537	974.75
Primary	dev-templates-raid0	156.04	401.96
Secondary	devesxi04_local	16.7	44.05

## Disk latency (top 5 hosts)

The chart below displays the top 5 hosts that recorded the highest average disk latency in milliseconds for a connected datastore.





# Networking

## Standard VM Networks

The following virtual machine networks have been configured within the standard virtual switches.

DATACENTER	CLUSTER	HOST SYSTEM	NETWORK
Development1.Lan	Primary	devesxi03.development.lan	Development VM Network For NLB
Development1.Lan	Primary	devesxi02.development.lan	Development VM Network For NLB
Development1.Lan	Primary	devesxi01.development.lan	Development VM Network For NLB
Development1.Lan	Primary	devesxi02.development.lan	VM Network
Development1.Lan	Primary	devesxi04.development.lan	NXCVM
Development1.Lan	Primary	devesxi05.development.lan	NXCVM
Development1.Lan	Primary	devesxi03.development.lan	NXCVM
Development1.Lan	Primary	devesxi02.development.lan	NXCVM
Development1.Lan	Primary	devesxi01.development.lan	NXCVM
Development1.Lan	Primary	devesxi02.development.lan	VM Network 2
Development1.Lan	Primary	devesxi04.development.lan	Development VM Network
Development1.Lan	Primary	devesxi05.development.lan	Development VM Network
Development1.Lan	Primary	devesxi03.development.lan	Development VM Network
Development1.Lan	Primary	devesxi02.development.lan	Development VM Network
Development1.Lan	Primary	devesxi01.development.lan	Development VM Network
Development1.Lan	Secondary	devesxi04.development.lan	TestNetwork
Development1.Lan	Secondary	devesxi05.development.lan	TestNetwork
Development1.Lan	Secondary	devesxi04.development.lan	TestNetwork2
Development1.Lan	Secondary	devesxi05.development.lan	TestNetwork2

## Distributed virtual switches

The following table lists all of the configured distributed virtual switches.

DATACENTER	DVSWITCH	VENDOR	VERSION	NAME
Development1.Lan	dvSwitch_dummy1	VMware	5.5.0	DVS

## Distributed virtual switch portgroups

The following table lists all of the configured distributed virtual switch portgroups.

DATACENTER	DVPORTGROUP	DVSWITCH
Development1.Lan		dvSwitch_dummy1
Development1.Lan	dvPortGroup	dvSwitch_dummy1
Development1.Lan	dvPortGroup2-sean1	dvSwitch_dummy1
Development1.Lan	dvPortGroup2-sean2	dvSwitch_dummy1
Development1.Lan	dvPortGroup2-trunk1	dvSwitch_dummy1
Development1.Lan	dvPortGroup2-trunk2	dvSwitch_dummy1
Development1.Lan	dvPortGroupPetes	dvSwitch_dummy1
Development1.Lan	dvSwitch_dummy1-DVUplinks-209	dvSwitch_dummy1