

# Capacity Analyzer

## Advanced Analytics for Capacity Management

### Proactively Monitor VMware ESX Performance and Prevent Downtime

In a virtual server infrastructure where all resources are shared, optimal performance can only be achieved with proactive capacity management and proper allocation of your shared resources. The biggest challenge is finding the vast amount of time or automated technology to do this. Not allocating enough resources can cause bottlenecks in CPU, memory, storage, and disk I/O – leading to performance problems and costly downtime events. However, over-allocating resources can drive up your cost per virtual machine – making an ROI harder to achieve.

Delivering patent-pending, advanced analytics, Capacity Analyzer enables you to proactively examine thousands of data points on a unique single-screen dashboard. By continuously monitoring shared capacity utilization trends in your VMware ESX environment, Capacity Analyzer significantly reduces the time and costs of:

- Identifying current capacity bottlenecks causing performance problems
- Predicting where future problems will occur and taking preventative action now
- Calculating resource availability across host, clusters, and resource pools, so you know exactly where to safely add new virtual machines
- Tracking the top resource consumers in your environment
- Alerting you when capacity utilization trends exceed thresholds

Capacity Analyzer uses sophisticated, under-the-hood mathematics and recomputes and redisplay all of the data every 5 minutes. Designed for enterprise scalability, Capacity Analyzer enables you to:

- Prevent current and potential future capacity problems
- Significantly lower the risk of performance degradations and downtime events
- Maximize your VMware ESX investment by reducing the cost per virtual machine
- Better manage and plan your virtual environment – saving time and money

VKernel's Capacity Analyzer is the only VMware Certified Virtual Appliance for Monitoring, Identifying, and Preventing Capacity Bottlenecks



- Identify Capacity Bottlenecks Before They Occur and Prevent Future Problems
- Track the Top Capacity Consumers in Your VMware ESX Environment
- Better Manage and Plan Your Infrastructure

“The VKernel virtual appliance model is great, as I was able to quickly get Capacity Analyzer up and running. In fact, the product began providing immediate value upon deployment when it identified three virtual machines which were hogging critical resources that we thought were deleted months ago.”

– Ed Ward, Hasbro, Inc.

## Capacity + Availability = Performance

FREE, NO RISK TEST DRIVE



DOWNLOAD



# How Capacity Analyzer Works

Capacity Analyzer continuously monitors CPU, memory and disk (storage and disk I/O) utilization and instantly identifies problems in your VMware ESX environment. Through a single screen, Capacity Analyzer provides critical resource utilization trending data to properly plan for growth, ensure optimal performance, and lower the costs per virtual machine.

- Deploys in minutes. No installation required for virtual appliances
- All VKernel Virtual Appliances share a common database to avoid redundant network discovery. Get up and running fast
- Auto synchronizes with VMware VirtualCenter to learn about updates to clusters, resource pools and folders
- Completely VMotion, DRS and HA aware

The dashboard includes several key sections:

- Current Capacity Bottlenecks - Top 5 Bottlenecks:** A table showing the top 5 hosts, clusters, or resource pools with their bottlenecks. Bottlenecks are color-coded and sorted by severity. Trend indicators show if problems are getting better or worse.
- Future Capacity Bottlenecks - Top 5 Future Bottlenecks:** Predicts how many days a warning or critical bottleneck will develop.
- Capacity Availability Map - Top 5 Places with Capacity:** Shows where it's best to deploy new VMs based on running VMs, HA status, and constraints.
- Datstore Statistics - 3 Most Limited in Free Space:** Shows the first three datstores associated with the object, sorted by least available free space.
- Top Resource Consumers in Each Category:** Identifies the top consumers for the object you highlight in the navigation tree.

Easy to use single-screen management dashboard

Capacity Availability Map - Top 5 Places with Capacity					
Need to know where is the best place to deploy new VMs?..					
Virtual Object	Number of Running VMs	How Many More VMs Can Fit	HA Enabled	Constraining Resource	
192.168.16.55		4	7	Memory	
Test	0	4	4	Memory	
Critical	1	4	4	Memory	
Dev	7	4	4	Memory	

To resolve capacity problems, Capacity Availability Maps let you know how many more VM's can fit in a resource pool, cluster or host.

Datstore Statistics - 3 Most Limited in Free Space		
The Datstore Statistics graph shows the first three datstores associated with the object (sorted by least available free space) you are highlighting in the navigation tree...		
Datstore	Total Space	Free Space
oracle.storage1	127.00 GB	25.12 GB
Openfiler_iscsi	107.00 GB	55.67 GB
iscsi-prod	612.75 GB	306.42 GB

Quickly understand the amount of total space and free space available in datstores.

Current Capacity Bottlenecks - Top 5 Bottlenecks			
Identifies the top 5 hosts, clusters or resource pools that have bottlenecks ordered by highest severity...			
Virtual Object	Constraining Resource	Utilization	Trend
Test	Storage	39%	↑
Critical	Storage	39%	↑
Dev	Storage	39%	↑
Dev	Memory	26%	↓
Dev	IO Wait	12%	→

Shows current capacity bottlenecks. Bottlenecks are color coded and sorted by severity. The trend indicator shows if problems are getting better or worse.

Future Capacity Bottlenecks - Top 5 Future Bottlenecks		
Predicts in how many days a warning or critical bottleneck will develop...		
Virtual Object	Constraining Resource	Days to warning or problem
Dev	IO Wait	9 Days
Dev	CPU Ready	>30 Days
Dev	Disk Bus Resets	>30 Days
Dev	Memory	>30 Days
Dev	CPU	>30 Days

Immediately identify what host, resource pool or cluster will run out of capacity next and predict the number of days before problems will occur

Top Resource Consumers in Each Category		
Top Resource Consumers identifies the top consumers for the object you highlight in the navigation tree...		
Resource	Virtual Machine	Usage
Memory	VK_Modeler_1_0_Beta	486 MB
CPU	VK_Modeler_1_0_Beta	240 MHz
CPU Ready	VK_Modeler_1_0_Beta	2.89 %
IO Wait	VK_Modeler_1_0_Beta	19.10 %
Disk Read	VK_Modeler_1_0_Beta	14 kBps
Disk Write	VK_Modeler_1_0_Beta	29 kBps
Disk Bus Resets	VK_Modeler_1_0_Beta	0
Disk Commands Aborted	Bottleneck	0
Storage	Desktop Echo IMKS	10.00 GB

Capacity Analyzer tracks the Top Capacity Consumers so you can keep your eye on the biggest resource consumers in the environment.

To download your 15-day trial or to view a 2-minute flash demo go to [www.vkernel.com](http://www.vkernel.com) or call 603-610-4322

