

vOPS™ Optimizer

vOPS™ Optimizer, part of the VKernel vOperations Suite™, enables VM administrators to optimize resource utilization and VM performance for Microsoft Hyper-V, Red Hat Enterprise Virtualization (RHEV) and VMware vSphere environments. Specifically, Optimizer provides actionable recommendations to allow data centers to correctly size resources for VMs and clean up wasted resources taken up by abandoned VM images, unused templates, snapshots, powered-off VMs and zombie VMs.

Part of the vOperations Suite

Optimizer is one of four applications that make up the VKernel vOperations Suite – an award-winning set of integrated products for monitoring, planning, optimization, reporting, and chargeback for virtual environments.



How Optimizer Works

VKernel Optimizer is integrated into VKernel's vOperations Suite which collects information from Microsoft Systems Center and VMware vCenter. vOPS™ then feeds the data into VKernel's Capacity Analytics Engine™ which analyzes thousands of data points across the entire virtual environment in order to:

- Profile each application workload (VM) and its consumption of CPU, memory, disk and disk I/O resources over time
- Compare utilization data to allocated VM resources at average and peak periods

- Provide specific, actionable recommendations that reclaim underutilized resources taking peak usage into account
- Assess VM image, template, snapshot, and VM activity to recommend which data files can be deleted based on lack of use

Spot Resource Efficiency Issues at a Glance

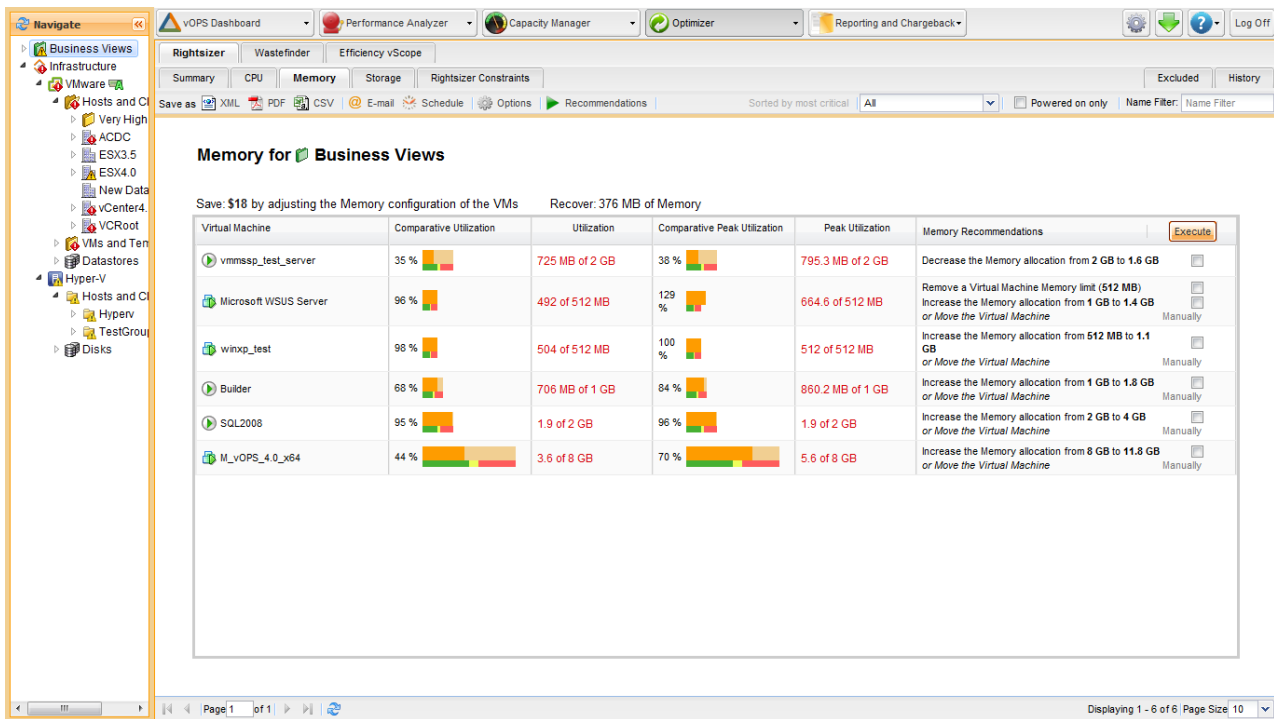
Optimizer features the vScope Resource Efficiency Heat Map that displays the efficiency status of all VMs and datastores in an environment across multiple sites and hypervisors on a single screen. Administrators can drill into any VM or datastore for more detail including resolution steps.

Rightsize VMs to Optimize Resource Use

Because determining exactly what CPU, memory and disk resources a virtual machine will require can be difficult, administrators tend to over-allocate resources to ensure performance. Optimizer's Rightsizer Report evaluates every VM's CPU, memory, and storage allocations, and compares that data to actual utilization on an average and peak basis. It then makes recommendations to alter VM resource allocations to appropriate levels while safely ensuring application performance.

Safely Re-Size VMs Automatically

Optimizer's rightsizing recommendations can be automatically implemented with the click of a button or on a scheduled basis. Constraints can be added for groupings of VMs to ensure that minimum or maximum sizing boundaries based on technical or business needs are respected.



Reduce Server and Storage Purchases

The ease with which snapshots, templates, and VMs can be created often results in waste when users lose track of this data. These files can occupy multiple GBs of storage. Optimizer's Wastefinder examines each VM, and related file to determine how long it has been since the VM or file was used or accomplished any useful work. Based on this analysis, Optimizer will recommend that unused files be deleted. To quickly enact these recommendations, VM images can be auto-deleted and snapshots auto-merged through vOPS Optimizer.

Automatically Power Off "Zombie VMs"

Zombie or "idle" VMs can be particularly troublesome. Aside from taking up unnecessary storage space, zombie VMs claim CPU and memory allocations. Optimizer's Zombie VM Power-Off Automation can turn these VMs off on an ad hoc or scheduled basis.

Avoid Performance Issues by Adding Resources to Under-allocated VMs

VMs without sufficient resources will likely suffer

performance issues. Optimizer can identify underutilized VMs and can automate adding resource allocations on a scheduled basis to ensure that performance problems do not occur.

System Requirements

vOPS (includes Optimizer) requires:

- 4 vCPUs
- 8 GB of memory
- 64 GB of storage space
- VMware ESX 3.0 or vCenter 2.5 or higher (if installed as a VMDK)
- Microsoft Systems Center Operations Manager 2007 R2 (if installed as a VHD)
- Microsoft Systems Center Virtual Machine Manager 2008 R2 U1 (if installed as a VHD)

Support

For technical support please visit <http://www.vkernel.com/support>, email support@vkernel.com or call +1 (978) 289 6300.

VKernel
300 Brickstone Square, Suite 503
Andover, MA 01810
Phone +1 (978) 289-6300
Fax +1 (978) 289-6301



Microsoft
System Center
Alliance Partner

