

# DCMWORKS VMWARE ASSESSMENT

## VMWARE ASSESSMENTS LOCATE YOUR BOTTLENECKS & REBALANCE RESOURCES TO INCREASE EFFICIENCY & SAVE MONEY

An assessment of VM host servers can lead to major cost savings. We find the bottlenecks and rebalance resources while finding unused or hidden guests, disks, and virtual switches. Recommendations for software updates and both software and hardware upgrades also often lead to reduced costs in the long run.

VMWare is the market leader in virtual servers. Other companies such as Microsoft, Parallels, Red Hat, and Oracle offer viable solutions, but no one has yet challenged VMWare's top position.

Server virtualization came about in response to the fact that barely 20% of the resources of standalone servers were actually being used. Software was created to allow the underlying hardware to be partitioned into smaller servers that could all operate within the constraints of one physical system being run by an operating system called a hypervisor.

Then the next logical step was to cluster the hypervisor driven servers so that even more resources could be shared, like networking and storage, and at the same time provide a level of redundancy if one of the physical servers failed, or needed hardware or software maintenance.

Virtual server deployments are as diverse as the companies that use the technology. Some organizations have one or many virtual servers supporting a variety of business needs or applications. While others have clusters of servers either in a single location or installed at several large office locations.

If there is only one physical server running a virtual environment, the hypervisor offers a management portal. However, if there are multiple physical servers, often there is a management application called vCenter that can manage all the nodes both local and remote. A physical server can only be registered in one vCenter.

Along with the actual server hardware, often there is a significant amount of networking included to connect the servers together, and external storage in the form of a Storage Area Network (SAN).

External storage is often used to expand the sometimes limited amount of internal storage that a single host can provide. And with external storage, a cluster of hosts can easily share the same storage framework and provide an efficient method to migrate virtual servers to a different host server for better performance, or even to compensate for a complete physical host failure. The movement/migration of virtual servers is often automated with capabilities already built-in to the hypervisor or can be done manually by an administrator.

## ASSESSMENT BENEFITS

- IDENTIFY POOR PERFORMING SERVERS DUE TO OVERLOADED MEMORY, DISK PERFORMANCE, HEAT, OLD DRIVERS, OLD FIRM WARE OR INADEQUATE NETWORK CONNECTIVITY
- IDENTIFY SIMPLE HARDWARE UPGRADES
- IDENTIFY CLUSTER REDUNDANCY PROBLEMS
- IDENTIFY RETIRED SYSTEMS STILL BEING POWERED ON
- IDENTIFY LOST ("ZOMBIE") VIRTUAL DISKS NOT CONNECTED TO ANY VIRTUAL SERVER
- IDENTIFY LOST VIRTUAL SERVERS
- IDENTIFY LICENSING ISSUES
- IDENTIFY CLUSTER OPTIMIZATION ISSUES
- IDENTIFY IF CLUSTERS CAN SUPPORT A COMPLETE PHYSICAL SERVER FAILURE OR DOWNTIME (N + 1 CONFIGURATION)

## ASSESSMENT DELIVERABLES

- FINDINGS REPORT
- ANALYSIS REPORT
- STABILITY, REDUNDANCY, UPGRADE & MIGRATION RECOMMENDATIONS

# DCMWORKS

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# DCMWORKS VMWARE ASSESSMENT

## HARDWARE ANALYSIS

- VIRTUAL HARDWARE PLATFORMS
  - ASSESS SERVER MODELS
  - ASSESS HARDWARE CONFIGURATION
    - CPUs
    - MEMORY
    - LOCAL DISKS
    - FANS
    - CONNECTIVITY
      - NETWORK INTERFACES
      - STORAGE INTERFACES
  - HYPERVISOR VERSION
  - HYPERVISOR LICENSE
  - INTERNAL STORAGE
  - EXTERNAL STORAGE
  - CURRENT SUPPORT PLAN
- HEALTH CHECK

## CLUSTER ANALYSIS

- ASSESS CLUSTER DESIGN
  - NUMBER OF NODES
  - EXTERNAL SHARED STORAGE
    - FIBER CHANNEL SWITCHES
    - ISCSI
    - NAS
  - HYPERVISOR LICENSE
    - QUANTITY & TYPE
  - CPU ARCHITECTURE
    - X86
    - AMD
    - CHIPSET COMPATIBILITY
- HEALTH CHECK

## STORAGE ANALYSIS

- DATASTORE ANALYSIS
  - CAPACITY
    - USED
    - FREE
    - UNALLOCATED
    - LOST
  - CONNECTIVITY
    - REDUNDANCY
  - PERFORMANCE
- HEALTH CHECK

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