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Hong Kong|2010 Part II

March 14, 2011



Microsoft®



How you Deploy and Manage your Private Cloud

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Head of Professional Services
Falcon Consulting (HK) Limited



Private Cloud and Public Cloud

introduction

Cloud and IT Maturity

We're all in.

Classic IT

Outsource to the Cloud

Leverage the Cloud

Be a Cloud



Products

- Microsoft Office
- Microsoft Exchange
- Microsoft SharePoint
- Microsoft SQL Server
- Windows Server

- Microsoft Exchange Online
- Microsoft SharePoint Online
- Microsoft Office Communications Online
- Microsoft Dynamics CRM Online

- Windows Azure
- SQL Azure
- Microsoft .NET Services

- Windows Server AppFabric
- Windows Server 2008 Hyper-V
- Microsoft System Center

Known as

(Nothing)aaS

SaaS

PaaS

IaaS

Minimum IT Maturity

Basic

Rationalized

Standardized

Basic

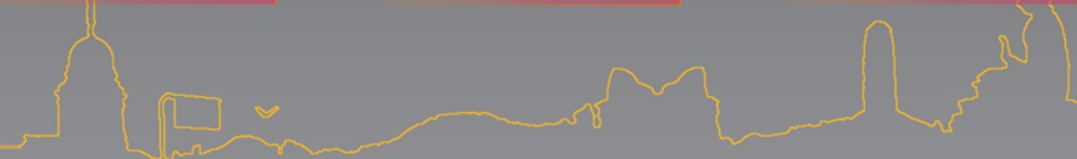
Basic

Dynamic

Rationalized

Standardized

Basic



Own a Cloud

SLA Driven

Automated
Management

Distributed
and Elastic

Infrastructure
Fabric



Microsoft | Solution Accelerator
System Center VMM Self Service Portal 2.0

Model based

Services Catalog

Reference
Architecture

Roadmap



Virtual Machine Manager Self Service Portal 2.0

Rapid Provisioning of Infrastructure

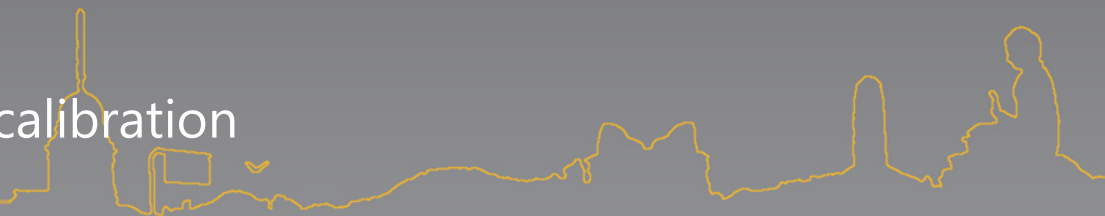
demo

Managing Heterogeneous Environment

transition

Mixed Hyper-V and VMware Environment Management

- Driven by customer demand
 - Existing investment cannot be easily forfeited
 - Migration and co-existence still requires transition and manageability
- Unified management experience
 - Physical and Virtual
 - Hyper-V and VMware
- Full virtual machine management
 - VMotion, Resource Pools, etc.
- Enhanced capabilities
 - Intelligent Placement
 - Library
 - Powershell
 - PRO application aware calibration



SCVMM VMware Management

Virtual Server

VMware Cluster

Hyper-V Cluster

The screenshot displays the Microsoft Virtual Machine Manager (VMM) interface. The left-hand navigation pane shows a tree view of Host Groups: All Hosts (containing Hong Kong and New York), ESX35-Cluster (containing esx35-n1 and esx35-n2), WS08HV-CLUSTER (containing WS08HV-N1 and WS08HV-N2), and Redmond (containing WS08HV-S1). The main pane shows a table of Virtual Machines across all hosts.

| Name | Status | Job Status | Host | Owner | CPU Average |
|--|---------|------------|-----------|-------------------|-------------|
| Operating System: 64-bit edition of Windows Server 2008 Datacenter | | | | | |
| PRODExch1 | Running | | WS08HV-S1 | VIRT\Administr... | 0 % |
| PRODExch4 | Running | | WS08HV-N2 | VIRT\Administr... | 0 % |
| Operating System: Suse Linux Enterprise Server 10 (32 bit) | | | | | |
| SUSE10svr1 | Running | | hvsvr-s1 | VIRT\Administr... | 0 % |
| SUSE10svr2 | Running | | hvsvr-s1 | VIRT\Administr... | 0 % |
| Operating System: Windows Server 2003 Enterprise Edition (32-bit x86) | | | | | |
| DevTest1 | Running | | esx35-n1 | Unknown | 1 % |
| DEVvmstore1 | Running | | WS08HV-S1 | VIRT\Administr... | 2 % |
| SQL2005-S1 | Running | | hvsvr-s1 | VIRT\Administr... | 2 % |
| VirtualCenter | Running | | WS08HV-S1 | VIRT\Administr... | 8 % |
| WMVserver1 | Running | | WS08HV-N2 | VIRT\Administr... | 1 % |

The bottom pane shows the details for the 'DevTest1' VM, which is running on host 'esx35-n1'. It has 1.00 GB of memory, a 1.00 GHz Pentium III Xeon processor, and 8.00 GB of storage. The latest job is 100% complete. The CPU usage graph shows low activity. The VM's display shows the Windows Server 2003 logo.

The right-hand pane shows the 'Actions' menu for the selected VM, including options like Start, Stop, Pause, Save state, Discard saved state, Shut down, Connect to virtual machine, Migrate, New checkpoint, Manage checkpoints, Disable undo disks, Repair, Install virtual guest services, New template, and Clone.

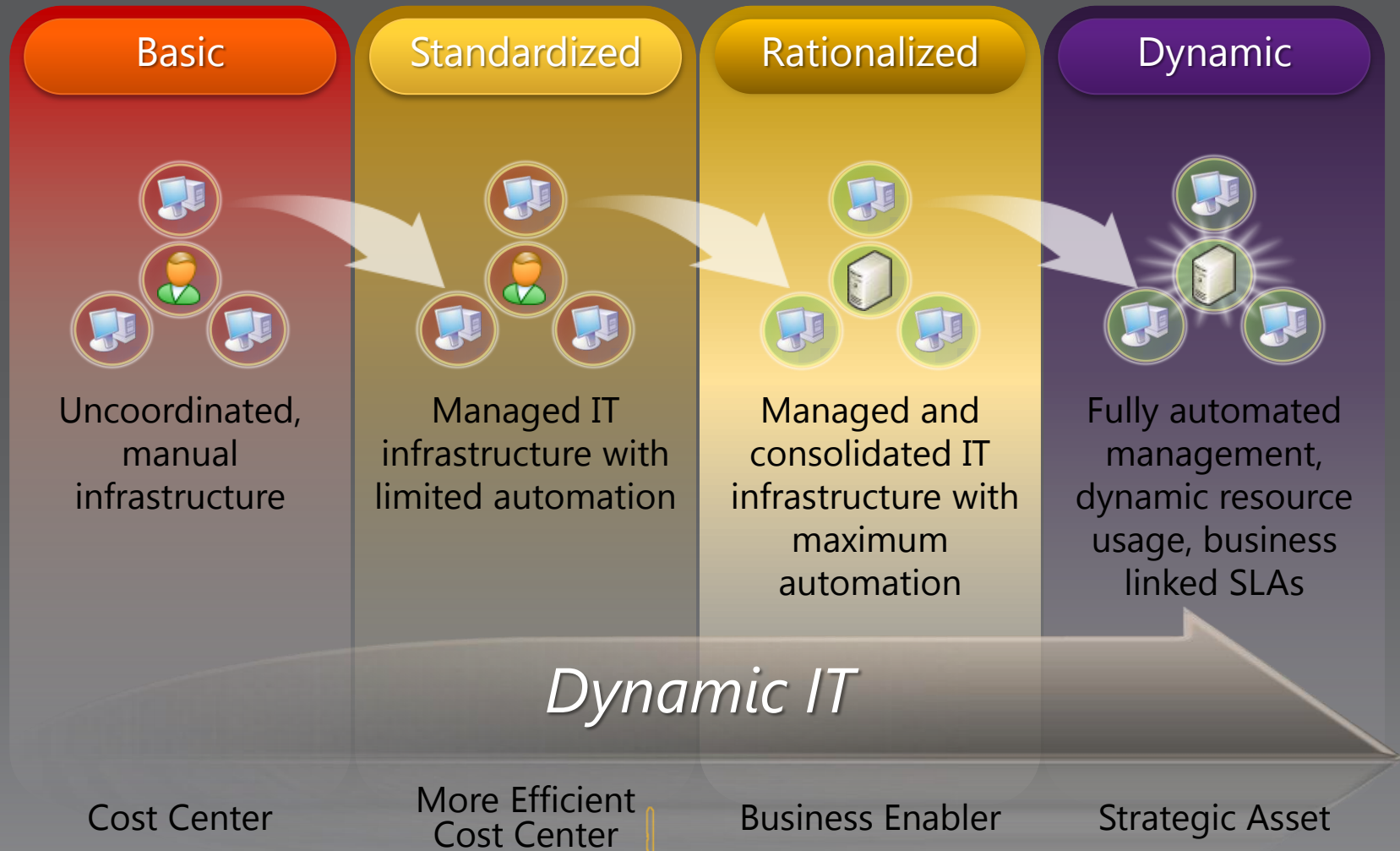
Managing ESX 4.1 Host with SCVMM

demo

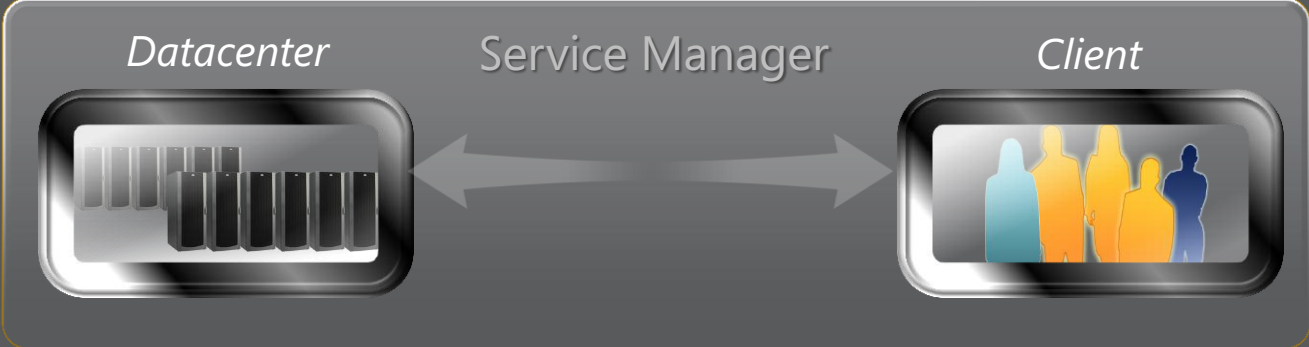
Managing Private Cloud

operational

Core Infrastructure Optimization



Microsoft Delivers Dynamic IT System Management



Improve Service Delivery

Demonstrate Compliance

Decrease Costs



Microsoft Platform
Skills + Technology + Ecosystem

Knowledge
Best Practices + Design

Automation
Action + Workflow + Optimization

Integration and Centralization

End-to-end Datacenter Management with System Center

demo

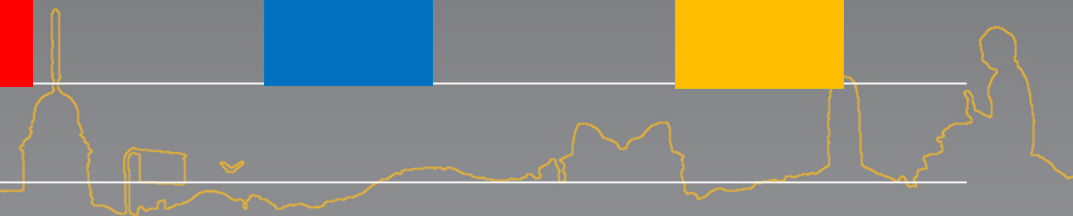
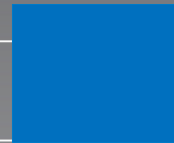
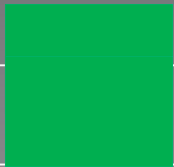
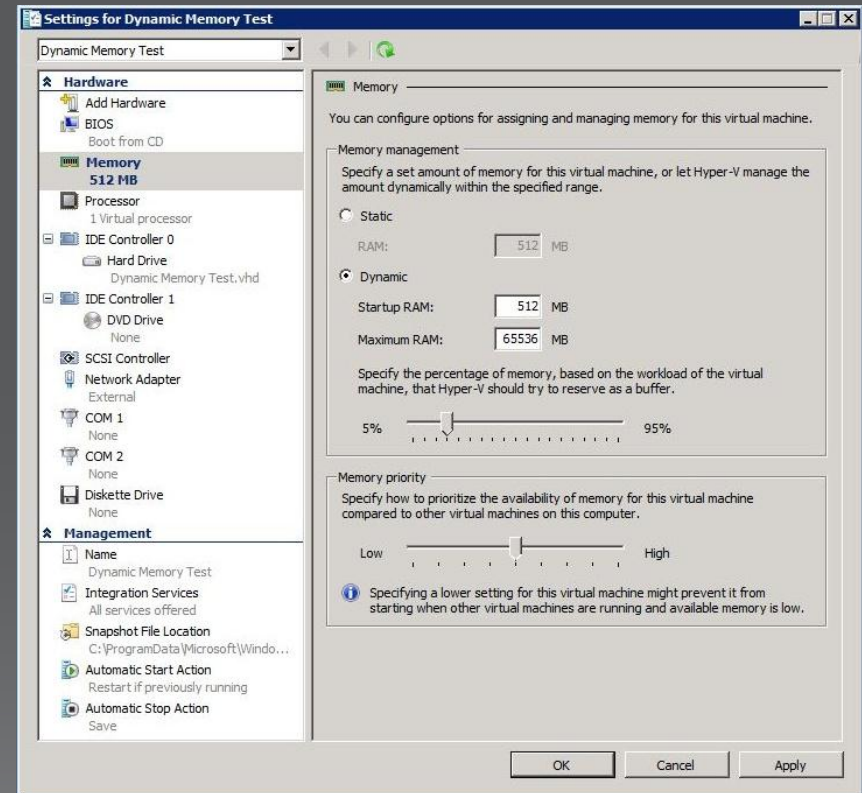
Windows Server 2008 R2 SP1

New datacenter features highlight

what's new

Hyper-V Dynamic Memory

- Benefits
 - Enables higher consolidation ratios per host by addressing the greatest limiting factor to consolidation: Memory
 - A **Production** feature.
- Overview
 - Memory is pooled and dynamically and securely distributed across VMs
 - Memory is dynamically added/removed based VM usage with no service interruption
 - Guest enlightened: guests & Hyper-V work TOGETHER



Thank You

q&a session

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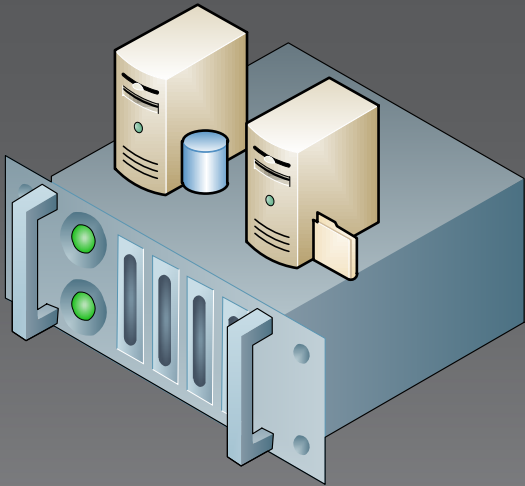
Windows Server Virtualization Right

appendix

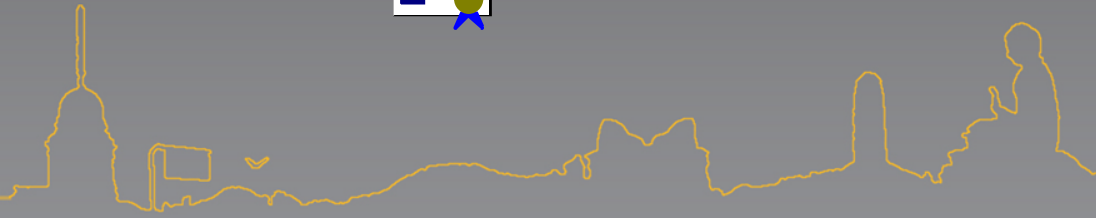
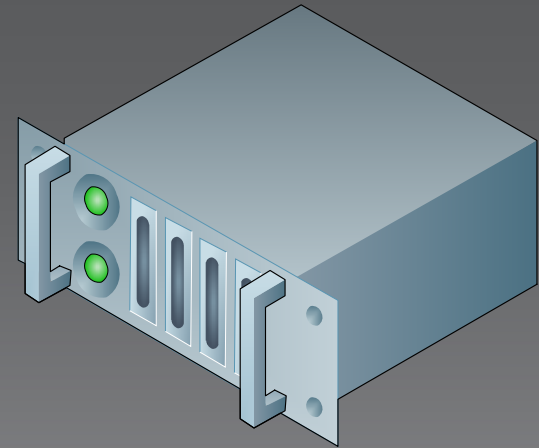
Something We Might Missed-out

- Example: Licensing Microsoft Server Products with Microsoft Virtual Server and Other Virtual Machine Technologies

| Products Impacted | Updates and Clarifications |
|--|---|
| <p>All products in the Microsoft Servers licensing model in the December 1st PUR</p> <ul style="list-style-type: none">• Microsoft Windows Server™ 2003• Exchange Server 2003• Virtual Server 2005 R2• Etc. | <p><u>Updates</u></p> <ul style="list-style-type: none">• Use terms for each software license⁶ specify the number of instances of software that you may run on a particular server at a time, rather than the number of copies of the software that you may install and use on your server.• Each software license allows you to create and store any number of instances of the software on any of your servers or storage media to make it easier for you to run those instances on any of your licensed servers. <p><u>Clarifications</u></p> <ul style="list-style-type: none">• Before you use the software under a license for a server product, you must assign that license to a server• Each hardware partition or blade is a separate physical hardware system, and therefore a separate server• You may reassign software licenses for server products, but not on a short-term basis (i.e., not within 90 days of the last assignment). They may be reassigned sooner if you retire the licensed server due to permanent hardware failure.• You may not separate software to run it in more than one OS environment under a single license, unless expressly permitted—even if the OS environments are on the same server. |



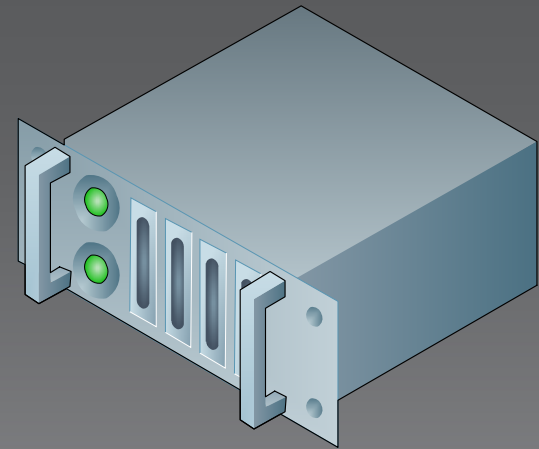
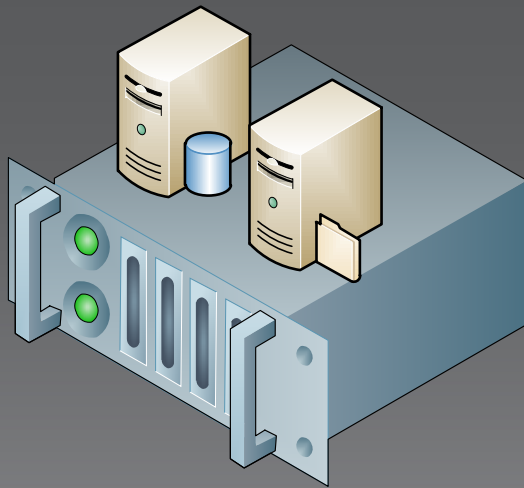
1. Virtualization OS License
2. File Server OS License
3. SQL Server License
4. SQL Server OS License



VM Transfer from Host to Host

But this can only be done once per 90 days

Means you can only fail back after 90 days (!)



1. Virtualization OS License
2. File Server OS License
3. SQL Server License
4. SQL Server OS License

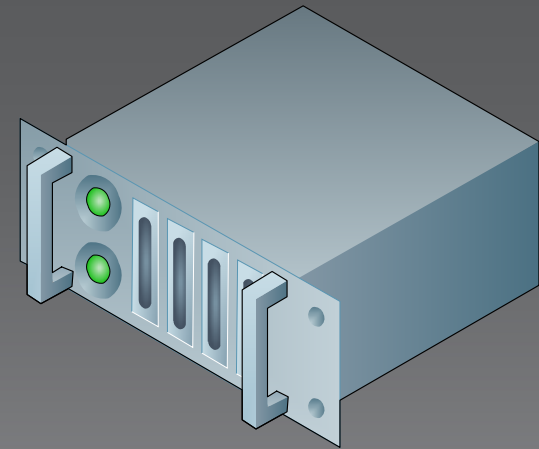
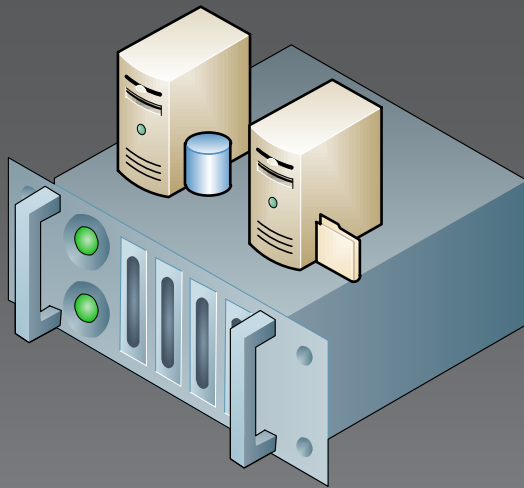


1. Virtualization OS License
2. SQL Server License
3. SQL Server OS License

VM Transfer from Host to Host

Simple, No License Reassignment is Needed

VM Transfer Can Be Done At Anytime!

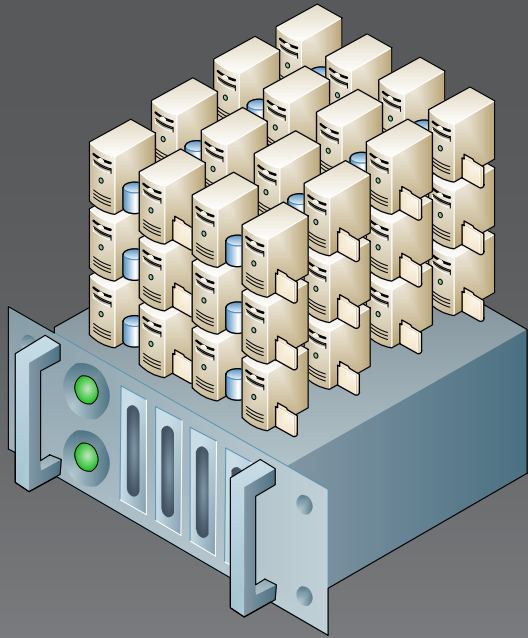


1. Virtualization OS License (not required for Hyper-V)
2. Windows Server Enterprise or Datacenter
3. SQL Server Enterprise or Datacenter

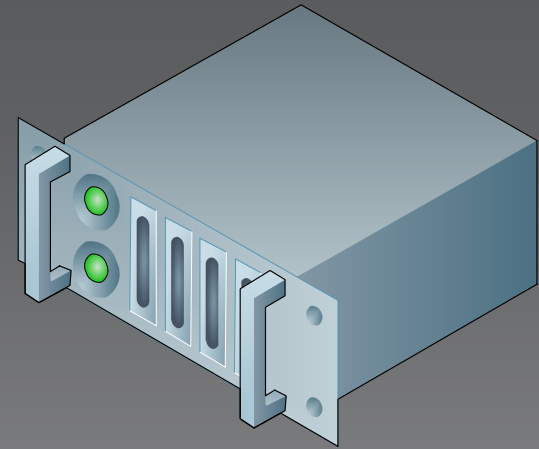


1. Virtualization OS License (not required for Hyper-V)
2. Windows Server Enterprise or Datacenter
3. SQL Server Enterprise or Datacenter

What if... I need to transfer VM all the time and fulfilling licensing requirement?



1. Virtualization OS License
2. n x OS, SQL Licenses

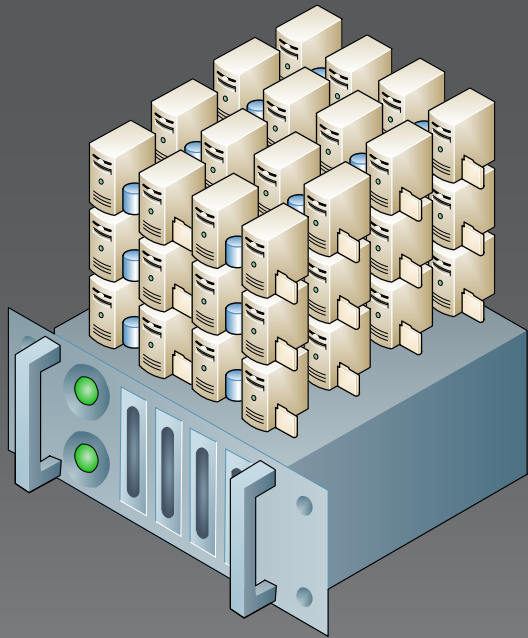


1. Virtualization OS License
2. n x OS, SQL Licenses

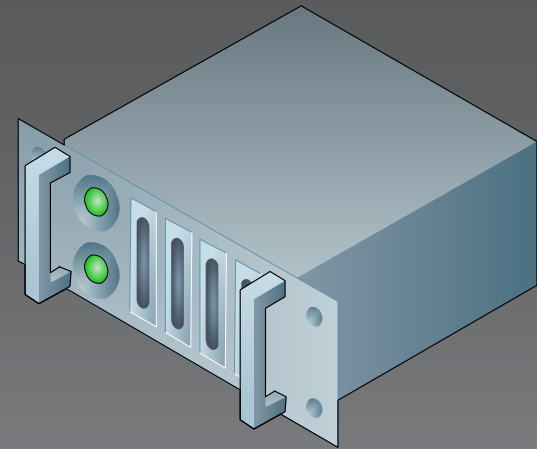
You will need 1 set of license per node target

You can see how virtualization right can help

License are all covered by virtualization right!



1. Virtualization OS License (not required for Hyper-V)
2. Windows Datacenter
3. SQL Server Datacenter



1. Virtualization OS License (not required for Hyper-V)
2. Windows Datacenter
3. SQL Server Datacenter

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