

At-A-Glance: VMware vSphere 5.5 and Microsoft Windows Server 2012 R2 Hyper-V

This whitepaper provides a summarized technical comparison of the feature sets provided by Microsoft [Windows Server 2012 R2](#) and [System Center 2012 R2](#) versus [VMware vSphere 5.5](#) using the currently available public information from both [Microsoft](#) and [VMware](#) as of this whitepaper’s publication date.

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Comparison Approach

Rather than simply comparing feature-by-feature using just simple check-marks in each category, a ranking along with additional detailed notes are provided to help in granularly comparing each technical feature.

For each feature, the level of support has been ranked using the following color-coded values:

- **Supported** – Fully supported without any additional products or licenses
- **Limited Support** – Significant limitations when using related feature, or limitations in comparison to the competing solution represented
- **Not Supported** – Not supported at all or without the addition of other product licensing costs

This technical comparison is organized into the following sections:

- Licensing
- Virtualization Scalability
- VM Portability, High Availability and Disaster Recovery
- Storage
- Networking
- Guest Operating Systems

Applying To Your Environment

Of course, not *all* of the features and capabilities presented in this whitepaper may be important to you. As you review the comparison summary presented in each section, make a note of the particular features that you're likely to use in *your* environment. When you're done, tally up the **Green** ratings in each column to determine which platform achieves a better score in meeting the needs of your organization.

Licensing: At-A-Glance

	Microsoft Windows Server 2012 R2 + System Center 2012 R2 Datacenter Editions	VMware vSphere 5.5 Enterprise Plus + vCenter Server 5.5	Notes
# of Physical CPUs per License	2	1	<p>With Microsoft, each Datacenter Edition license provides licensing for up to 2 physical CPUs per Host. Additional licenses can be “stacked” if more than 2 physical CPUs are present.</p> <p>With VMware, a vSphere 5.5 Enterprise Plus license must be purchased for each physical CPU. This difference in CPU licensing is one of the factors that can contribute to increased licensing costs. In addition, a minimum of one license of vCenter Server 5.5 is required for vSphere deployments.</p>
# of Managed OSE’s per License	Unlimited	Unlimited	Both solutions provide the ability to manage an unlimited number of Operating System Environments per licensed Host.
# of Windows Server VM Licenses per Host	Unlimited	0	With VMware, Windows Server VM licenses must still be purchased separately. In environments virtualizing Windows Server workloads, this can contribute to a higher overall cost when virtualizing with VMware. VMware does include licenses for an unlimited # of VMs running SUSE Linux Enterprise Server per Host.
Includes Anti-virus / Anti-malware protection	Yes - System Center Endpoint Protection agents included for both Host and VMs with System Center 2012 R2	Yes - Includes vShield Endpoint Protection which deploys as EPSEC thin agent in each VM + separate virtual appliance.	
Includes full SQL Database Server licenses for management databases	Yes – Includes all needed database server licensing to manage up to 1,000 hosts and 25,000 VMs per management server.	No – Must purchase additional database server licenses to scale beyond managing 100 hosts and 3,000 VMs with vCenter Server Appliance.	VMware licensing includes an internal vPostgres database that supports managing up to 100 hosts and 3,000 VMs via vCenter Server Appliance. See VMware vSphere 5.5 Configuration Maximums for details.

	Microsoft Windows Server 2012 R2 + System Center 2012 R2 Datacenter Editions	VMware vSphere 5.5 Enterprise Plus + vCenter Server 5.5	Notes
Includes licensing for Operations Monitoring and Management of hosts and guest VMs.	Yes – Included in System Center 2012 R2	No – Operations Monitoring and Management requires separate license for vCenter Operations Manager or upgrade to vSphere with Operations Management	
Includes licensing for Private Cloud Management capabilities – pooled resources, self-service, delegation, automation, elasticity, chargeback/showback	Yes – Included in System Center 2012 R2	No – Private Cloud Management capabilities require additional cost of VMware vCloud Suite .	
Includes management tools for provisioning and managing VDI solutions for virtualized Windows desktops.	Yes – Included in the RDS role of Windows Server 2012.	No – VDI management requires additional cost of VMware Horizon View .	

Virtualization Scalability: At-a-Glance

	Microsoft Windows Server 2012 R2 + System Center 2012 R2 Datacenter Editions	VMware vSphere 5.5 Enterprise Plus + vCenter Server 5.5	Notes
Maximum # of Logical Processors per Host	320	320	With vSphere 5.5 Enterprise Plus, VMware has “caught up” to Microsoft in terms of Maximum # of Logical Processors supported per Host.
Maximum Physical RAM per Host	4TB	4TB	With vSphere 5.5 Enterprise Plus, VMware has “caught up” to Microsoft in terms of Maximum Physical RAM supported per Host.
Maximum Active VMs per Host	1,024	512	
Maximum Virtual CPUs per VM	64	64	When using VMware FT , only 1 Virtual CPU per VM can be used.
Hot-Adjust Virtual CPU Resources to VM	Yes - Hyper-V provides the ability to increase and decrease Virtual Machine limits for processor resources on running VMs.	Yes - Can Hot-Add virtual CPUs for running VMs on selected Guest Operating Systems and adjust Limits/Shares for CPU resources.	VMware Hot-Add CPU feature requires supported Guest Operating System. Check VMware Compatibility Guide for details. VMware Hot-Add CPU feature not supported when using VMware FT
Maximum Virtual RAM per VM	1TB	1TB	When using VMware FT , only 64GB of Virtual RAM per VM can be used.
Hot-Add Virtual RAM to VM	Yes (Dynamic Memory)	Yes	Requires supported Guest Operating System.
Dynamic Memory Management	Yes (Dynamic Memory)	Yes (Memory Ballooning) Note that memory overcommit is not supported for VMs that are configured as an MSCS VM Guest Cluster .	VMware vSphere 5.5 also supports another memory technique: Transparent Page Sharing (TPS). While TPS was useful in the past on legacy server hardware platforms and operating systems, it is no longer effective in many environments due to modern servers and operating systems supporting Large Memory Pages (LMP) for improved memory performance.
Guest NUMA Support	Yes	Yes	NUMA = Non-Uniform Memory Access. Guest

	Microsoft Windows Server 2012 R2 + System Center 2012 R2 Datacenter Editions	VMware vSphere 5.5 Enterprise Plus + vCenter Server 5.5	Notes
			NUMA support is particularly important for scalability when virtualizing large multi-vCPU VMs on Hosts with a large number of physical processors.
Maximum # of physical Hosts per Cluster	64	32	
Maximum # of VMs per Cluster	8,000	4,000	
Virtual Machine Snapshots	Yes - Up to 50 snapshots per VM are supported.	Yes - Up to 32 snapshots per VM chain are supported, but VMware only recommends 2-to-3 . In addition, VM Snapshots are not supported for VMs using an iSCSI initiator .	
Integrated Application Load Balancing for Scaling-Out Application Tiers	Yes - via System Center 2012 R2 VMM	No – Requires additional purchase of vCloud Network and Security (vCNS) or vCloud Suite.	
Bare-metal deployment of new Hypervisor hosts and clusters	Yes - via System Center 2012 R2 VMM	Yes - VMware Auto Deploy and Host Profiles supports bare metal deployment of new hosts into an existing cluster, but does not support bare metal deployment of new clusters.	
Bare-metal deployment of new Storage hosts and clusters	Yes - via System Center 2012 R2 VMM	No	
Manage GPU Virtualization for Advanced VDI Graphics	Yes - Server GPUs can be virtualized and pooled across VDI VMs via RemoteFX and native VDI management features in RDS role.	Yes - via vDGA and vSGA features, but requires separate purchase of VMware Horizon View to manage VDI desktop pools.	

	Microsoft Windows Server 2012 R2 + System Center 2012 R2 Datacenter Editions	VMware vSphere 5.5 Enterprise Plus + vCenter Server 5.5	Notes
Virtualization of USB devices	Yes - Client USB devices can be passed to VMs via Remote Desktop connections. Direct redirection of USB storage from Host possible with Windows-to-Go certified devices. Direct redirection of other USB devices possible with third-party solutions .	Yes - via USB Pass-through support.	
Minimum Disk Footprint	<p>800KB - Micro-kernelized hypervisor (Ring -1)</p> <p>5GB - Drivers + Management (Parent Partition - Ring 0 + 3)</p> <p>Microsoft Hyper-V uses a modern micro-kernelized hypervisor architecture, which minimizes the components needed within the hypervisor running in Ring -1, while still providing strong scalability, performance, VM security, Virtual Disk security and broad device driver compatibility.</p>	<p>155MB - Monolithic hypervisor w/ Drivers(Ring -1 + 0)</p> <p>4GB - Management (vCenter Server Appliance - Ring 3)</p> <p>VMware vSphere uses a larger classic monolithic hypervisor approach, which incorporates additional code, such as device drivers, into the hypervisor. This approach can make device driver compatibility an issue in some cases, but offers increased compatibility with legacy server hardware that does not support Intel-VT / AMD-V hardware-assisted virtualization.</p>	<p>Microsoft and VMware each use different approaches for hypervisor architecture. Each approach offers different advantages as noted in the columns to the left.</p> <p>See When it comes to hypervisors, does size really matter? for a more detailed real-world comparison.</p> <p>Frequently, patch management comes up when discussing disk footprints. See Orchestrating Patch Management for more details on this area.</p>

VM Portability, High Availability and Disaster Recovery: At-a-Glance

	Microsoft Windows Server 2012 R2 + System Center 2012 R2 Datacenter Editions	VMware vSphere 5.5 Enterprise Plus + vCenter Server 5.5	Notes
Live Migration of running VMs	Yes – Unlimited concurrent Live VM Migrations. Provides flexibility to cap at a maximum limit that is appropriate for <i>your</i> datacenter architecture.	Yes – but limited to 4 concurrent vMotions per host when using 1GbE network adapters and 8 concurrent vMotions per host when using 10GbE network adapters.	
Live Migration of running VMs without shared storage between hosts	Yes – Supported via Shared Nothing Live Migration	Yes – Supported via Enhanced vMotion .	
Live Migration using compression of VM memory state	Yes – Supported via Compressed Live Migration , providing up to a 2X increase in Live Migration speeds.	No	
Live Migration over RDMA-enabled network adapters	Yes – Supported via SMB-Direct Live Migration , providing up to a 10X increase in Live Migration speeds.	No	
Live Migration of VMs Clustered with Windows Server Failover Clustering (MSCS Guest Cluster)	Yes – by configuring relaxed monitoring of MSCS VM Guest Clusters.	No – based on documented vSphere MSCS Setup Limitations	
Highly Available VMs	Yes – Highly available VMs can be configured on a Hyper-V Host cluster . If the application running inside the VM is cluster aware, a VM Guest Cluster can also be configured via MSCS for faster application failover times.	Yes – Supported by VMware HA , but with the limitations listed above when using MSCS VM Guest Clusters.	
Failover Prioritization of Highly Available VMs	Yes – Supported by clustered priority settings on each highly available VM.	Yes	

	Microsoft Windows Server 2012 R2 + System Center 2012 R2 Datacenter Editions	VMware vSphere 5.5 Enterprise Plus + vCenter Server 5.5	Notes
Affinity Rules for Highly Available VMs	Yes – Supported by preferred cluster resource owners and anti-affinity VM placement rules.	Yes	
Cluster-Aware Updating for Orchestrated Patch Management of Hosts.	Yes – Supported via included Cluster-Aware Updating (CAU) role service.	Yes – Supported by vSphere 5.5 Update Manager , but if using vCenter Server Appliance, need separate 64-bit Windows OS license for Update Management server. If supporting more than 5 hosts and 50 VMs, also need a separate SQL database server.	
Guest OS Application Monitoring for Highly Available VMs	Yes	Yes – Provided by vSphere App HA , but limited to only the following applications: Apache Tomcat, IIS, SQL Server, Apache HTTP Server, SharePoint, SpringSource tc Runtime.	
VM Guest Clustering via Shared Virtual Hard Disk files	Yes – Provided via native Shared VHDX support for VM Guest Clusters	Yes – But only Single-Host VM Guest Clustering supported via Shared VMDK files. For VM Guest Clusters that extend across multiple hosts, must use RDM instead.	
Intelligent Placement of new VM workloads	Yes – Provided via Intelligent Placement in System Center 2012 R2	Yes – Provided via vSphere DRS , but without ability to intelligently place fault tolerant VMs using VMware FT.	
Automated Load Balancing of VM Workloads across Hosts	Yes – Provided via Dynamic Optimization in System Center 2012 R2	Yes - Provided via vSphere DRS , but without ability to load-balance VM Guest Clusters using MSCS.	
Power Optimization of Hosts when load-balancing VMs	Yes – Provided via Power Optimization in System Center 2012 R2	Yes – Provided via vSphere DRS , with the same limitations listed above for Automated Load Balancing.	

	Microsoft Windows Server 2012 R2 + System Center 2012 R2 Datacenter Editions	VMware vSphere 5.5 Enterprise Plus + vCenter Server 5.5	Notes
Fault Tolerant VMs	No - The vast majority of application availability needs can be supported via Highly Available VMs and VM Guest Clustering on a more cost-effective and more-flexible basis than software-based fault tolerance solutions. If required for specific business applications, hardware-based fault tolerance server solutions can be leveraged where needed.	Yes – Supported via VMware FT , but there are a large number of limitations when using VMware FT , including no support for the following when using VMware FT: VM Snapshots, Storage vMotion, VM Backups via vSphere Data Protection, Virtual SAN, Multi-vCPU VMs, More than 64GB of vRAM per VM.	Software-based fault tolerance solutions, such as VMware FT, generally have significant limitations. If applications require more comprehensive fault tolerance than provided via Highly Available VMs and VM Guest Clustering, hardware-based fault tolerance server solutions offer an alternative choice without the limits imposed by software-based fault tolerance solutions.
Backup VMs and Applications	Yes - Provided via included System Center 2012 R2 Data Protection Manager with support for Disk-to-Disk, Tape and Cloud backups.	Yes - Only supports Disk-to-Disk backup of VMs via vSphere Data Protection . Application-level backup integration requires separately purchased vSphere Data Protection Advanced .	
Site-to-Site Asynchronous VM Replication	Yes – Provided via Hyper-V Replica with 30-second, 5-minute or 15-minute replication intervals. Minimum RPO = 30-seconds. Hyper-V Replica also supports extended replication across three sites for added protection.	Yes – Provided via vSphere Replication with minimum replication interval of 15-minutes. Minimum RPO = 15-minutes.	In VMware solution, Orchestrated Failover of Site-to-Site replication can be provided via separately licensed VMware SRM . In Microsoft solution, Orchestrated Failover of Site-to-Site replication can be provided via included PowerShell at no additional cost. Alternatively, a GUI interface for orchestrating failover can be provided via the separately licensed Windows Azure HRM service.

Storage: At-a-Glance

	Microsoft Windows Server 2012 R2 + System Center 2012 R2 Datacenter Editions	VMware vSphere 5.5 Enterprise Plus + vCenter Server 5.5	Notes
Maximum # Virtual SCSI Hard Disks per VM	256 (Virtual SCSI)	60 (PVSCSI) 120 (Virtual SATA)	
Maximum Size per Virtual Hard Disk	64TB	62TB	vSphere 5.5 support for 62TB VMDK files is limited to when using VMFS5 and NFS datastores only. In vSphere 5.5, VMFS3 datastores are still limited to 2TB VMDK files. In vSphere 5.5, Hot-Expand , VMware FT , Virtual Flash Read Cache and Virtual SAN are not supported with 62TB VMDK files.
Boot VM from Virtual SCSI disks	Yes (Generation 2 VMs)	Yes	
Hot-Add Virtual SCSI VM Storage for running VMs	Yes	Yes	
Hot-Expand Virtual SCSI Hard Disks for running VMs	Yes	Yes – but not supported with new 62TB VMDK files.	
Hot-Shrink Virtual SCSI Hard Disks for running VMs	Yes	No	
Storage Quality of Service	Yes (Storage QoS)	Yes (Storage IO Control)	In VMware vSphere 5.5, Storage IO Control is not supported for RDM disks. In Windows Server 2012 R2, Storage QoS is not supported for Pass-through disks.
Virtual Fibre Channel to VMs	Yes (4 Virtual FC NPIV ports per VM)	Yes (4 Virtual FC NPIV ports per VM) - but not supported when using VM Guest Clusters with MSCS.	vSphere 5.5 Enterprise Plus also includes a software initiator for FCoE support for VMs. While not included in box in Windows Server 2012 R2, a no-cost ISV solution is available here to provide FCoE support for Hyper-V VMs.

	Microsoft Windows Server 2012 R2 + System Center 2012 R2 Datacenter Editions	VMware vSphere 5.5 Enterprise Plus + vCenter Server 5.5	Notes
Live Migrate Virtual Storage for running VMs	Yes - Unlimited concurrent Live Storage migrations. Provides flexibility to cap at a maximum limit that is appropriate for <i>your</i> datacenter architecture.	Yes – but only up to 2 concurrent Storage vMotion operations per host / only up to 8 concurrent Storage vMotion operations per datastore . Storage vMotion is also not supported for MSCS VM Guest Clusters .	
Flash-based Read Cache	Yes - Using SSDs in Tiered Storage Spaces, limited up to 160 physical disks and 480 TB total capacity.	Yes – but only up to 400GB of cache per virtual disk / 2TB cumulative cache per host for all virtual disks .	
Flash-based Write-back Cache	Yes - Using SSDs in Storage Spaces for Write-back Cache.	No	
SAN-like Storage Virtualization using commodity hard disks.	Yes – Included in Windows Server 2012 R2 Storage Spaces .	No	VMware provides Virtual SAN which is included as an experimental feature in vSphere 5.5. You can test and experiment with Virtual SAN, but VMware does not expect it to be used in a production environment.
Automated Tiered Storage between SSD and HDD using commodity hard disks.	Yes – Included in Windows Server 2012 R2 Storage Spaces .	No	VMware provides Virtual SAN which is included as an experimental feature in vSphere 5.5. You can test and experiment with Virtual SAN, but VMware does not expect it to be used in a production environment.
Can consume storage via iSCSI, NFS, Fibre Channel and SMB 3.0.	Yes	Yes – Except no support for SMB 3.0.	
Can present storage via iSCSI, NFS and SMB 3.0.	Yes – Available via included iSCSI Target Server , NFS Server and Scale-out SMB 3.0 Server support. All roles can be clustered for High Availability.	No	VMware provides vSphere Storage Appliance as a separately licensed product to deliver the ability to present NFS storage.
Storage Multipathing	Yes – via MPIO and SMB Multichannel	Yes – via VAMP	
SAN Offload Capability	Yes – via ODX	Yes – via VAAI	

	Microsoft Windows Server 2012 R2 + System Center 2012 R2 Datacenter Editions	VMware vSphere 5.5 Enterprise Plus + vCenter Server 5.5	Notes
Thin Provisioning and Trim Storage	Yes – Available via Storage Spaces Thin Provisioning and NTFS Trim Notifications .	Yes – but trim operations must be manually processed by running esxcli vmfs unmap command to reclaim disk space.	
Storage Encryption	Yes – via BitLocker	No	
Deduplication of storage used by running VMs	Yes – Available via included Data Deduplication role service.	No	
Provision VM Storage based on Storage Classifications	Yes – via Storage Classifications in System Center 2012 R2	Yes – via Storage Policies , formerly called Storage Profiles, in vCenter Server 5.5	
Dynamically balance and re-balance storage load based on demands	Yes – Storage IO load balancing and re-balancing is automatically handled on-demand by both SMB 3.0 Scale Out File Server and Automated Storage Tiers in Storage Spaces .	Yes – Performed via Storage DRS , but limited in load-balancing frequency. The default DRS load-balance interval only runs at 8-hour intervals and can be adjusted to run load-balancing only as often as every 1-hour.	
Integrated Provisioning and Management of Shared Storage	Yes - System Center 2012 R2 VMM includes storage provisioning and management of SAN Zoning, LUNS and Clustered Storage Servers.	No	

Networking: At-a-Glance

	Microsoft Windows Server 2012 R2 + System Center 2012 R2 Datacenter Editions	VMware vSphere 5.5 Enterprise Plus + vCenter Server 5.5	Notes
Distributed Switches across Hosts	Yes – Supported by Logical Switches in System Center 2012 R2	Yes	
Extensible Virtual Switches	Yes - Several partners offer extensions today, such as Cisco , NEC , Inmon and 5nine . Windows Server 2012 R2 offers new support for co-existence of Network Virtualization and Switch Extensions .	Replaceable, not extensible - VMware virtual switch is replaceable, not incrementally extensible with multiple 3rd party solutions concurrently	
NIC Teaming	Yes – Up to 32 NICs per NIC Team. Windows Server 2012 R2 provides new Dynamic Load Balancing mode using <i>flowlets</i> to provide efficient load balancing even between a small number of hosts.	Yes – Up to 32 NICs per Link Aggregation Group	
Private VLANs (PVLAN)	Yes	Yes	
ARP Spoofing Protection	Yes	No – Requires additional purchase of vCloud Network and Security (vCNS) or vCloud Suite.	
DHCP Snooping Protection	Yes	No – Requires additional purchase of vCloud Network and Security (vCNS) or vCloud Suite.	
Router Advertisement Guard Protection	Yes	No – Requires additional purchase of vCloud Network and Security (vCNS) or vCloud Suite.	
Virtual Port ACLs	Yes - Windows Server 2012 R2 adds support for Extended ACLs that include Protocol, Src/Dst Ports, State, Timeout & Isolation ID	Yes - via new Traffic Filtering and Marking policies in vSphere 5.5 distributed switches	
Trunk Mode to VMs	Yes	Yes	
Port Monitoring	Yes	Yes	
Port Mirroring	Yes	Yes	

	Microsoft Windows Server 2012 R2 + System Center 2012 R2 Datacenter Editions	VMware vSphere 5.5 Enterprise Plus + vCenter Server 5.5	Notes
Dynamic Virtual Machine Queue	Yes	Yes	
IPsec Task Offload	Yes	No	
Single Root IO Virtualization (SR-IOV)	Yes	Yes – SR-IOV is supported by vSphere 5.5 Enterprise Plus, but <i>without</i> support for vMotion, Highly Available VMs or VMware FT when using SR-IOV.	
Virtual Receive Side Scaling (Virtual RSS)	Yes	Yes (VMXNet3)	
Network Quality of Service	Yes	Yes	
Network Virtualization	Yes – Provided via Hyper-V Network Virtualization based on NVGRE protocol and in-box Site-to-Site NVGRE Gateway.	No – Requires additional purchase of VMware NSX	
Integrated Network Management of both Virtual and Physical Network components	Yes – System Center 2012 R2 VMM supports integrated management of virtual networks, Top-of-Rack (ToR) switches and integrated IP Address Management	No	

Guest Operating Systems: At-a-Glance

For this section, *Supported Guest Operating Systems* are defined as operating systems that are supported by **both** the virtualization platform vendor **and** by the operating system vendor.

The table below lists the latest common versions of major Windows and Linux operating systems that are used in all sizes of business environments, including SMB, Enterprise and hosting partner organizations. The support status for each operating system is shown along with relevant notes where related to the support status.

The full list of supported Guest Operating Systems for each virtualization platform can be found at the following link locations:

- **Microsoft:** [Supported Server and Client Guest Operating Systems](#)
- **VMware:** [Compatibility Guide for Guest Operating Systems](#)

	Microsoft Windows Server 2012 R2 + System Center 2012 R2 Datacenter Editions	VMware vSphere 5.5 Enterprise Plus + vCenter Server 5.5	Notes
Windows Server 2012 R2	Yes	Yes	
Windows 8.1	Yes	Yes	
Windows Server 2012	Yes	Yes	
Windows 8	Yes	Yes	
Windows Server 2008 R2 SP1	Yes	Yes	
Windows Server 2008 R2	Yes	Yes	
Windows 7 with SP1	Yes	Yes	
Windows 7	Yes	Yes	
Windows Server 2008 SP2	Yes	Yes	
Windows Home Server 2011	Yes	No	
Windows Small Business Server 2011	Yes	No	
Windows Vista with SP2	Yes	Yes	

	Microsoft Windows Server 2012 R2 + System Center 2012 R2 Datacenter Editions	VMware vSphere 5.5 Enterprise Plus + vCenter Server 5.5	Notes
Windows Server 2003 R2 SP2	Yes	Yes	
Windows Server 2003 SP2	Yes	Yes	
Windows XP with SP3	Yes	Yes	
Windows XP x64 with SP2	Yes	Yes	
CentOS 5.7, 5.8, 6.0 – 6.4	Yes	Yes	
CentOS Desktop 5.7, 5.8, 6.0 – 6.4	Yes	Yes	
Red Hat Enterprise Linux 5.7, 5.8, 6.0 – 6.4	Yes	Yes	
Red Hat Enterprise Linux Desktop 5.7, 5.8, 6.0 – 6.4	Yes	Yes	
SUSE Linux Enterprise Server 11 SP2 & SP3	Yes	Yes	
SUS Linux Enterprise Desktop 11 SP2 & SP3	Yes	Yes	
OpenSUSE 12.1	Yes	Yes	
Ubuntu 12.04, 12.10, 13.10	Yes	Yes – Currently 13.04 in the 13.x distros	
Ubuntu Desktop 12.04, 12.10, 13.10	Yes	Yes – Currently 13.04 in the 13.x distros	
Oracle Linux 6.4	Yes – Oracle has certified its supported products to run on Hyper-V and Windows Azure	Yes – However, per this Oracle article, Oracle has not certified any of its products to run on VMware. Oracle will only provide support for issues that are either known to occur on the native OS, or can be demonstrated not to be as a result of running on VMware.	

	Microsoft Windows Server 2012 R2 + System Center 2012 R2 Datacenter Editions	VMware vSphere 5.5 Enterprise Plus + vCenter Server 5.5	Notes
Mac OS X 10.7.x & 10.8.x	No	Yes - However, see note to the right. Based on current Apple EULA, this configuration may not be legally permitted in your environment.	Note that according to the Apple EULA for Mac OS X, it is not permitted to install Mac OS X on any platform that is not Apple-branded hardware. If you choose to virtualize Mac OS X on non-Apple hardware platforms, it's my understanding that you're violating the terms of the Apple EULA.
Sun Solaris 10	No	Yes – However, per this Oracle article, Oracle has not certified any of its products to run on VMware. Oracle will only provide support for issues that are either known to occur on the native OS, or can be demonstrated not to be as a result of running on VMware.	

In terms of Guest Operating System choices ... It's somewhat of a draw in this area, as the best choice for you really depends upon which Guest Operating Systems you are actually using in your environment.

If you are primarily using the latest past few versions of common Windows and Linux operating systems in your shop, either platform probably nicely supports your required mix of Guest Operating Systems. However, if you're still using older legacy versions or specialized versions of some operating systems, you may need to more closely review the full compatibility lists for each platform using the links provided above.

Note: When evaluating Guest Operating System support for virtualization platforms, remember to also check with the Operating System vendor to ensure that the OS in question also meets their support and licensing policies.

Managing Heterogeneous Hypervisor Environments

In certain scenarios, you may find that a mix of virtualization platforms is needed to cost-effectively support all the features and Guest Operating Systems for which you're looking, in which case you'll be pleased to find that [Microsoft System Center 2012 R2](#) also supports Private Cloud management across heterogeneous hypervisors, including Hyper-V, VMware vSphere and Citrix XenServer.

For more details on managing VMware vSphere and Citrix XenServer hypervisors with Microsoft System Center 2012 R2, be sure to check out the following articles:

- [Managing VMware vSphere hosts with System Center 2012 R2](#)
- [Managing Citrix XenServer hosts with System Center 2012 R2](#)

Summary

As you can see, both Microsoft Windows Server 2012 R2 / System Center 2012 R2 and VMware vSphere 5.5 offer lots of enterprise-grade virtualization features. Hopefully this comparison was useful to you in more granularly evaluating each platform for *your* environment.

If you'd like to provide feedback or suggest updates to this technical comparison whitepaper, please feel free to contact me at <http://KeithMayer.com>.

Additional resources

- [FREE EBOOK: Get Started as an “Early Expert” on Windows Server 2012 R2](#)
- [Build Your Private Cloud in a Month](#)
- [Right-size IT Budgets with Windows Server 2012 Storage Spaces](#)
- [Step-by-Step: Reduce Storage Costs with Data Deduplication in Windows Server 2012](#)
- [Step-by-Step: Speaking iSCSI with Windows Server 2012 and Hyper-V](#)
- [Step-by-Step: Build an Automated Tiered Storage Lab with Windows Server 2012 R2 & PowerShell](#)
- [Step-by-Step: Remote Desktop Services on Windows Azure - A cost-effective alternative to Desktop as a Service](#)
- [VMware or Microsoft? The Complete Series](#)