vSphere 6.0 Advantages Over Hyper-V

The most trusted and complete virtualization platform

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vmware®

v3c

vSphere 6.0 – The Most Trusted Virtualization Platform

		vmware vSphere 6.0	Microsoft Windows Server 2012 R2 Hyper-V
Hypervisor Architecture	Scalability	✓ Host – **480 CPUs, 12TB RAM** **VM – 128 vCPUs, 4TB vRAM**	~ Host – 320 CPUs, 4TB RAM VM – 64 vCPUs, 1TB vRAM
	Purpose-Built Hypervisor	✓ No reliance on general purpose OS	X Hyper-V requires Windows Server OS
	Simplified Patching	✓ No unrelated patching; Automated, image-based with rollback capabilities	X Subject to unrelated Windows patching (i.e. "Update" Tuesday); 81 patches (1.9GB) required at install
	Advanced Memory Management	✓ Ballooning Transparent page sharing Memory Compression Swap to disk/SSD; centrally managed	X Dynamic Memory is complex and managed on a per-VM basis with devastating noisy-neighbor potential
	Long-Distance vMotion	✓ **NEW Long-Distance and cross-vCenter vMotion capability between remote data centers (100ms or less)**	X No comparable capability
	Management Scalability	✓ vCenter 6.0 supports 1,000 hosts, 10,000 VMs, 64 hosts per cluster and up to 8,000 VMs per cluster	✓ System Center supports 1,000 hosts, 25,000 VMs, 64 hosts per cluster and up to 8,000 VMs per cluster
Broad Support & Choice	Certified Service Providers	✓ 7,200+ VMware Service Providers ~70,000 VMware partners globally	X Fewer than 100 certified CloudOS partners worldwide
	Explicit ISV Support Statements	✓ 3,000+ technology partners 5,000+ applications certified	~ Mostly just implied, not certified, support. Apps certified on Windows Server not always certified with Hyper-V
	Supported Operating Systems	✓ **84 fully supported operating systems**	~ Full support for only 15 operating systems

…to Run Business Critical Apps…

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Business Continuity	Zero Downtime for Most Critical Apps	✓ **Fault Tolerance now supports up to 4 vCPUs per VM**	X Nothing comparable
	Advanced Backup Capabilities	✓ **VDPA features now included in VDP: app-consistent backups, changed block tracking, 8TB de-duped backup per VDP appliance, 20 VDP appliances**	X DPM is not an appliance, requires separate Windows and database install with separate management, outside of the virtual environment
	Backup Efficiency	✓ Built-in variable-length de-dupe for both Windows & Linux VMs	X System Center DPM requires agents on host, limited Linux support, no variable-length de-dupe
	Live Resource Expansion	✓ Hot-add vCPU, vRAM Hot-plug/extend virtual disk	X No hot-add vCPU hot-extend virtual disk requires VHDX & Gen 2 VM migration
	Host-Based Replication	✓ Native vSphere Replication that also supports vCloud Air as target, without any VM conversion	~ Hyper-V Replica: Limited management & monitoring. Replication to Azure may require conversion
	Robust High Availability	✓ Single-click, withstands multiple host failures; network and data store heartbeats	~ Failover Clustering limited to network heartbeat only
Virtualization Security	Small Attack Surface Area	✓ **158MB disk footprint (actually reduced from vSphere 5.5's ~200MB)**	X Server Core: 5GB Full Install: 13GB
	Centralized Security Management	✓ Unified policy-based approach, managed via vCenter	X Lacks single interface, Requires multiple System Center tools (VMM, EP)
	Agentless VM Protection	✓ Built-in vShield Endpoint offloads AV and anti-malware to secure appliance	X No introspection; Relies on agents in every VM; legacy physical security

…with superior automation and management…

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Integrated Storage and Network Management	Automated Storage Workload Balancing	✓ Storage DRS accelerates VM placement and reduces time to provision	X No storage DRS – Manual approach increases the management effort and time to provision
	Intelligent Storage Selection	✓ Policy-Based Storage—automatic placement on tiered storage based on performance characteristics	X Arbitrary and manual classification of storage devices. No compliance checks. Storage Spaces is not VM-aware and provides basic tiering of SSDs/HDDs only
	Cluster-Wide Prioritization of Storage I/O	✓ Storage I/O Control and Storage DRS – VM Performance isolation, prevents "noisy neighbor" problems	~ Storage QoS provides per VM IOPS limits but does not have any storage awareness thus no ability to intelligently balance storage IO across datastores
	Storage APIs	✓ Standards-based array offload capability reqs no additional infrastructure or config	~ Requires vendor supplied API and additional infrastructure dependencies
	Software defined storage	✓ VSAN integrates compute and storage with centralized vCenter management and VM visbility	X No equivalent capability. Storage spaces is a separate, complex physical storage architecture with no VM visibility
	Simplified VM-level management of storage layer	✓ **NEW** VMware Virtual Volumes (VVols) provides storage-level granularity with 1:1 mapping of VMs to storage volumes, simplified and automated via Storage Policy-Based Management (SPBM).	X No equivalent capability. Storage is managed as a separate silo of responsibility, with no VM-level policies
	Network IO Control	✓ **NEW** support for per-VM Distributed vSwitch bandwidth reservations to guarantee isolation and enforce limits on bandwidth to ensure availability.	X Minimum throughput and VM "weight" reservations assigned per virtual NIC are not the same as pre-defining traffic types and cannot guarantee isolation.

…at the Lowest Total Cost of Ownership.

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Intelligent Automation	Automated Host Provisioning	✓ Auto Deploy: Initial deployment and ongoing host config management	X Bare-metal provisioning via SCVMM supports initial deployment only
	Automated Server Workload Balancing	✓ Distributed Resource Scheduler and Distributed Power Management	~ Dynamic Optimization only looks at free space for initial placement of VMs
	Virtual Distributed Switch	✓ Native Distributed Switch Proven 3rd party switch	~ Native Logical Switch First generation 3rd party switch
	Automated Virtual Networks Across Non-Contiguous Clusters	✓ VXLAN Better load balancing	~ NVGRE no per-flow load balancing
	Content Library	✓ **NEW** VMware Content Library provides centralized storage of VM templates, vApps, ISO images and scripts that are automatically synchronized between vCenter servers. Easy to create VM template and add to this library.	~ SCVMM provides a single-site VMM library but it does not have distributed syncing and is limited to a single managed cluster only.
	High Availability	✓ vSphere HA can now protect as many as 64 ESXi hosts and 6,000 virtual machines – up from 32 hosts and 2,048 VMs – and is still enabled by a single checkbox in vCenter.	X Hyper-V Failover Clusters based on legacy pre-virtualization model and still risks majority node failure issue. Complex configuration done outside of virtualization platform. Support for up to 64 nodes and 8,000 VMs

Remember to leverage the VMware TCO Comparison Calculator to show how VMware provides the lowest total cost of ownership when compared to Microsoft:
http://www.vmware.com/go/tcocalculator

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