

SDDC HCI Systems

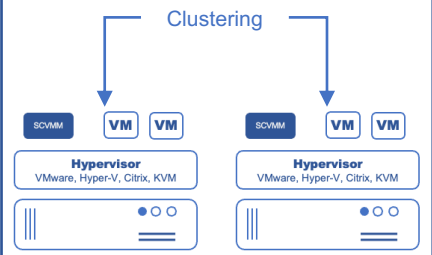
High Availability Clustered Hyperconverged Appliances





vmware® Microsoft Hyper-V
KVM Citrix XenServer

Hypervisor Agnostic

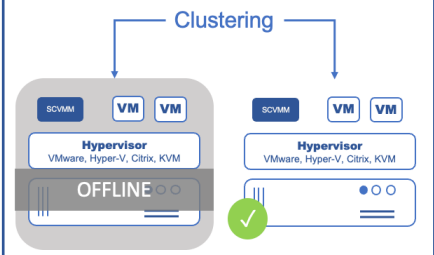


Clustering

SCVMM VM VM
Hypervisor
VMware, Hyper-V, Citrix, KVM

SCVMM VM VM
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Multi-Node Cluster

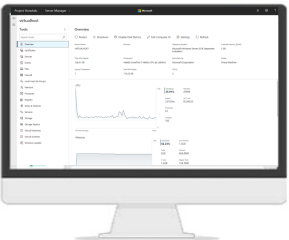


Clustering

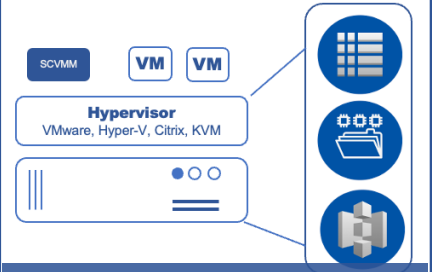
SCVMM VM VM
Hypervisor
VMware, Hyper-V, Citrix, KVM
OFFLINE

SCVMM VM VM
Hypervisor
VMware, Hyper-V, Citrix, KVM

High Availability – No disruption

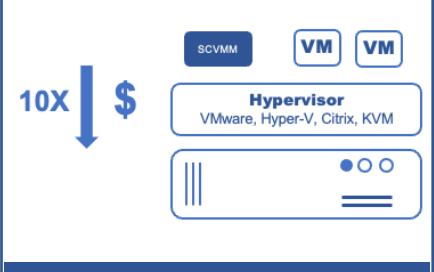


Centralized Management



SCVMM VM VM
Hypervisor
VMware, Hyper-V, Citrix, KVM

Data Center Consolidation



10X ↓ \$

SCVMM VM VM
Hypervisor
VMware, Hyper-V, Citrix, KVM

10x Cost Savings

SDDC

What are HCI Systems?

Introduction

HCI systems are hyper-converged appliances that consist of multiple nodes configured in an active/active cluster setup. These nodes are designed to automatically failover and failback across both Local Area Network (LAN) and Wide Area Network (WAN) environments.

Leveraging industry-standard hypervisors, the SDDC HCI systems empower HDUltrasoftware customers to minimize their data center footprint. This involves replacing servers, switches, and outdated storage silos with Virtual Machines (VMs) that are highly scalable, easily manageable, and cost-effective. Furthermore, the integrated cloud connect features streamline cloud integration, enabling users to utilize cloud storage for a diverse range of applications, use-cases, and projects.

The nodes are constructed to guarantee continuous operation and data accessibility, providing near-zero downtime. This makes them well-suited for organizations requiring an infrastructure with no single point of failure.

Providing customization choices for computing, storage, and virtualization engines (or hypervisors), HDUltrasoftware presents the SDDC HCI systems tailored for Small and Medium-sized Businesses (SMBs), Enterprises (SMEs), and large organizations across various industries, including healthcare, education, finance, and government departments.

Hyperconvergence: Each appliance node combines compute, network, storage, and virtualization in a single Hyperconverged Infrastructure (HCI).

Supported hypervisors:

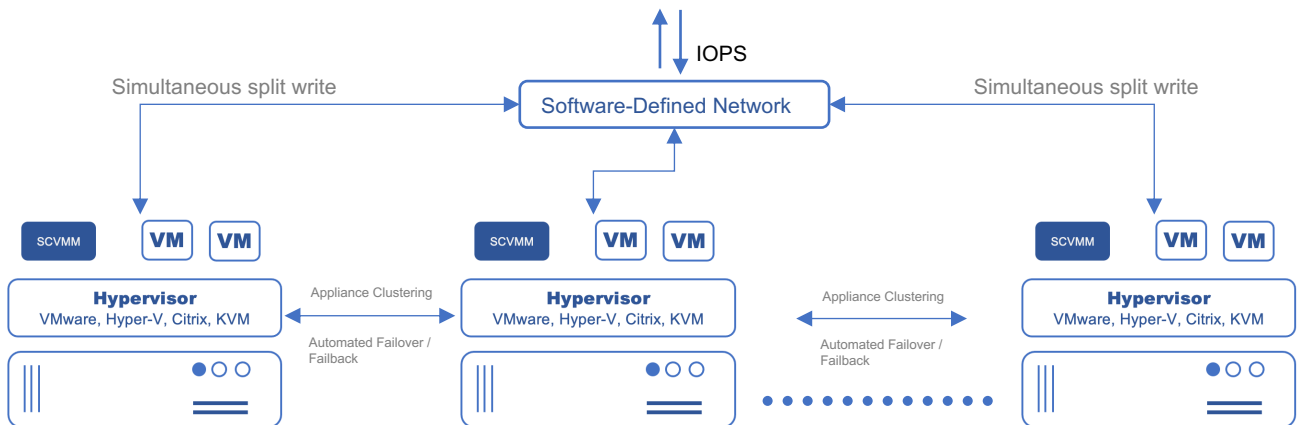
The SDDC HCI systems can be configured with:

- VMware
- Microsoft Hyper-V
- KVM
- Citrix or XenServer

How HCI Systems work?

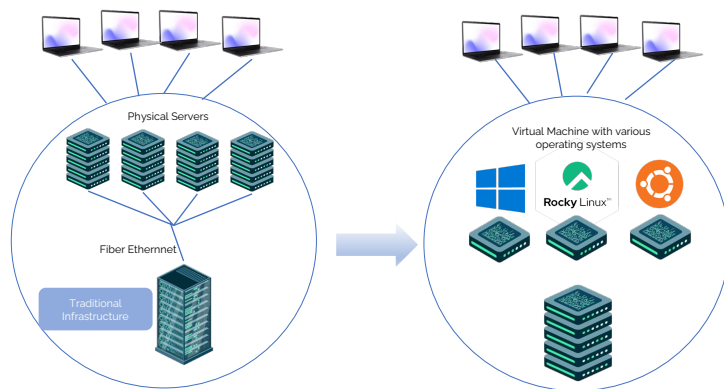
Working

Through software-defined networking, the SDDC HCI concurrently writes data on both nodes. This clustered configuration guarantees that each appliance node possesses committed data. Consequently, this grants the capability for the organization to operate seamlessly without interruption, even if one appliance node is offline for maintenance or unavailable due to other reasons such as disasters. This continuity is maintained by accessing the remaining nodes.



SDDC Features

Replace your Datacenter with HDUltrasoftware Hyperconverged Solution



HDUltrasoftware hyper converged infrastructure combines compute, storage, and networking in a single, easy-to-manage, scalable, and high performance platform.

HDUltrasoftware enables you to replace dedicated servers and switches with a consolidated turnkey infrastructure in turn saving money, reducing maintenance overhead, and optimizing DevOps processes seamlessly.

The SDDC Server (SDDC) is a Hyper-Converged Infrastructure (HCI) that integrates storage, networking, computing, and virtualization technologies into a unified and easily manageable solution. These SDDC appliances are preconfigured with industry-standard hypervisors and software-defined networking. HDUltrasoftware's SDDC empowers users to perform tasks such as running databases, deploying applications, storing data, launching Virtual Desktop Infrastructures (VDIs), and provisioning virtual Storage Area Networks (vSAN), Network-Attached Storage (NAS), and S3 Volumes, catering to a broad spectrum of requirements.

SDDC Capabilities

- Run Web Server, AD domain Server, HA Proxy load balancer applications, databases, & other Linux or Windows VMs
- Manage all VMs from a single management interface
- Compute & storage in a single solution-no latency or delay

Hot Tier Storage

Store hot tier on high performance flash drives (SSDs) to improve speed and support high IOPS

Sync/Async Replication

Configure real-time or scheduled replication for VMs and setup on-site, offsite, or cloud based target repositories

Automated Tiering

Setup high performance & cost effective tiers – simplify management by automating transfers between them

Immutable Snapshots

Set up read-only volume snapshots to safeguard essential VMs or the entire virtual environment.

Advanced Encryption

Protect critical volumes with hardware enabled volume encryption technology

Flash Cache

Enhance IOPS by leveraging with high performance flash drives (SSDs) for frontend SSD

Hardware Specifications

SDDC Systems Hardware Features:

Chassis		
Model Chassis	SDDC-B410	SDDC-B420
Processor Blade	4 blade servers - Up to 10 hot-swappable full-height single-width 1-socket blade servers	4 blade servers - Up to 10 hot-swappable full-height single-width 2-socket blade servers
Power Supplies	4 PS modules - Up to 8 hot-plug 2200W Titanium power supplies	4 PS modules - Up to 8 hot-plug 3000W Titanium power supplies
Networking	2 Ethernet 25G/100G Switch modules – Up to 4x modules	
Management Module	2 CMMs for remote system management with software	
Cooling Design	4 Cooling fans - Up to 8 cooling fans in PWS modules	
Dimensions (HxWxD)	10.5" x 17.6" x 32"	
Blade servers		
Nodes Type	Single Socket 4th Generation Intel® Xeon	Dual Socket 4th Generation Intel® Xeon
CPU Type	Intel® Xeon® Processor 16-Core 2.5GHz	2 x Intel® Xeon® Processor 16-Core 2.5GHz
Operating System	Microsoft Windows Server 2022 Datacenter	
Memory	Maximum Capacity 16 DIMM Slots	Maximum Capacity 32 DIMM Slots
	8 x 64GB 4800MHz DDR5 ECC	16 x 32GB 4800MHz DDR5 ECC
Drive Bays / Storage	2 x 960GB SATA 6.0Gb/s Solid State Drive for OS	1 x 960GB SATA 6.0Gb/s Solid State Drive for OS
	3 x 3.84TB M.2 PCIe 4.0 x4 NVMe Solid State Drive (Read Speed: 4,500 MB/s; Wirte Speed: 1,750 MB/s)	2 x 3.84TBU.2 PCIe 4.0 x4 NVMe Solid State Drive (Read Speed: 6,900 MB/s; Wirte Speed: 4,100 MB/s)
Input / Output	TPM 2.0 Header	TPM 2.0 Header
I/O Modules - Networking	Dual-Port 25-Gigabit Ethernet via mezzanine card	Dual-Port 25-Gigabit Ethernet via mezzanine card
Expansion Slots	1 PCIe Gen5 x16 slot, 1 PCIe Gen5 x8 slot	-

Ethernet 25G/100G Switch modules	
General Specifications	20x 25G Ethernet downlink (backward compatible to 20x10G) 4x 100G/40G Ethernet uplinks, each can split into 4x 25G or 4x 10G uplinks with optional fan-out cables 1x Gigabit Ethernet uplink 1 console port
Switching Capacity	1802Gbps
Physical Layer Features	100G/40G optical/copper QSFP28 Gigabit Ethernet copper RJ45
Layer 2 Features	4K VLANs Spanning Tree Protocol (802.1D) Rapid Spanning Tree Protocol (802.1w) IEEE 802.1Q VLANs/ port-based VLANs Multiple Spanning Tree Protocol (802.1s) Jumbo frames up to 9KB IEEE 802.1AX LAG IEEE 802.3ac VLAN tagging IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
Advanced Layer 2 Features	Storm control Flow control Port mirroring Uplink Failure Detection (UFD) MLAG RDMA over Converged Ethernet (RoCE)
Security Features	Switch access password protection RADIUS and TACACS+ Authentication Access Control Lists SSH, SSL Encryption
System Management	Industry Standard CLI Web-based management interface – HTTP/HTTPS Syslog SSH SNMP v1/v2/v3 NTP Content-sensitive "Help" Auto Command completion TFTP Client RESTCONF
Multicast	IGMP Snooping
Automation	Zero Touch Provisioning