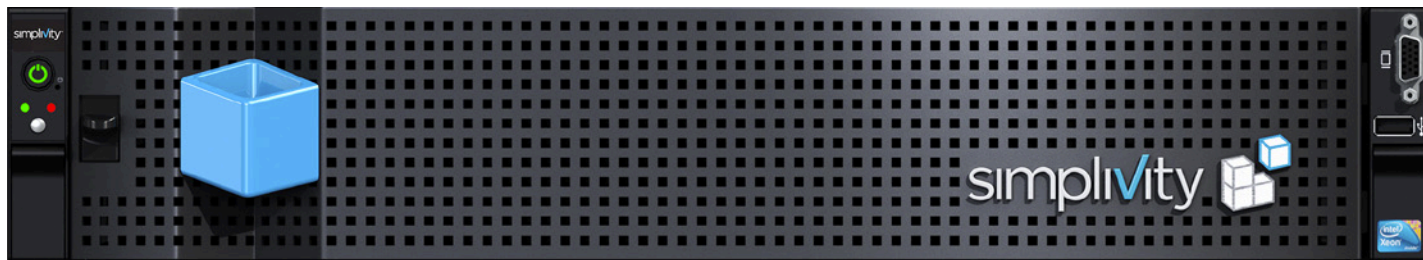# SimpliVity OmniCube

OmniCube: Changing the Game

SimpliVity OmniCube is the industry's first and only globally-federated hyperconverged infrastructure solution. Designed and optimized for modern virtual environments, OmniCube is a compact, scalable 2U rack-mounted building block that delivers server, storage, and storage networking services. It also delivers a complete set of advanced functionality that enables dramatic improvements to the efficiency, management, protection, and performance of virtualized workloads – all at a fraction of the cost and complexity of today's traditional infrastructure stack.

TCO Savings

By assimilating eight to twelve core data center functions, including the hypervisor, compute, storage, storage network switching, backup, replication, cloud gateway, caching, WAN optimization, real-time deduplication, and more, OmniCube delivers the performance, reliability, availability, security, efficiency, backup, and disaster recovery that enterprises expect, in a fully integrated, easy-to-deploy system. Furthermore, OmniCube consolidates these capabilities into a single x86 building block that scales out with additional nodes, resulting in up to threefold TCO savings.

Cloud Economics with Enterprise Capabilities

Enterprises today seek the agility, elasticity, and affordability promised by cloud computing. However, IT organizations also want the performance, reliability, and resiliency of on-premises infrastructure. OmniCube delivers both. Independent studies show that running virtual machines on on-premises SimpliVity OmniCube hyperconverged infrastructure is 22% to 49% less expensive than running them in a comparable Amazon Web Services environment, when considering total costs over a three-year period.

OmniStack: Attacking Complexity at the Source

Today's infrastructure complexity problem is caused by antiquated data architectures not suited for modern virtualized and cloud-integrated applications. SimpliVity OmniCube is powered by the OmniStack Virtual Controller, and the OmniStack Accelerator Card. OmniStack's enabling technology, the OmniStack Data Virtualization Platform, delivers three breakthrough innovations:

OmniCube Overview

Fully Integrated System: Combines x86 resources, storage, and storage networking in a single hyperconverged system. Simplifies management, and delivers greater cost efficiency and agility with increased visibility and control.

Intel Xeon x86 Processor Product Families: Supports powerful, dual CPU x86 configurations. Delivers an outstanding combination of performance, flexibility, and efficiency.

Performance: Provides predictable and linear performance at near-wire speeds with reduced latency. Hardware-assisted inline deduplication, compression, and optimization minimize IO and network traffic, improving performance while delivering greater storage and bandwidth efficiency.

Scale In and Scale Out: Easily expand or shrink OmniCube configurations as your needs change. Each node supports a large number of fully protected VMs, with the networked collection of nodes at both local and remote sites managed as a single entity.

VM-Centricity and Mobility: Enables all actions, policies, and management at the VM level. Global unified management and integration with established administrative systems streamline operations and improve IT agility.

Data-at-Rest Encryption: Optional self-encrypting drives on the OmniCube CN-3400 prevent unauthorized access to confidential data.

1. **Accelerated Data Efficiency:** On average, SimpliVity customers achieve 40:1 data efficiency while simultaneously increasing application performance. Using OmniStack, OmniCube deduplicates, compresses, and optimizes all data inline, in real time, at inception, once and forever across all stages of the data lifecycle, globally.

2. **Built-in Data Protection:** OmniCube has built-in highly efficient local and remote backup, delivering operational and disaster recovery. This enables full logical backups in just seconds, as well as RTOs of seconds to minutes and RPOs of minutes.

3. **Global Unified Management:** Manage data centers at the VM level globally, rather than at the LUN or share level—all from a single interface. The underlying hardware is uniquely abstracted from the hypervisor, providing VM-centric management and mobility of all data, including backups, moves, and clones.

OmniCube Models

A wide variety of OmniCube models are available to support a broad range of environments and use cases.

Specifications	SimpliVity OmniCube			
	CN-1200	CN-2400	CN-3400	CN-5400
Targeted Use Case	Remote Office, Branch Office (ROBO) sites with up to 20 Virtual Machines. All workloads.	All workloads in small to medium environments, ROBO, virtual desktop infrastructure (VDI)	Majority of workloads across a wide range of environments, in small, medium and large enterprises.	Ultra high-performance application workloads for enterprises and cloud providers.
Configuration	2 x 400GB SSD 4 x 1 TB 7.2K HDD	2 x 400GB SSD 8 x 1 TB 7.2K HDD	4 x 400GB SSD[1] 20 x 1 TB 7.2K HDD[1]	4 x 400GB SSD 20 x 1.2 TB 10K HDD
Effective Capacity	2 – 4TB[2]	5– 10TB[2]	18 – 36TB[2]	20 – 40TB[2]
CPU	Single Intel E5-2650v2 8 Cores	Single or Dual Intel E5-2600v3 8– 28 Cores	Single or Dual Intel E5-2600v3 8– 28 Cores	Single or Dual Intel E5-2600v3 8– 28 Cores
RAM Usable Capacity	50– 82 GB[3]	71–327 GB Single CPU 71–1443 GB Dual CPU[3]	98–284 GB Single CPU 156–1400 GB Dual CPU[3]	92–284 GB Single CPU 284–1400 GB Dual CPU[3]
Network Connections	2 x 10 Gbe (SFP+) & 2 x 1 Gbe (RJ45)	2 x 10 Gbe (SFP+) & 2 x 1 Gbe (RJ45); Plus up to 3 for Dual CPU: 2 x 10 Gbe (SFP+), 2 x 1 Gbe (RJ45) or 4 x 1 Gbe (RJ45)[4]	2 x 10 Gbe (SFP+) & 2 x 1 Gbe (RJ45); Plus up to 3 for Dual CPU: 2 x 10 Gbe (SFP+), 2 x 1 Gbe (RJ45) or 4 x 1 Gbe (RJ45)[4]	2 x 10 Gbe (SFP+) & 2 x 1 Gbe (RJ45); Plus up to 3 for Dual CPU: 2 x 10 Gbe (SFP+), 2 x 1 Gbe (RJ45) or 4 x 1 Gbe (RJ45)[4]
Physical Dimensions	3.44"H x 17.5"W x 28.5"D (30.5"with bezel)	3.44"H x 17.5"W x 29.75"D (31.5"with bezel)	3.44"H x 17.5"W x 29.75"D (31.5"with bezel)	3.44"H x 17.5"W x 29.75"D (31.5"with bezel)
Weight	65 LBs (29.5 kg)	65 LBs (29.5 kg)	71.5 LBs (32.4 kg)	71.5 LBs (32.4 kg)
Power Supply	Dual 750W 100/240VAC @ 50/60HZ (auto-sensing)	Dual 1100W 100/240VAC @ 50/60HZ (auto-sensing)	Dual 1100W 100/240VAC @ 50/60HZ (auto-sensing)	Dual 1100W 100/240VAC @ 50/60HZ (auto-sensing)

[1] Supports data-at-rest encryption. Models with self-encrypting drives available.
[2] Effective capacity varies by environment, and is a function of realized deduplication and compression rates. The capacities mentioned above offer a conservative range based on compression and deduplication rates found in standard, primary storage use cases.
[3] Usable RAM represents estimated memory resources available to virtual applications.
[4] For dual CPU models, three additional slots are available for any combination of these NICs - 2 x 10 Gbe (SFP+), 2 x 1 Gbe (RJ45) or 4 x 1 Gbe (RJ45).

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