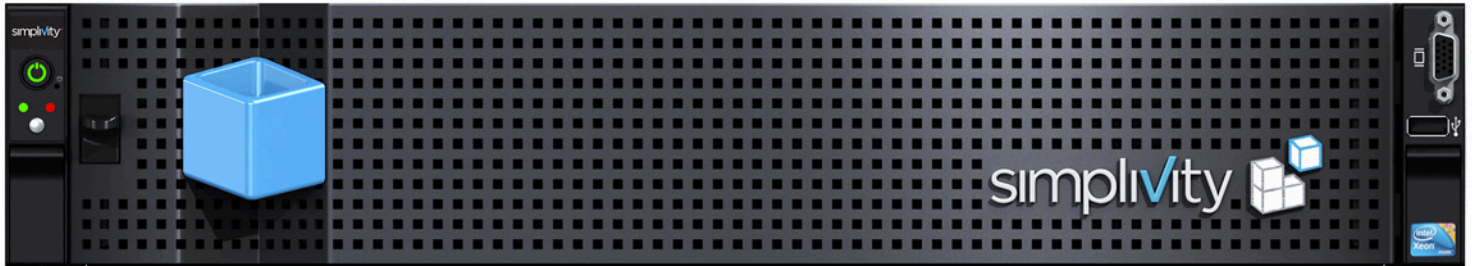# SimpliVity OmniCube™

OmniCube: Changing the Game

SimpliVity's OmniCube is the industry's first and only globally-federated and hyperconverged infrastructure solution. OmniCube converges all IT infrastructure below the hypervisor into 2U building blocks on enterprise-grade servers. The solution assimilates eight to twelve core data center functions including the hypervisor, compute, storage, network switching, backup, replication, cloud gateway, caching, WAN optimization, real-time deduplication, and more.

Cloud Economics with Enterprise Capabilities and TCO Savings

With 3x TCO savings, OmniCube delivers the best of both worlds - enterprise-class performance, protection and resiliency that enterprises require with cloud economics businesses demand - for single-site businesses to large-scale multi-site Global 2000 enterprises.

The Technology: Attacking Complexity at the Source

Today's infrastructure complexity problem is caused by an antiquated data architecture not suited for modern virtualized and cloud-integrated applications. SimpliVity's data architecture consists of the OmniStack Data Virtualization Platform and OmniStack Accelerator Card. SimpliVity's data architecture is a globally-aware file system with data optimization techniques that enables a single shared compute and storage resource pool across multiple sites, and provides highly-efficient data storage, management, and mobility. It abstracts data from its underlying hardware, shifting policies and management from infrastructure components to the application workload/virtual machine level. The OmniStack Accelerator Card is a purpose-built PCIe card that offloads global inline deduplication, compression, and optimization processes to ensure primary CPU resources are available to serve business applications.

Features and Benefits

- **Fully Integrated System:** Combines x86 resources, networking, and storage access to assimilate all IT infrastructure and services below the hypervisor.

- **10GB Unified Network Fabric:** Low-latency, lossless, wire-once deployment means fewer interface cards, cables, and ports to maintain.

- **Intel Xeon x86 Processor Product Families:** Powerful, dual CPU x86 configuration availability delivers an outstanding combination of performance, flexibility, and efficiency gains.

- **TCO Reduction:** Eliminate the need to purchase multiple discrete components, optimize storage capacity with 40:1 data efficiency, and prevent over-provisioning for performance and capacity with on-demand expansion.

- **Efficiency and Agility:** Streamline operations with VM-centric management and mobility, and speed time to deploy infrastructure for new workloads.

- **Mitigate Risk:** Significantly improve RPOs and RTOs, reduce storage and   network requirements   for data protection with VM-centric backup and WAN-optimized replication for DR.

OmniStack Data Virtualization Platform delivers three breakthrough innovations:

1. **Accelerated Data Efficiency:** On average, SimpliVity customers achieve 40:1 data efficiency while simultaneously increasing application performance. OmniStack 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:** With OmniStack, data protection is built in and ultra efficient. OmniStack natively includes policy-based VM-centric backup and WAN-optimized replication for disaster recovery, reducing backup and restore times from hours to minutes.

3. **Global Unified Management:** OmniStack provides policy-based VM-centric management and mobility to improve IT agility for single and multi-site deployments of all sizes. Administrators are no longer required to manage LUNs and volumes; instead, they can manage all resources and workloads centrally, using familiar interfaces, such as VMware vCenter, VMware vRealize Automation, and OpenStack.

OmniCube Models

The flexible architecture of the OmniStack Data Virtualization Platform allows SimpliVity to offer a range of OmniCube models that apply to 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 sites with up to 20 Virtual Machines. All workloads.	All workloads in small to medium environments, remote office /branch office (ROBO)	Majority of workloads across a wide range of environments from smallest IT organizations to large Enterprise	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 20 x 1 TB 7.2K RPM HDD	4 x 400GB SSD 20 x 1.2 TB 10K RPM HDD
Effective Capacity	2–4TB*	5–10TB*	18–36TB*	21–43TB*
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**	71–327 GB Single CPU 71–1443 GB Dual CPU**	92–284 GB Single CPU 284-1400 GB Dual CPU**	92–284 GB Single CPU 284-1400 GB Dual CPU**
Network Connections	2 x 10 GbE (SFP+), 2 x 1 GbE (RJ45)	2 x 10 GbE (SFP+), 2 x 1 GbE (RJ45) plus either 2 x 10GbE (SFP+) and/or 2 x 1GbE (RJ45)	2 x 10 GbE (SFP+) and 2 x 1 GbE (RJ45) plus either 2 x 10GbE (SFP+) and/or 2 x 1GbE (RJ45)	2 x 10 GbE (SFP+) and 2 x 1 GbE (RJ45) plus either 2 x 10GbE (SFP+) and/or 2 x 1GbE (RJ45)
Physical Dimensions	3.43"H x 17.5"W x 28.5"D (30.5"with bezel)	3.43"H x 17.5"W x 28.5"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 (32.4 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)

* Effective capacity varies by environment, and is a function of the 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.
** RAM usable capacity represents estimated memory resources available to virtual applications.

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