

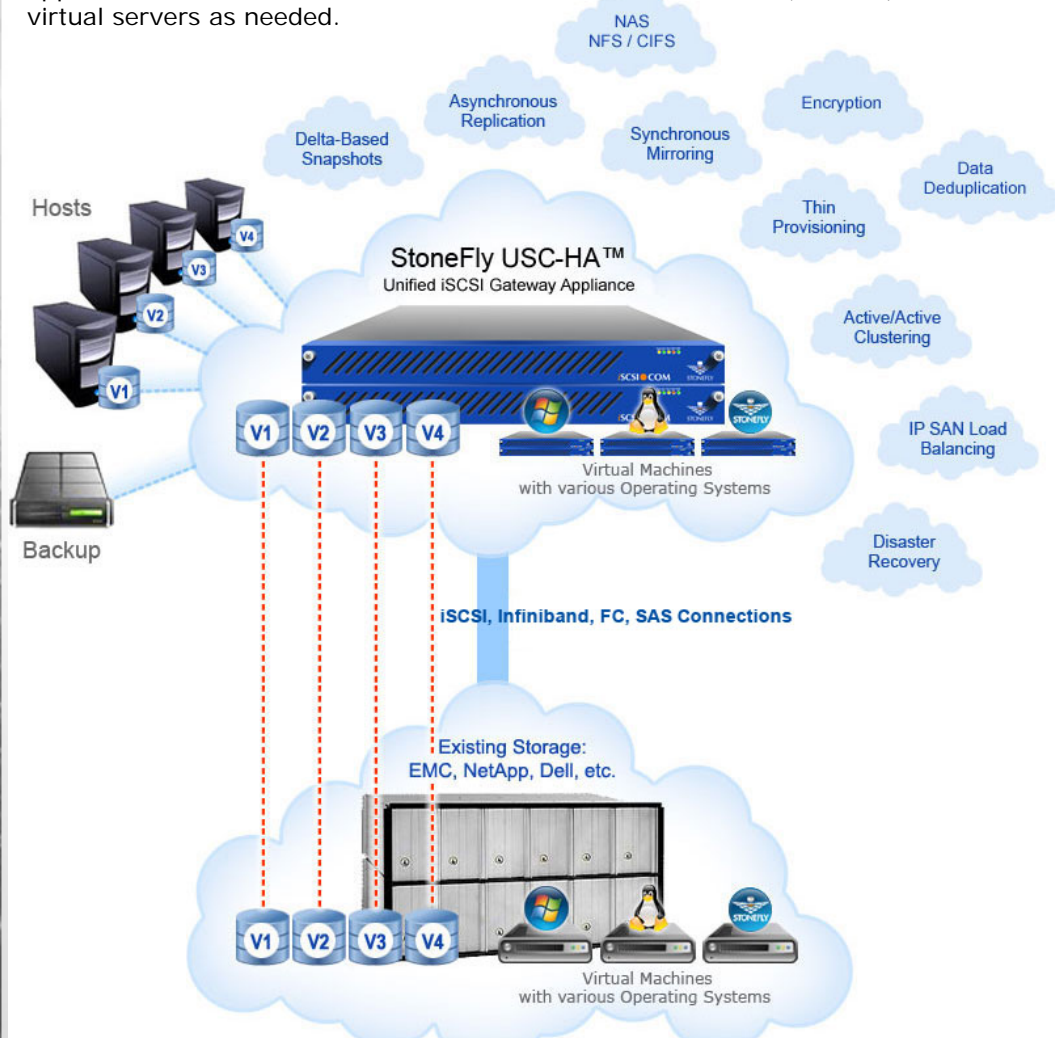


StoneFly USC-HA™ SAN Cluster Gateway "Unified Storage Concentrator" Appliance

The **StoneFly USC-HA™ Cluster "Unified Storage Concentrator" High-Availability SAN Gateway Appliance** allows businesses to easily convert their existing Fibre Channel, SAS, Infiniband, or iSCSI storage (EMC, NetApp, Dell, etc.) into unified iSCSI, Fibre Channel SAN or NAS storage. Once storage volumes have been provisioned by the **USC-HA** appliance, they can enjoy StoneFly's numerous advanced data storage management features.

Built-in features of the **USC-HA** include delta-based snapshots with mountable read-write snapshot volumes, real-time synchronous mirroring, thin provisioning with space reclamation, and active-active clustering services with host and IP SAN load balancing with seamless failover and fallback operations. Optional upgrades include FC SAN target, volume encryption, data deduplication, asynchronous replication, NAS volume support for CIFS/SMB and NFS protocols, and VSS support.

The **USC-HA SAN Cluster Gateway** is an ideal hyper-converged solution to consolidate all of your server and storage systems into one easy to manage, fully redundant, highly available modular appliance. Use of virtualized operating systems allows for complete hardware utilization and considerable reduction in power/cooling costs. **USC-HA** flexibility replaces the "fixed hardware model" of the past with on-demand resource allocation (such as CPU, memory, storage, etc.) based on your application needs. **USC-HA** comes with a Virtual SAN Cluster (SCVM™) and the ability to create additional virtual storage or virtual servers as needed.



1. Assign or provision all or part of your existing storage (EMC, NetApp, Dell, etc.) through your existing or preferred available interface (iSCSI, FC, Infiniband, SAS). From this storage pool you can create new volumes for all of your hosts. These new volumes are shown in the diagram as V1, V2, V3 and V4.
2. These new volumes (V1 - V4) are now part of StoneFly storage and can be encrypted, mirrored, thin provisioned, deduplicated, snapshotted, replicated, etc.
3. Hosts can now enjoy volumes V1 - V4 through StoneFly iSCSI (or optional FC SAN) and enjoy all of its features. You have turned a simple volume into a managed volume and saved a lot of money!
4. Additional Virtual Machines (Windows, Linux, StoneFly SCVM, etc.) that are VMware compatible can easily be installed on the USC-HA SAN Gateway Cluster Appliance to further reduce hardware costs and datacenter overhead.

USC-HA SAN Cluster Gateway Appliance Series Key Features

StoneFly SCVM™ 8.0 Virtual SAN Storage Appliance on Each Cluster Node

- o Logical Volume Creation and Patented Advanced Storage Virtualization Services
- o 200 iSCSI Volumes Supported
- o 1022 Concurrent Host iSCSI Sessions
- o iSCSI Port Teaming, Failover and Load-Balancing
- o Volume-Level Access Control and Dynamic Volume Management
- o Support for iSCSI, SNMP Traps, UPS, Nagios, RAID Monitoring, Call Home
- o System-Wide Graphical Performance and Utilization Reporting
- o Advanced Report Management
- o Automated Online Volume / Dynamic Storage Expansion

StoneFly SCVM™ 8.0 Advanced Features Package on Each Cluster Node

- o StoneFly Active / Active Clustering Services with Host and SAN Load Balancing, Seamless Failover and Failback Operations
- o StoneFly Snapshot Services with 2520 Delta-Based Snapshots
- o Mountable Read-Write Snapshot Volumes
- o Snapshot Schedule Utility, Command Line Interface Utility
- o StoneFly Real-Time Synchronous Mirroring of SAN Volumes and Nodes (Campus Mirroring)
- o Multi-Site/Multi-Appliance Replication and Unified Central Management System
- o Thin Provisioning with Space Reclamation
- o Tiered Storage Architecture with Hardware & Software Support




StoneFly i7000vi-D Dual 1U, StoneFly i7100vi-D Dual 2U or StoneFly i7200vi-D Dual 3U Storage Concentrator Cluster

- o Choice of Space-Saving 1U, Low-Profile 2U, or Full-Height 3U
- o Hot-Swappable Cluster Nodes with Failover and Failback
- o Choice of Dual Hexa-Core (12 Cores), Dual Octa-Core (16 Cores), Dual Deca-Core (20 Cores), or Dual Dodeca-Core (24 Cores) Storage Virtualization Engines per Cluster Node
- o Up to 1TB Data Packet and Command Queuing Cache for SSPP® per Cluster Node (32GB Standard)
- o Two Hot-Swappable OS Drives Mirrored at RAID 1 with Cache Battery Backup in each Cluster Node
- o Supports 1Gb Copper, 10Gb RJ-45/CX4 Copper, SFP+, SR/LR Optical iSCSI Connections
- o One Gigabit Management Port per Cluster Node
- o Supports Infiniband, 3Gb SAS, 6Gb SAS, 4Gb FC and 8Gb FC External Storage Expansion Kits to Easily Convert Your Existing Storage Appliances into Advanced iSCSI Storage
- o IPMI v2.0 with KVM-Over-LAN
- o Integrated DVD+/-RW Optical Drive
- o Redundant 80-PLUS® Certified Hot-Swappable Power Supplies
- o VMware vSphere Essentials Kit
- o Operating Temperature: 10° to 35°C (50°F to 95°F)
- o Relative Humidity: 8 to 90%, Non-Condensing

Available Software Upgrade Options

- o Asynchronous Replication (One-to-Many & Many-to-One)
- o Hardware-Enabled Block Level AES 256 Volume Encryption
- o Data Deduplication for Optimized Storage Efficiency
- o NAS with Support for CIFS/SMB and NFS Protocols
- o Fibre Channel SAN Target (Bundled 4Gb/8Gb/16Gb FC HBAs)
- o VSS Agent Support

USC-HA SAN Cluster Gateway Models

Storage Concentrators	Interface	Storage Expansion	Form Factor / Dimensions
 <p>i7000vi-D Dual 1U SC</p>	<p><u>Standard:</u> 4 Gigabit RJ-45 Copper Ethernet & 4 10Gb SFP+ Connections per Cluster</p> <p><u>Optional:</u> Up to 20x1Gb or 20x10Gb (RJ45/CX4 Copper, SFP+, SR/LR Optical)*</p>	<p>Up to 3 Infiniband, Dual-Port 3Gb/6Gb SAS or 4Gb/8Gb FC Expansion Kits.*</p>	<p>2U 19" Rackmount Chassis 3.5" x 19" x 27.75" (89 x 485 x 705mm)</p>
 <p>i7100vi-D Dual 2U SC</p>	<p><u>Standard:</u> 4 Gigabit RJ-45 Copper Ethernet Connections per Cluster</p> <p><u>Optional:</u> Up to 52x1Gb or 52x10Gb (RJ45/CX4 Copper, SFP+, SR/LR Optical)*</p>	<p>Up to 7 Infiniband, Dual-Port 3Gb/6Gb SAS or 4Gb/8Gb FC Expansion Kits.*</p>	<p>4U 19" Rackmount Chassis 7" x 19" x 25.5" (178 x 485 x 648mm)</p>
 <p>i7200vi-D Dual 3U SC</p>	<p><u>Standard:</u> 4 Gigabit RJ-45 Copper Ethernet Connections per Cluster</p> <p><u>Optional:</u> Up to 52x1Gb or 52x10Gb (RJ45/CX4 Copper, SFP+, SR/LR Optical)*</p>	<p>Up to 7 Infiniband, Dual-Port 3Gb/6Gb SAS or 4Gb/8Gb FC Expansion Kits.*</p>	<p>6U 19" Rackmount Chassis 10.5" x 19" x 25.5" (267 x 485 x 648mm)</p>

* The USC-HA 2U Cluster supports up to 3 USC-HA SAS/FC/Infiniband External Storage Expansion Kits, 1Gb/10Gb Ethernet Kits, or combination thereof. The USC-HA 4U and 6U Clusters supports up to 7 USC-HA SAS/FC/Infiniband External Storage Expansion Kits, 1Gb/10Gb Ethernet Kits, or combination thereof.

StoneFly.com
www.StoneFly.com
www.iSCSI.com

Phone: 510.265.1616
 Fax: 510.265.1565
 Email: Sales@StoneFly.com

StoneFly, Inc.
 26250 Eden Landing Rd
 Hayward, CA 94545