

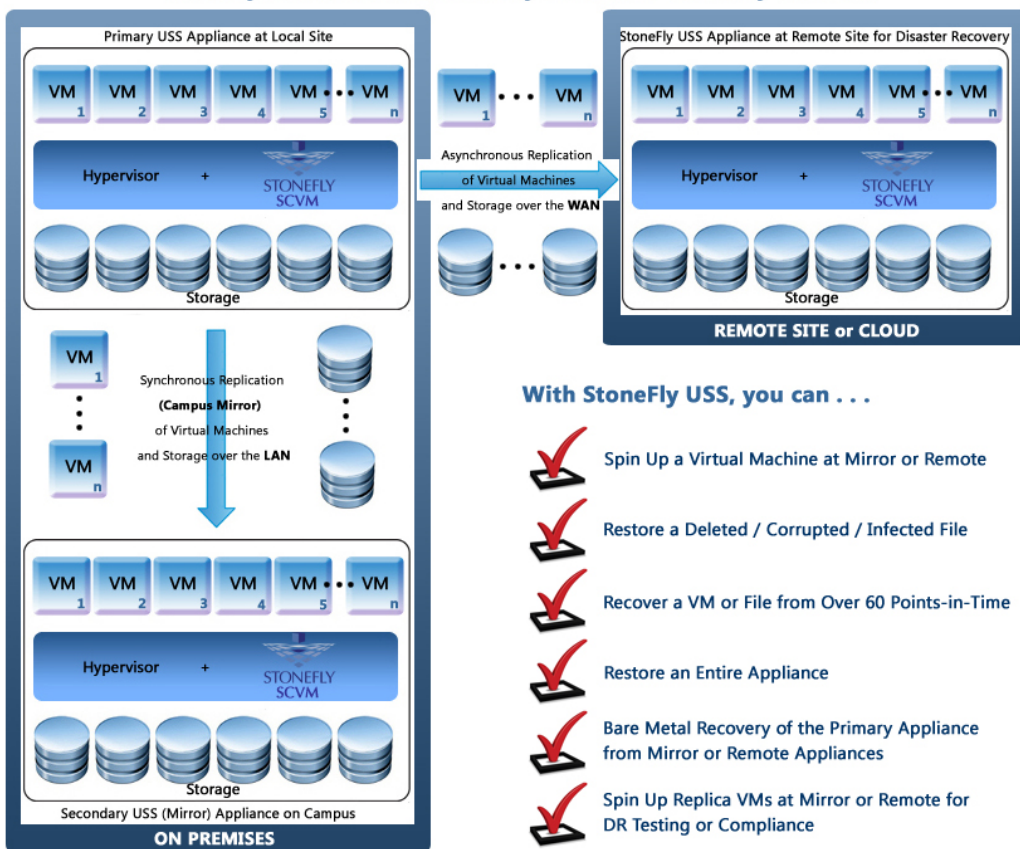


USS "Unified Storage & Server" Appliance

USS™ is the ideal hyper-converged infrastructure solution to consolidate all your server and storage systems into one easy to manage appliance. Use of virtualized operating systems allows for complete hardware utilization and considerable reduction in power/cooling costs. USS 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.

The USS appliance includes a Virtual IP SAN Storage Appliance (SCVM™) and the ability to create additional Virtual Storage or Servers as needed. By migrating your existing Windows and Linux physical servers to VMware-compatible Virtual Machines on the StoneFly USS appliance, you can greatly reduce your hardware footprint and run many more applications on much less hardware.

StoneFly USS Business Continuity & Disaster Recovery Solution



With StoneFly USS, you can . . .

-  Spin Up a Virtual Machine at Mirror or Remote
-  Restore a Deleted / Corrupted / Infected File
-  Recover a VM or File from Over 60 Points-in-Time
-  Restore an Entire Appliance
-  Bare Metal Recovery of the Primary Appliance from Mirror or Remote Appliances
-  Spin Up Replica VMs at Mirror or Remote for DR Testing or Compliance

Delta-Based Snapshots

Virtual Machines installed on the StoneFly USS along with their hyper-converged storage are protected by StoneFly's advanced delta-based snapshot technology, which allow you to recover a VM, file or volume from up to 63 points in time. Easily restore files that have been accidentally deleted, incorrectly modified, corrupted, or infected by a virus. Snapshot volumes are fully mountable and feature read and write capability if needed. Optional VSS agents ensure that your databases are properly quiesced for accurate snapshots.

Asynchronous Replication

For complete business continuity and disaster recovery, StoneFly's optional Asynchronous Replication to a remote site or to the cloud allows your Virtual Machines and data to be stored and protected off-site in case of disaster at the local site. As with the mirror appliance, you can spin up your Virtual Machines, replicate data back to the primary USS appliance (failback), or perform bare metal recoveries on replacements of the destroyed appliances.

Synchronous Replication (Campus Mirroring)

StoneFly's real-time Synchronous Mirroring of your Virtual Machines and hyper-converged storage to a secondary USS appliance (campus mirroring) on your premises over the Local Area Network (LAN) allows you to have a full and identical copy of everything on your primary USS. Delta-based snapshots on the secondary appliance maintain point in time recovery. To ensure that your recovery measures are fully-effective, you can easily spin up replica VMs on the mirror appliance for DR testing or compliance.

This secondary USS appliance not only allows you to do everything that you could already do on the primary appliance, but also allows you to spin up one or all of your VMs on the mirror appliance in the event that a VM on the primary appliance has failed or if the entire primary appliance is down. When the primary appliance is repaired, a bare metal recovery of the primary appliance can be performed from the secondary appliance to restore the mirror.

StoneFly USS "Unified Storage & Server" Appliance – Key Software & Hardware Features

StoneFly SCVM™ 8.0 Virtual Storage Appliance - SAN Management 64-Bit Storage Concentrator Virtual Machine

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

StoneFly SCVM™ 8.0 Advanced Features Package

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

Available Software Upgrade Options







- Asynchronous Replication (One-to-Many & Many-to-One)
- Data Deduplication with High Performance Index Engine
- Hardware-Enabled Block Level AES 256 Volume Encryption
- NAS - Support for CIFS/SMB and NFS Protocols
- Fibre Channel SAN Target (Bundled 4Gb/8Gb/16Gb FC HBA)
- VSS Agents Support

USS Series Hardware Features

- 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 Node
- Up to 1TB Data Packet and Command Queuing Cache for SSPP® (32GB Minimum)
- RAID 0, 1, 3, 5, 6, 10, 30, 50 and 60 w/ RAID Cache BBU
- 6Gb and 12Gb SAS Technology
- 12 to 24 Hot-Swappable Disk Drives per Chassis
- Choice of SATA, SAS, SSD or Tiered Storage
- Two Rear Hot-Swappable RAID Certified Drives Mirrored at RAID 1 for VMware and SCVM -Independent of Data Storage
- Scale Capacity with up to 10 Expansion Units per Node
- Dual-Port Copper Gigabit Ethernet
- Supports 1Gb Copper, 10Gb RJ-45/CX4 Copper, SFP+, SR/LR Optical (Up to 18x1Gb or 18x10Gb)
- VMware vSphere Essentials Kit
- Intelligent Platform Management Interface (IPMI) v2.0 with KVM-Over-LAN
- Integrated DVD+/-RW Optical Drive (USS-1602 Only)
- Redundant 80-PLUS® Certified Hot-Swappable Power
- Dynamic Storage Expansion
- Operating Temperature: 10° to 35°C (50°F to 95°F)
- Relative Humidity: 8 to 90%, Non-Condensing

Tiered Storage

SSD	SAS	SATA	SATA
SSD	SAS	SATA	SATA
SSD	SAS	SATA	SATA
SSD	SAS	SATA	SATA

StoneFly USS Series	Internal Drives	Storage Capacities per Chassis	Form Factor & Dimensions	Power Requirements	
USS Storage Appliances					
USS-1202 	Twelve 3.5" for Storage Plus Two 2.5" Mirrored OS Drives	6Gb SATA/SAS 7200RPM: Up to 96TB 6Gb SAS 10k RPM: Up to 21.6TB 6Gb SAS 15k RPM: Up to 7.2TB 6Gb SSD: Up to 9.6TB Supports up to 256 Drives (2 PB)	2U Rackmount 3.5" x 17.2" x 25.5" 89 x 437 x 648mm	Redundant 920W PS 80-PLUS® Platinum Dual Power Cords	
USS-1602 	Sixteen 3.5" for Storage Plus Two 2.5" Mirrored OS Drives	6Gb SATA/SAS 7200RPM: Up to 128TB 6Gb SAS 10k RPM: Up to 28.8TB 6Gb SAS 15k RPM: Up to 9.6TB 6Gb SSD: Up to 12.8TB Supports up to 256 Drives (2 PB)	3U Rackmount 5.2" x 17.2" x 25.5" 132 x 437 x 648mm	Redundant 920W PS 80-PLUS® Platinum Dual Power Cords	
USS-2402 	Twenty-Four 3.5" Plus Two 2.5" Mirrored OS Drives	6Gb SATA/SAS 7200RPM: Up to 192TB 6Gb SAS 10k RPM: Up to 43.2TB 6Gb SAS 15k RPM: Up to 14.4TB 6Gb SSD: Up to 19.2TB Supports up to 256 Drives (2 PB)	4U Rackmount 7" x 17.2" x 26" 178 x 437 x 660mm	Redundant 920W PS 80-PLUS® Platinum Dual Power Cords	
USS Expansion Units					
USS-1202E 	<ul style="list-style-type: none"> (12) 3.5" Drives 6Gb Host & Cascading Ports Redundant 920W 80-PLUS Platinum 2U Rackmount 	USS-1602E 	<ul style="list-style-type: none"> (16) 3.5" Drives 6Gb Host & Cascading Ports Redundant 920W 80-PLUS Platinum 3U Rackmount 	USS-2402E 	<ul style="list-style-type: none"> (24) 3.5" Drives 6Gb Host & Cascading Ports Redundant 920W 80-PLUS Platinum 4U Rackmount



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