MIGRATION GUIDE

CISCO HYPERFLEX

How to migrate from Cisco HyperFlex to StorMagic SvSAN

EXECUTIVE SUMMARY

The purpose of this document is to provide basic guidance for resellers and partners who are migrating customers from the Cisco HyperFlex hyperconverged solution, due to end-of-life.

TARGET AUDIENCE

Resellers and Partners – Sales and Technical

STORMAGIC SvSAN

SvSAN presents storage over block iSCSI that can be shared to the same hosts for hyperconverged or to any other iSCSI initiator hosts on the network. This enables a non-disruptive migration path with the VM migration tools included in all hypervisors.

The storage presented through SvSAN as block may not provide the same usable space as via HyperFlex due to deduplication/compression.

SvSAN provides synchronously mirrored storage across two nodes. The storage assigned to SvSAN can be hardware RAID protected, or individual disks passed up through an HBA and protected via software RAID 0, 1 or 10, provided by the VSA.

SvSAN can be run in 2-node, 3-node or 4-node infrastructures with compute nodes free to access the storage.

For more information on 2 versus 3 node, visit: https://support.stormagic.com/hc/en-gb/ articles/5809883891613-SvSAN-2x-node-vs-3xnode

MIGRATING TO A NEW HARDWARE/ SOFTWARE PLATFORM

Deploy the new solution of your hardware and hypervisor of choice with SvSAN and migrate the VMs to the new hardware using VMware vCenter or Hyper-V manager. This can be accomplished via compute and storage move operations or by sharing the storage to the existing hypervisor hosts.

- Visit stormagic.com/manual and search for "VMware" or "Hyper-V".
- Add the hosts to the target ACL.
- Add the storage to the hosts:
- https://stormagic.com/doc/svsan/6-3-P2/en/ Content/datastore-create-hv.htm

Once the virtual machine workloads are migrated, the old systems may be powered off and retired.

IN PLACE MIGRATION

SvSAN can present non-mirrored storage that can be converted to mirrored, to enable storage high availability. This enables an inplace migration in the steps in the following pages.

FURTHER HELP

If you require additional assistance in migrating from Cisco Hyperflex to StorMagic SvSAN, please contact presales@

stormagic.com

and the team will be happy to assist.

StorMagic

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Clearing an existing host of VM compute (see figures 1 to 2)

vMotion/Live migrate VMs to the other/another host in the cluster.

5 Virtual Machines -	Select a migration type	×
Migrate	Change the virtual machines' compute resource, storage, or both.	
1 Select a migration type	• Change compute resource only	
	Migrate the virtual machines to another host or cluster.	
2 Select a compute resource	○ Change storage only	
	Migrate the virtual machines' storage to a compatible datastore or datastore cluster.	
3 Select networks	○ Change both compute resource and storage	
	Migrate the virtual machines to a specific host or cluster and their storage to a specific datastore or datastore cluster	₽r.
4 Ready to complete	○ Cross vCenter Server export	
	Migrate the virtual machines to a vCenter Server not linked to the current SSO domain.	

Figure 1 - vMotion guests to one host to clear the other.

5 Virtual Machines - Migrate	Select a compute Select a cluster, host, vApp	e resource o or resource pool to run the virtua	al machines.		×
1 Select a migration type	Hosts Clusters Res	source Pools vApps			
2. Solact a compute resource	Quick Filter				
	Name	↑ State	Status	Cluster	
3 Select networks	💿 🚦 hx-edge-01.ts.st	ormagic.com Connected	🗸 Normal	[]] HX-Cluster	
	O 🗐 hx-edge-02.ts.st	tormagic.com Connected	V Normal	[]] HX-Cluster	
4 Ready to complete				2 it	ems
	Compatibility				
	✓ Compatibility checks s	ucceeded.			

Figure 2 - Select a compute resource to run the VMs.

Break the existing Cisco Hyperflex storage, ensuring the storage will stay live from the surviving Hyperflex storage controller VM.



Figure 3 - Storage Controller VM host 1 power off

Figure 4 - Storage Controller VM host 1 deletion

vSphere Client Q	Actions - stc1/WH-FCH2002V0K0 Power Guest OS Snapshots C Open Remote Console	> > >	stCtIVM-FCH2002 mmary Monitor Confi Guest OS	2VOK ^{gure}	(0 ▷ □ ঢ় ֎ ֎ ৫৫ : Permissions Datastores Ne Virtual Machine Details
Inx-edge-01.ts.s Inx-edge-02.ts.s Image: GuestVM1 Image: GuestVM2	Clone Fault Tolerance	>			Power Status Guest OS VMware Tools
 ♂ GuestVM3 ♂ GuestVM4 ♂ GuestVM5 	VM Policies Template Compatibility	> > >	Powered Off		DNS Name IP Addresses Encryption
🔠 stCtiVM-FCH2C	Export System Logs		LAUNCH REMOTE CONSOLE		۵
	Move to folder Rename Edit Notes Tags & Custom Attributes	>	PCI Devices		Related Objects
	Add Permission Alarms Remove from Inventory	>	(i) No PCI devices		Host hx-cluster hx-cluster hx-cluster m Networks
	Delete from Dia				VM Network Storage

4/1/

Deploy the StorMagic plug-in VM and register to vCenter (see figure 5)

Visit **stormagic.com/manual** and search for "Deploy StorMagic plug-in to vCenter". https://stormagic.com/doc/svsan/6-3-P2/en/Content/vSphere%20Plugin/Plugin_deploy_vsphere.htm



Figure 5 - SvSAN vCenter plug-in

Deploy a StorMagic VSA to the newly cleared host (see figures 6 to 8)

https://stormagic.com/doc/svsan/6-3-P2/en/Content/vsa-deploy-vs.htm

	Deployment					
1 Welcome	You can change the defau	It VSA hostname, domain name and datast	ore to install on. The StorMagic VSA will			
2 Host	consume 21 GB of disk spa	consume 21 GB of disk space from the selected datastore.				
3 License Agreement	VSA Hostname:	VSAhxedge01	-			
4 Deployment	VSA Domain Name:	ts.stormagic.com	-			
5 Storage						
6 Caching	Datastore:	104.37 GB Localdatastore1 ∨				
7 Networking						
8 Network Time Service						
9 Licensing			CANCEL BACK NEXT			

Figure 6 - SvSAN vCenter plug-in deployment wizard

Note that it may be required to clear off existing signatures left on the storage/disks to be managed by SvSAN, as it may not appear as available in the StorMagic plug-in. This can be completed by creating a VMFS datastore on the disk and deleting this to then RDM the storage to SvSAN. Alternatively using partedUtil via the command line.



NOTE: This is a destructive operation.

🛃 hx-edge-01.ts.:	storm	agic.com	- PuTTY	
[root@hx-edg total 713024	e-01 175	l:~] ls	-lh /vmfs	/devices/disks/
-rw		root	root	240.0G Oct 30 20:13 pag.6000c294dc5a41157190eae3e1d834a4
-rw		root	root	100.0M Oct 30 20:13 naa.6000c294dc5a41157190eae3e1d834a4:1
-rw		root	root	4.0G Oct 30 20:13 naa.6000c294dc5a41157190eae3e1d834a4:5
-rw		root.	root	4.0G Oct 30 20:13 naa.6000c294dc5a41157190eae3e1d834a4:6
-rw		root	root	119.9G Oct 30 20:13 naa.6000c294dc5a41157190eae3e1d834a4:7
-rw		root	root	112.0G Oct 30 20:13 naa.6000c294dc5a41157190eae3e1d834a4:8
-rw		root	root	100.0G Oct 30 20:13 naa.6000c29b203dbfe86a3bc58c0b276c70
-rw		root	root	100.0G Oct 30 20:13 naa.6000c29b203dbfe86a3bc58c0b276c70:1
lrwxrwxrwx				36 Oct 30 20:13 vml.020000000000000294dc5a41157190eae3e1d834a4566972747561 -> naa.6000c294dc5a41157190eae3e1d834a4
lrwxrwxrwx				38 Oct 30 20:13 vml.020000000000000294dc5a41157190eae3e1d834a4566972747561:1 -> naa.6000c294dc5a41157190eae3e1d834a4:1
lrwxrwxrwx				38 Oct 30 20:13 vml.02000000006000c294dc5a41157190eae3e1d834a4566972747561:5 -> naa.6000c294dc5a41157190eae3e1d834a4:5
lrwxrwxrwx				38 Oct 30 20:13 vml.02000000006000c294dc5a41157190eae3e1d834a4566972747561:6 -> naa.6000c294dc5a41157190eae3e1d834a4:6
lrwxrwxrwx				38 Oct 30 20:13 vml.02000000006000c294dc5a41157190eae3e1d834a4566972747561:7 -> naa.6000c294dc5a41157190eae3e1d834a4:7
lrwxrwxrwx				38 Oct 30 20:13 vml.02000000006000c294dc5a41157190eae3e1d834a4566972747561:8 -> naa.6000c294dc5a41157190eae3e1d834a4:8
lrwxrwxrwx				36 Oct 30 20:13 vml.02000000006000c29b203dbfe86a3bc58c0b276c70566972747561 -> naa.6000c29b203dbfe86a3bc58c0b276c70
lrwxrwxrwx		root	root	38 Oct 30 20:13 vml.02000000006000c29b203dbfe86a3bc58c0b276c70566972747561:1 -> naa.6000c29b203dbfe86a3bc58c0b276c70:1
[root@hx-edg	e-01	l:~] pa	rtedUtil m	<pre>klabel /vmfs/devices/disks/naa.6000c29b203dbfe86a3bc58c0b276c70 msdos</pre>
[root@hx-edg	e-01	l:~] ls	-lh /vmfs	/devices/disks/
total 608168	944			
-rw				240.0G Oct 30 20:13 naa.6000c294dc5a41157190eae3e1d834a4
-rw				100.0M Oct 30 20:13 naa.6000c294dc5a41157190eae3e1d834a4:1
-rw				4.0G Oct 30 20:13 naa.6000c294dc5a41157190eae3e1d834a4:5
-rw				4.0G Oct 30 20:13 naa.6000c294dc5a41157190eae3e1d834a4:6
-rw				119.9G Oct 30 20:13 naa.6000c294dc5a41157190eae3e1d834a4:7
-rw		root	root	112.0G Oct 30 20:13 naa.6000c294dc5a41157190eae3e1d834a4:8
-rw		root	root	100.0G Oct 30 20:13 naa.6000c29b203dbfe86a3bc58c0b276c70
lrwxrwxrwx		root	root	36 Oct 30 20:13 vml.0200000006000c294dc5a41157190eae3e1d834a4566972747561 -> naa.6000c294dc5a41157190eae3e1d834a4
lrwxrwxrwx		root	root	38 Oct 30 20:13 vml.0200000006000c294dc5a41157190eae3e1d834a4566972747561:1 -> naa.6000c294dc5a41157190eae3e1d834a4:1
lrwxrwxrwx		root	root	38 Oct 30 20:13 vml.02000000006000c294dc5a41157190eae3e1d834a4566972747561:5 -> naa.6000c294dc5a41157190eae3e1d834a4:5
lrwxrwxrwx		root	root	38 Oct 30 20:13 vml.02000000006000c294dc5a41157190eae3e1d834a4566972747561:6 -> naa.6000c294dc5a41157190eae3e1d834a4:6
lrwxrwxrwx		root	root	38 Oct 30 20:13 vml.0200000000000000294dc5a41157190eae3e1d834a4566972747561:7 -> naa.6000c294dc5a41157190eae3e1d834a4:7
lrwxrwxrwx		root	root	38 Oct 30 20:13 vml.02000000006000c294dc5a41157190eae3e1d834a4566972747561:8 -> naa.6000c294dc5a41157190eae3e1d834a4:8
1rwxrwxrwx	1	root	root	36 Oct 30 20:13 Vml.02000000006000c29b203dbfe86a3bc58c0b276c70566972747561 -> naa.6000c29b203dbfe86a3bc58c0b276c70
[[root@hx-edg	e-01	:~]		

Figure 7 - SSH to remove existing partition signatures

	Summary
1 Welcome	When you click 'Finish', the deploy VSA task will be queued. You can view progress in Recent Tasks. The VSA will
2 Host	be powered on when deployment is completed.
3 License Agreement	Host: ESXiHostname: hx-edge-01.ts.stormagic.com ESXiPassword: ***
4 Deployment	
5 Storage	Deployment: VSAHostname: VSAhxedge01.ts.stormagic.com
6 Caching	Destination Datastore: Localdatastore1
7 Networking	
8 Network Time Service	Storage:
9 Licensing	 Keep VSA on deployment failure Download PowerShell script
10 Password	
11 Summary	CANCEL BACK FINISH

Figure 8 - SvSAN VSA deployment confirmation

Create a non-mirrored datastore (see figures 9 to 11)

As per the following documentation select the StorMagic VSA and create a datastore sharing to the VMware ESXi hosts in the cluster.

Visit stormagic.com/manual and search for "Create non-mirrored datastore".

https://stormagic.com/doc/svsan/6-3-P2/en/Content/datastore-create-vs.htm

\equiv vSphere Client ${\sf Q}$ Search in all environments				C & Administrator@	VSPHERE.LOCAL ~
 VSphere Client Q Search In all environments P E Q P E Q P HX-bascenter HX-bascenter HX-cluster hx-edge-01.ts.stormagic.com hx-edge-02.ts.stormagic.com GuestVM1 GuestVM2 GuestVM4 GuestVM4	HX-Datacenter HX-Datacenter Summary Monitor Configur Alarm Definitions Scheduled Tasks Network Protocol Profiles StorMagic Plugin Stormagic Plugin	ACTIONS ure Permissions Hosts & Clusters VMs D rig Started Manage VSA3 Manage Storage What is the StorMagic VSA The Storage 1 Welcome The Sto 1 Welcome The Sto 1 Welcome Storage 3 Mirroring Basic 4 Caching 1 or 5 Sharing 1 or 6 Host Credentials 1 or 7 Summary	atastores Networks Updates Settings Create Datastore To create mirrored storage, select two VSAs. Datastore Name: SvSANDatastore Size: 99.98 Available Space: 99.98 GB @ Use all Make Spanned Make Encrypted	GE ~	/SPHERELOCAL V ©
		6.4.0.1	 Vsa ↑ VSAhxedge01.ts.stormagic.com 	▼ Free 99.98 GB CANCEL	BACK NEXT

Figure 9 - Datastore creation wizard

	Mirroring	
1 Welcome	Storage will be created using a single VSA, so it will not be mirrored.	
2 Create Datastore		
3 Mirroring		
4 Caching		
5 Sharing		
6 Host Credentials		
7 Summary		
	CANCEL BACK NEX	Т

Figure 10 - Non-mirrored storage creation message

Sharing this to both hypervisor hosts.

	Sharing	
1 Welcome	Select the hosts you want the datastore to be shared with.	
2 Create Datastore	Host	↑ ▼
3 Mirroring	hx-edge-01.ts.stormagic.com	
4 Caching	hx-edge-02.ts.stormagic.com	
5 Sharing		
6 Host Credentials		
7 Summary		

Figure 11 - Datastore creation wizard, hosts to access the storage

Migrate the VM workload virtual drives (see figures 12 to 13)

Through VMware vSphere Storage vMotion or other tools migrate the VM disks to the newly presented SvSAN storage.

5 Virtual Machines - Migrate	Select a migration type Change the virtual machines' compute resource, storage, or both.	×
1 Select a migration type	Change compute resource only Migrate the virtual machines to another host or cluster.	
2 Select storage	• Change storage only Migrate the virtual machines' storage to a compatible datastore or datastore cluster.	
3 Ready to complete	 Change both compute resource and storage Migrate the virtual machines to a specific host or cluster and their storage to a specific datastore or datastore cluster. Cross vCenter Server export Migrate the virtual machines to a vCenter Server not linked to the current SSO domain. 	



5 Virtual Machines - Migrate	Select a migration type	×
	Change the virtual machines compute resource, storage, or both.	
1 Select a migration type	Change compute resource only	
	Migrate the virtual machines to another host or cluster.	
2 Select a compute resource	Change storage only	
	Migrate the virtual machines' storage to a compatible datastore or datastore cluster.	
3 Select storage	Change both compute resource and storage	
	Migrate the virtual machines to a specific host or cluster and their storage to a specific datastore or datastore cluster.	
4 Select networks	Cross vCenter Server export	
5 Select vMotion priority	Migrate the virtual machines to a vCenter Server not linked to the current SSO domain.	
6 Ready to complete		

Figure 13 - VM storage migration – compute resource and storage