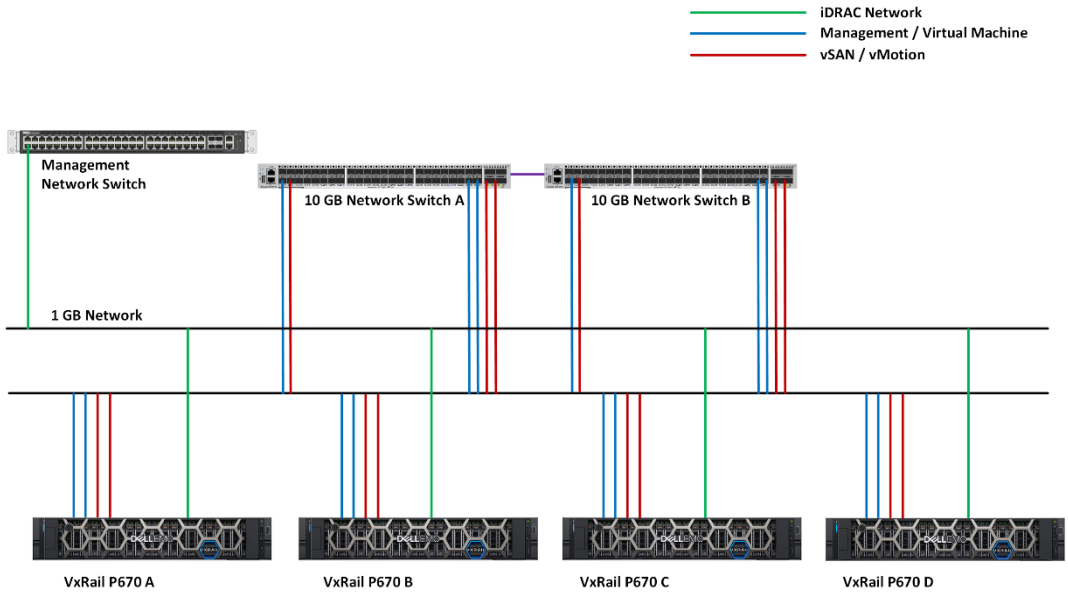
# Chapter 1: Overview of VxRail Appliance 7.x System

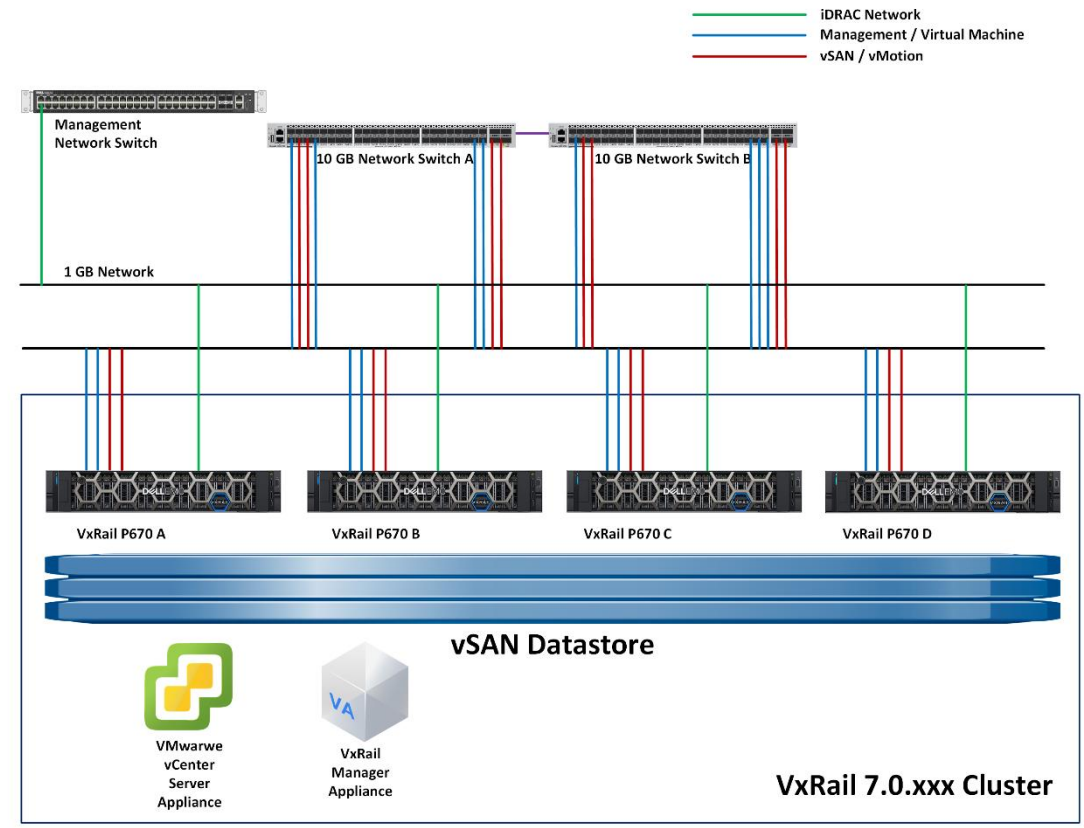




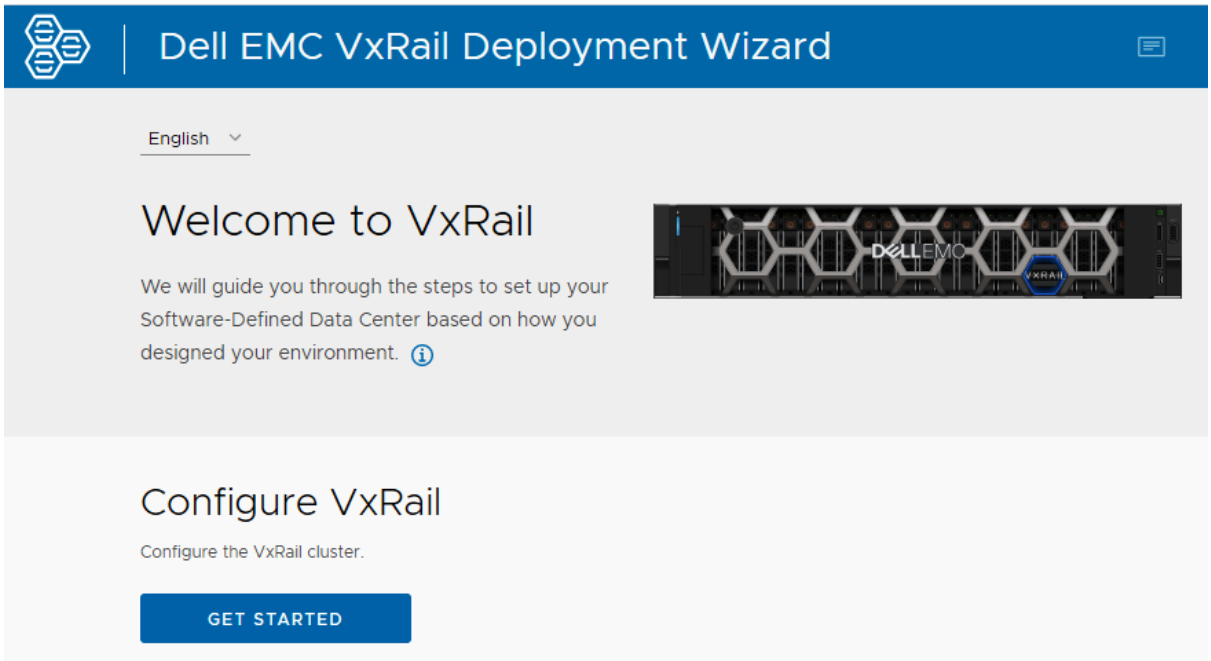


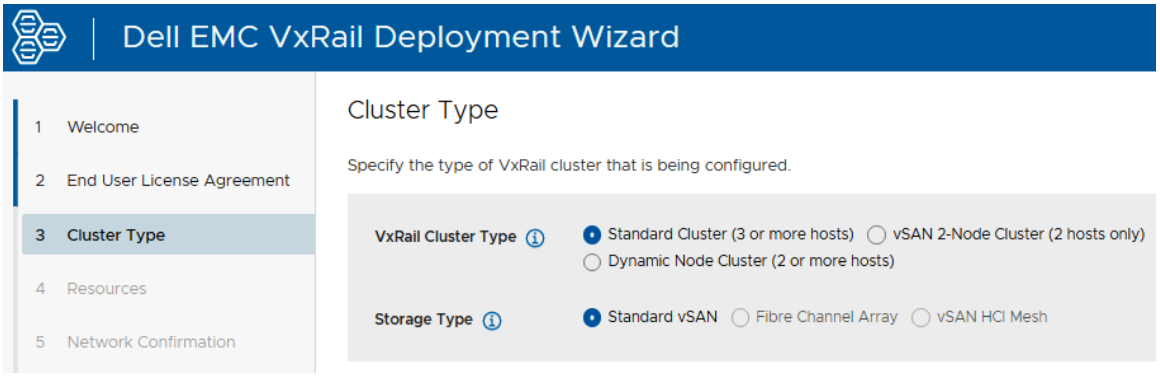


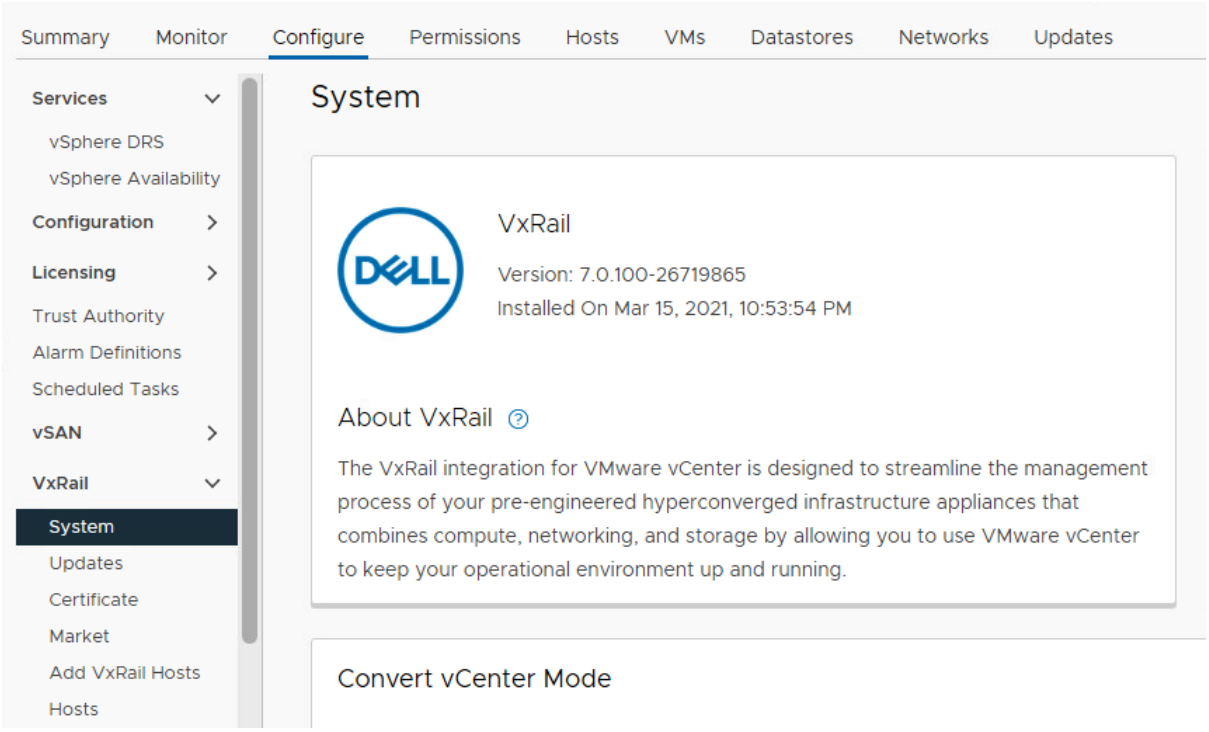

VxRail 7.0.xxx Environment

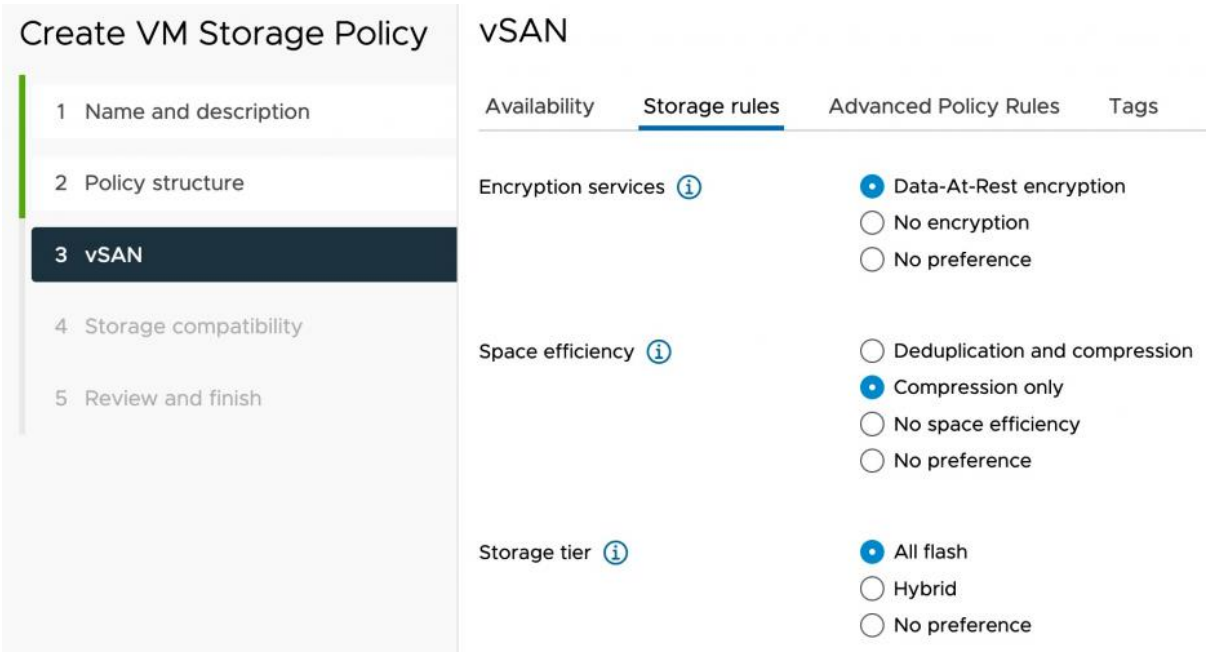


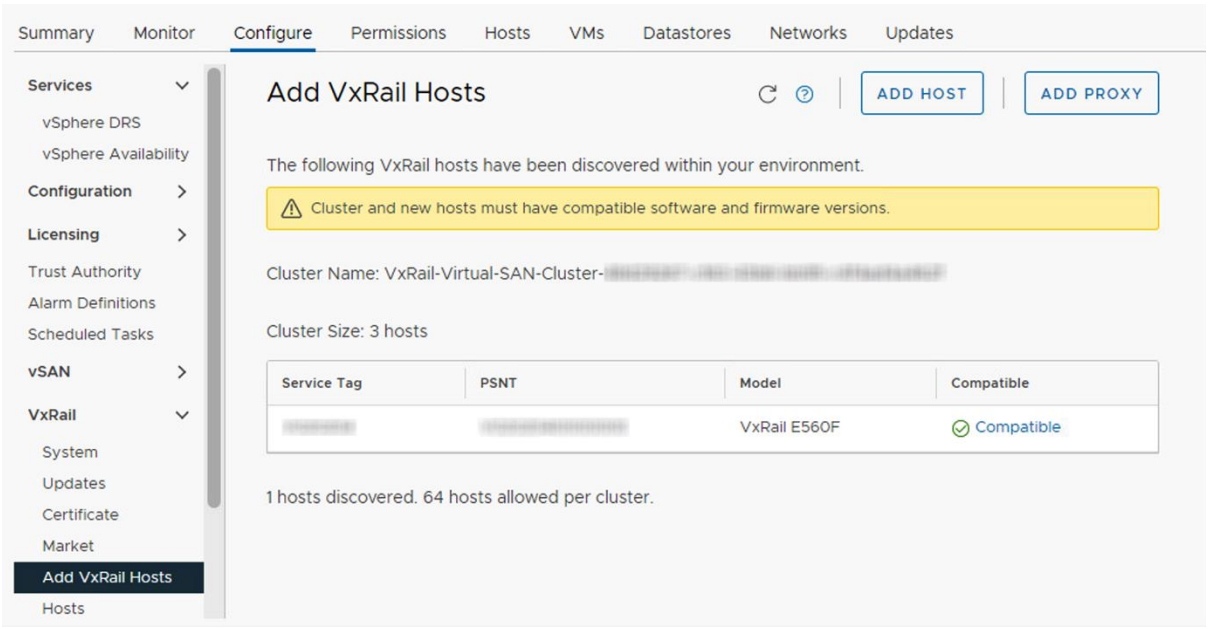

VxRail 7.0.xxx Environment




Dell EMC VxRail Deployment Wizard
1 Welcome
2 End User License Agreement
3 Cluster Type
4 Resources
5 Network Confirmation
Cluster Type
Specify the type of VxRail cluster that is being configured.
VxRail Cluster Type
Standard Cluster (3 or more hosts)
vSAN 2-Node Cluster (2 hosts only)
Dynamic Node Cluster (2 or more hosts)
Storage Type
Standard vSAN
Fibre Channel Array
vSAN HCI Mesh


Summary
Monitor
Configure
Permissions
Hosts
VMs
Datastores
Networks
Updates
Services
vSphere DRS
vSphere Availability
Configuration
Licensing
Trust Authority
Alarm Definitions
Scheduled Tasks
vSAN
VxRail
System
Updates
Certificate
Market
Add VxRail Hosts
Hosts
System
VxRail
Version: 7.0.100-26719865
Installed On Mar 15, 2021, 10:53:54 PM
About VxRail
The VxRail integration for VMware vCenter is designed to streamline the management process of your pre-engineered hyperconverged infrastructure appliances that combines compute, networking, and storage by allowing you to use VMware vCenter to keep your operational environment up and running.
Convert vCenter Mode


Create VM Storage Policy
1 Name and description
2 Policy structure
3 vSAN
4 Storage compatibility
5 Review and finish
vSAN
Availability
Storage rules
Advanced Policy Rules
Tags
Encryption services
Data-At-Rest encryption
No encryption
No preference
Space efficiency
Deduplication and compression
Compression only
No space efficiency
No preference
Storage tier
All flash
Hybrid
No preference


Summary
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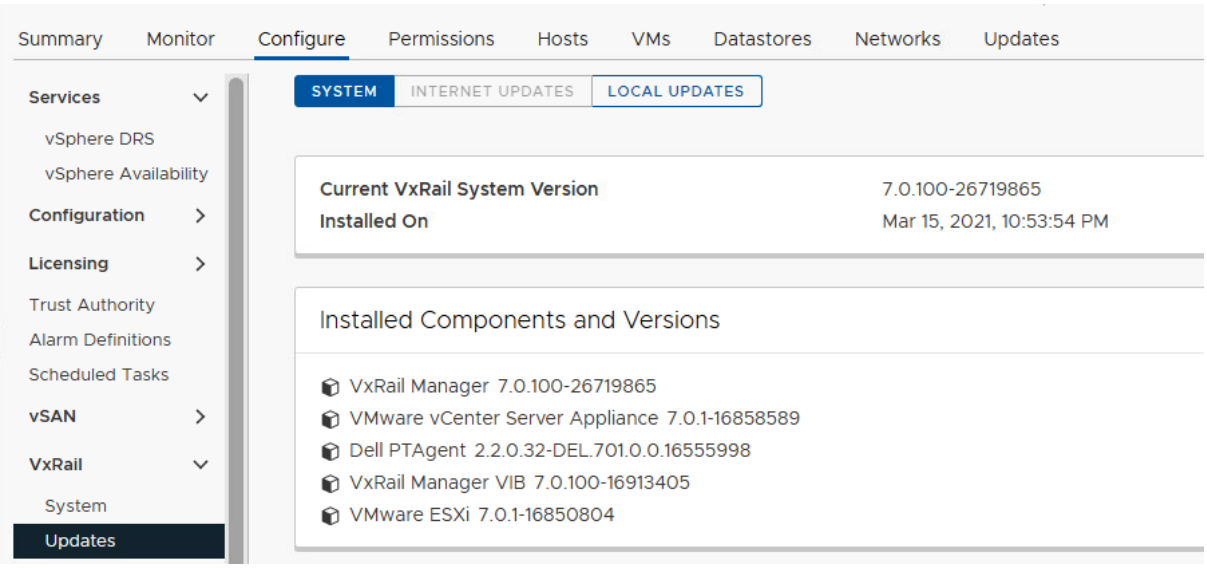
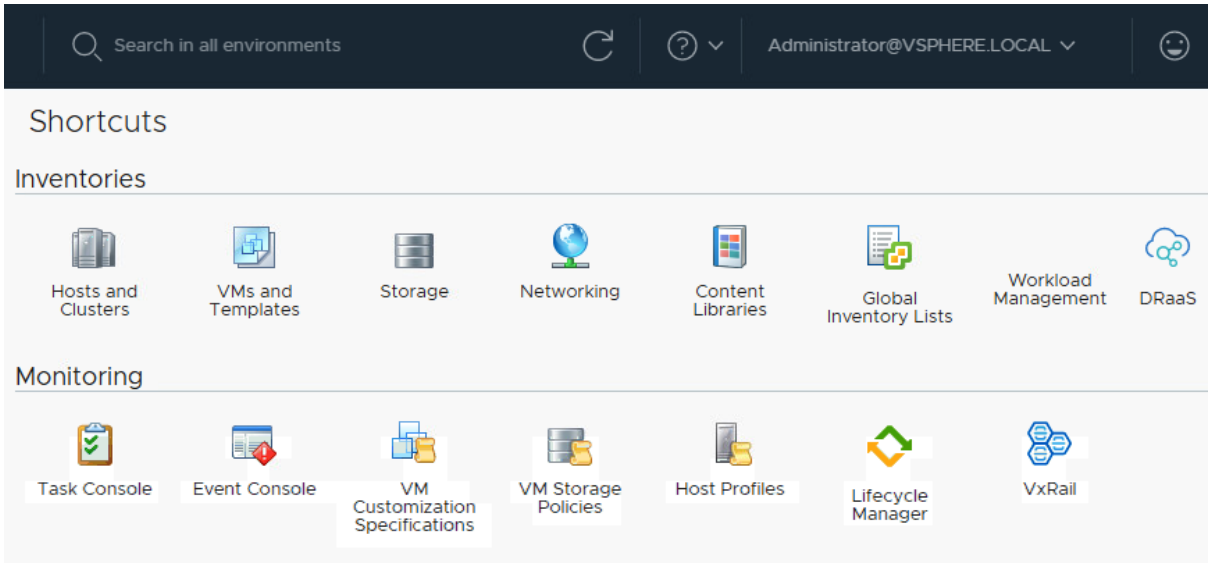
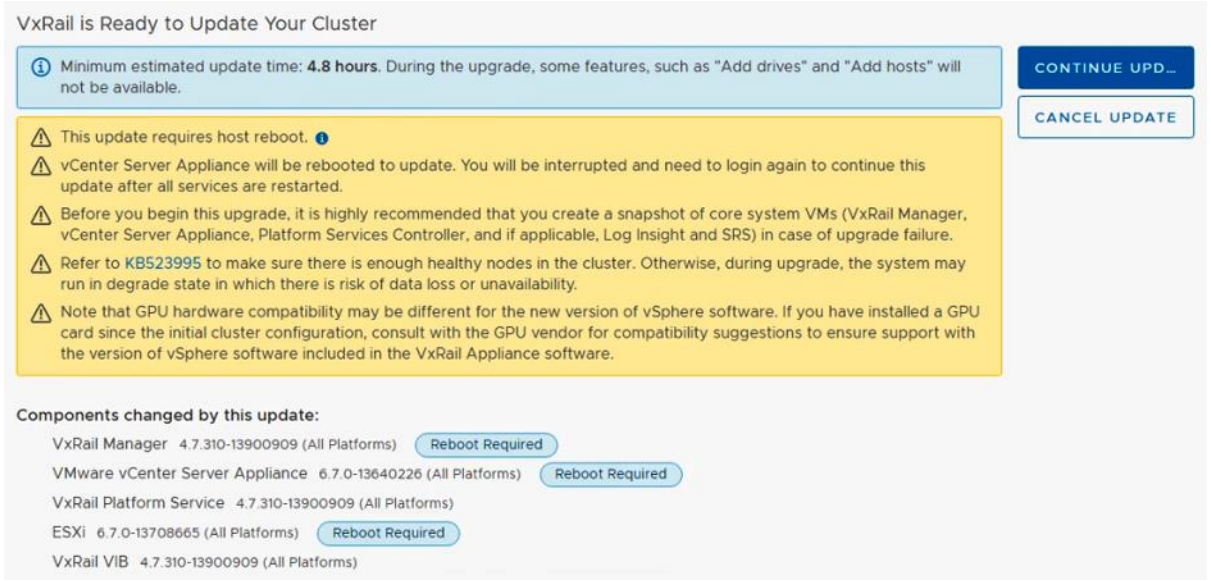
vSphere Availability
Configuration
Licensing
Trust Authority
Alarm Definitions
Scheduled Tasks
vSAN
VxRail
System
Updates
Certificate
Market
Add VxRail Hosts
Hosts
Add VxRail Hosts
ADD HOST
ADD PROXY
The following VxRail hosts have been discovered within your environment.
Cluster and new hosts must have compatible software and firmware versions.
Cluster Name: VxRail-Virtual-SAN-Cluster-
Cluster Size: 3 hosts
Service Tag
PSNT
Model
Compatible
VxRail E560F
Compatible
1 hosts discovered. 64 hosts allowed per cluster.

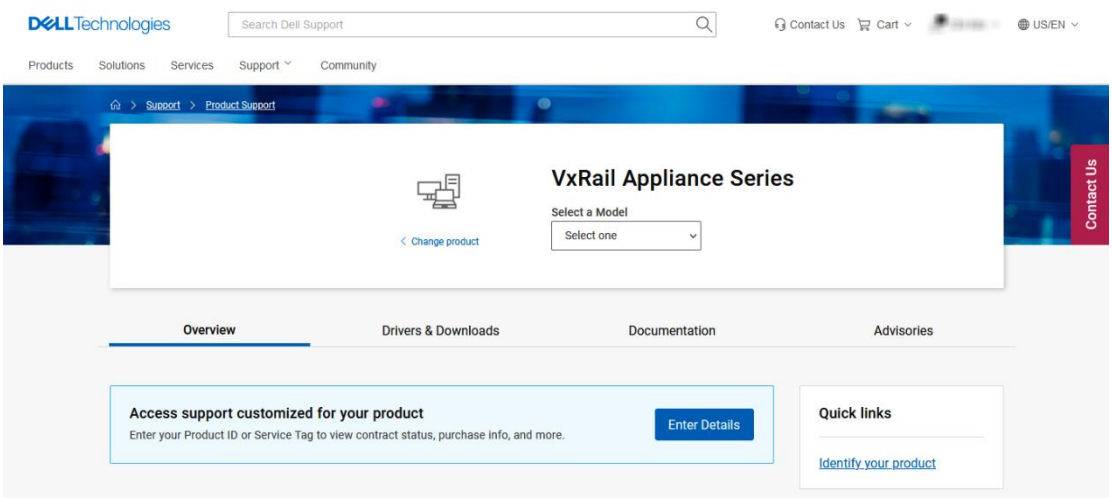



## Feature Comparison

| | Basic | ProSupport | ProSupport Plus |
|---|---|---|---|
| Remote technical support | 9x5 | 24x7 | 24x7 |
| Covered products | Hardware | Hardware Software | Hardware Software |
| Onsite hardware support | Next business day | Next business day or 4hr mission critical | Next business day or 4hr mission critical |
| 3rd party collaborative assistance | | ● | ● |
| Self-service case initiation and management | | ● | ● |
| Access to software updates | | ● | ● |
| Proactive storage health monitoring, predictive analytics and anomaly detection with CloudIQ and the CloudIQ mobile app | | ● | ● |
| Priority access to specialized support experts | | | ● |
| Predictive detection of hardware failures | | | ● |
| 3rd party software support | | | ● |
| An assigned Service Account Manager | | | ● |
| Proactive, personalized assessments and recommendations | | | ● |
| Proactive systems maintenance | | | ● |


Search in all environments
Administrator@VSPHERE.LOCAL
Shortcuts
Inventories
Hosts and Clusters
VMs and Templates
Storage
Networking
Content Libraries
Global Inventory Lists
Workload Management
DRaaS
Monitoring
Task Console
Event Console
VM Customization Specifications
VM Storage Policies
Host Profiles
Lifecycle Manager
VxRail


VxRail is Ready to Update Your Cluster
Minimum estimated update time: 4.8 hours. During the upgrade, some features, such as "Add drives" and "Add hosts" will not be available.
CONTINUE UPD...
CANCEL UPDATE
This update requires host reboot.
vCenter Server Appliance will be rebooted to update. You will be interrupted and need to login again to continue this update after all services are restarted.
Before you begin this upgrade, it is highly recommended that you create a snapshot of core system VMs (VxRail Manager, vCenter Server Appliance, Platform Services Controller, and if applicable, Log Insight and SRS) in case of upgrade failure.
Refer to KB523995 to make sure there is enough healthy nodes in the cluster. Otherwise, during upgrade, the system may run in degrade state in which there is risk of data loss or unavailability.
Note that GPU hardware compatibility may be different for the new version of vSphere software. If you have installed a GPU card since the initial cluster configuration, consult with the GPU vendor for compatibility suggestions to ensure support with the version of vSphere software included in the VxRail Appliance software.
Components changed by this update:
VxRail Manager 4.7.310-13900909 (All Platforms) Reboot Required
VMware vCenter Server Appliance 6.7.0-13640226 (All Platforms) Reboot Required
VxRail Platform Service 4.7.310-13900909 (All Platforms)
ESXi 6.7.0-13708665 (All Platforms) Reboot Required
VxRail VIB 4.7.310-13900909 (All Platforms)


DELL Technologies
Search Dell Support
Contact Us
Cart
US/EN
Products
Solutions
Services
Support
Community
Support
Product Support
VxRail Appliance Series
Change product
Select a Model
Select one
Contact Us
Overview
Drivers & Downloads
Documentation
Advisories
Access support customized for your product
Enter your Product ID or Service Tag to view contract status, purchase info, and more.
Enter Details
Quick links
Identify your product

DELL Technologies SolVe Online

## VxRail Appliance

- Networking Procedures
- VxRail Procedures
  - Connectivity
  - Install
  - Upgrade
  - Replacement Procedures
  - Miscellaneous
- Reference Material
- VMware Validated Design for VxRail (VVD) Content
- APEX Cloud Services with VMware Cloud
- VMware Cloud on Dell EMC VxRail (Dimension)
- VMware Cloud Foundation for VxRail (VCF) Procedures





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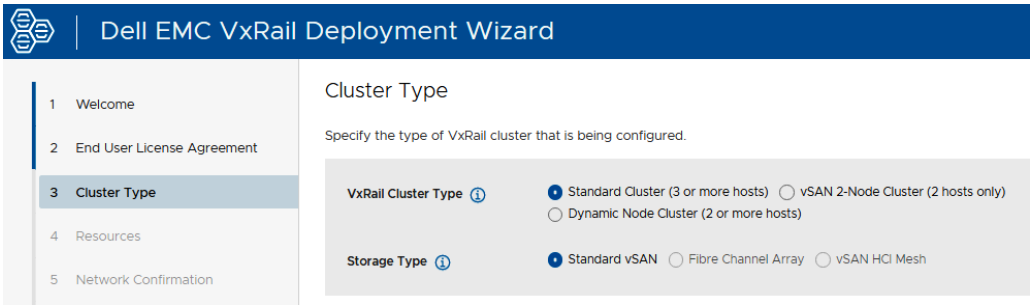
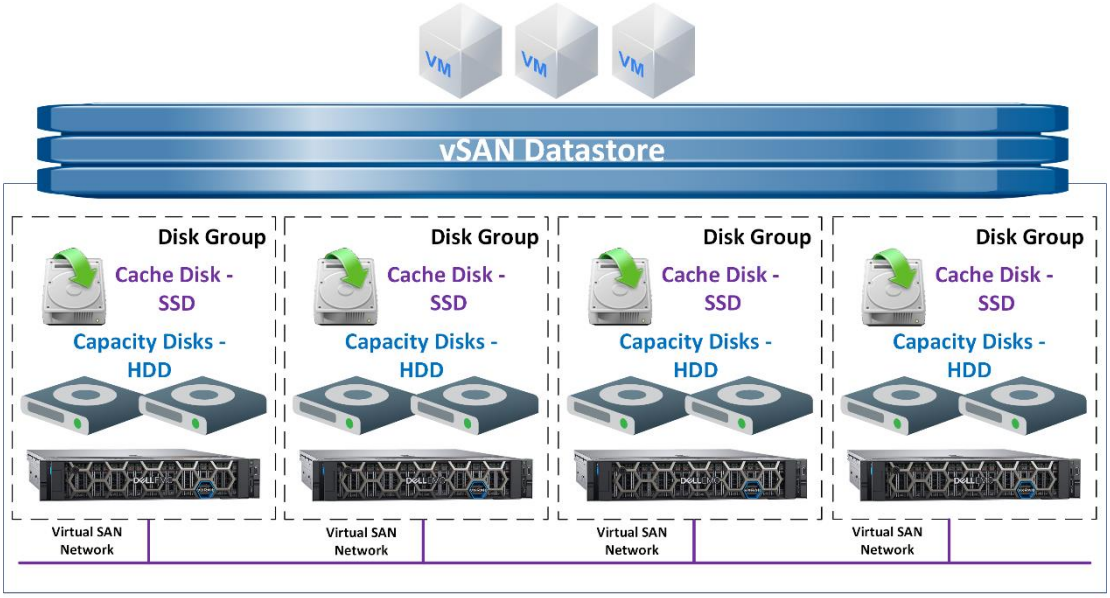
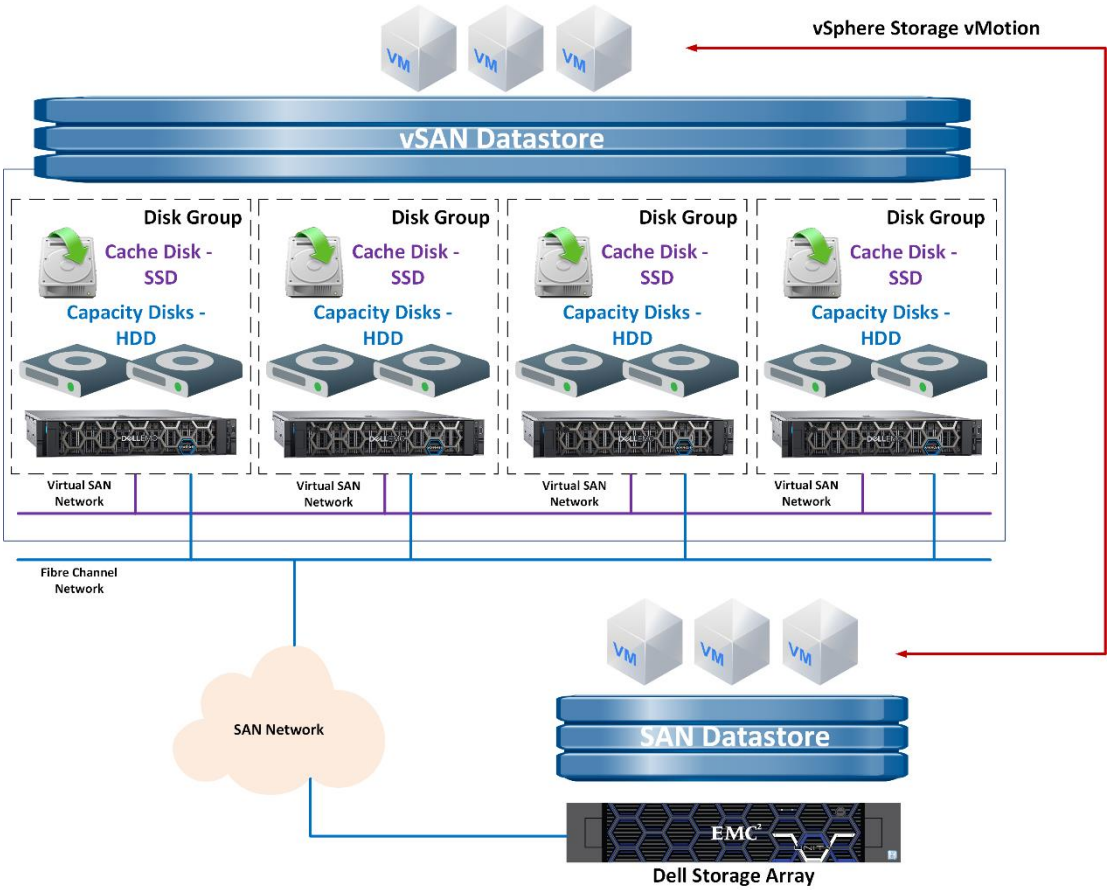
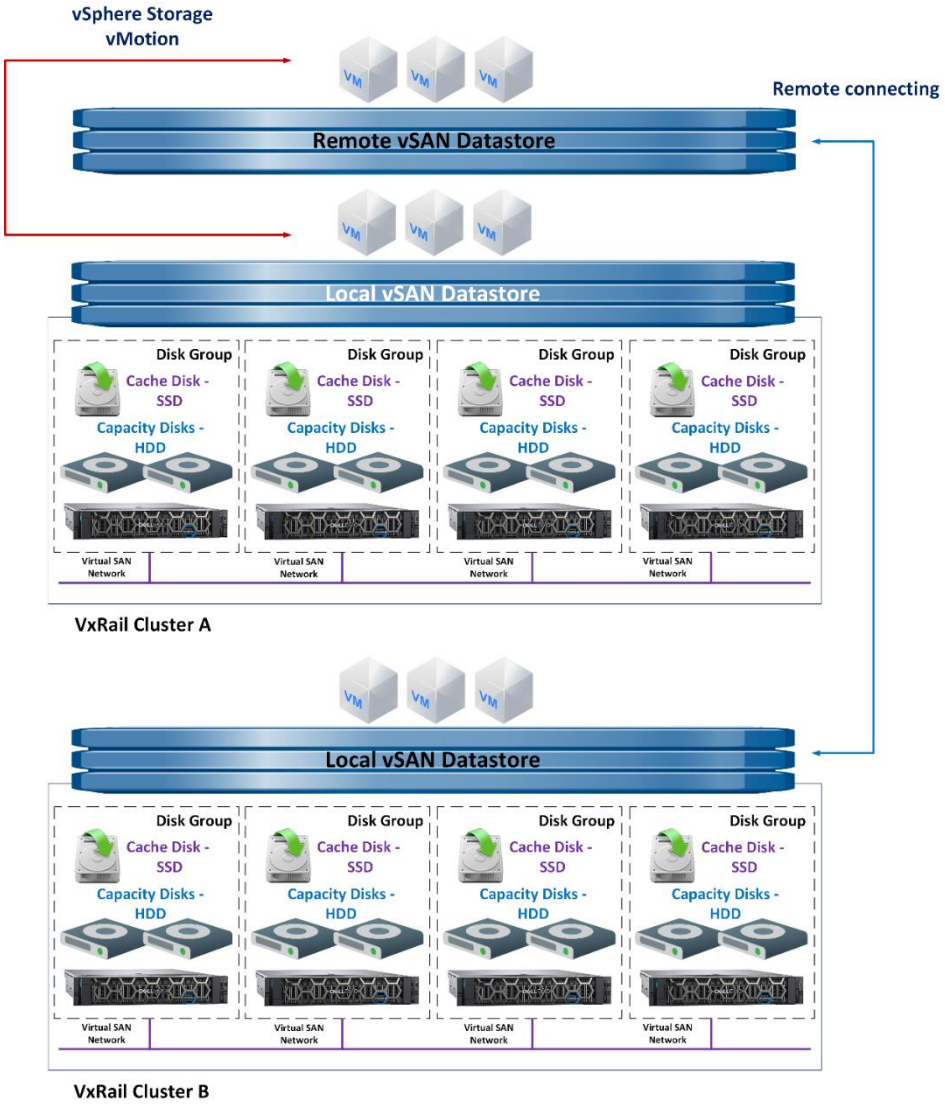
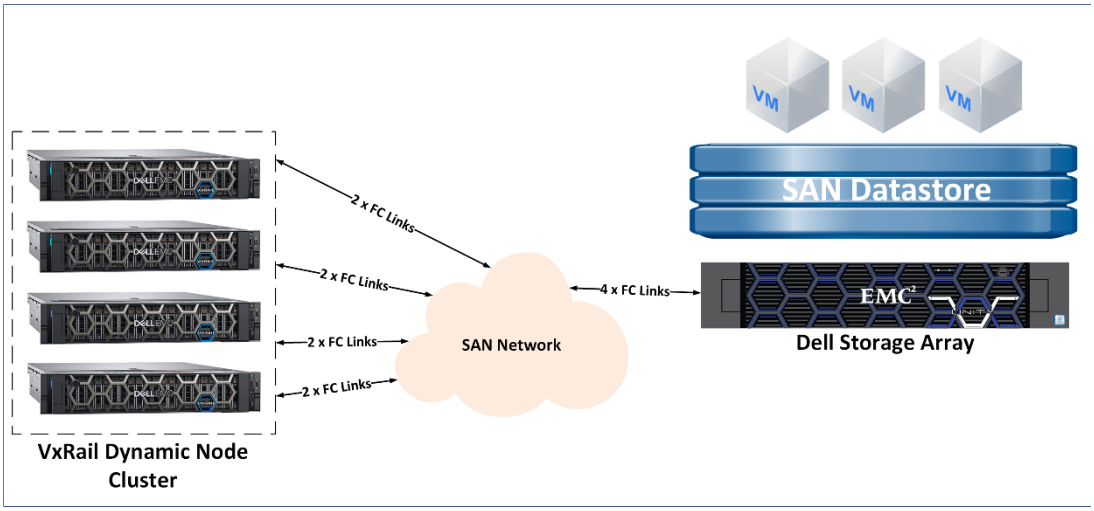
# Chapter 2: Benefits of Hyper-Converged Infrastructure

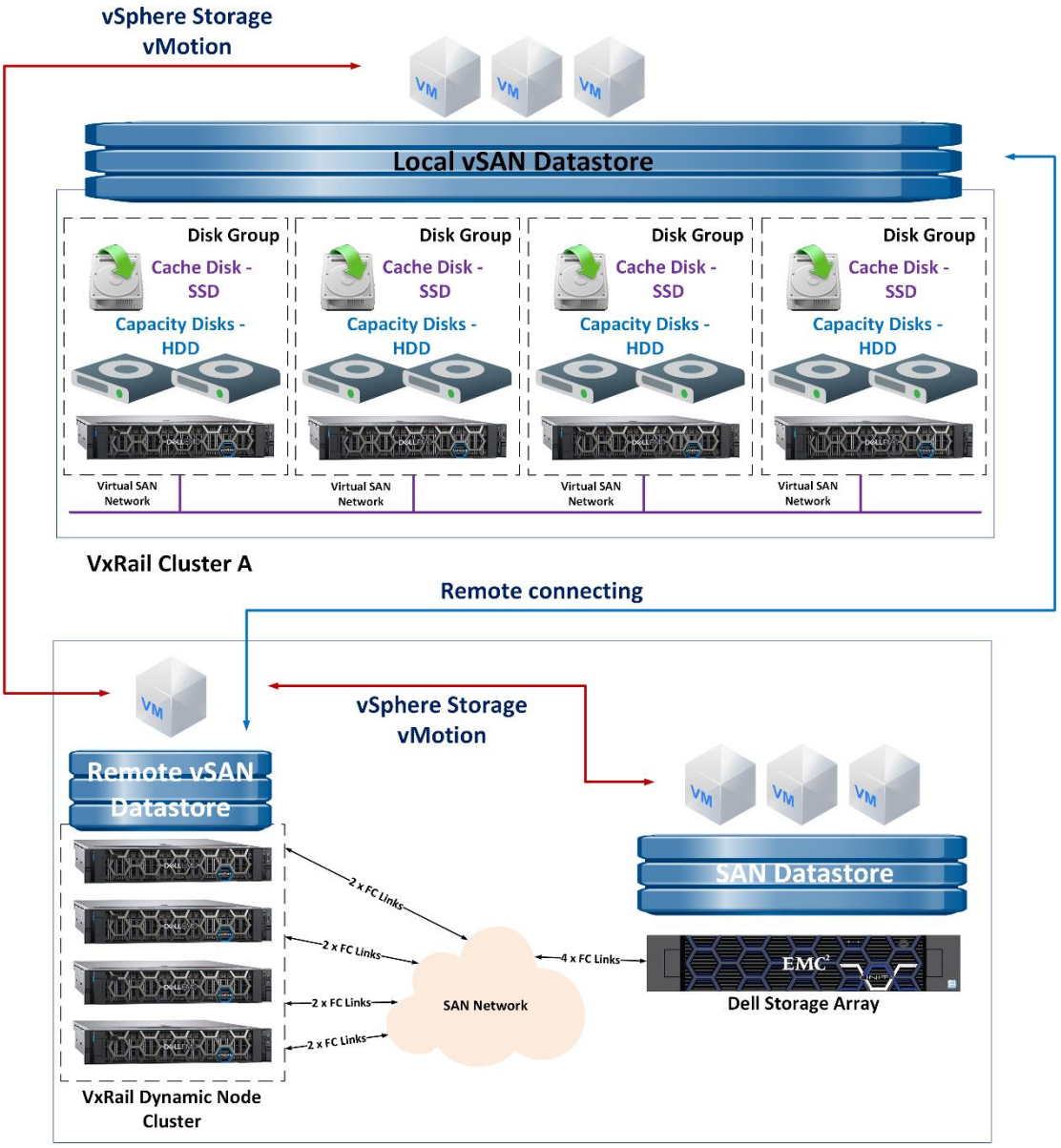



vSphere Storage vMotion
VM
VM
VM
vSAN Datastore
Disk Group
Cache Disk - SSD
Capacity Disks - HDD
Disk Group
Cache Disk - SSD
Capacity Disks - HDD
Disk Group
Cache Disk - SSD
Capacity Disks - HDD
Disk Group
Cache Disk - SSD
Capacity Disks - HDD
Virtual SAN Network
Virtual SAN Network
Virtual SAN Network
Virtual SAN Network
Fibre Channel Network
VM
VM
VM
SAN Network
SAN Datastore
EMC²
Dell Storage Array


vSphere Storage
vMotion
Remote connecting
Remote vSAN Datastore
Local vSAN Datastore
Disk Group
Cache Disk - SSD
Capacity Disks - HDD
Virtual SAN Network
VxRail Cluster A
Local vSAN Datastore
VxRail Cluster B


SAN Datastore
2 x FC Links
2 x FC Links
2 x FC Links
2 x FC Links
4 x FC Links
SAN Network
Dell Storage Array
VxRail Dynamic Node Cluster


vSphere Storage
vMotion
VM
VM
VM
Local vSAN Datastore
Disk Group
Cache Disk - SSD
Capacity Disks - HDD
Disk Group
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Disk Group
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Virtual SAN Network
Virtual SAN Network
Virtual SAN Network
Virtual SAN Network
VxRail Cluster A
Remote connecting
VM
vSphere Storage
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Remote vSAN Datastore
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VM
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SAN Datastore
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2 x FC Links
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SAN Network
EMC
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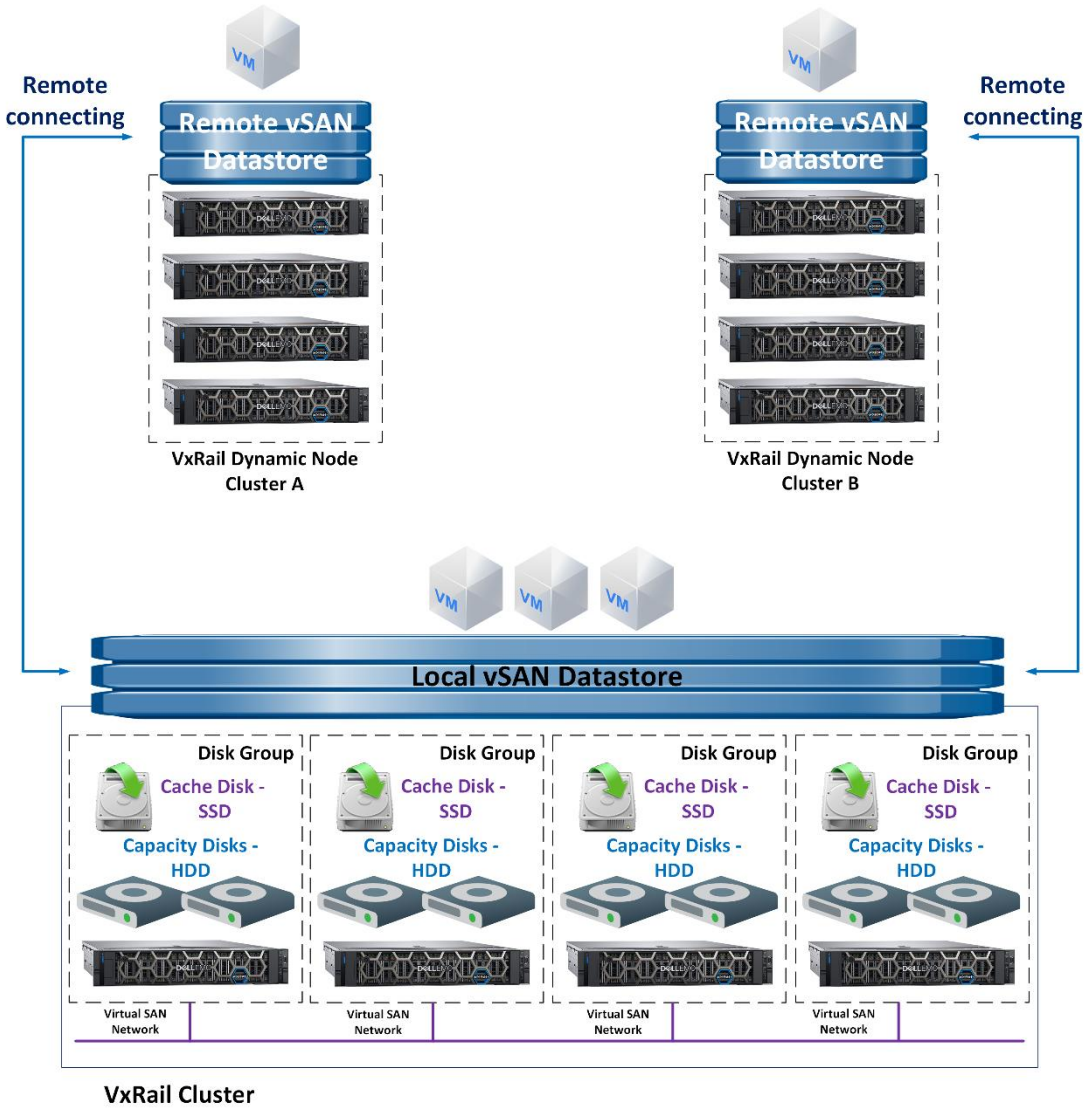
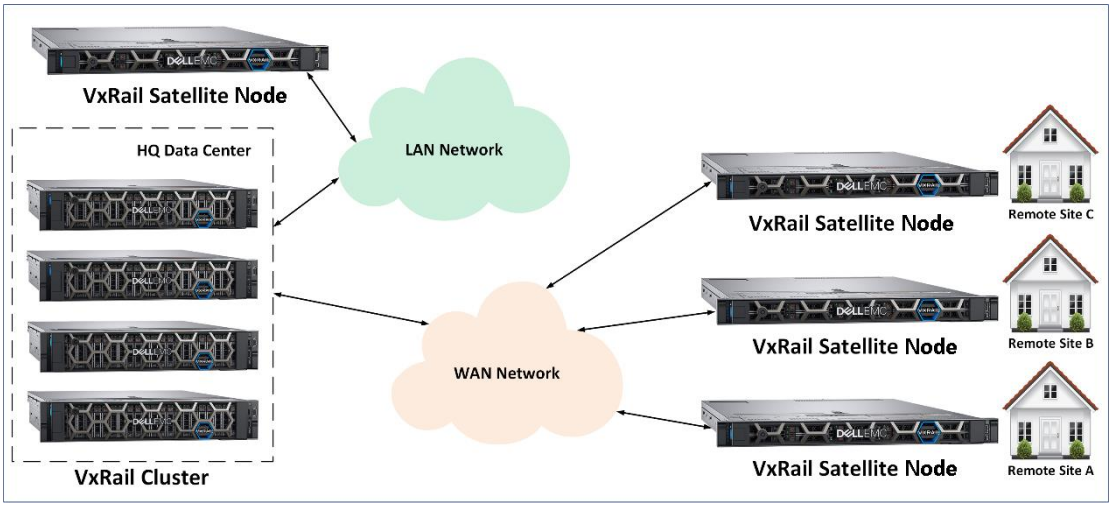
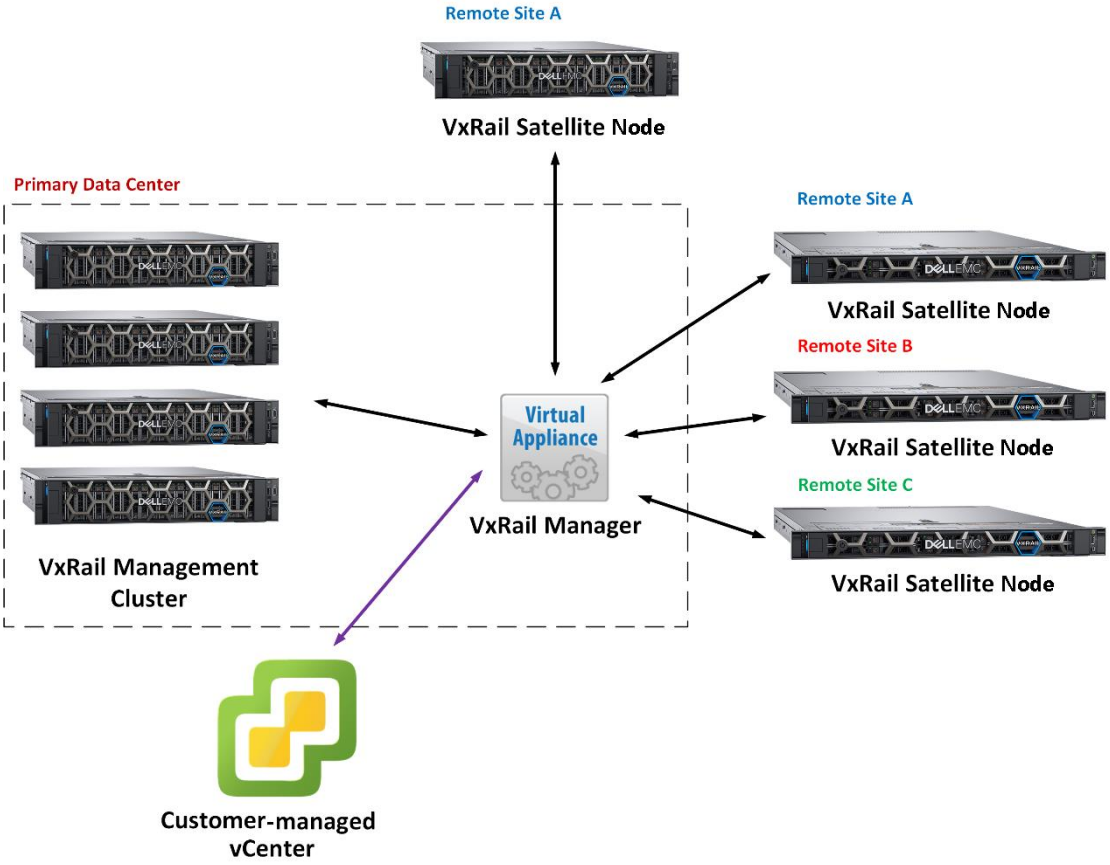
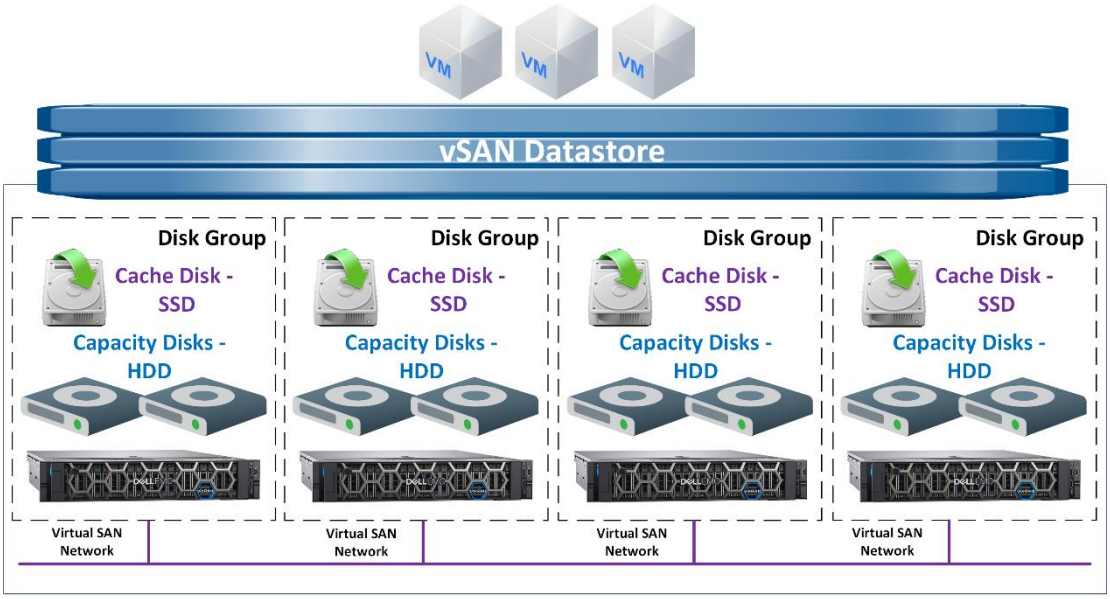

Remote connecting
Remote vSAN Datastore
VxRail Dynamic Node Cluster A
Remote vSAN Datastore
VxRail Dynamic Node Cluster B
Remote connecting
VM
Local vSAN Datastore
Disk Group
Cache Disk - SSD
Capacity Disks - HDD
Virtual SAN Network
VxRail Cluster


VxRail Satellite Node
HQ Data Center
LAN Network
WAN Network
VxRail Cluster
VxRail Satellite Node
VxRail Satellite Node
VxRail Satellite Node
Remote Site C
Remote Site B
Remote Site A


Remote Site A
VxRail Satellite Node
Primary Data Center
Remote Site A
VxRail Satellite Node
Remote Site B
VxRail Satellite Node
Virtual Appliance
VxRail Manager
Remote Site C
VxRail Satellite Node
VxRail Management Cluster
Customer-managed vCenter


VM
VM
VM
vSAN Datastore
Disk Group
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Capacity Disks - HDD
Disk Group
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Capacity Disks - HDD
Disk Group
Cache Disk - SSD
Capacity Disks - HDD
Disk Group
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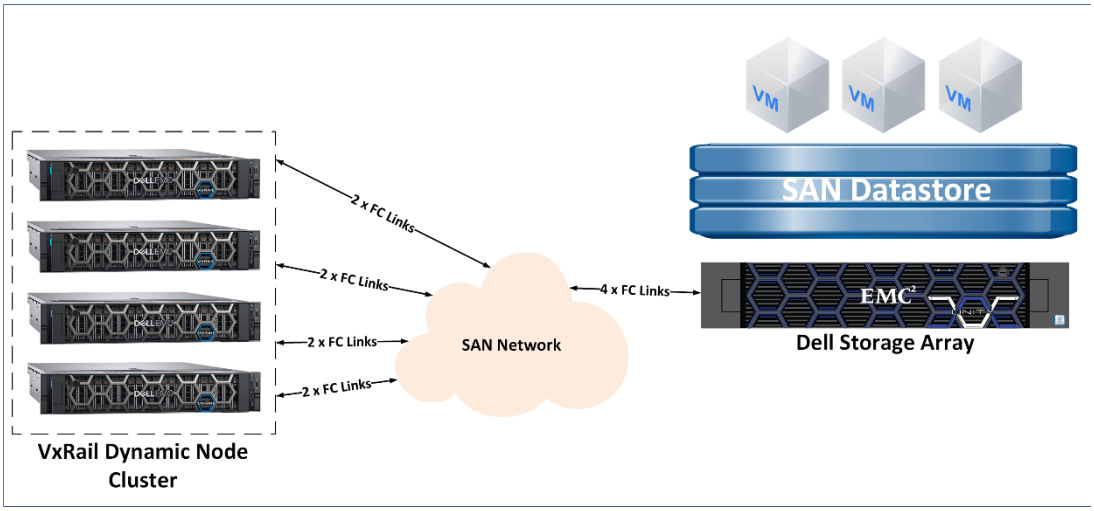
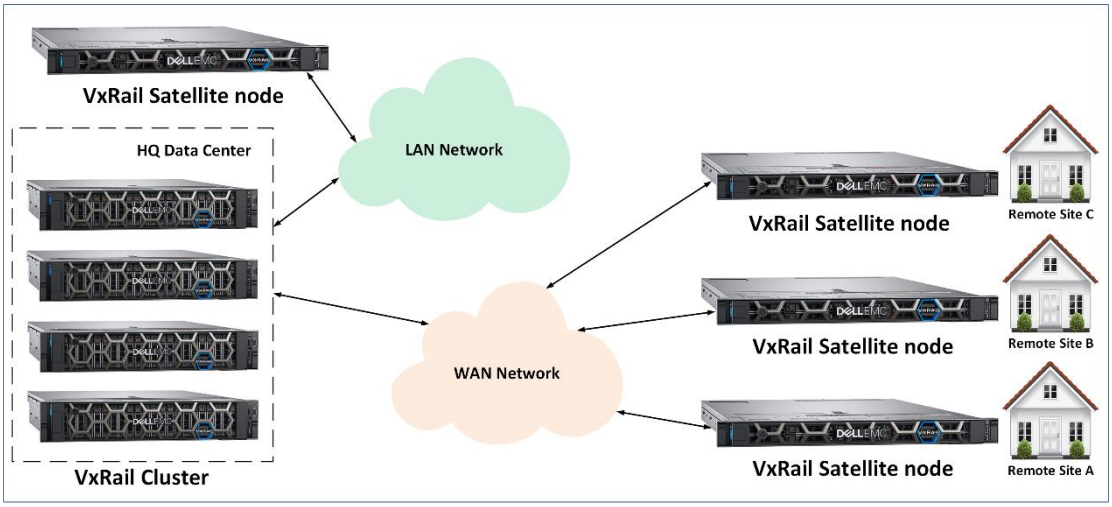
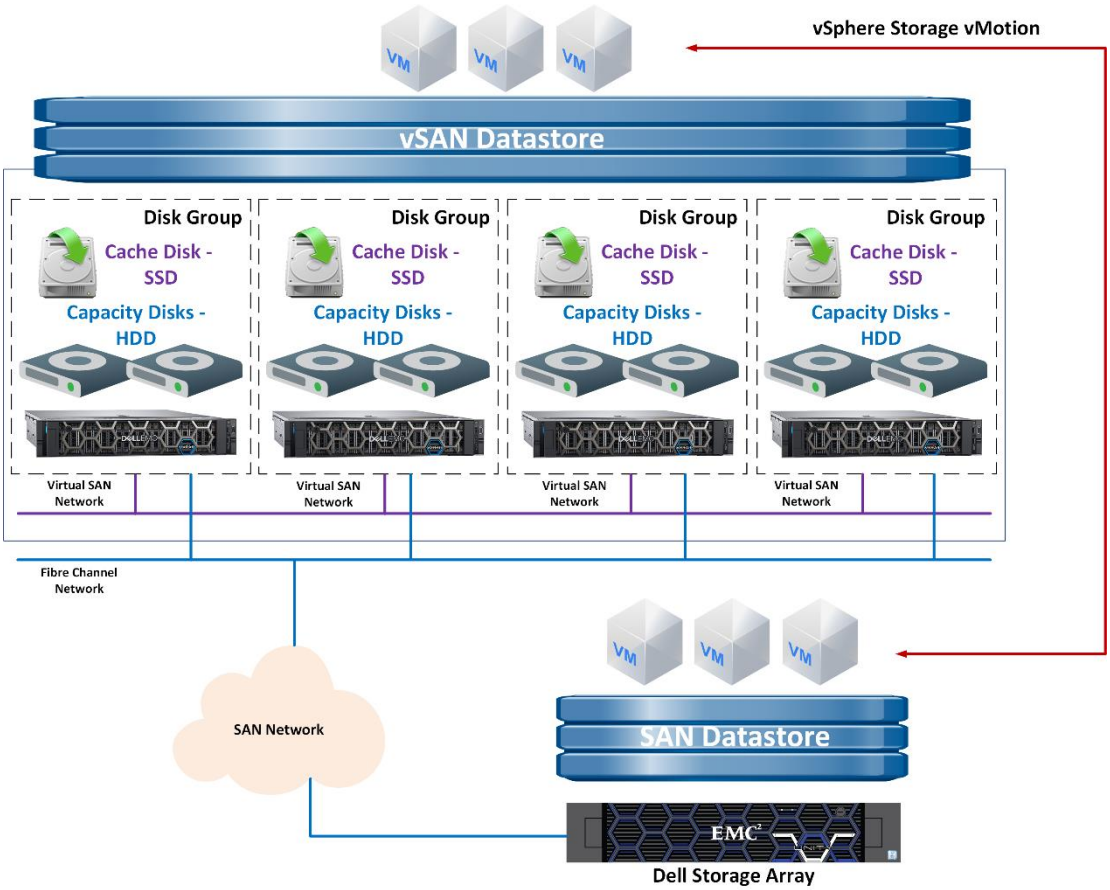
Capacity Disks - HDD
Virtual SAN Network
Virtual SAN Network
Virtual SAN Network
Virtual SAN Network


VM
VM
VM
SAN Datastore
2 x FC Links
2 x FC Links
2 x FC Links
2 x FC Links
4 x FC Links
SAN Network
EMC²
Dell Storage Array
VxRail Dynamic Node Cluster


VxRail Satellite node
HQ Data Center
LAN Network
WAN Network
VxRail Satellite node
VxRail Satellite node
VxRail Satellite node
Remote Site C
Remote Site B
Remote Site A
VxRail Cluster


vSphere Storage vMotion
VM
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vSAN Datastore
Disk Group
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Capacity Disks - HDD
Disk Group
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Capacity Disks - HDD
Disk Group
Cache Disk - SSD
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Disk Group
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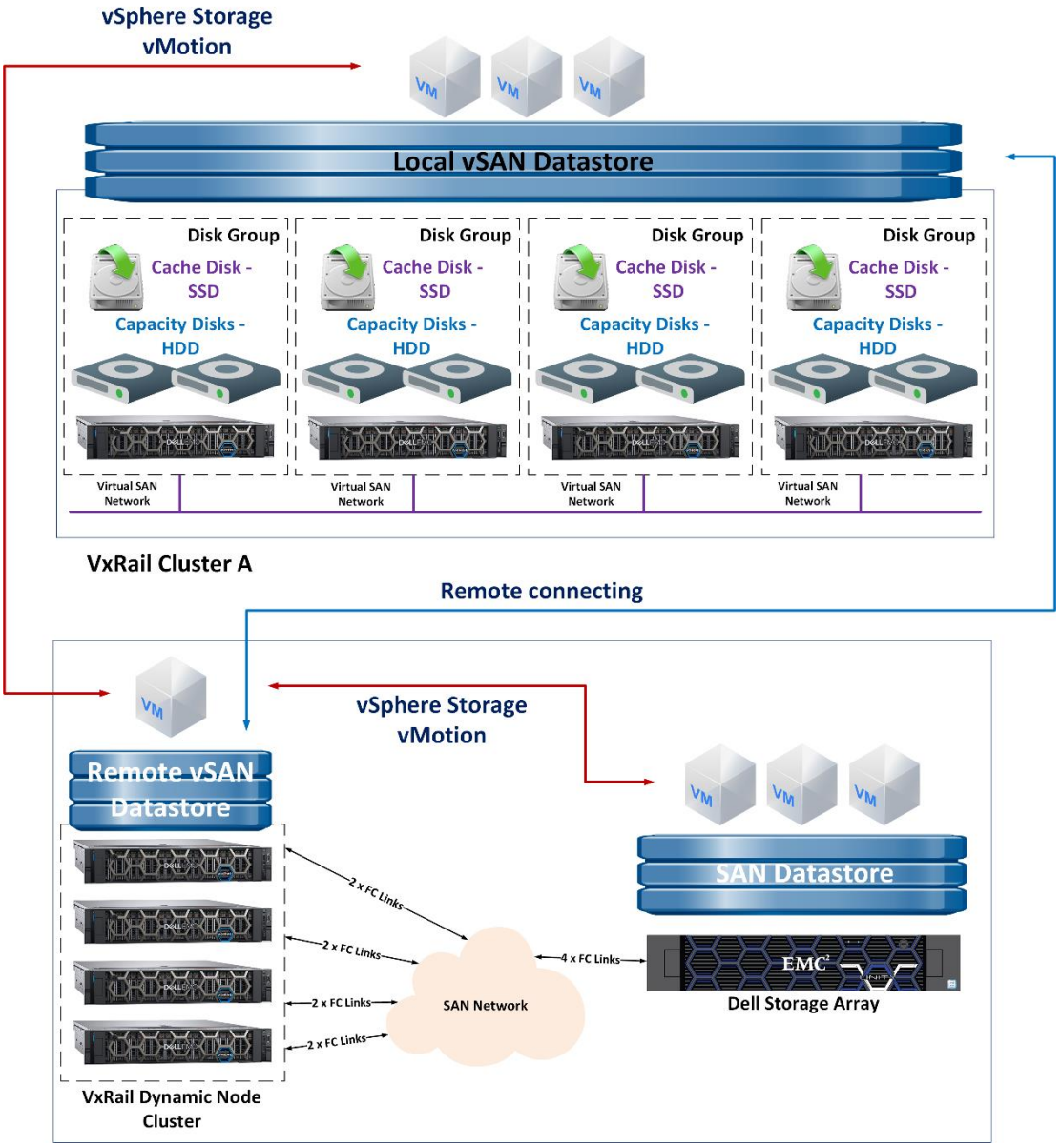
Capacity Disks - HDD
Virtual SAN Network
Virtual SAN Network
Virtual SAN Network
Virtual SAN Network
Fibre Channel Network
VM
VM
VM
SAN Network
SAN Datastore
EMC²
Dell Storage Array


vSphere Storage
vMotion
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VM
VM
Local vSAN Datastore
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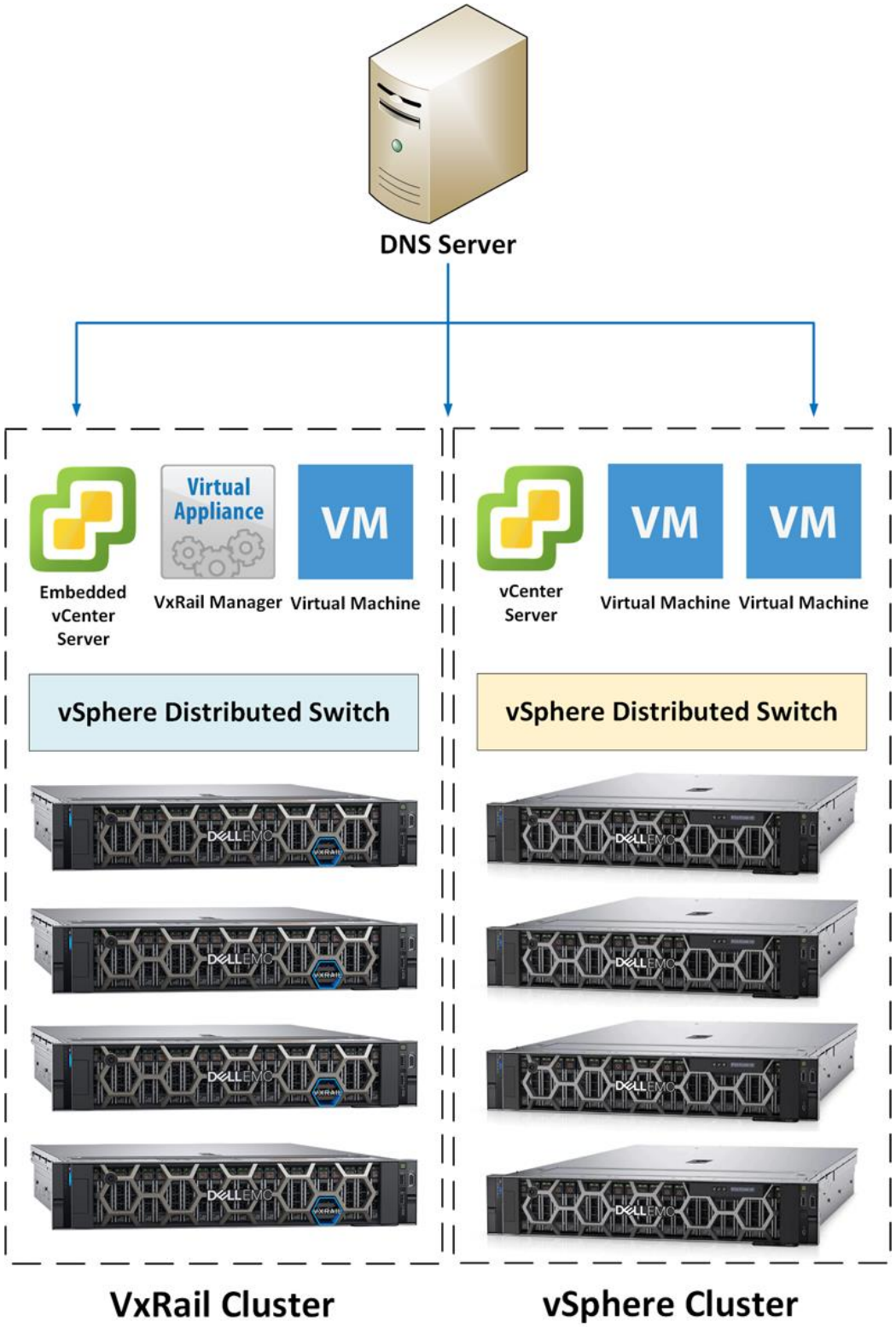
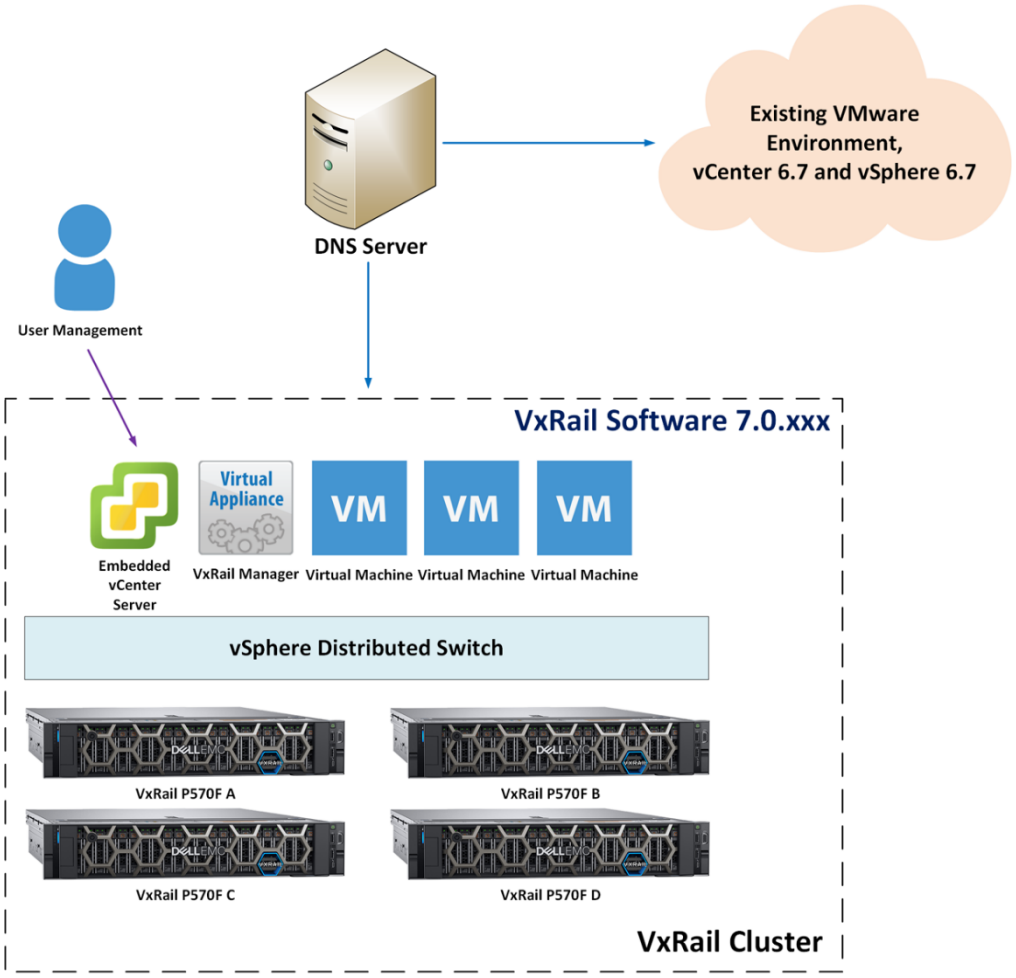
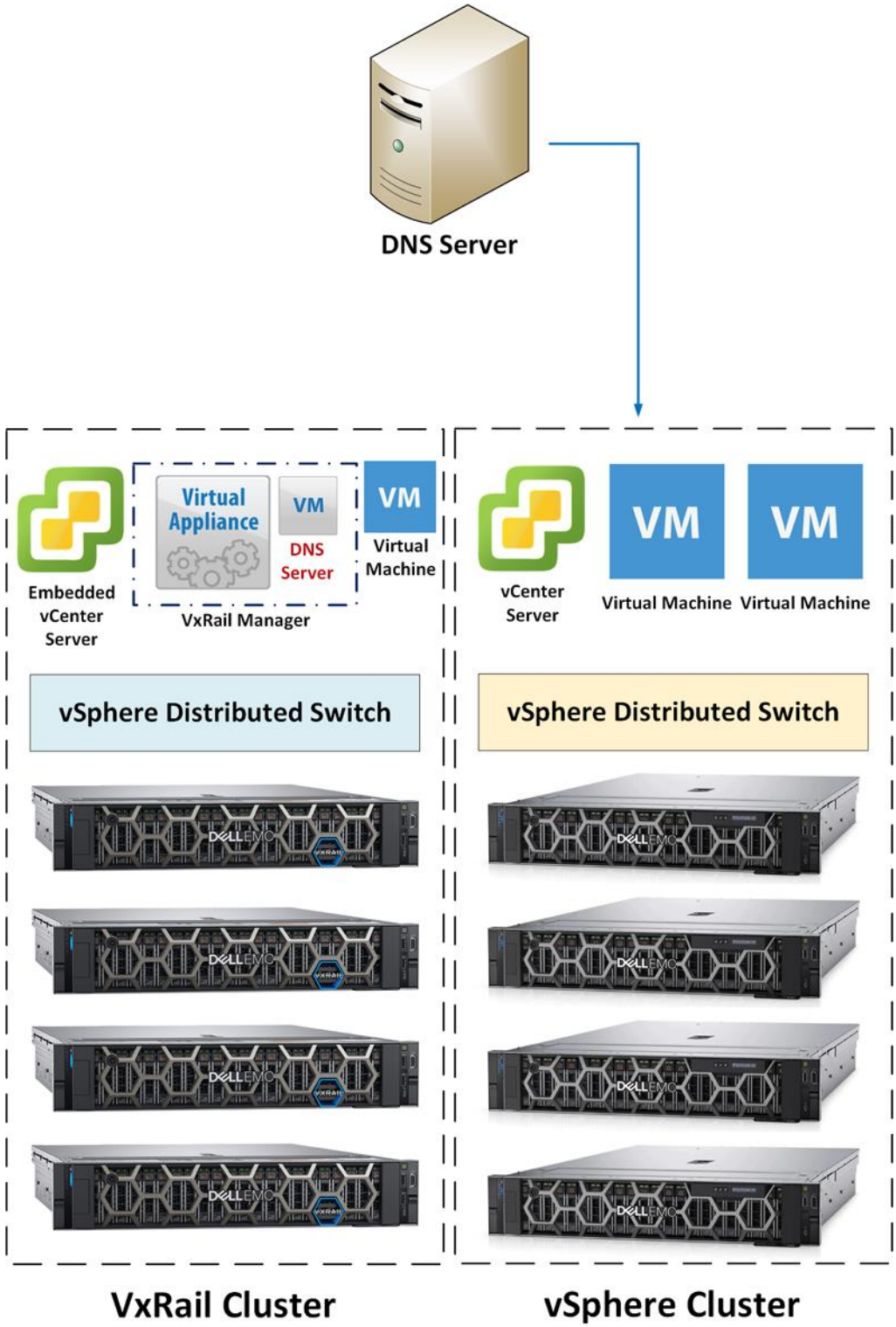
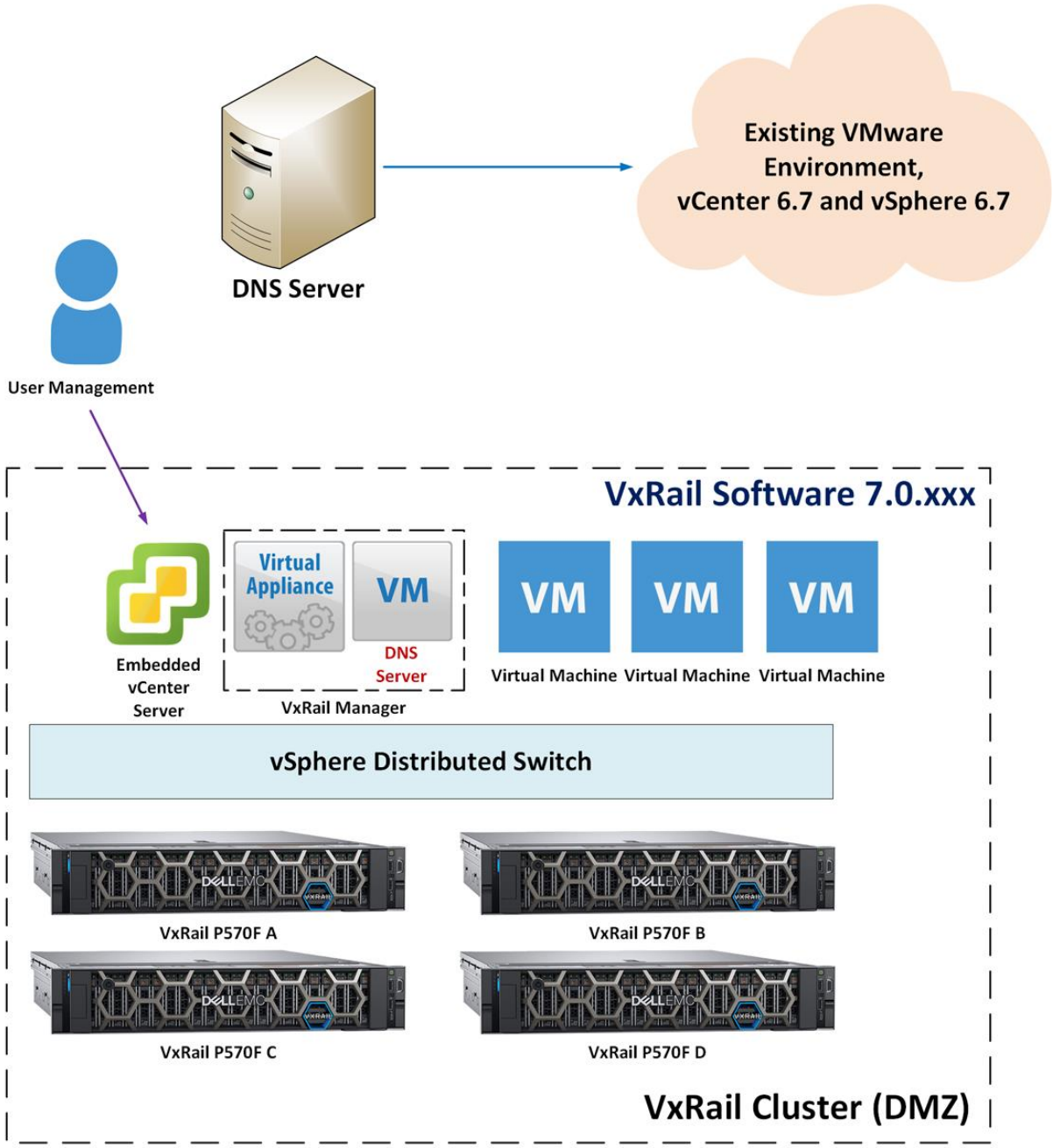
Capacity Disks - HDD
Disk Group
Cache Disk - SSD
Capacity Disks - HDD
Disk Group
Cache Disk - SSD
Capacity Disks - HDD
Disk Group
Cache Disk - SSD
Capacity Disks - HDD
Virtual SAN Network
Virtual SAN Network
Virtual SAN Network
Virtual SAN Network
VxRail Cluster A
Remote connecting
VM
vSphere Storage
vMotion
Remote vSAN Datastore
VM
VM
VM
SAN Datastore
2 x FC Links
2 x FC Links
2 x FC Links
2 x FC Links
4 x FC Links
SAN Network
EMC
Dell Storage Array
VxRail Dynamic Node Cluster

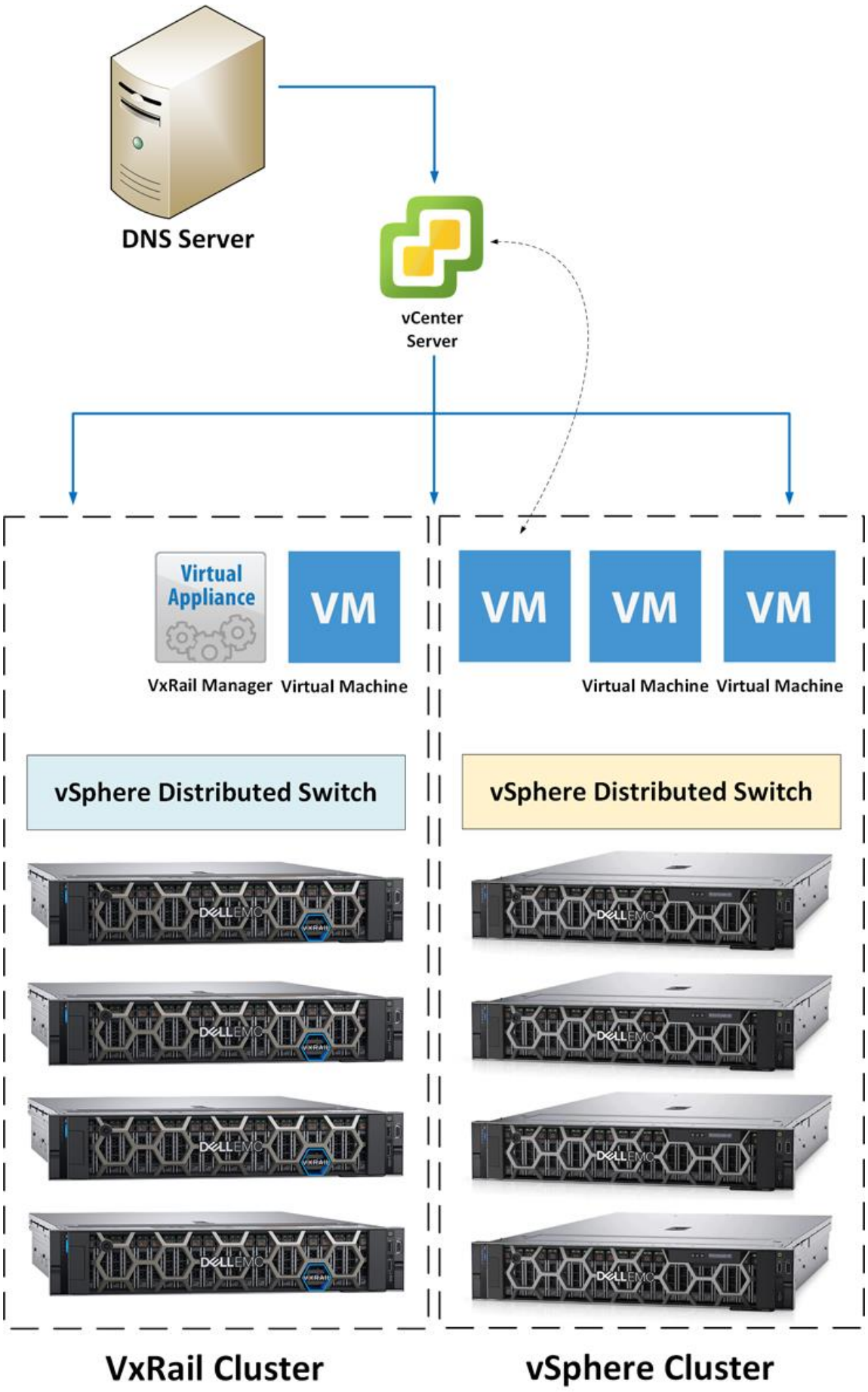
# Chapter 3: Design of vCenter Server

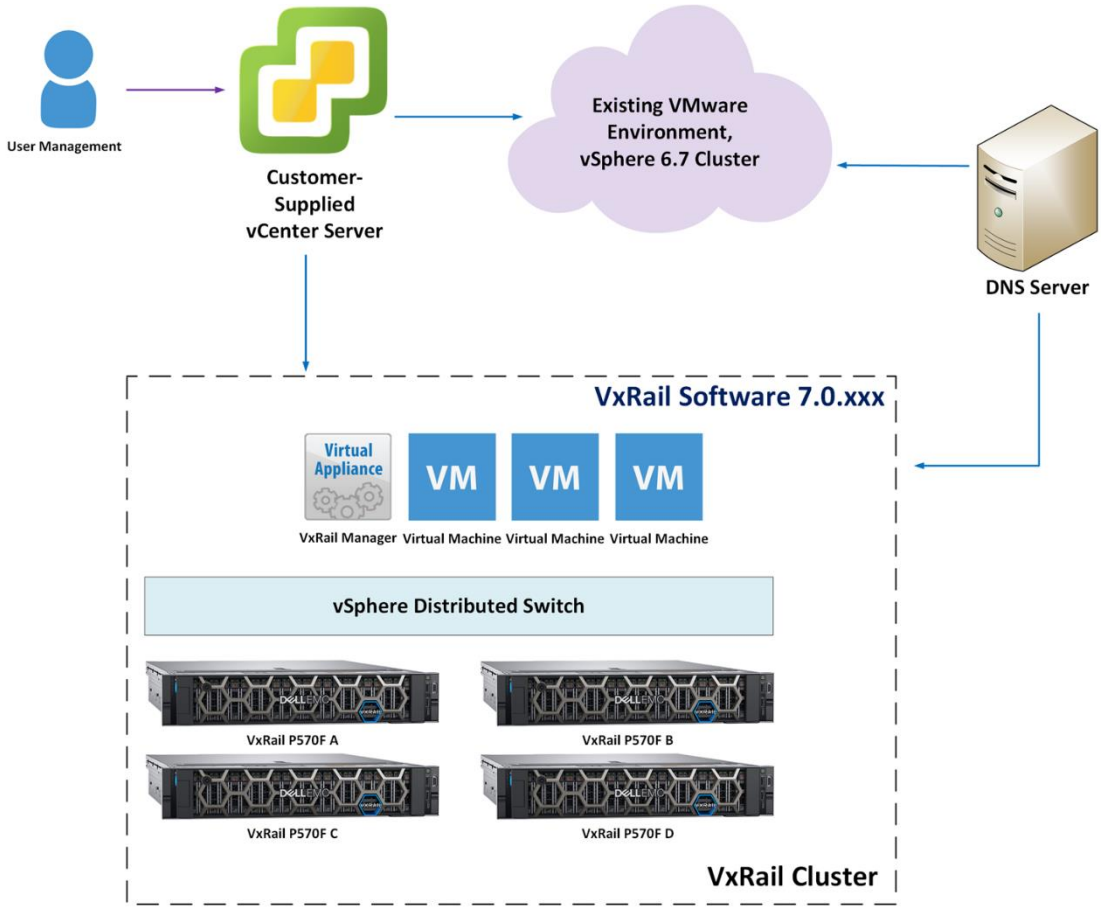


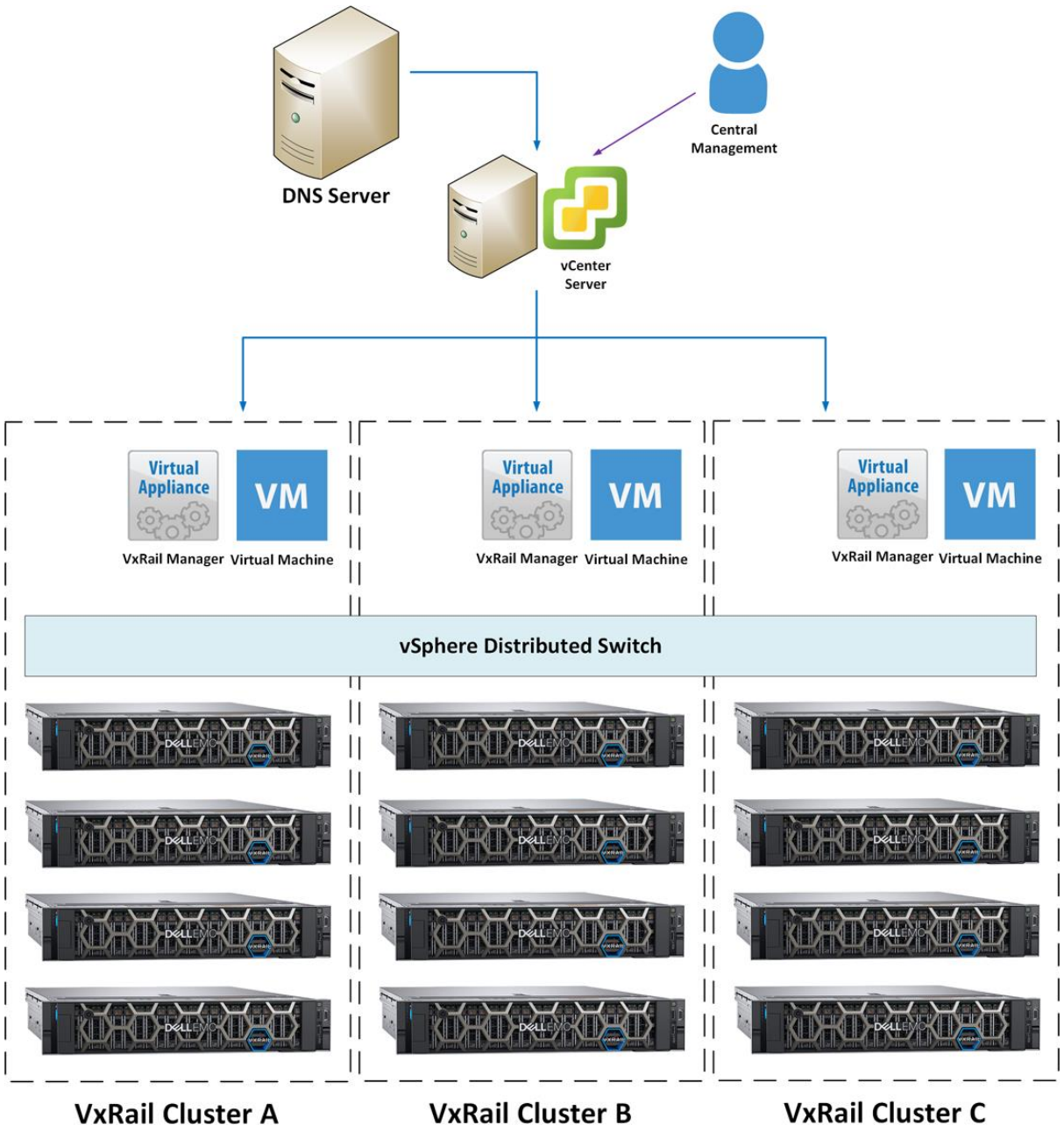

Existing VMware Environment, vCenter 6.7 and vSphere 6.7
DNS Server
User Management
VxRail Software 7.0.xxx
Virtual Appliance
VM
VM
VM
Embedded vCenter Server
VxRail Manager
Virtual Machine
Virtual Machine
Virtual Machine
vSphere Distributed Switch
VxRail P570F A
VxRail P570F B
VxRail P570F C
VxRail P570F D
VxRail Cluster

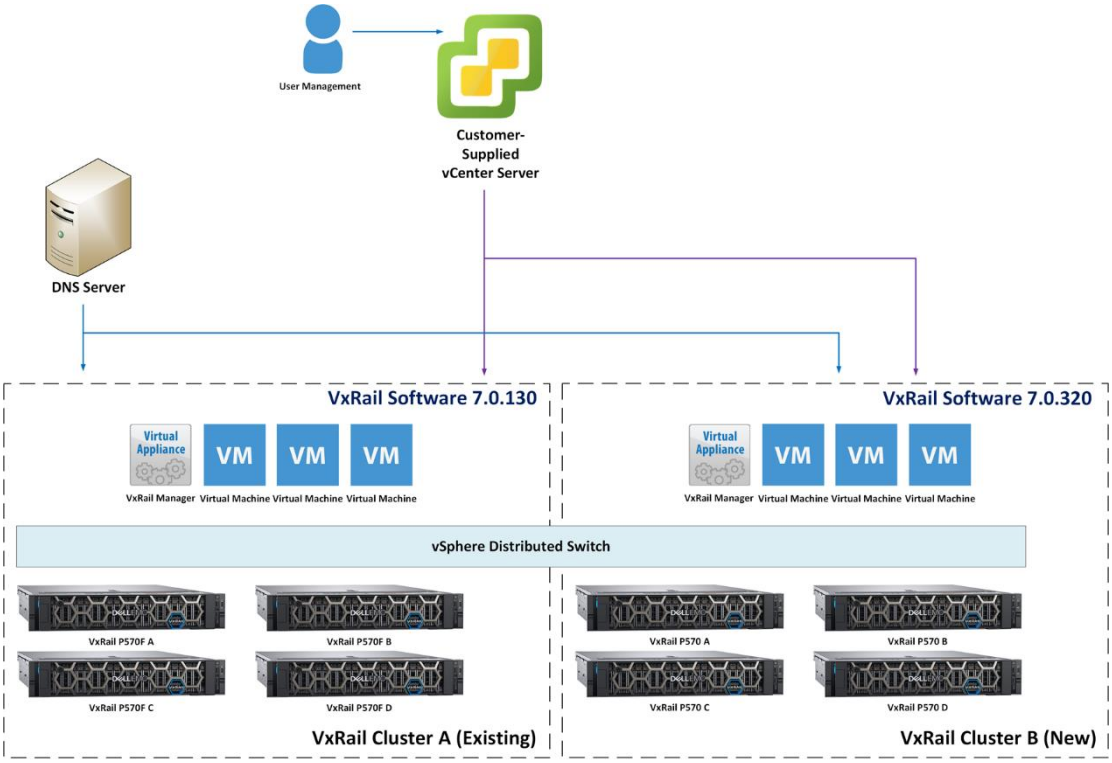

DNS Server
Virtual Appliance
VM
DNS Server
VM
Virtual Machine
Embedded vCenter Server
VxRail Manager
vSphere Distributed Switch
vCenter Server
VM
VM
Virtual Machine
Virtual Machine
vSphere Distributed Switch
VxRail Cluster
vSphere Cluster


Existing VMware Environment, vCenter 6.7 and vSphere 6.7
DNS Server
User Management
VxRail Software 7.0.xxx
Virtual Appliance
VM
DNS Server
VxRail Manager
Embedded vCenter Server
VM
VM
VM
Virtual Machine
Virtual Machine
Virtual Machine
vSphere Distributed Switch
VxRail P570F A
VxRail P570F B
VxRail P570F C
VxRail P570F D
VxRail Cluster (DMZ)

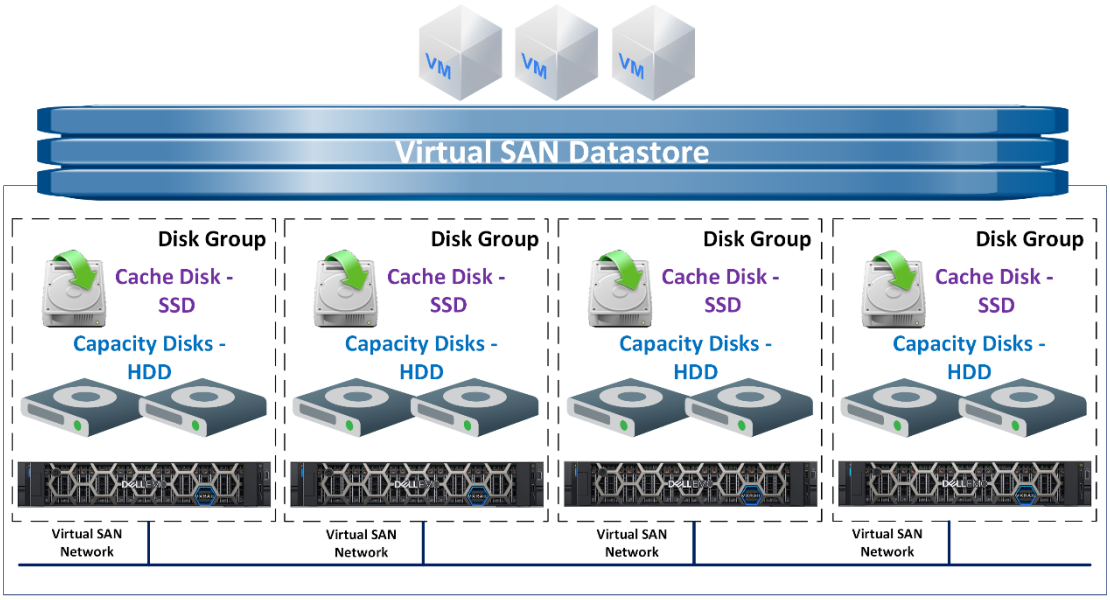

DNS Server
vCenter Server
Virtual Appliance
VM
VM
VM
VM
VxRail Manager
Virtual Machine
Virtual Machine
Virtual Machine
vSphere Distributed Switch
vSphere Distributed Switch
VxRail Cluster
vSphere Cluster

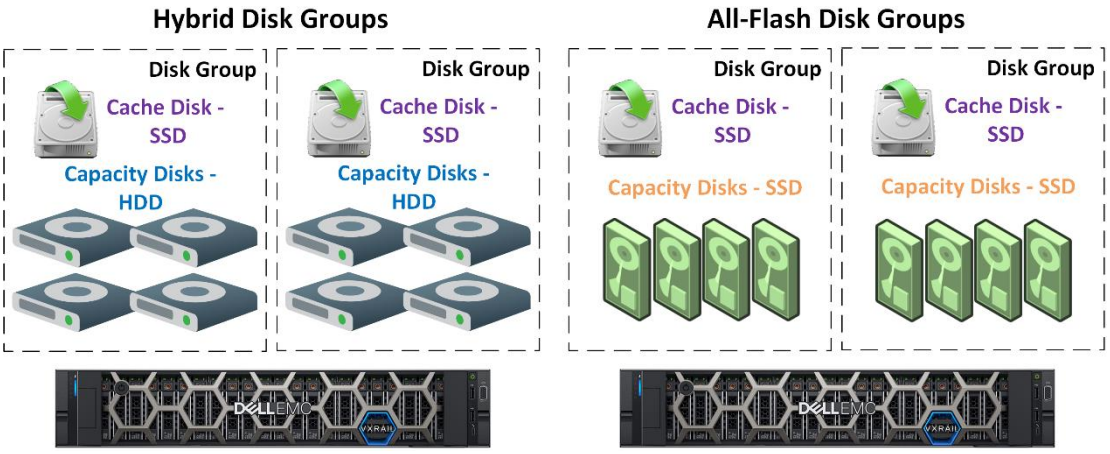

User Management
Customer-
Supplied
vCenter Server
Existing VMware
Environment,
vSphere 6.7 Cluster
DNS Server
VxRail Software 7.0.xxx
Virtual
Appliance
VM
VM
VM
VxRail Manager
Virtual Machine
Virtual Machine
Virtual Machine
vSphere Distributed Switch
VxRail P570F A
VxRail P570F B
VxRail P570F C
VxRail P570F D
VxRail Cluster

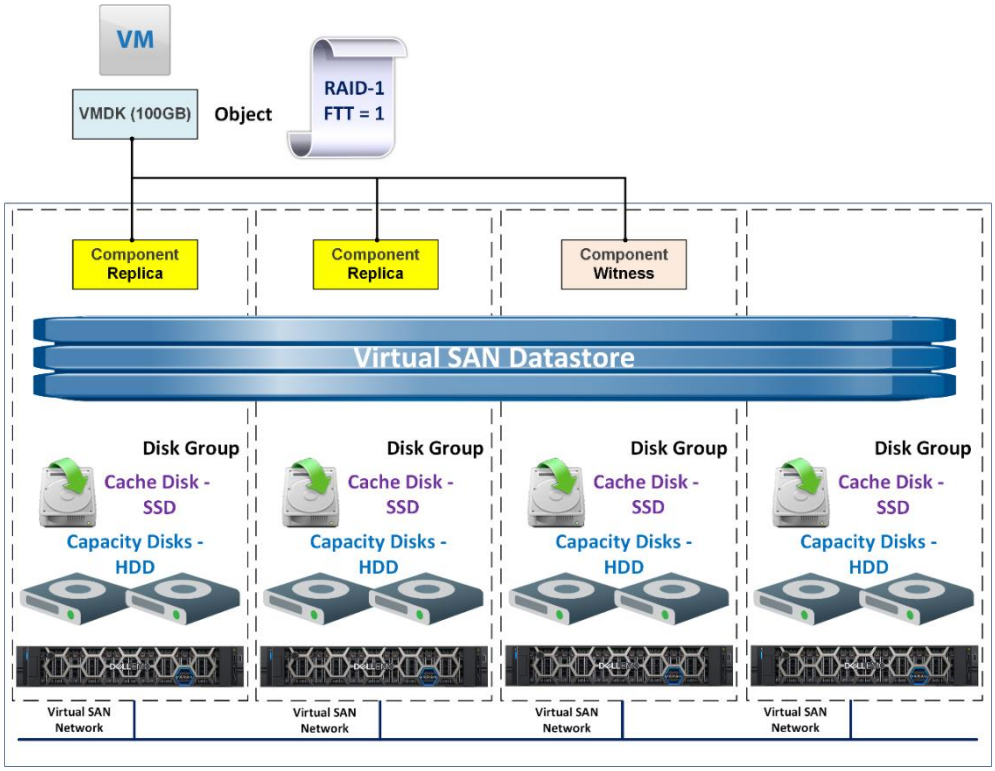

DNS Server
Central Management
vCenter Server
Virtual Appliance
VM
VxRail Manager
Virtual Machine
Virtual Appliance
VM
VxRail Manager
Virtual Machine
Virtual Appliance
VM
VxRail Manager
Virtual Machine
vSphere Distributed Switch
VxRail Cluster A
VxRail Cluster B
VxRail Cluster C

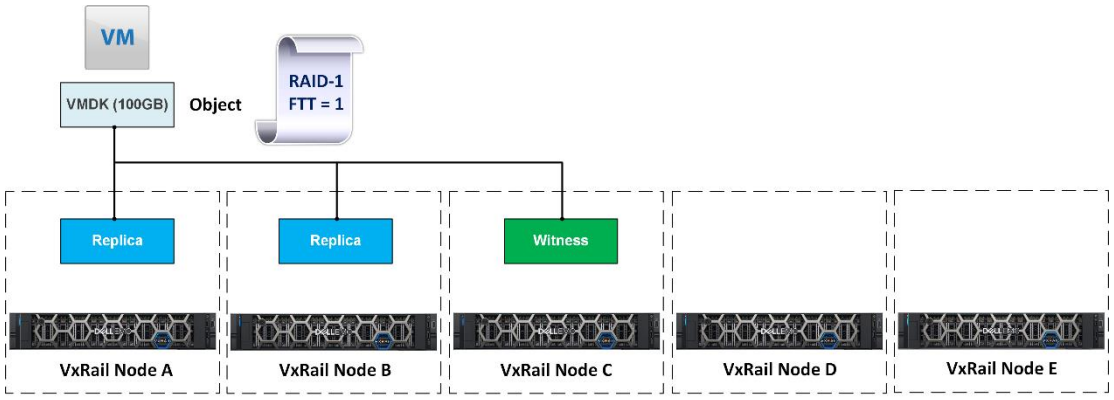

User Management
Customer-Supplied vCenter Server
DNS Server
VxRail Software 7.0.130
Virtual Appliance
VM
VM
VM
VxRail Manager
Virtual Machine
Virtual Machine
Virtual Machine
vSphere Distributed Switch
VxRail P570F A
VxRail P570F B
VxRail P570F C
VxRail P570F D
VxRail Cluster A (Existing)
VxRail Software 7.0.320
Virtual Appliance
VM
VM
VM
VxRail Manager
Virtual Machine
Virtual Machine
Virtual Machine
VxRail P570 A
VxRail P570 B
VxRail P570 C
VxRail P570 D
VxRail Cluster B (New)

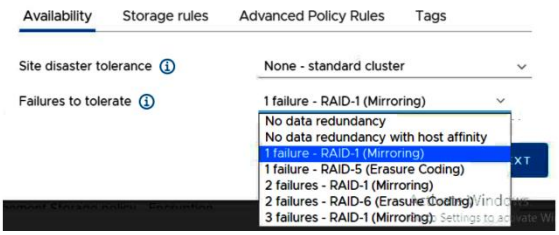
# Chapter 4: Design of vSAN Storage Policies

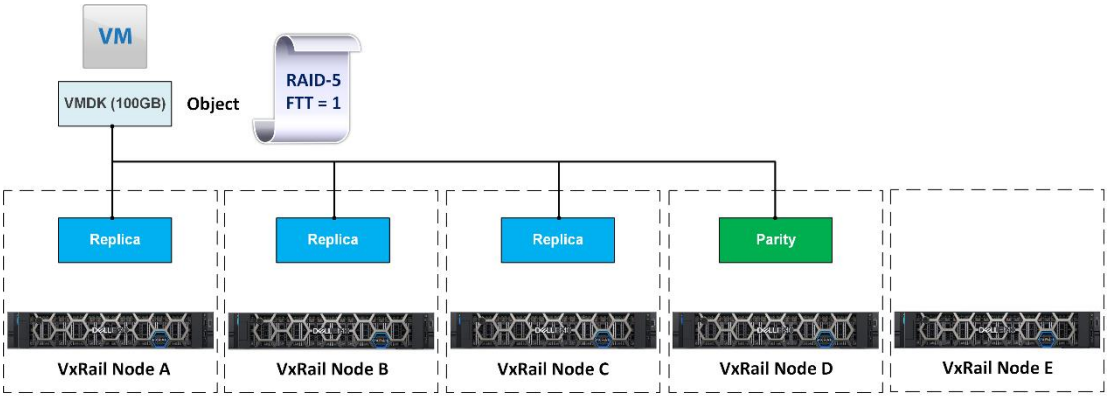


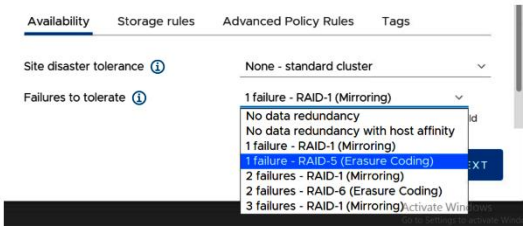



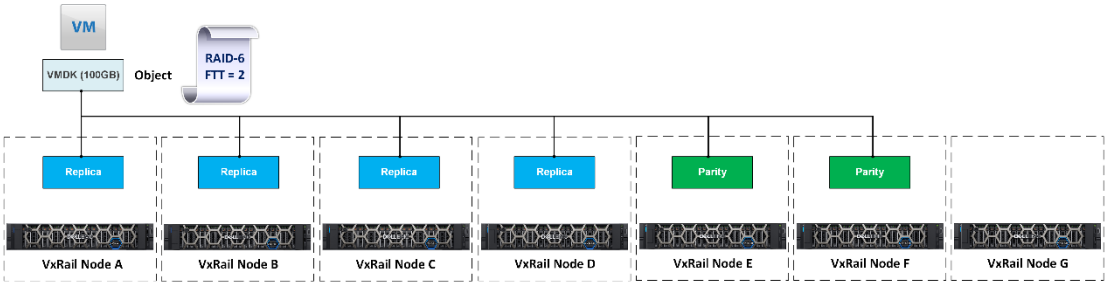

VM
VMDK (100GB)
Object
RAID-1
FTT = 1
Component
Replica
Component
Replica
Component
Witness
Virtual SAN Datastore
Disk Group
Cache Disk -
SSD
Capacity Disks -
HDD
Disk Group
Cache Disk -
SSD
Capacity Disks -
HDD
Disk Group
Cache Disk -
SSD
Capacity Disks -
HDD
Disk Group
Cache Disk -
SSD
Capacity Disks -
HDD
Virtual SAN
Network
Virtual SAN
Network
Virtual SAN
Network
Virtual SAN
Network

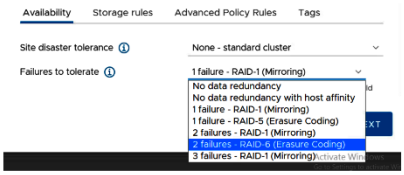

VM
VMDK (100GB)
Object
RAID-1
FTT = 1
Replica
Replica
Witness
VxRail Node A
VxRail Node B
VxRail Node C
VxRail Node D
VxRail Node E

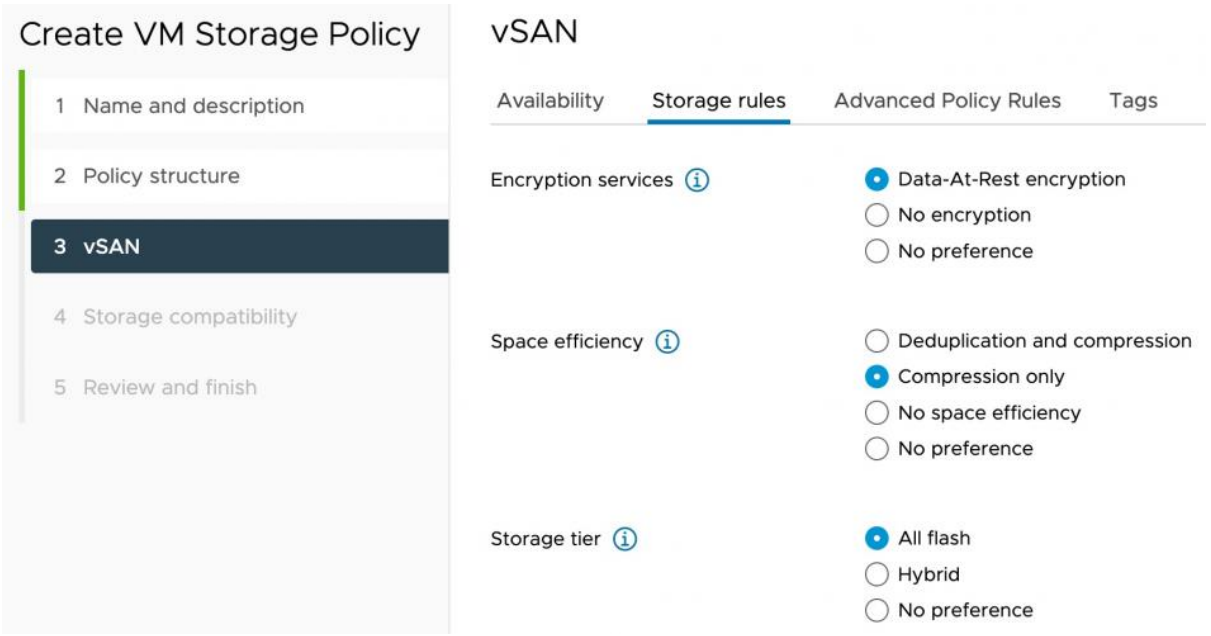

Availability
Storage rules
Advanced Policy Rules
Tags
Site disaster tolerance
None - standard cluster
Failures to tolerate
1 failure - RAID-1 (Mirroring)
No data redundancy
No data redundancy with host affinity
1 failure - RAID-1 (Mirroring)
1 failure - RAID-5 (Erasure Coding)
2 failures - RAID-1 (Mirroring)
2 failures - RAID-6 (Erasure Coding)
3 failures - RAID-1 (Mirroring)

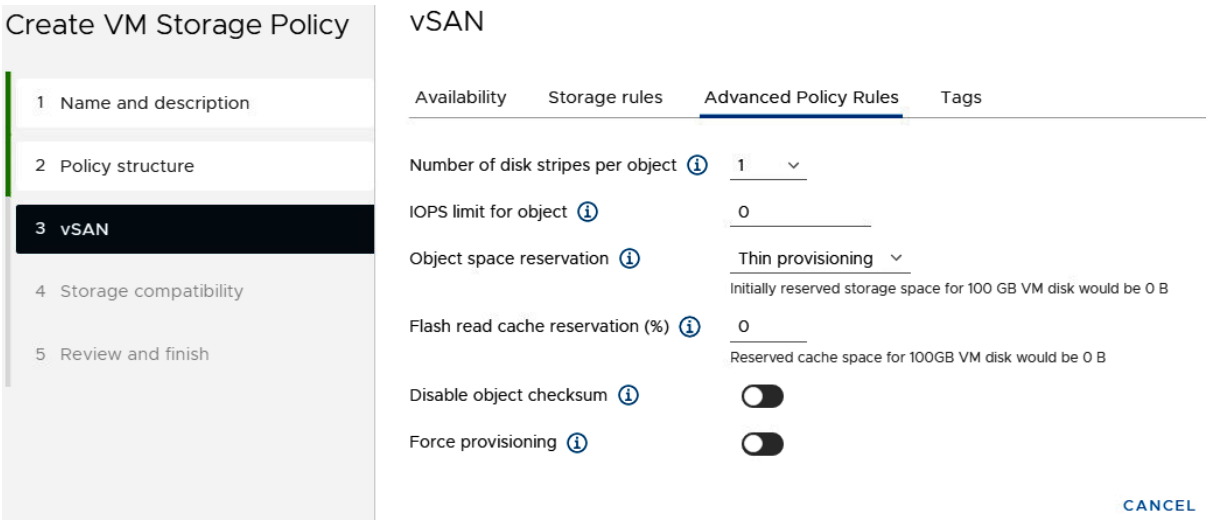

VM
VMDK (100GB)
Object
RAID-5
FTT = 1
Replica
Replica
Replica
Parity
VxRail Node A
VxRail Node B
VxRail Node C
VxRail Node D
VxRail Node E

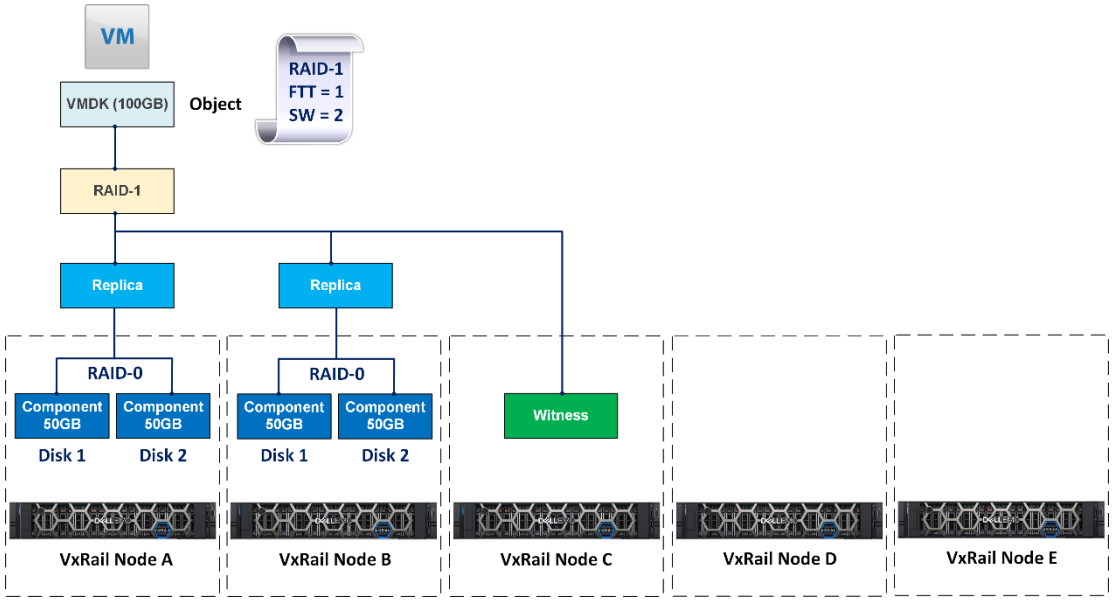

Availability
Storage rules
Advanced Policy Rules
Tags
Site disaster tolerance
None - standard cluster
Failures to tolerate
1 failure - RAID-1 (Mirroring)
No data redundancy
No data redundancy with host affinity
1 failure - RAID-1 (Mirroring)
1 failure - RAID-5 (Erasure Coding)
2 failures - RAID-1 (Mirroring)
2 failures - RAID-6 (Erasure Coding)
3 failures - RAID-1 (Mirroring)

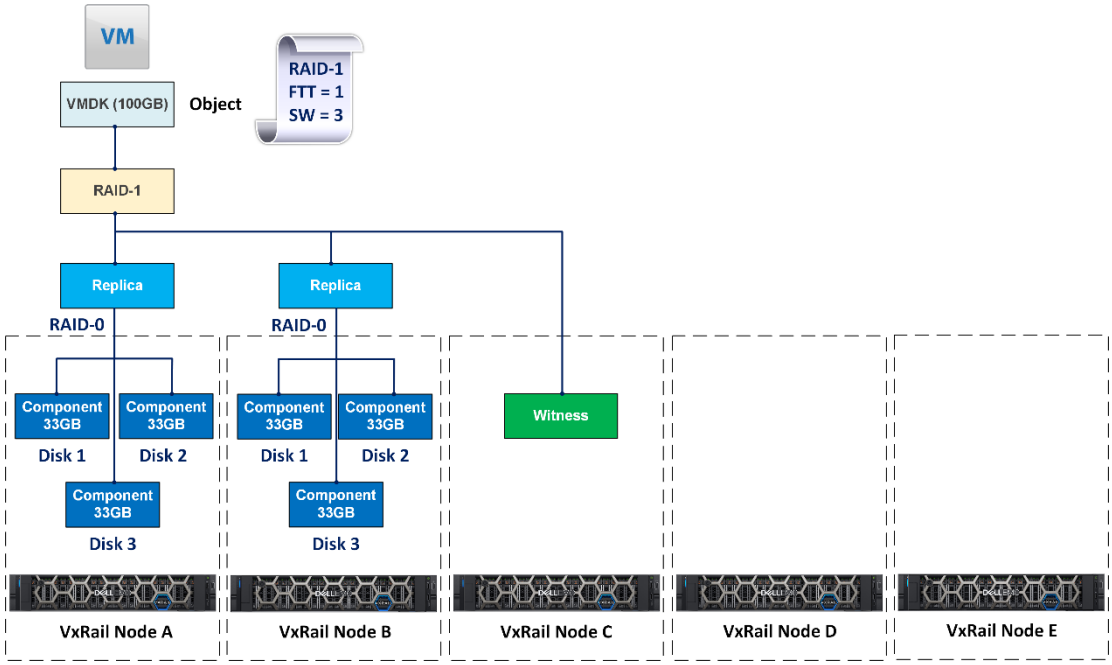

VM
VMDK (100GB)
Object
RAID-6
FTT = 2
Replica
Replica
Replica
Replica
Parity
Parity
VxRail Node A
VxRail Node B
VxRail Node C
VxRail Node D
VxRail Node E
VxRail Node F
VxRail Node G

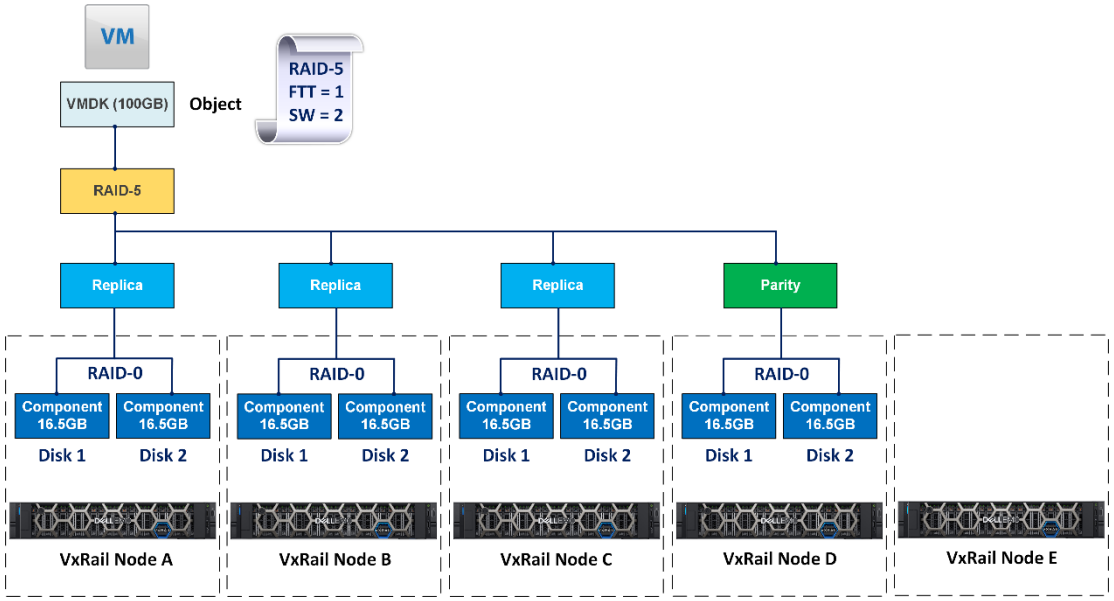

Availability
Storage rules
Advanced Policy Rules
Tags
Site disaster tolerance
None - standard cluster
Failures to tolerate
1 failure - RAID-1 (Mirroring)
No data redundancy
No data redundancy with host affinity
1 failure - RAID-1 (Mirroring)
1 failure - RAID-5 (Erasure Coding)
2 failures - RAID-1 (Mirroring)
2 failures - RAID-6 (Erasure Coding)
3 failures - RAID-1 (Mirroring)

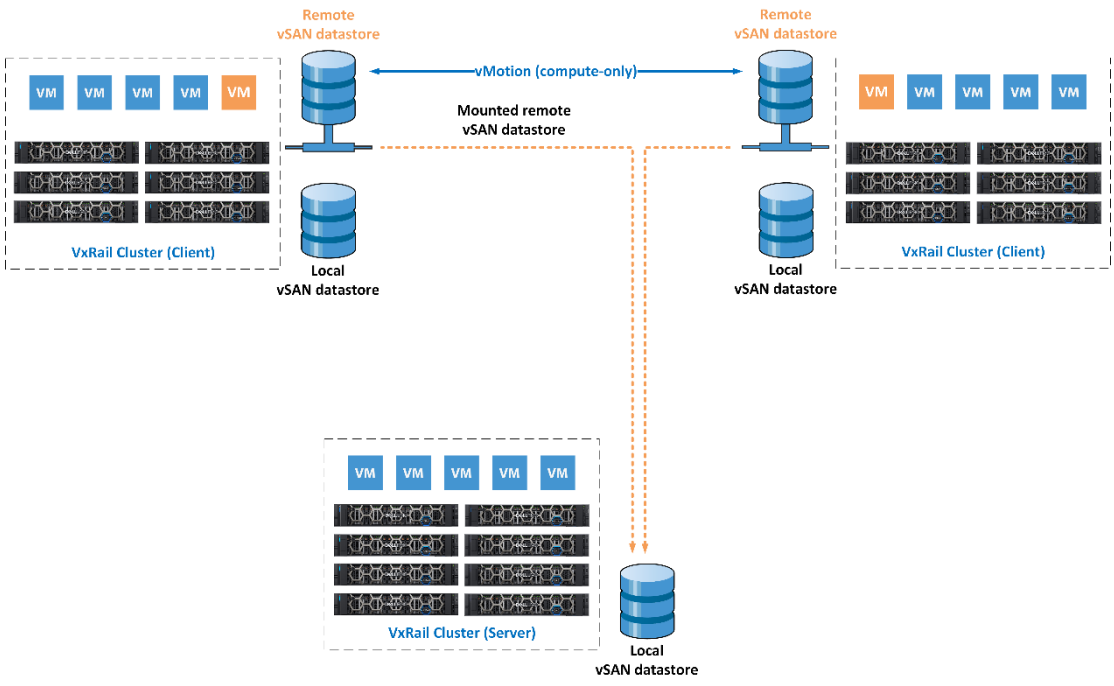

Create VM Storage Policy
1 Name and description
2 Policy structure
3 vSAN
4 Storage compatibility
5 Review and finish
vSAN
Availability
Storage rules
Advanced Policy Rules
Tags
Encryption services
Data-At-Rest encryption
No encryption
No preference
Space efficiency
Deduplication and compression
Compression only
No space efficiency
No preference
Storage tier
All flash
Hybrid
No preference

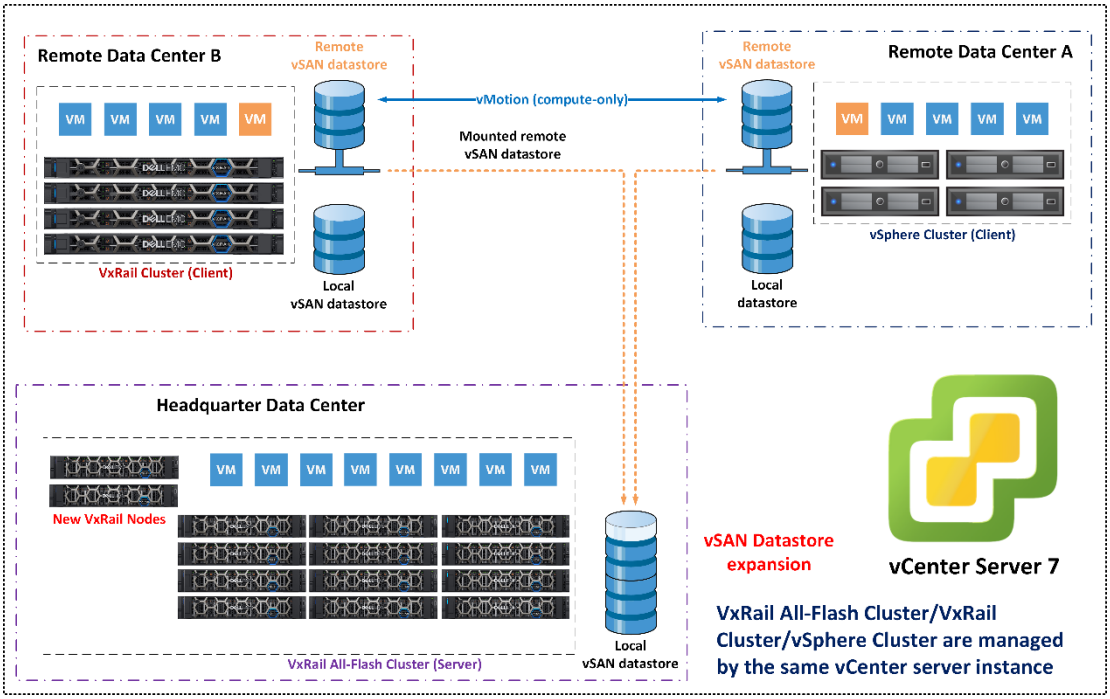

Create VM Storage Policy
1 Name and description
2 Policy structure
3 vSAN
4 Storage compatibility
5 Review and finish
vSAN
Availability
Storage rules
Advanced Policy Rules
Tags
Number of disk stripes per object
1
IOPS limit for object
0
Object space reservation
Thin provisioning
Initially reserved storage space for 100 GB VM disk would be 0 B
Flash read cache reservation (%)
0
Reserved cache space for 100GB VM disk would be 0 B
Disable object checksum
Force provisioning
CANCEL

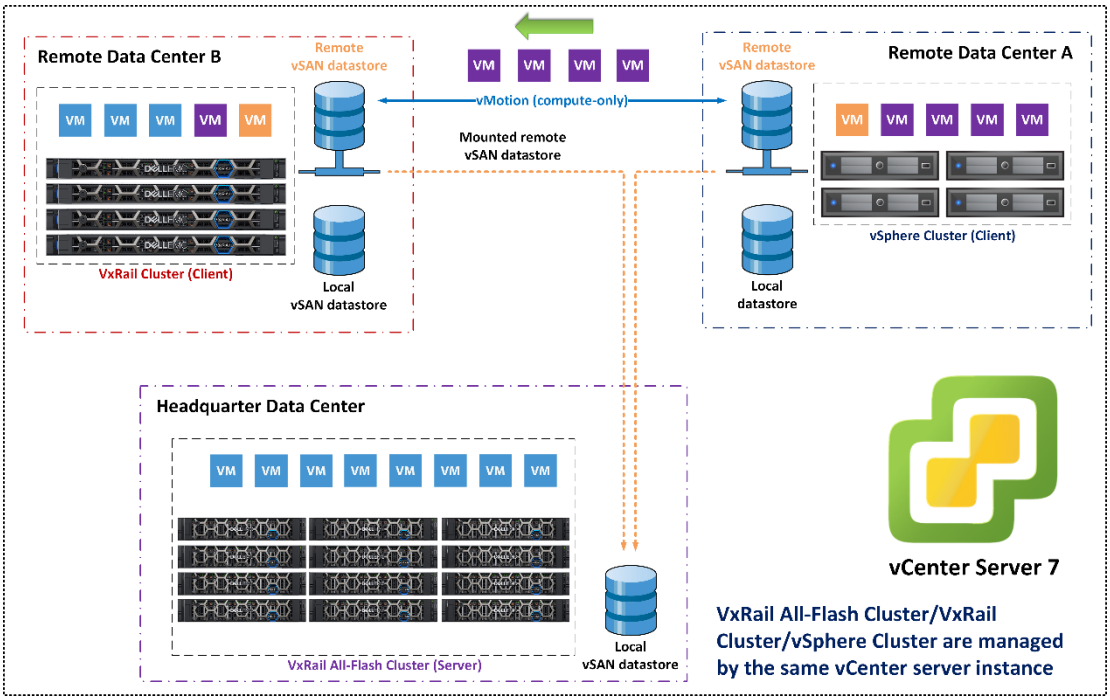

VM
VMDK (100GB)
Object
RAID-1
FTT = 1
SW = 2
RAID-1
Replica
Replica
RAID-0
RAID-0
Component 50GB
Component 50GB
Component 50GB
Component 50GB
Witness
Disk 1
Disk 2
Disk 1
Disk 2
VxRail Node A
VxRail Node B
VxRail Node C
VxRail Node D
VxRail Node E


VM
VMDK (100GB)
Object
RAID-1
FTT = 1
SW = 3
RAID-1
Replica
Replica
RAID-0
RAID-0
Component 33GB
Component 33GB
Component 33GB
Component 33GB
Witness
Disk 1
Disk 2
Disk 1
Disk 2
Component 33GB
Component 33GB
Disk 3
Disk 3
VxRail Node A
VxRail Node B
VxRail Node C
VxRail Node D
VxRail Node E

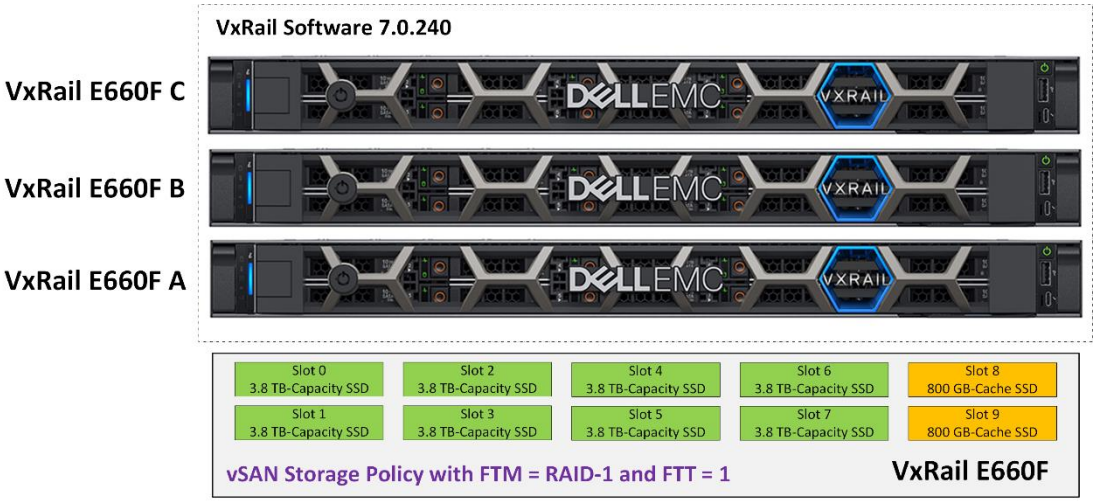

VM
VMDK (100GB)
Object
RAID-5
FTT = 1
SW = 2
RAID-5
Replica
Replica
Replica
Parity
RAID-0
RAID-0
RAID-0
RAID-0
Component 16.5GB
Component 16.5GB
Component 16.5GB
Component 16.5GB
Component 16.5GB
Component 16.5GB
Component 16.5GB
Component 16.5GB
Disk 1
Disk 2
Disk 1
Disk 2
Disk 1
Disk 2
Disk 1
Disk 2
VxRail Node A
VxRail Node B
VxRail Node C
VxRail Node D
VxRail Node E

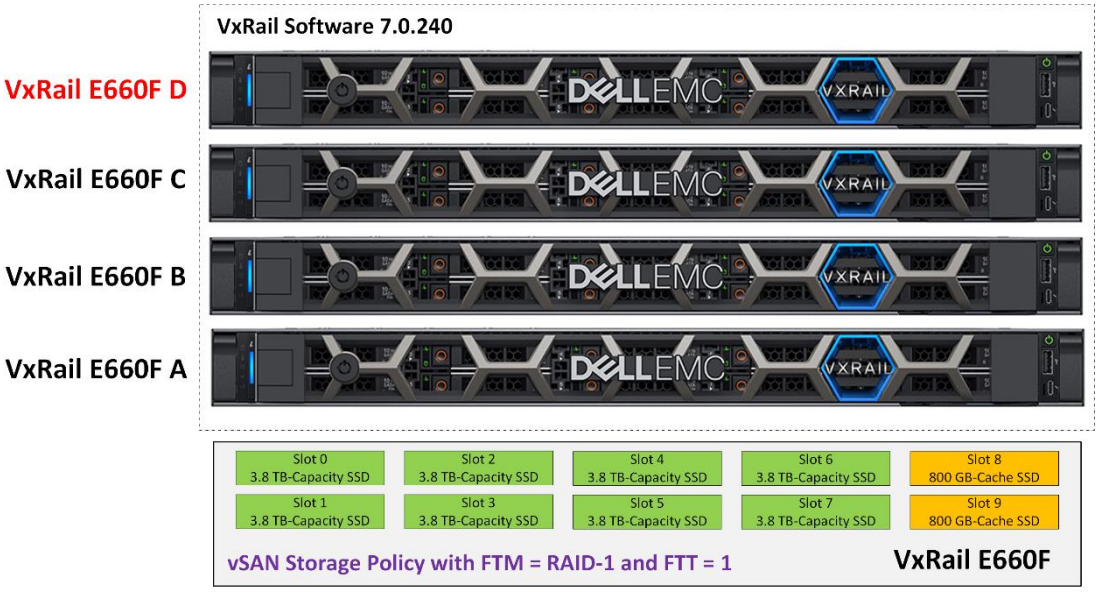

Remote vSAN datastore
Remote vSAN datastore
vMotion (compute-only)
Mounted remote vSAN datastore
VM
VxRail Cluster (Client)
VxRail Cluster (Client)
Local vSAN datastore
Local vSAN datastore
VxRail Cluster (Server)
Local vSAN datastore

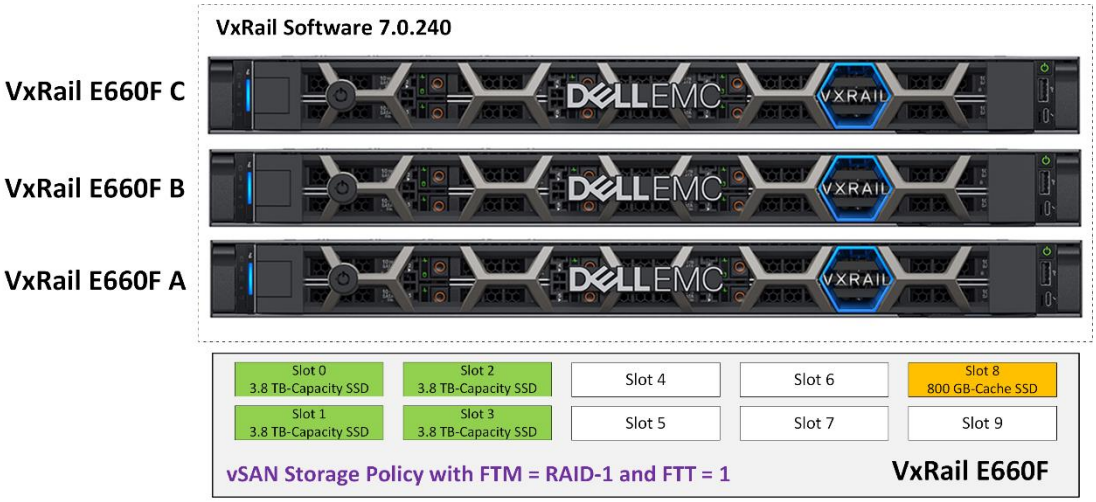

Remote Data Center B
Remote vSAN datastore
VM VM VM VM VM
VxRail Cluster (Client)
Local vSAN datastore
vMotion (compute-only)
Mounted remote vSAN datastore
Remote vSAN datastore
Remote Data Center A
VM VM VM VM VM
vSphere Cluster (Client)
Local datastore
Headquarter Data Center
New VxRail Nodes
VM VM VM VM VM VM VM VM
VxRail All-Flash Cluster (Server)
Local vSAN datastore
vSAN Datastore expansion
vCenter Server 7
VxRail All-Flash Cluster/VxRail Cluster/vSphere Cluster are managed by the same vCenter server instance

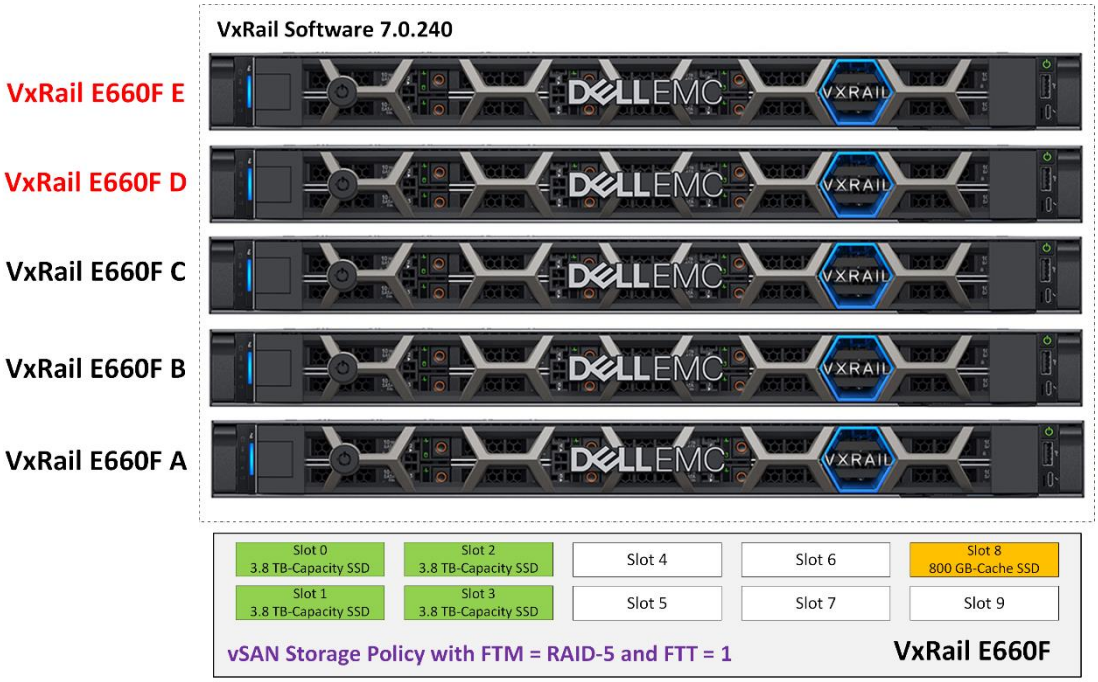

Remote Data Center B
Remote vSAN datastore
VM VM VM VM VM
VxRail Cluster (Client)
Local vSAN datastore
VM VM VM VM
vMotion (compute-only)
Mounted remote vSAN datastore
Remote vSAN datastore
Remote Data Center A
VM VM VM VM VM
vSphere Cluster (Client)
Local datastore
Headquarter Data Center
VM VM VM VM VM VM VM VM
VxRail All-Flash Cluster (Server)
Local vSAN datastore
vCenter Server 7
VxRail All-Flash Cluster/VxRail Cluster/vSphere Cluster are managed by the same vCenter server instance

# Chapter 5: Design of Cluster Expansion




VxRail Software 7.0.240
VxRail E660F C
VxRail E660F B
VxRail E660F A
Slot 0
3.8 TB-Capacity SSD
Slot 2
3.8 TB-Capacity SSD
Slot 4
Slot 6
Slot 8
800 GB-Cache SSD
Slot 1
3.8 TB-Capacity SSD
Slot 3
3.8 TB-Capacity SSD
Slot 5
Slot 7
Slot 9
vSAN Storage Policy with FTM = RAID-1 and FTT = 1
VxRail E660F


VxRail Software 7.0.240
VxRail E660F E
VxRail E660F D
VxRail E660F C
VxRail E660F B
VxRail E660F A
Slot 0
3.8 TB-Capacity SSD
Slot 2
3.8 TB-Capacity SSD
Slot 4
Slot 6
Slot 8
800 GB-Cache SSD
Slot 1
3.8 TB-Capacity SSD
Slot 3
3.8 TB-Capacity SSD
Slot 5
Slot 7
Slot 9
vSAN Storage Policy with FTM = RAID-5 and FTT = 1
VxRail E660F


| | | | | |
|---|---|---|---|---|
| Slot 0 | Slot 2 | Slot 4 | Slot 6 | Slot 8 |
| Slot 1 | Slot 3 | Slot 5 | Slot 7 | Slot 9 |

**Front View**

**VxRail E660/F/N**


| | | | | |
|---|---|---|---|---|
| Slot 0 | Slot 2 | Slot 4 | Slot 6 | Slot 8 |
| Slot 1 | Slot 3 | Slot 5 | Slot 7 | Slot 9 |

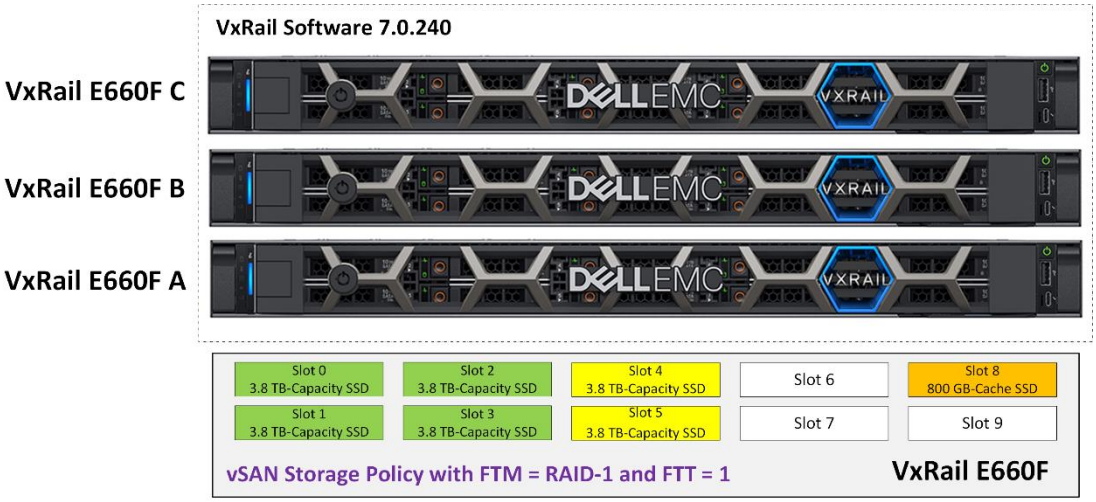
**Front View**

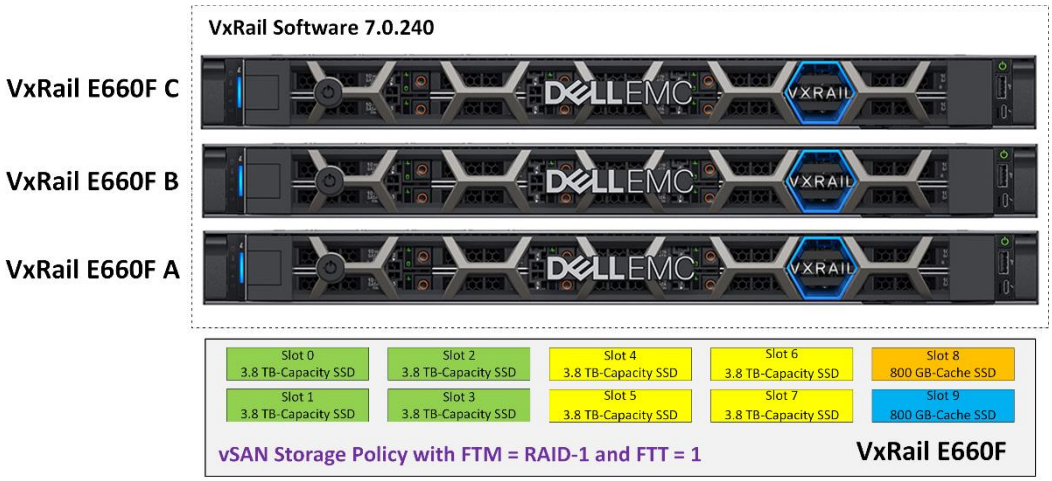
**VxRail E660/F/N**


| | | | | |
|---|---|---|---|---|
| Slot 0 | Slot 2 | Slot 4 | Slot 6 | |
| Slot 1 | Slot 3 | Slot 5 | Slot 7 | |

**Front View**

**VxRail E665/F**


VxRail Software 7.0.240
VxRail E660F C
VxRail E660F B
VxRail E660F A
Slot 0
3.8 TB-Capacity SSD
Slot 2
3.8 TB-Capacity SSD
Slot 4
3.8 TB-Capacity SSD
Slot 6
Slot 8
800 GB-Cache SSD
Slot 1
3.8 TB-Capacity SSD
Slot 3
3.8 TB-Capacity SSD
Slot 5
3.8 TB-Capacity SSD
Slot 7
Slot 9
vSAN Storage Policy with FTM = RAID-1 and FTT = 1
VxRail E660F


VxRail Software 7.0.240
VxRail E660F C
VxRail E660F B
VxRail E660F A
Slot 0
3.8 TB-Capacity SSD
Slot 2
3.8 TB-Capacity SSD
Slot 4
3.8 TB-Capacity SSD
Slot 6
3.8 TB-Capacity SSD
Slot 8
800 GB-Cache SSD
Slot 1
3.8 TB-Capacity SSD
Slot 3
3.8 TB-Capacity SSD
Slot 5
3.8 TB-Capacity SSD
Slot 7
3.8 TB-Capacity SSD
Slot 9
800 GB-Cache SSD
vSAN Storage Policy with FTM = RAID-1 and FTT = 1
VxRail E660F


Slot 0 | Slot 1 | Slot 2 | Slot 3 | Slot 4 | Slot 5 | Slot 6 | Slot 7 | Slot 8 | Slot 9 | Slot 10 | Slot 11 | Slot 12 | Slot 13 | Slot 14 | Slot 15 | Slot 16 | Slot 17 | Slot 18 | Slot 19 | Slot 20 | Slot 21 | Slot 22 | Slot 23

**Front View** — **VxRail P670F**

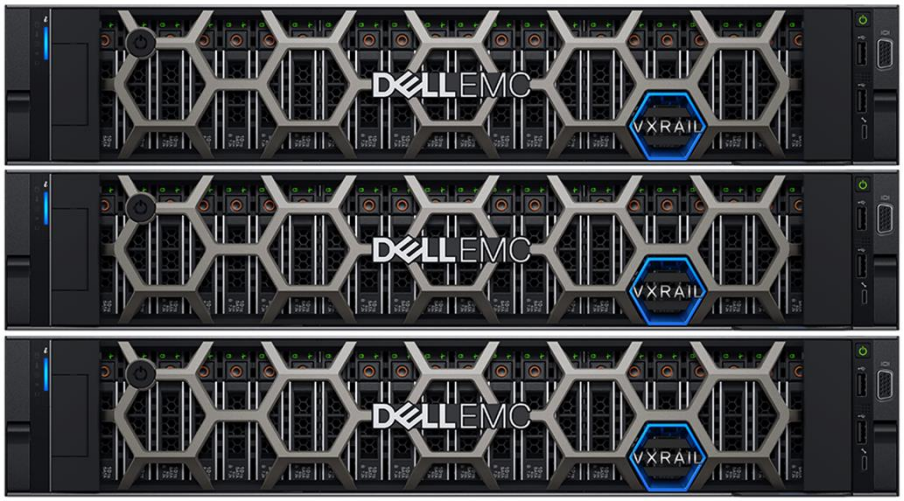
Slot 24 | Slot 26

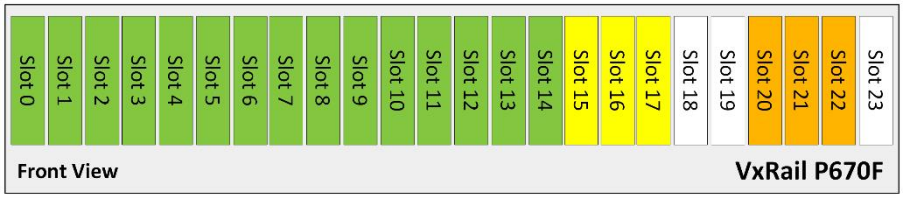
Slot 25 | Slot 27

**Rear View** — **VxRail P670F**

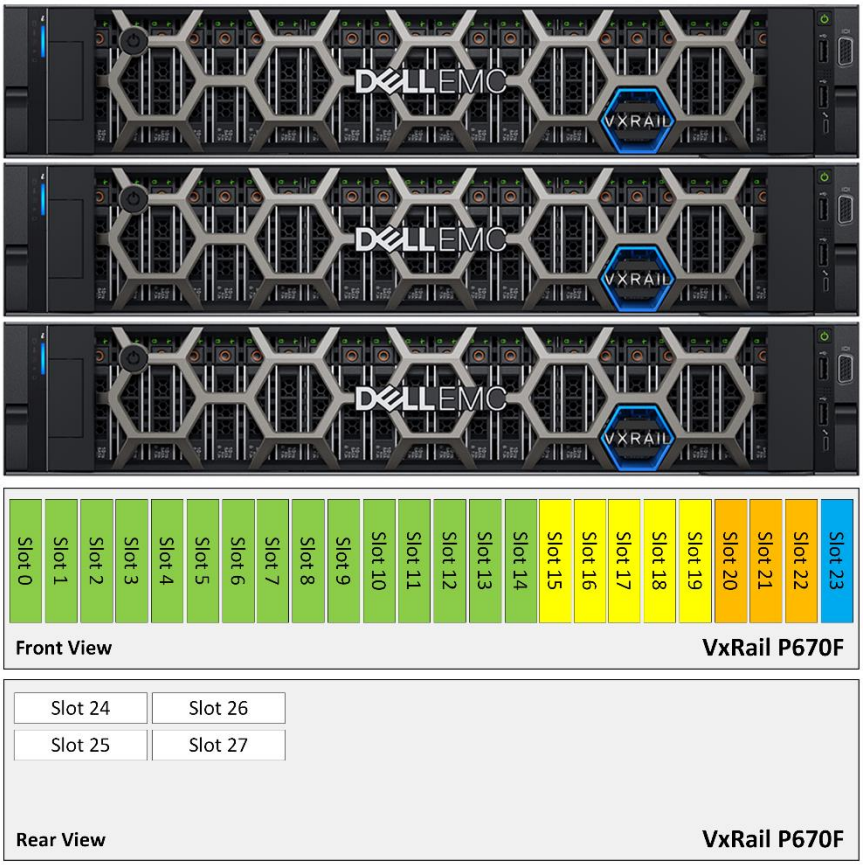

Slot 0 | Slot 1 | Slot 2 | Slot 3 | Slot 4 | Slot 5 | Slot 6 | Slot 7 | Slot 8 | Slot 9 | Slot 10 | Slot 11 | Slot 12 | Slot 13 | Slot 14 | Slot 15 | Slot 16 | Slot 17 | Slot 18 | Slot 19 | Slot 20 | Slot 21 | Slot 22 | Slot 23

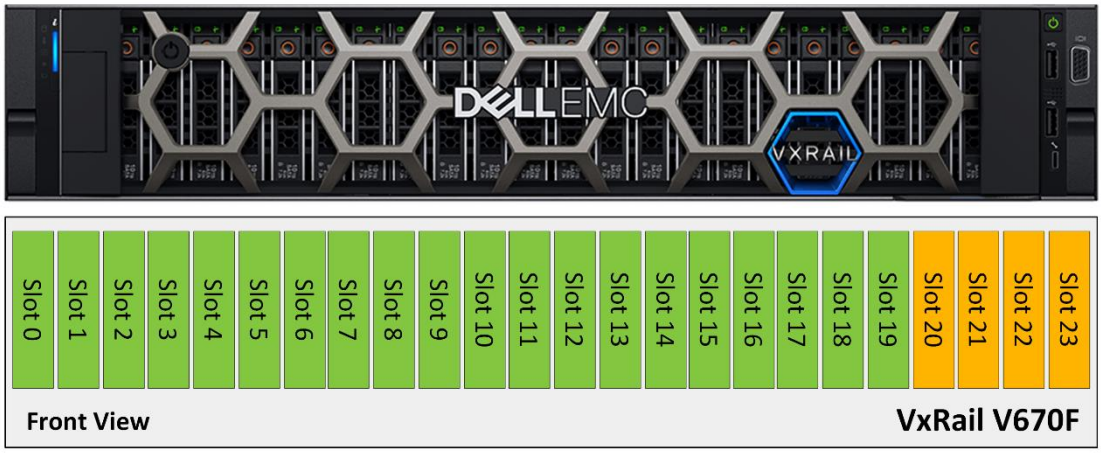
**Front View** — **VxRail P675F/N**

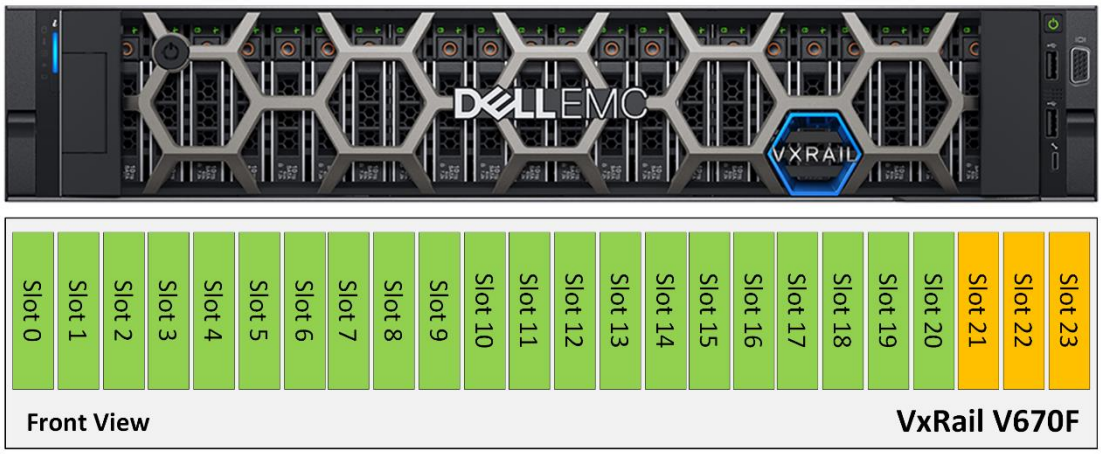

VxRail P670F C
VxRail P670F B
VxRail P670F A

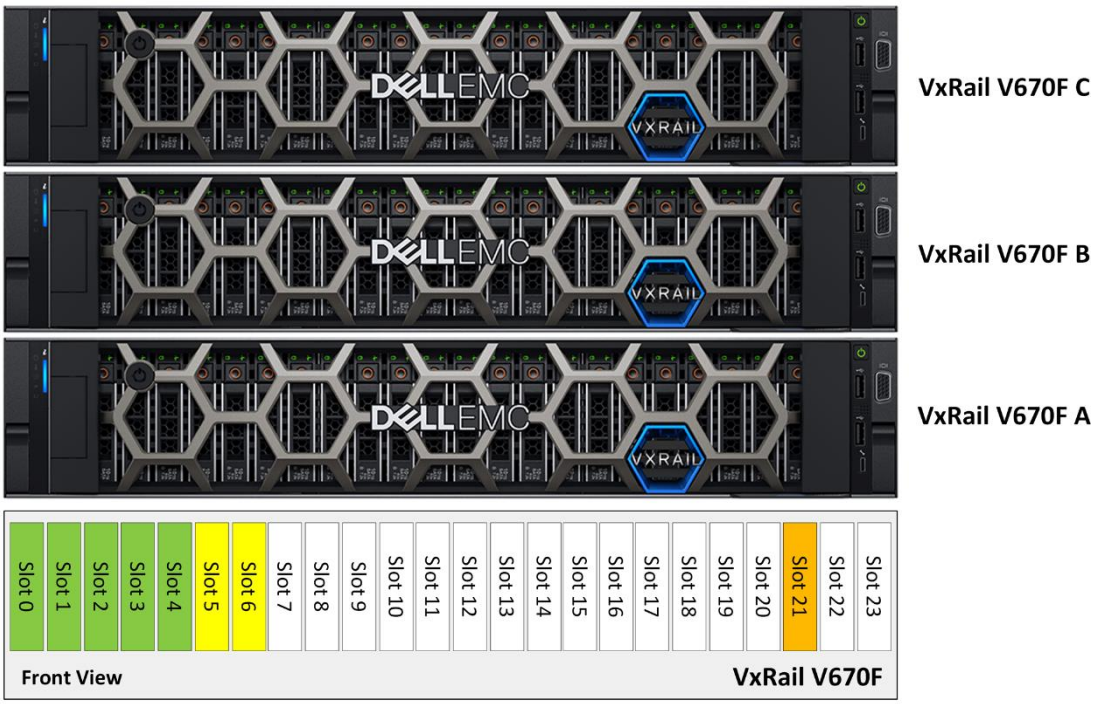

Slot 0
Slot 1
Slot 2
Slot 3
Slot 4
Slot 5
Slot 6
Slot 7
Slot 8
Slot 9
Slot 10
Slot 11
Slot 12
Slot 13
Slot 14
Slot 15
Slot 16
Slot 17
Slot 18
Slot 19
Slot 20
Slot 21
Slot 22
Slot 23
Front View
VxRail P670F

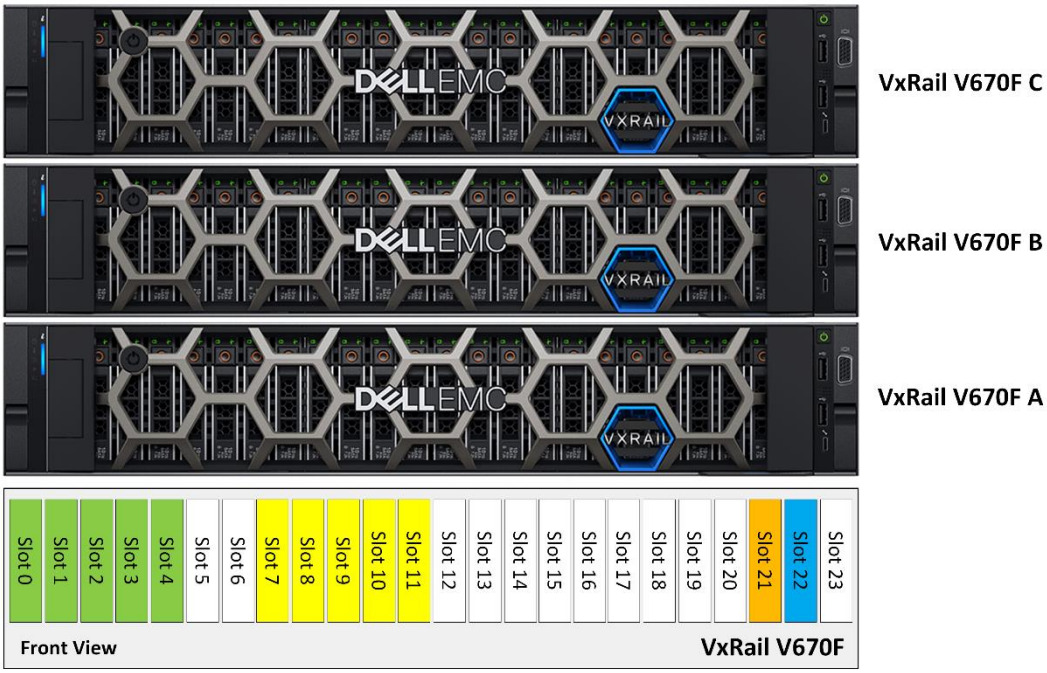

Slot 24
Slot 26
Slot 25
Slot 27
Rear View
VxRail P670F

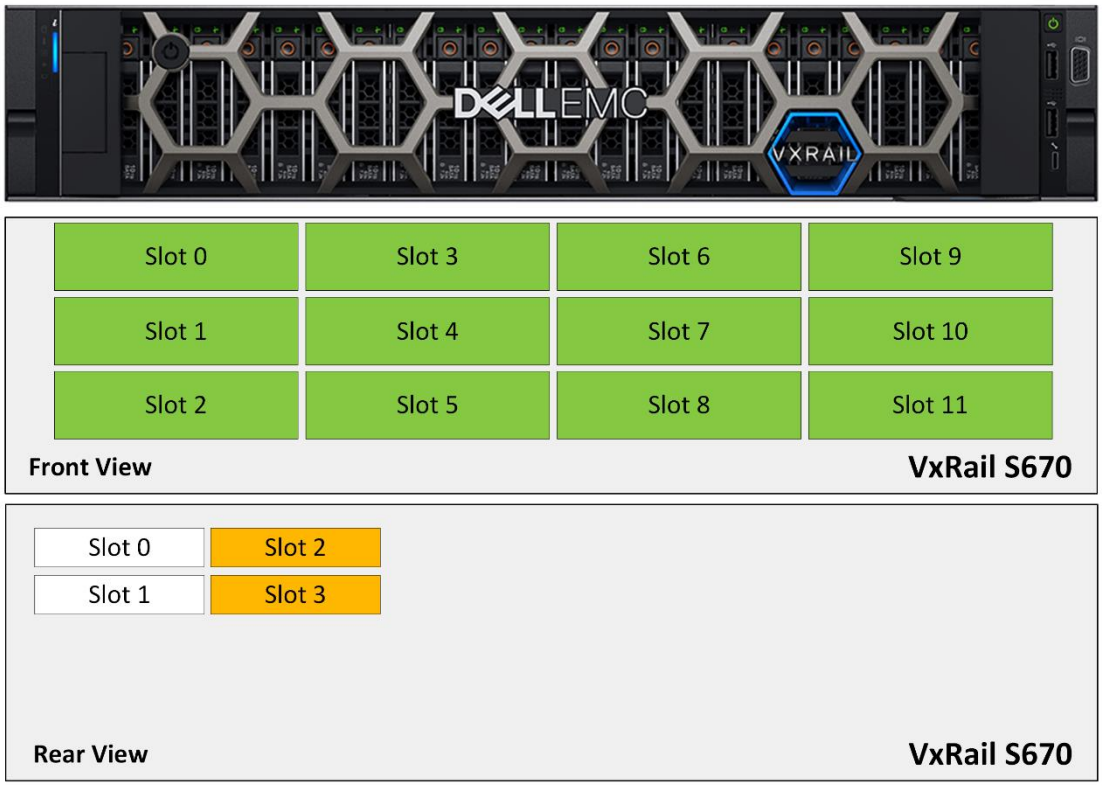

VxRail P670F C
VxRail P670F B
VxRail P670F A
Slot 0
Slot 1
Slot 2
Slot 3
Slot 4
Slot 5
Slot 6
Slot 7
Slot 8
Slot 9
Slot 10
Slot 11
Slot 12
Slot 13
Slot 14
Slot 15
Slot 16
Slot 17
Slot 18
Slot 19
Slot 20
Slot 21
Slot 22
Slot 23
Front View
VxRail P670F
Slot 24
Slot 26
Slot 25
Slot 27
Rear View
VxRail P670F


Slot 0
Slot 1
Slot 2
Slot 3
Slot 4
Slot 5
Slot 6
Slot 7
Slot 8
Slot 9
Slot 10
Slot 11
Slot 12
Slot 13
Slot 14
Slot 15
Slot 16
Slot 17
Slot 18
Slot 19
Slot 20
Slot 21
Slot 22
Slot 23
Front View
VxRail V670F


Slot 0
Slot 1
Slot 2
Slot 3
Slot 4
Slot 5
Slot 6
Slot 7
Slot 8
Slot 9
Slot 10
Slot 11
Slot 12
Slot 13
Slot 14
Slot 15
Slot 16
Slot 17
Slot 18
Slot 19
Slot 20
Slot 21
Slot 22
Slot 23
Front View
VxRail V670F


VxRail V670F C
VxRail V670F B
VxRail V670F A
Slot 0
Slot 1
Slot 2
Slot 3
Slot 4
Slot 5
Slot 6
Slot 7
Slot 8
Slot 9
Slot 10
Slot 11
Slot 12
Slot 13
Slot 14
Slot 15
Slot 16
Slot 17
Slot 18
Slot 19
Slot 20
Slot 21
Slot 22
Slot 23
Front View
VxRail V670F


VxRail V670F C
VxRail V670F B
VxRail V670F A
Slot 0
Slot 1
Slot 2
Slot 3
Slot 4
Slot 5
Slot 6
Slot 7
Slot 8
Slot 9
Slot 10
Slot 11
Slot 12
Slot 13
Slot 14
Slot 15
Slot 16
Slot 17
Slot 18
Slot 19
Slot 20
Slot 21
Slot 22
Slot 23
Front View
VxRail V670F


Slot 0
Slot 3
Slot 6
Slot 9
Slot 1
Slot 4
Slot 7
Slot 10
Slot 2
Slot 5
Slot 8
Slot 11
Front View
VxRail S670
Slot 0
Slot 2
Slot 1
Slot 3
Rear View
VxRail S670


| | | | |
|---|---|---|---|
| Slot 0 | Slot 3 | Slot 6 | Slot 9 |
| Slot 1 | Slot 4 | Slot 7 | Slot 10 |
| Slot 2 | Slot 5 | Slot 8 | Slot 11 |

**Front View** **VxRail S670**

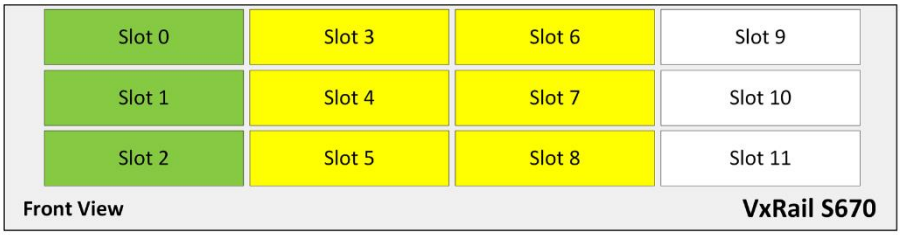
| | |
|---|---|
| Slot 0 | Slot 2 |
| Slot 1 | Slot 3 |

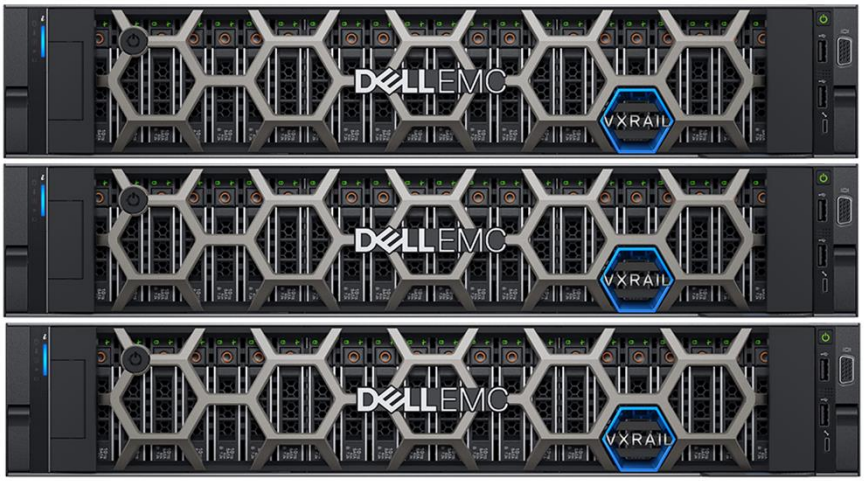
**Rear View** **VxRail S670**

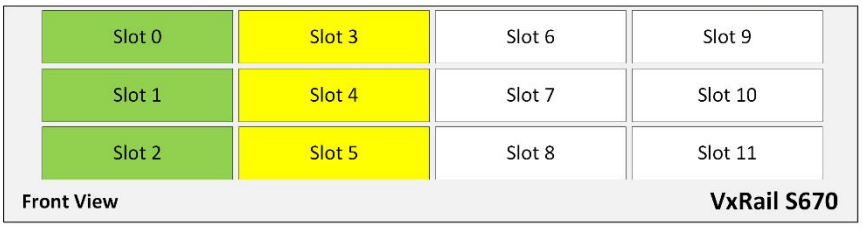

VxRail S670 C


VxRail S670 B

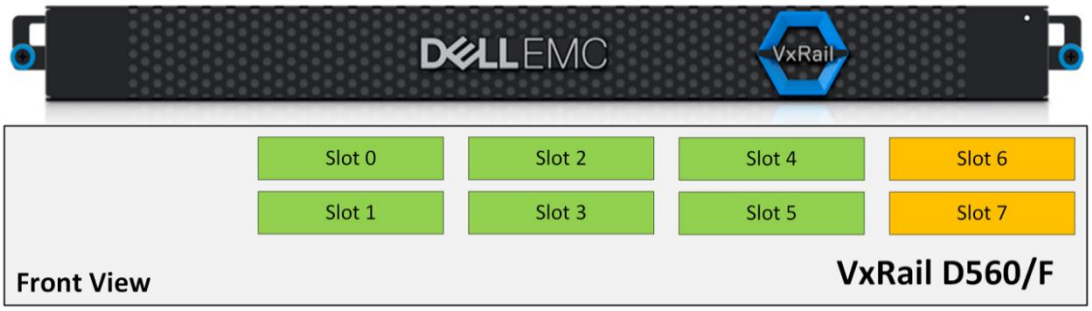

VxRail S670F A

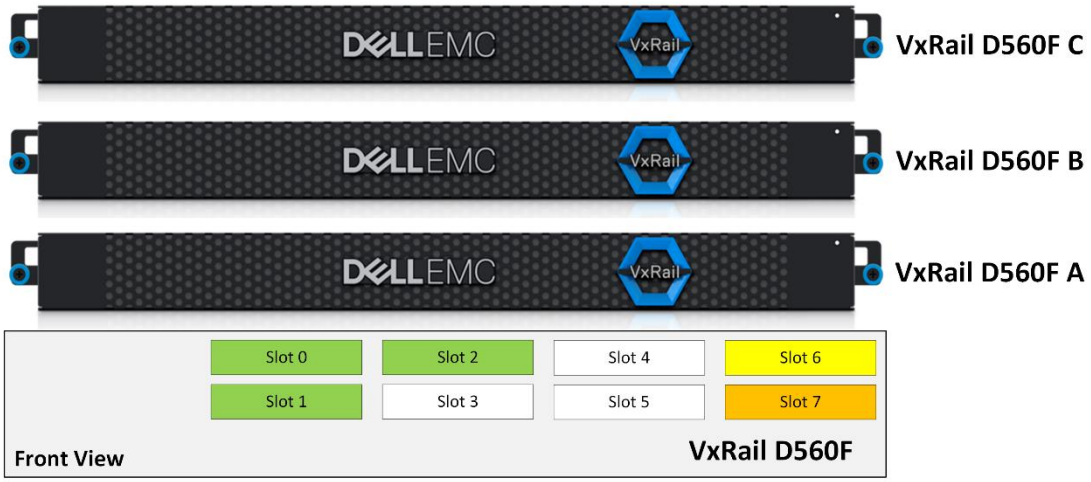


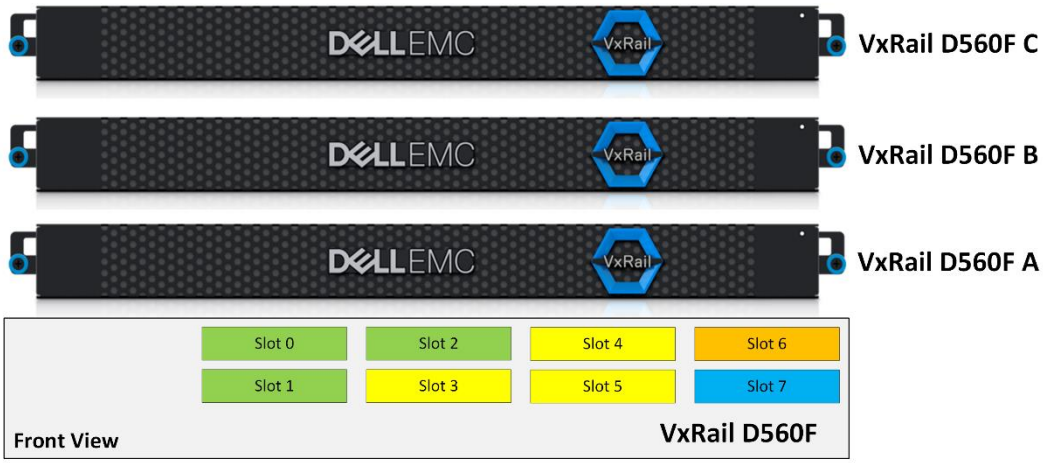


VxRail S670 C
VxRail S670 B
VxRail S670F A

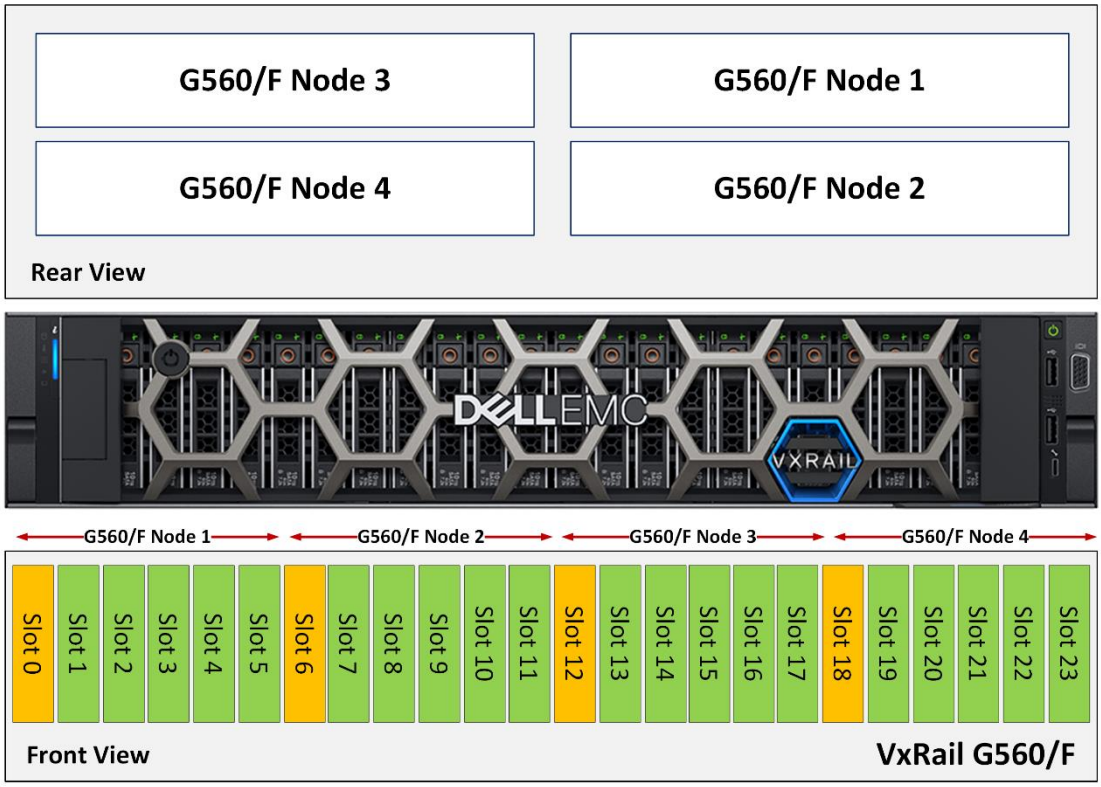

Slot 0
Slot 3
Slot 6
Slot 9
Slot 1
Slot 4
Slot 7
Slot 10
Slot 2
Slot 5
Slot 8
Slot 11
Front View
VxRail S670

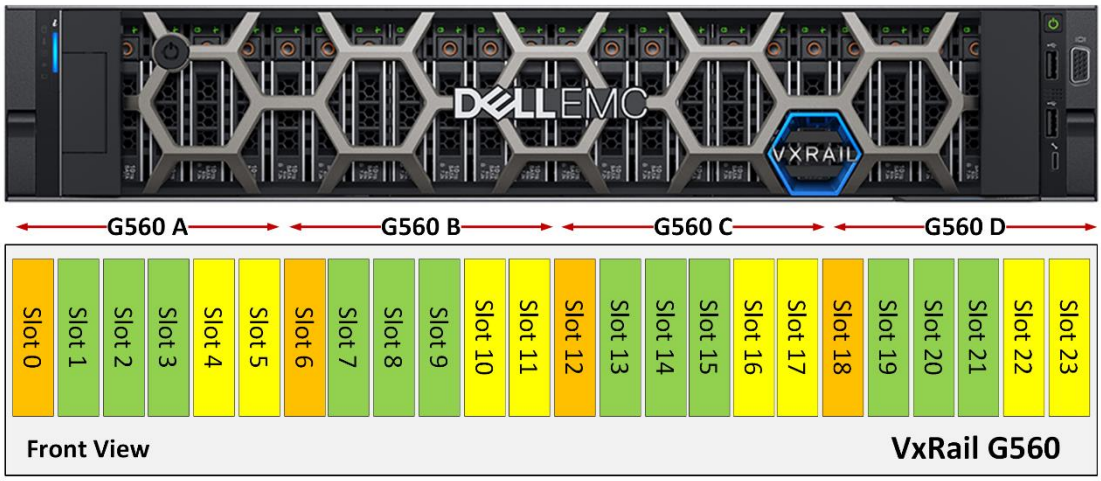

Slot 0
Slot 2
Slot 1
Slot 3
Rear View
VxRail S670

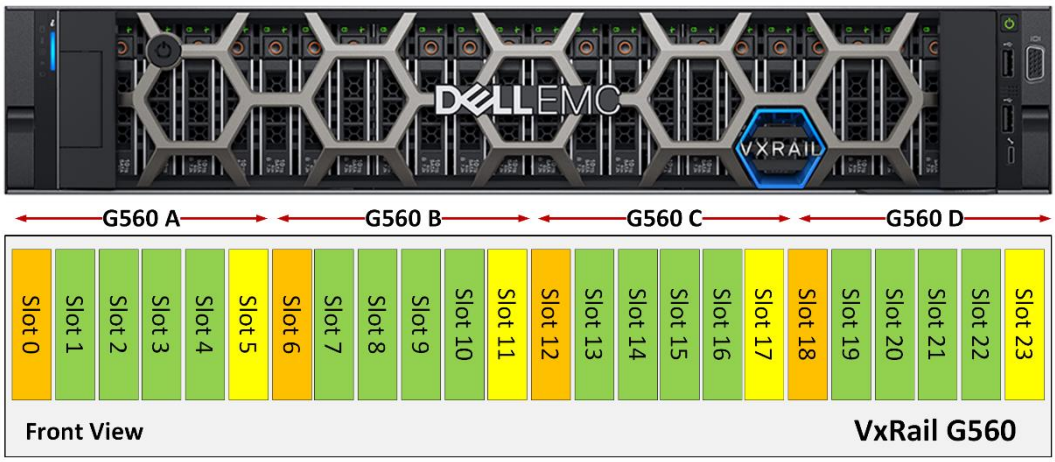

Slot 0
Slot 2
Slot 4
Slot 6
Slot 1
Slot 3
Slot 5
Slot 7
Front View
VxRail D560/F

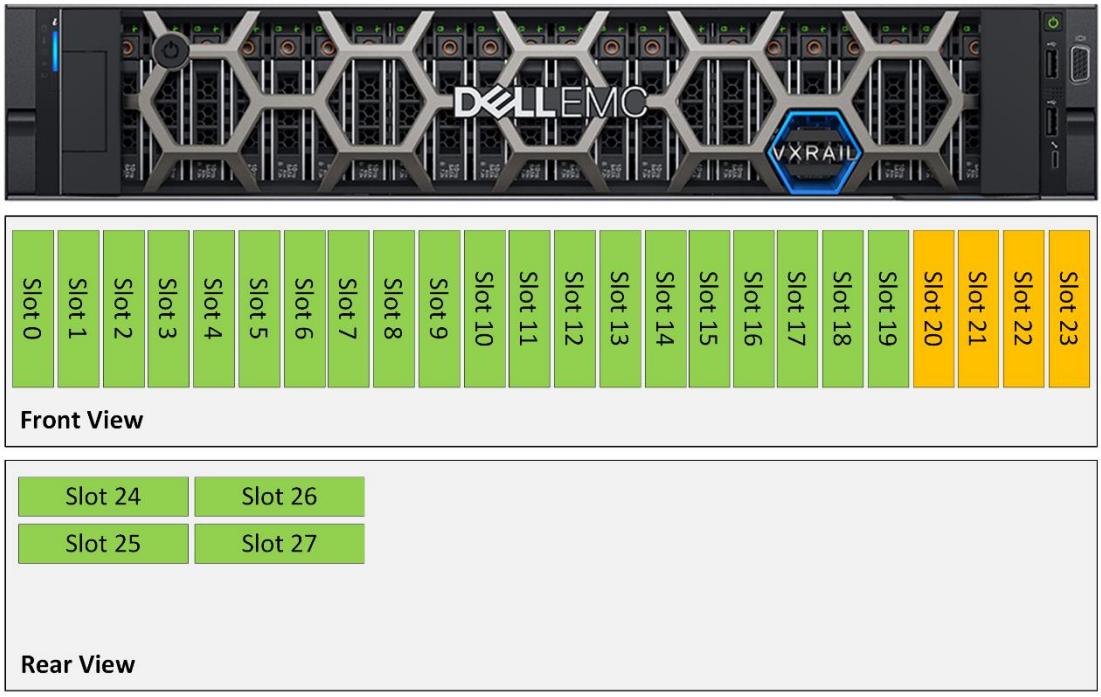

VxRail D560F C
VxRail D560F B
VxRail D560F A
Slot 0
Slot 2
Slot 4
Slot 6
Slot 1
Slot 3
Slot 5
Slot 7
Front View
VxRail D560F


VxRail D560F C
VxRail D560F B
VxRail D560F A
Slot 0
Slot 2
Slot 4
Slot 6
Slot 1
Slot 3
Slot 5
Slot 7
Front View
VxRail D560F

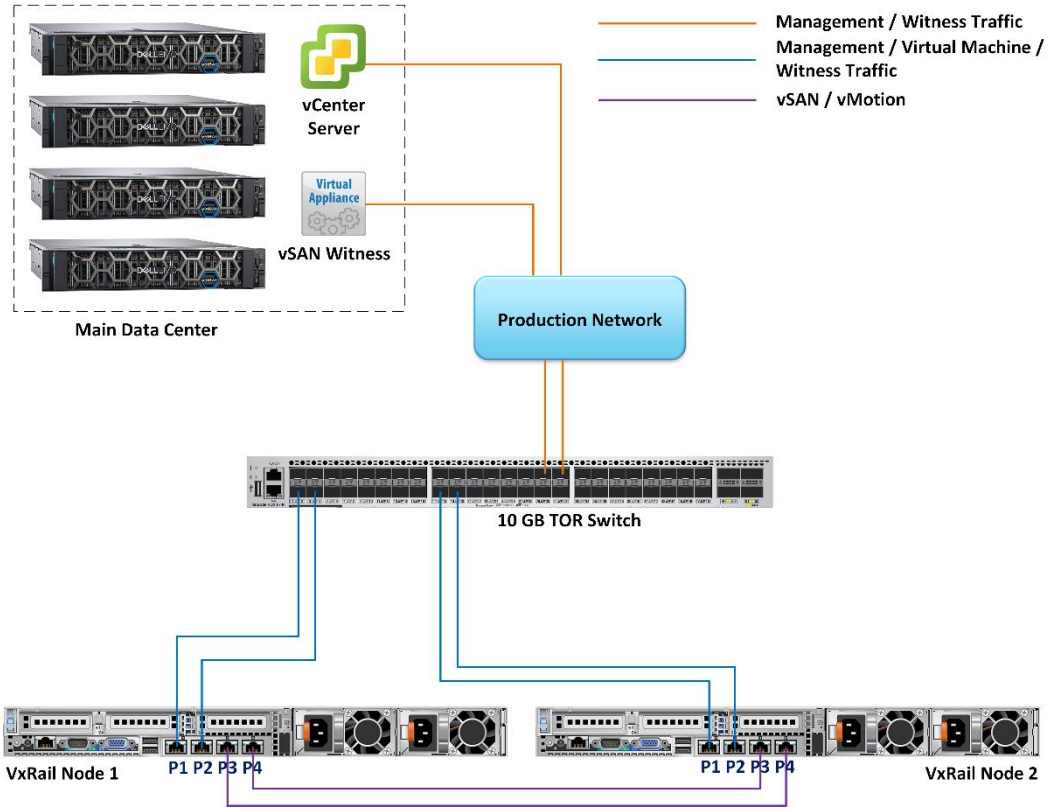

G560/F Node 3
G560/F Node 1
G560/F Node 4
G560/F Node 2
Rear View
DELL EMC
VXRAIL
G560/F Node 1
G560/F Node 2
G560/F Node 3
G560/F Node 4
Slot 0
Slot 1
Slot 2
Slot 3
Slot 4
Slot 5
Slot 6
Slot 7
Slot 8
Slot 9
Slot 10
Slot 11
Slot 12
Slot 13
Slot 14
Slot 15
Slot 16
Slot 17
Slot 18
Slot 19
Slot 20
Slot 21
Slot 22
Slot 23
Front View
VxRail G560/F

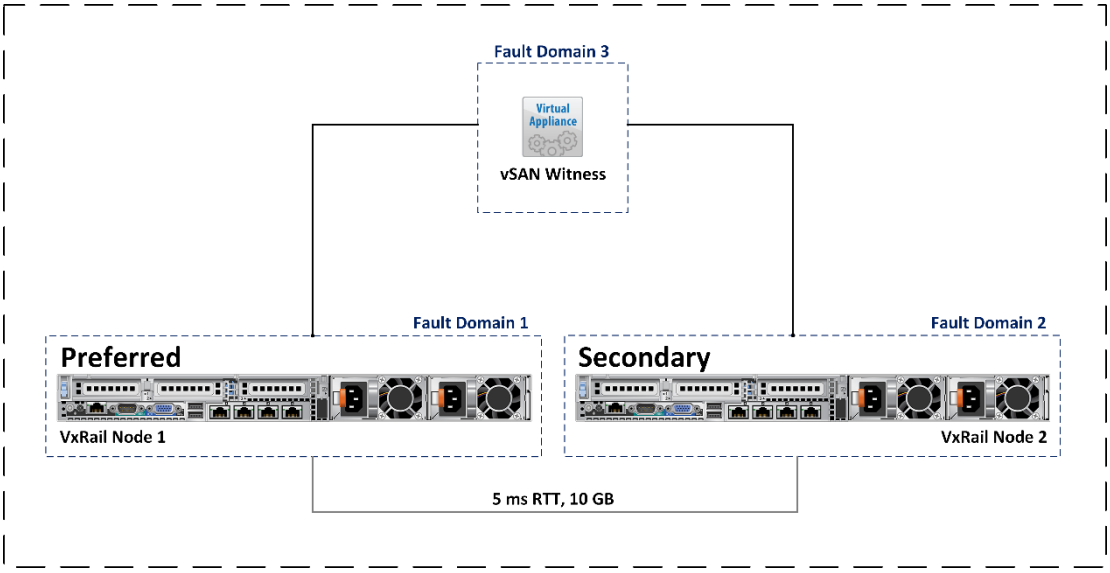

DELL EMC
VXRAIL
G560 A
G560 B
G560 C
G560 D
Slot 0
Slot 1
Slot 2
Slot 3
Slot 4
Slot 5
Slot 6
Slot 7
Slot 8
Slot 9
Slot 10
Slot 11
Slot 12
Slot 13
Slot 14
Slot 15
Slot 16
Slot 17
Slot 18
Slot 19
Slot 20
Slot 21
Slot 22
Slot 23
Front View
VxRail G560

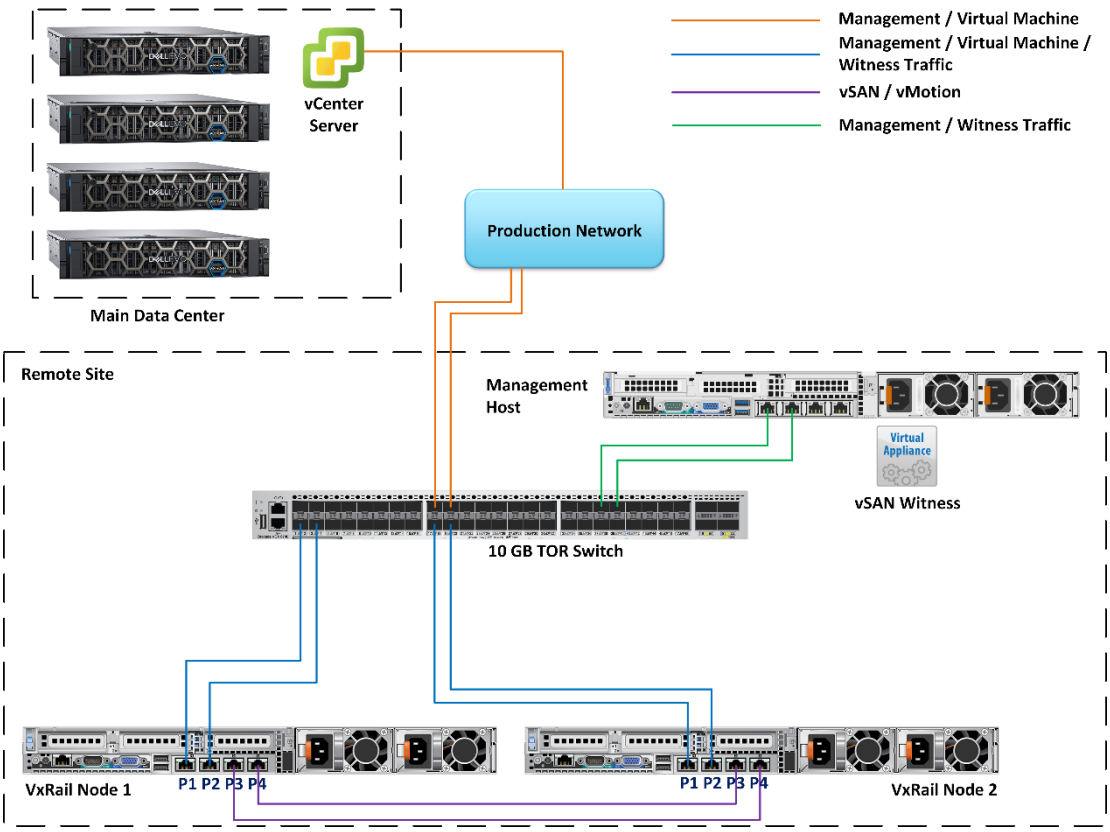

G560 A
G560 B
G560 C
G560 D
Slot 0
Slot 1
Slot 2
Slot 3
Slot 4
Slot 5
Slot 6
Slot 7
Slot 8
Slot 9
Slot 10
Slot 11
Slot 12
Slot 13
Slot 14
Slot 15
Slot 16
Slot 17
Slot 18
Slot 19
Slot 20
Slot 21
Slot 22
Slot 23
Front View
VxRail G560

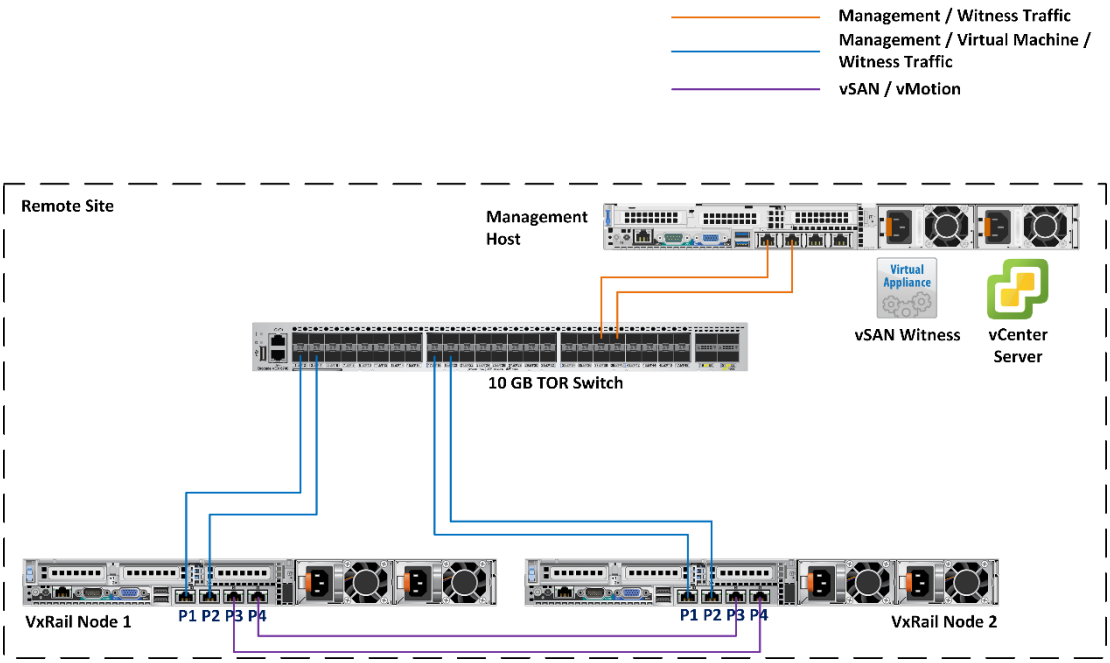

Slot 0
Slot 1
Slot 2
Slot 3
Slot 4
Slot 5
Slot 6
Slot 7
Slot 8
Slot 9
Slot 10
Slot 11
Slot 12
Slot 13
Slot 14
Slot 15
Slot 16
Slot 17
Slot 18
Slot 19
Slot 20
Slot 21
Slot 22
Slot 23
Front View
Slot 24
Slot 26
Slot 25
Slot 27
Rear View

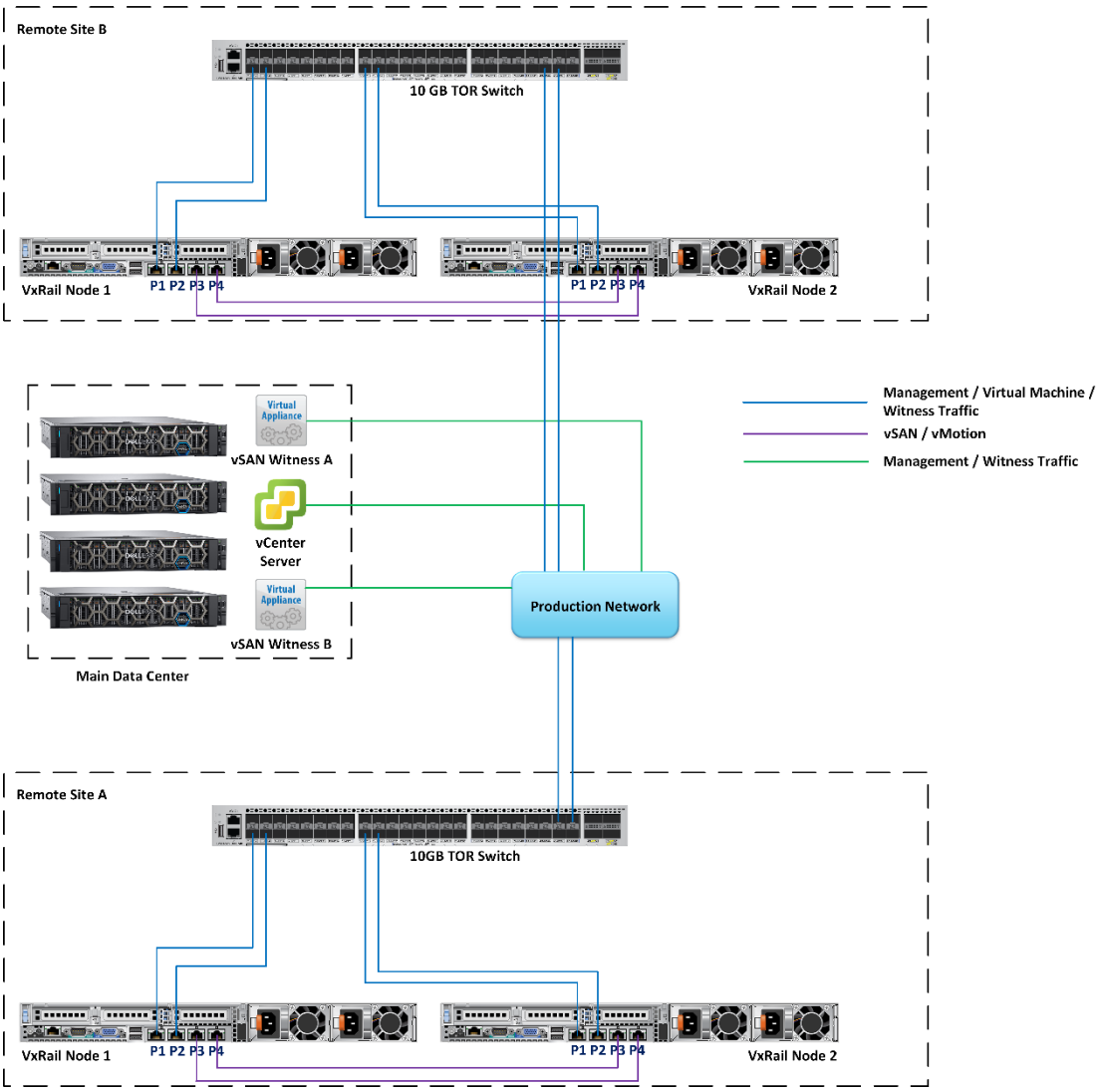
# Chapter 6: Design of vSAN 2-Node Cluster on VxRail

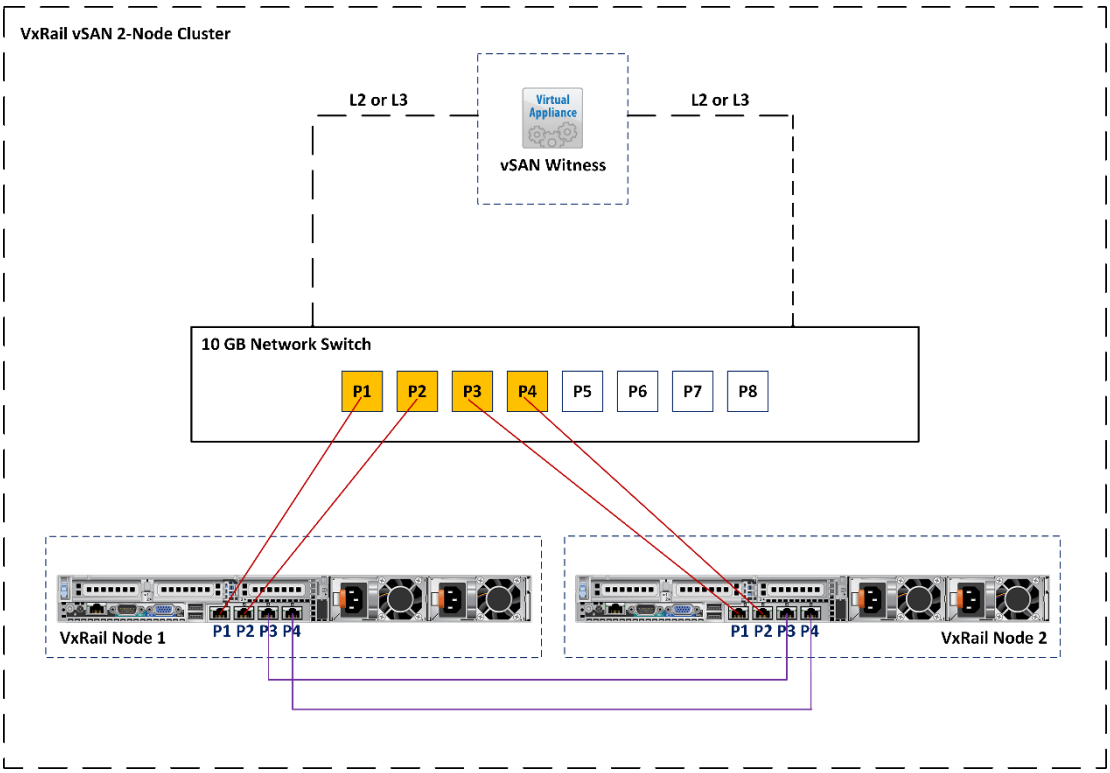


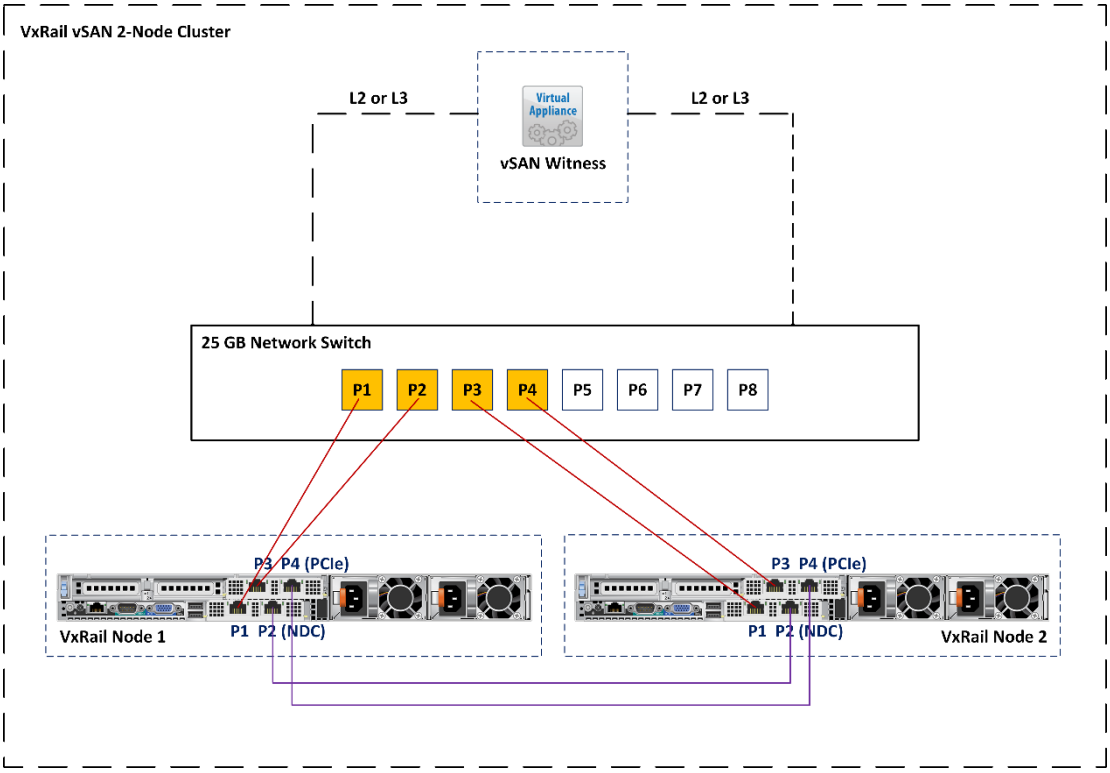



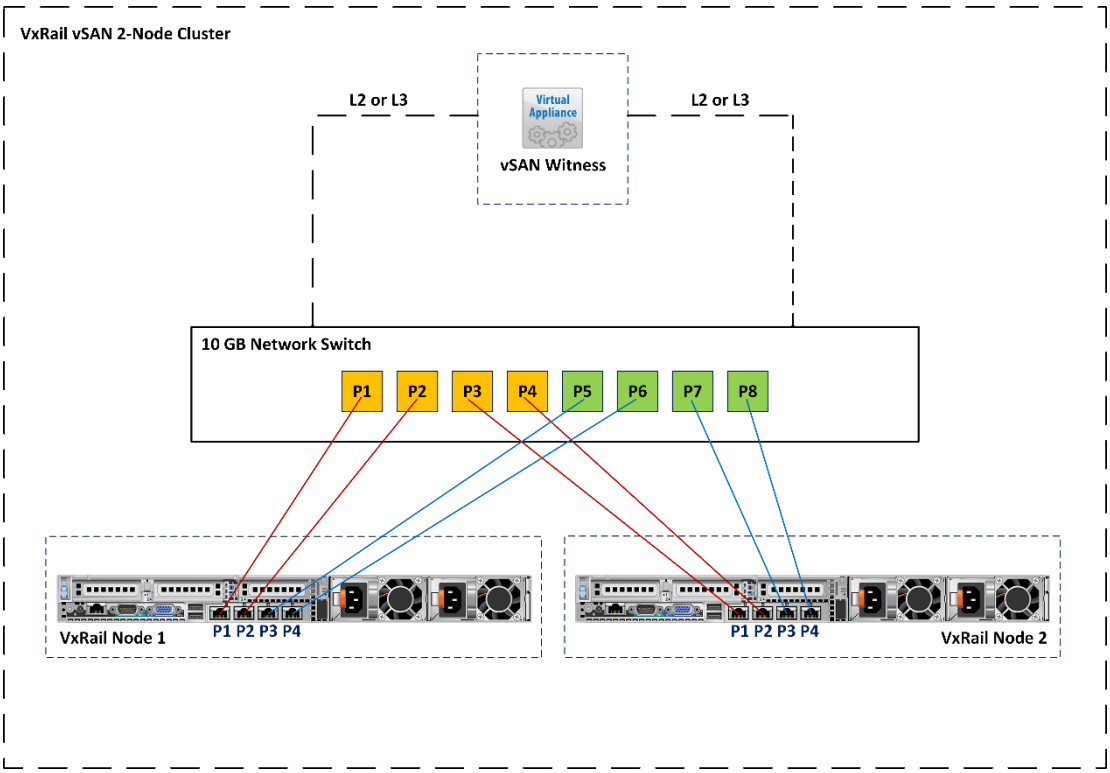

Management / Virtual Machine
Management / Virtual Machine / Witness Traffic
vSAN / vMotion
Management / Witness Traffic
vCenter Server
Production Network
Main Data Center
Remote Site
Management Host
Virtual Appliance
vSAN Witness
10 GB TOR Switch
VxRail Node 1
P1 P2 P3 P4
P1 P2 P3 P4
VxRail Node 2

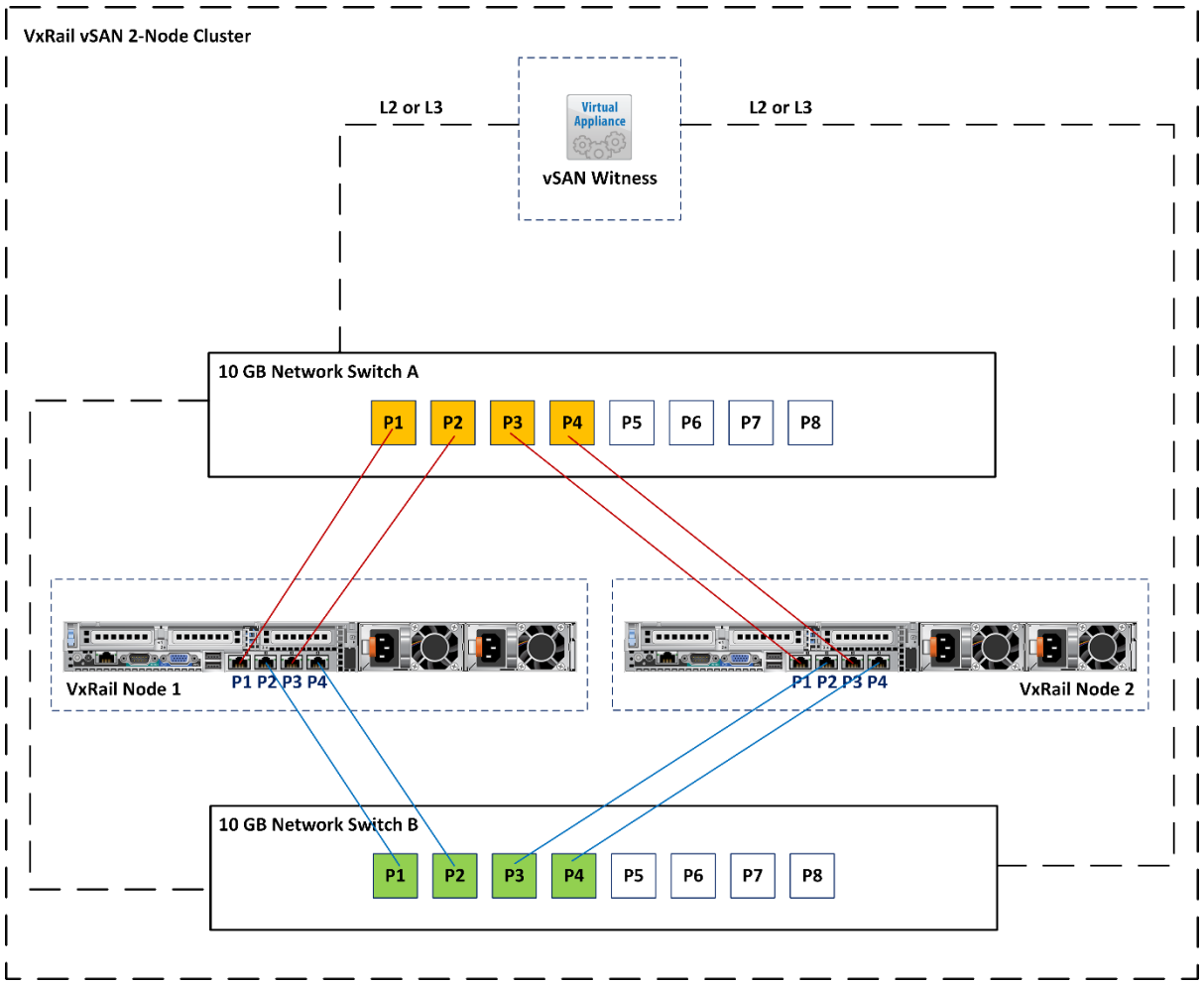

Management / Witness Traffic
Management / Virtual Machine / Witness Traffic
vSAN / vMotion
Remote Site
Management Host
Virtual Appliance
vSAN Witness
vCenter Server
10 GB TOR Switch
VxRail Node 1
P1 P2 P3 P4
P1 P2 P3 P4
VxRail Node 2

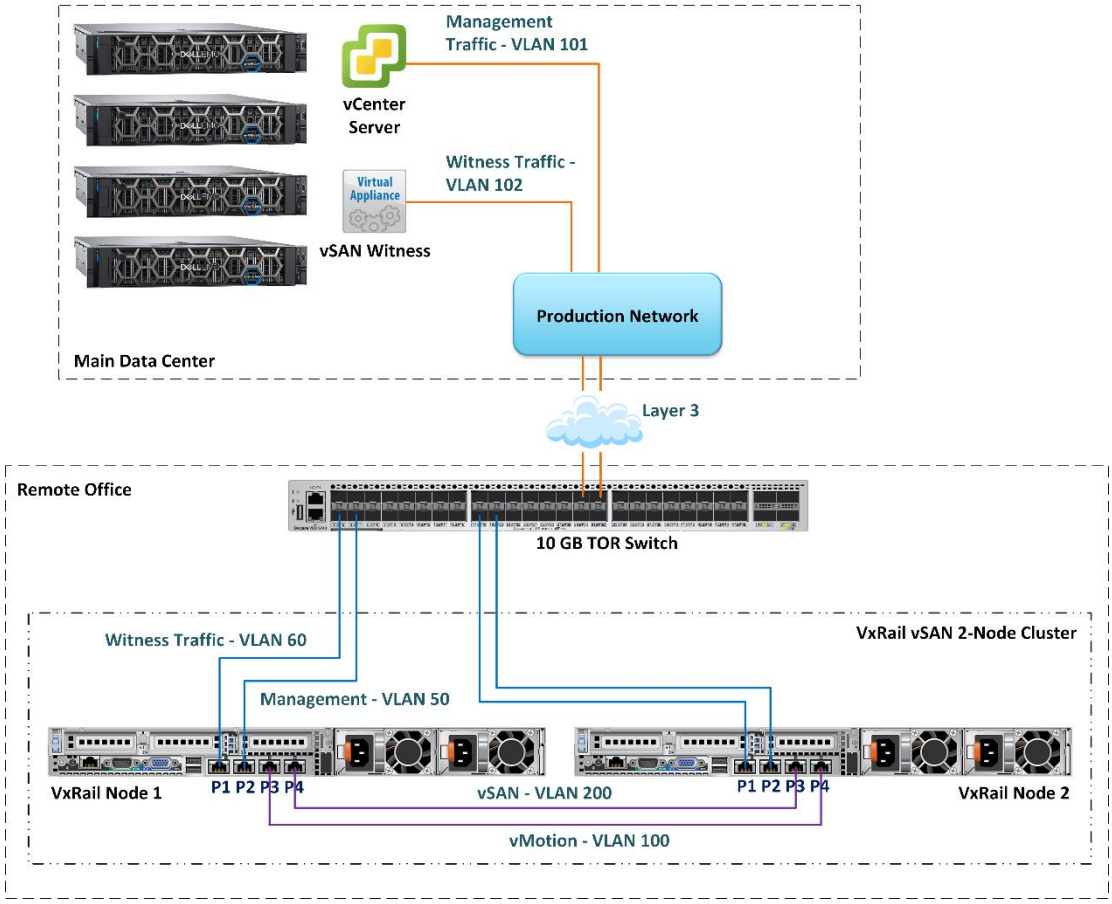

Remote Site B
10 GB TOR Switch
VxRail Node 1
P1 P2 P3 P4
P1 P2 P3 P4
VxRail Node 2
Virtual Appliance
vSAN Witness A
vCenter Server
Virtual Appliance
vSAN Witness B
Main Data Center
Production Network
Management / Virtual Machine / Witness Traffic
vSAN / vMotion
Management / Witness Traffic
Remote Site A
10GB TOR Switch
VxRail Node 1
P1 P2 P3 P4
P1 P2 P3 P4
VxRail Node 2


VxRail vSAN 2-Node Cluster
L2 or L3
Virtual Appliance
vSAN Witness
L2 or L3
10 GB Network Switch
P1
P2
P3
P4
P5
P6
P7
P8
VxRail Node 1
P1 P2 P3 P4
P1 P2 P3 P4
VxRail Node 2


VxRail vSAN 2-Node Cluster
L2 or L3
Virtual Appliance
vSAN Witness
L2 or L3
25 GB Network Switch
P1
P2
P3
P4
P5
P6
P7
P8
P3 P4 (PCIe)
VxRail Node 1
P1 P2 (NDC)
P3 P4 (PCIe)
P1 P2 (NDC)
VxRail Node 2

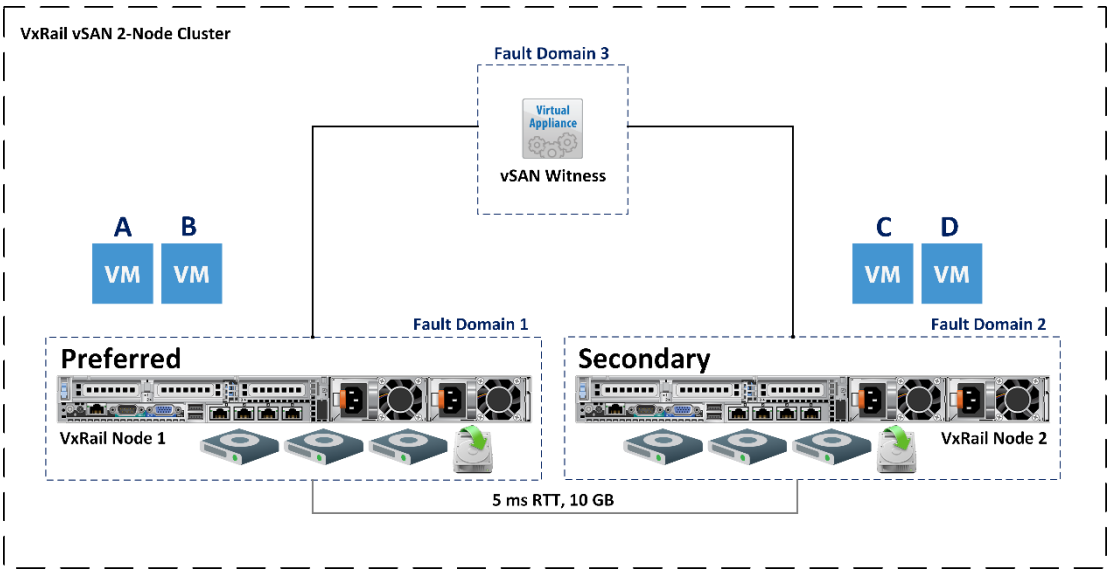

VxRail vSAN 2-Node Cluster
L2 or L3
Virtual Appliance
vSAN Witness
L2 or L3
10 GB Network Switch
P1
P2
P3
P4
P5
P6
P7
P8
VxRail Node 1
P1 P2 P3 P4
P1 P2 P3 P4
VxRail Node 2

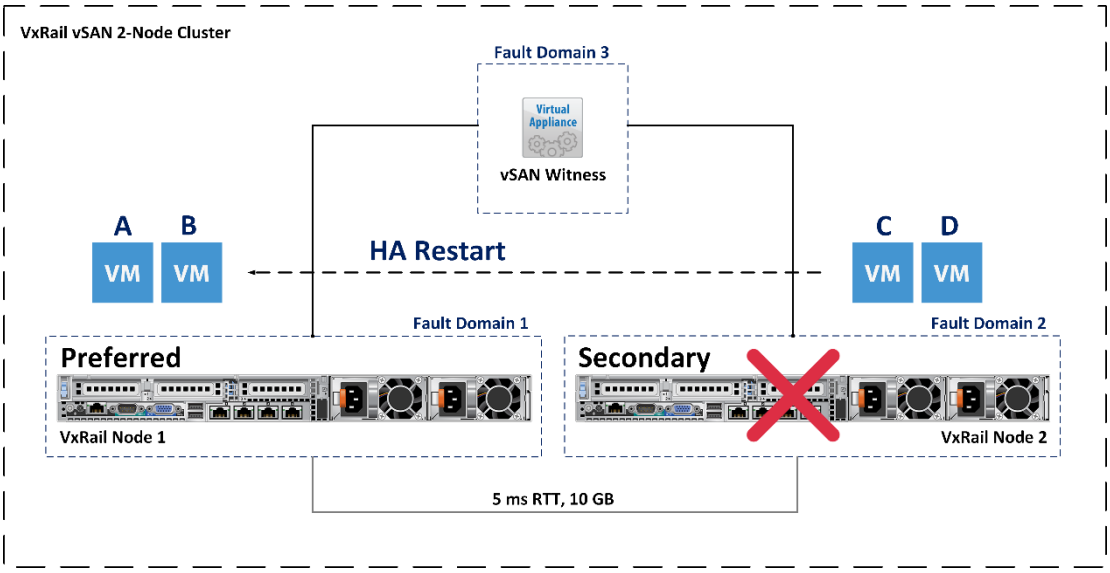

VxRail vSAN 2-Node Cluster
L2 or L3
Virtual Appliance
vSAN Witness
L2 or L3
10 GB Network Switch A
P1
P2
P3
P4
P5
P6
P7
P8
VxRail Node 1
P1 P2 P3 P4
P1 P2 P3 P4
VxRail Node 2
10 GB Network Switch B
P1
P2
P3
P4
P5
P6
P7
P8

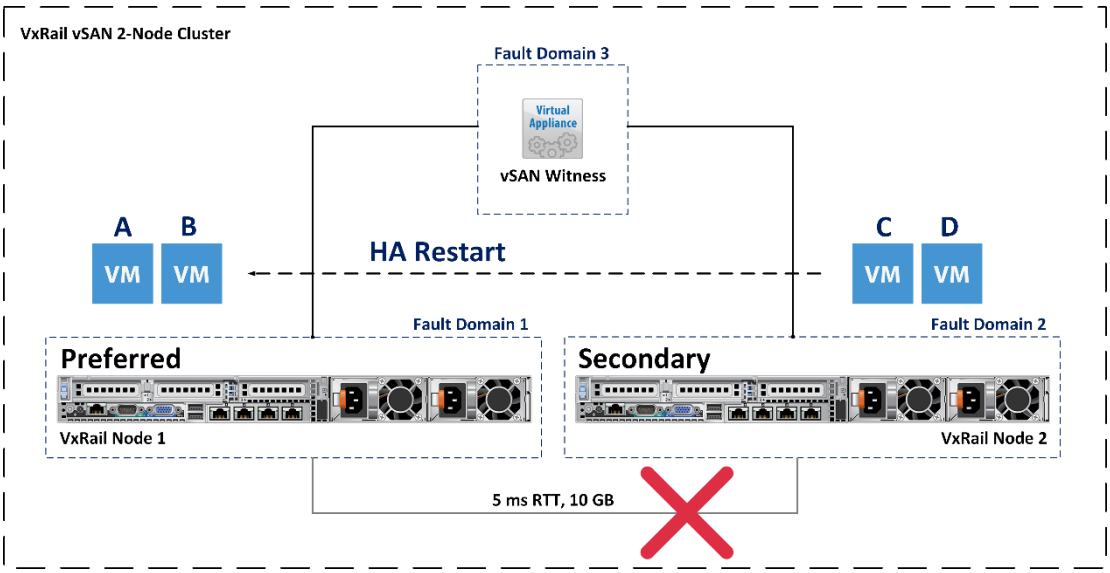


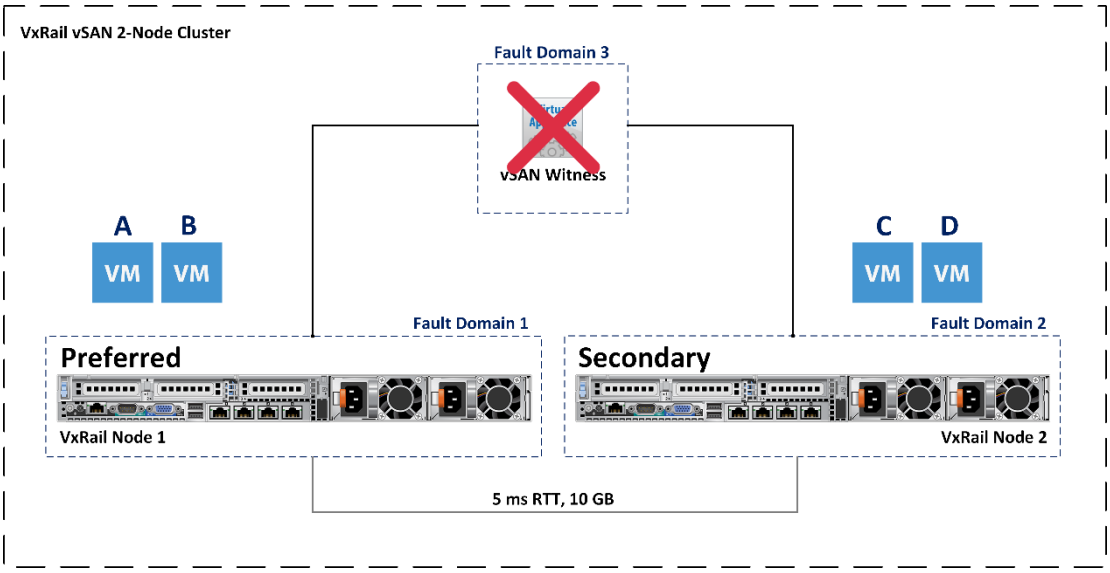

**Matrix of supported external vCenter versions with VxRail**

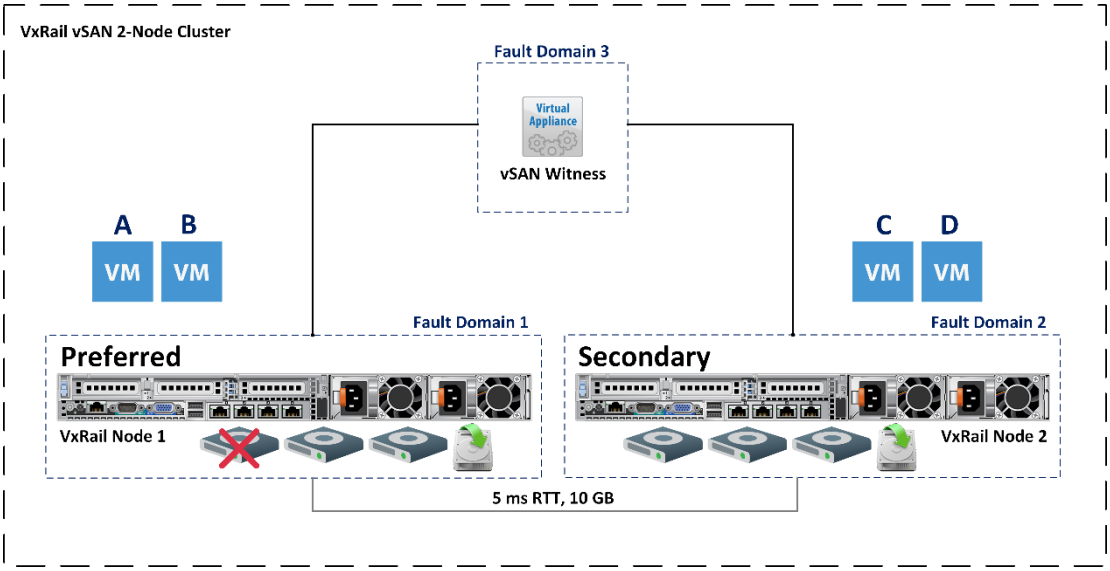
| VxRail Release | ESXi (Version - Build #) | External vCenter versions | |
|---|---|---|---|
| | | Minimum | Recommended |
| 7.0.371 | 7.0 U3d - 19482537 | 7.0 U3 (7.0.3) | 7.0 U3d (7.0.3.00500) or later |
| 7.0.370 | 7.0 U3d - 19482537 | 7.0 U3 (7.0.3) | 7.0 U3d (7.0.3.00500) or later |
| 7.0.360 [30] | 7.0 U3c - 19193900 | 7.0 U3 (7.0.3) | 7.0 U3c (7.0.3.00300) or later |
| 7.0.350 | 7.0 U3c - 19193900 | 7.0 U3 (7.0.3) | 7.0 U3c (7.0.3.00300) or later |
| 7.0.320 [29] | 7.0 U3c - 19193900 | 7.0 U3 (7.0.3) | 7.0 U3c (7.0.3.00300) or later |
| 7.0.300 | 7.0 U3 - 18644231 | 7.0 U3 (7.0.3) | 7.0 U3a (7.0.3.00100) or later |
| 7.0.241 [28] | 7.0 U2c - 18426014 | 7.0 U2 (7.0.2) | 7.0 U2d (7.0.2.00500) or later |
| 7.0.240 | 7.0 U2c - 18426014 | 7.0 U2 (7.0.2) | 7.0 U2c (7.0.2.00400) or later |
| 7.0.210 [24] | 7.0 U2a - 17867351 | 7.0 U2 (7.0.2) | 7.0 U2b (7.0.2.00200) or later |
| 7.0.203 [26] | 7.0 U2a - 17867351 | 7.0 U2 (7.0.2) | 7.0 U2b (7.0.2.00200) or later |
| 7.0.202 | 7.0 U2a - 17867351 | 7.0 U2 (7.0.2) | 7.0 U2b (7.0.2.00200) or later |
| 7.0.201 [23] | 7.0 U2a - 17867351 | 7.0 U2 (7.0.2) | 7.0 U2b (7.0.2.00200) or later |
| 7.0.200 | 7.0 U2a - 17867351 | 7.0 U2 (7.0.2) | 7.0 U2 (7.0.2) or later |
| 7.0.132 | 7.0 U1d - 17551050 | 7.0 U1 (7.0.1) | 7.0 U1c (7.0.1.00200) or later |
| 7.0.131 | 7.0 U1d - 17551050 | 7.0 U1 (7.0.1) | 7.0 U1c (7.0.1.00200) or later |
| 7.0.130 | 7.0 U1c - 17325551 | 7.0 U1 (7.0.1) | 7.0 U1c (7.0.1.00200) or later |
| 7.0.101 [20] | 7.0 U1b - 17168206 | 7.0 U1 (7.0.1) | 7.0 U1 (7.0.1) or later |
| 7.0.100 [20] | 7.0 U1 - 16850804 | 7.0 U1 (7.0.1) | 7.0 U1 (7.0.1) or later |
| 7.0.010 [20] | 7.0 b - 16324942 | 7.0 GA | 7.0.0b or later |
| 7.0.000 [20] | 7.0 GA - 15843807 | 7.0 GA | 7.0 GA or later |


VxRail vSAN 2-Node Cluster
Fault Domain 3
Virtual Appliance
vSAN Witness
A
B
VM
VM
C
D
VM
VM
Fault Domain 1
Fault Domain 2
Preferred
Secondary
VxRail Node 1
VxRail Node 2
5 ms RTT, 10 GB


VxRail vSAN 2-Node Cluster
Fault Domain 3
Virtual Appliance
vSAN Witness
A
B
VM
VM
HA Restart
C
D
VM
VM
Fault Domain 1
Fault Domain 2
Preferred
Secondary
VxRail Node 1
VxRail Node 2
5 ms RTT, 10 GB

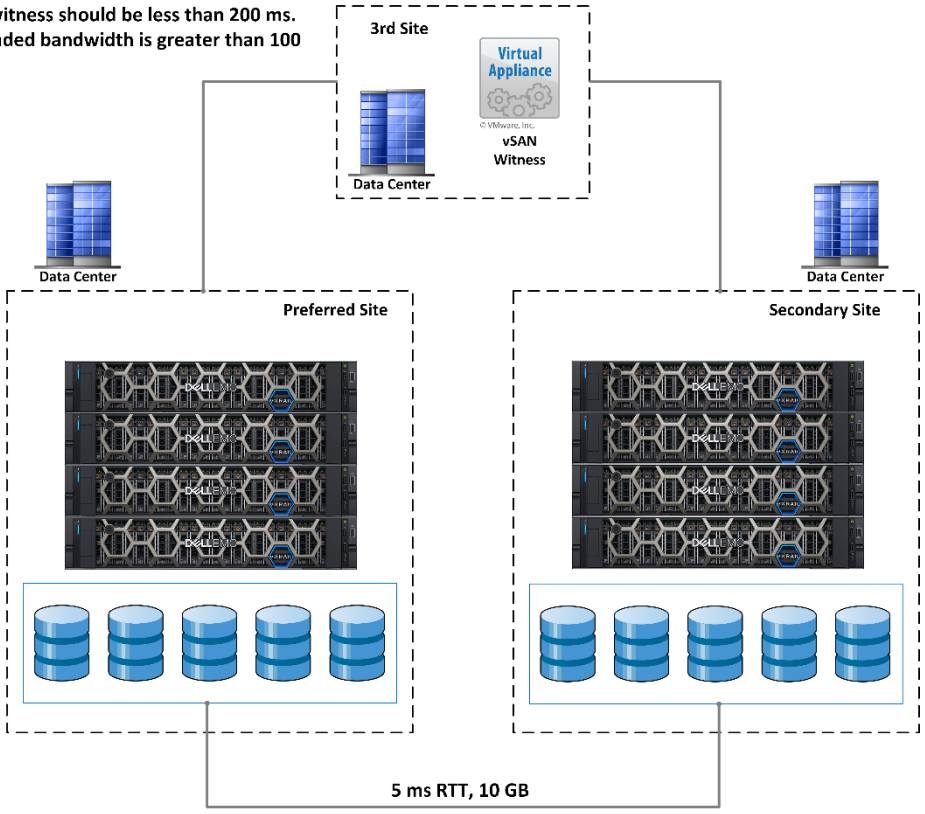

VxRail vSAN 2-Node Cluster
Fault Domain 3
Virtual Appliance
vSAN Witness
A
B
VM
VM
HA Restart
C
D
VM
VM
Fault Domain 1
Fault Domain 2
Preferred
Secondary
VxRail Node 1
VxRail Node 2
5 ms RTT, 10 GB


VxRail vSAN 2-Node Cluster
Fault Domain 3
vSAN Witness
A
B
VM
VM
C
D
VM
VM
Fault Domain 1
Fault Domain 2
Preferred
Secondary
VxRail Node 1
VxRail Node 2
5 ms RTT, 10 GB

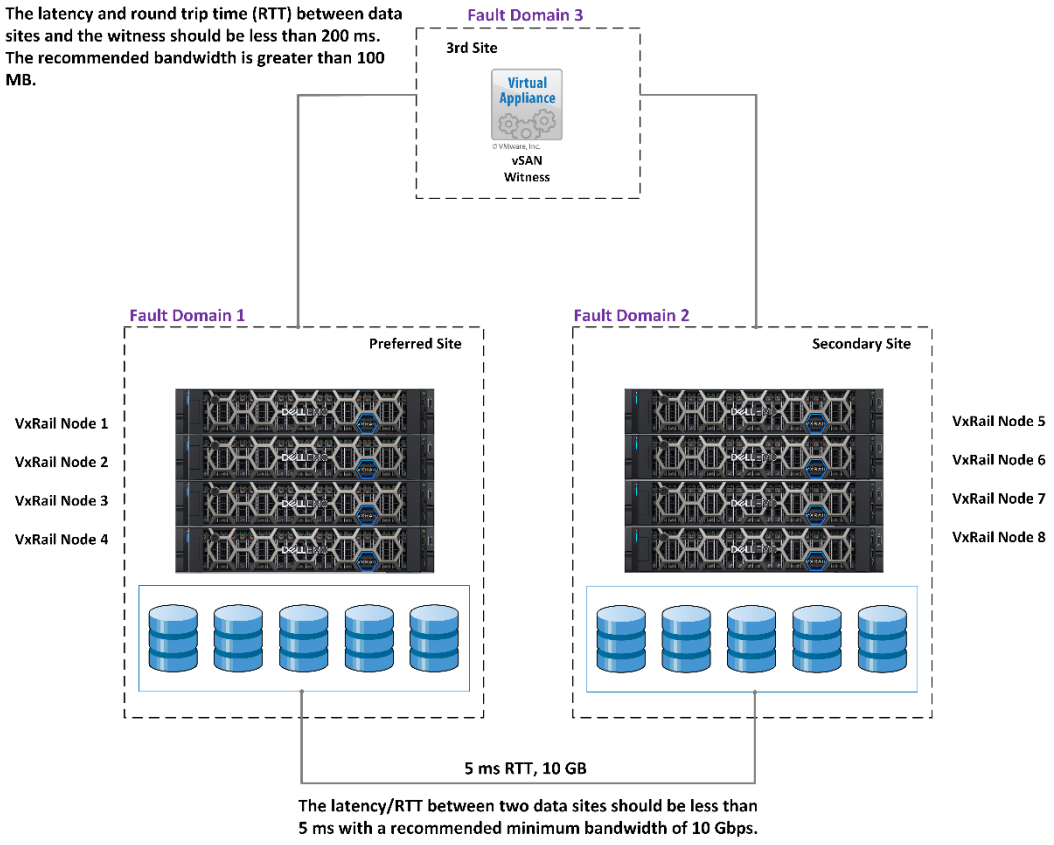

VxRail vSAN 2-Node Cluster
Fault Domain 3
Virtual Appliance
vSAN Witness
A
B
VM
VM
C
D
VM
VM
Fault Domain 1
Fault Domain 2
Preferred
Secondary
VxRail Node 1
VxRail Node 2
5 ms RTT, 10 GB

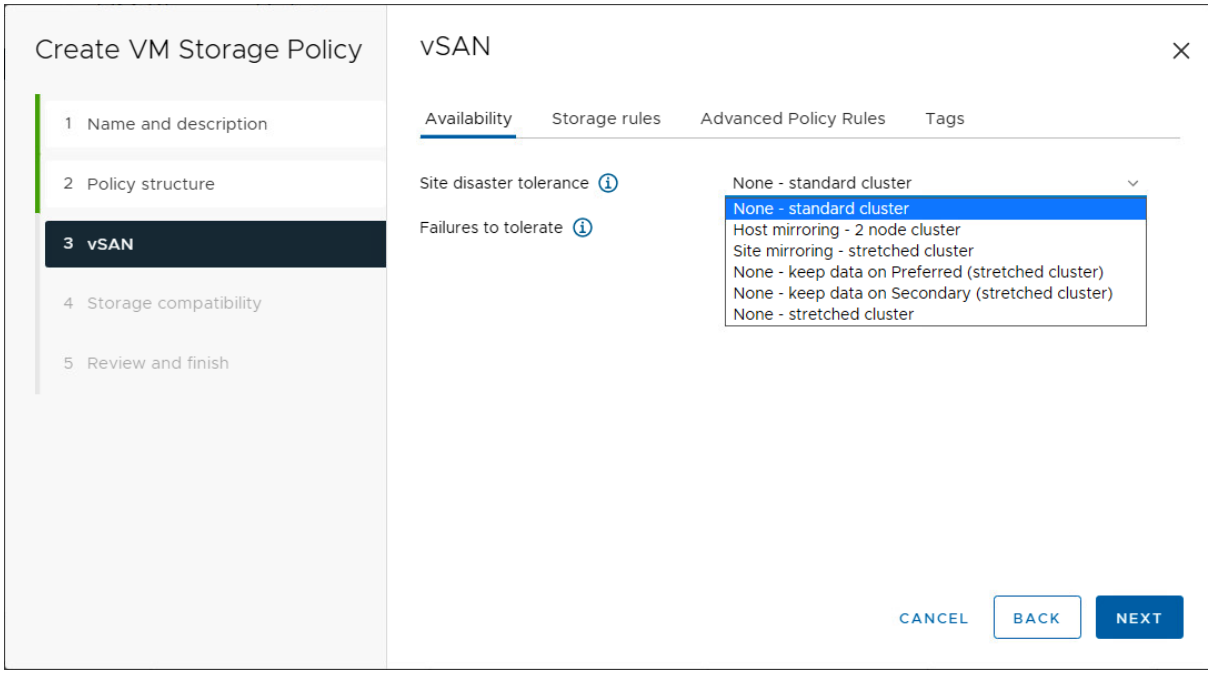
# Chapter 7: Design of Stretched Cluster on VxRail

The latency and round trip time (RTT) between data sites and the witness should be less than 200 ms. The recommended bandwidth is greater than 100 MB.




The latency/RTT between two data sites should be less than 5 ms with a recommended minimum bandwidth of 10 Gbps.


The latency and round trip time (RTT) between data sites and the witness should be less than 200 ms. The recommended bandwidth is greater than 100 MB.
Fault Domain 3
3rd Site
Virtual Appliance
vSAN Witness
Fault Domain 1
Preferred Site
Fault Domain 2
Secondary Site
VxRail Node 1
VxRail Node 2
VxRail Node 3
VxRail Node 4
VxRail Node 5
VxRail Node 6
VxRail Node 7
VxRail Node 8
5 ms RTT, 10 GB
The latency/RTT between two data sites should be less than 5 ms with a recommended minimum bandwidth of 10 Gbps.


Create VM Storage Policy
1 Name and description
2 Policy structure
3 vSAN
4 Storage compatibility
5 Review and finish
vSAN
Availability
Storage rules
Advanced Policy Rules
Tags
Site disaster tolerance
None - standard cluster
Failures to tolerate
None - standard cluster
Host mirroring - 2 node cluster
Site mirroring - stretched cluster
None - keep data on Preferred (stretched cluster)
None - keep data on Secondary (stretched cluster)
None - stretched cluster
CANCEL
BACK
NEXT

vSAN

Availability | Storage rules | Advanced Policy Rules | Tags

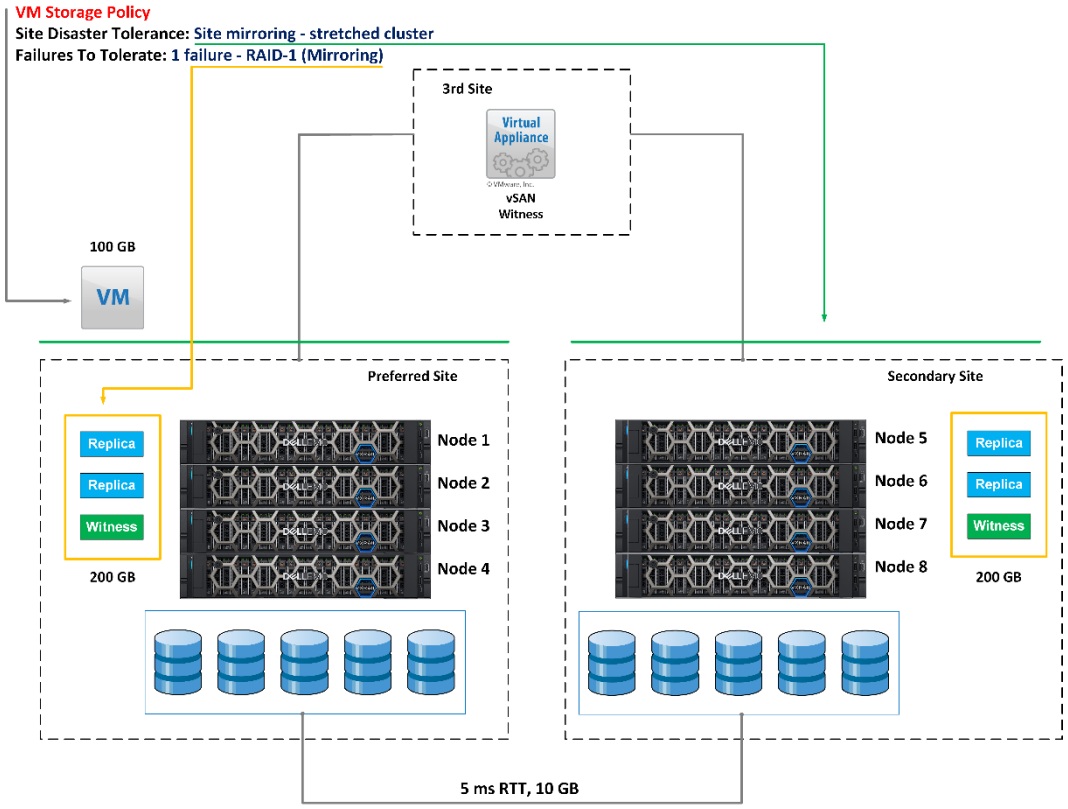
Site disaster tolerance: None - standard cluster

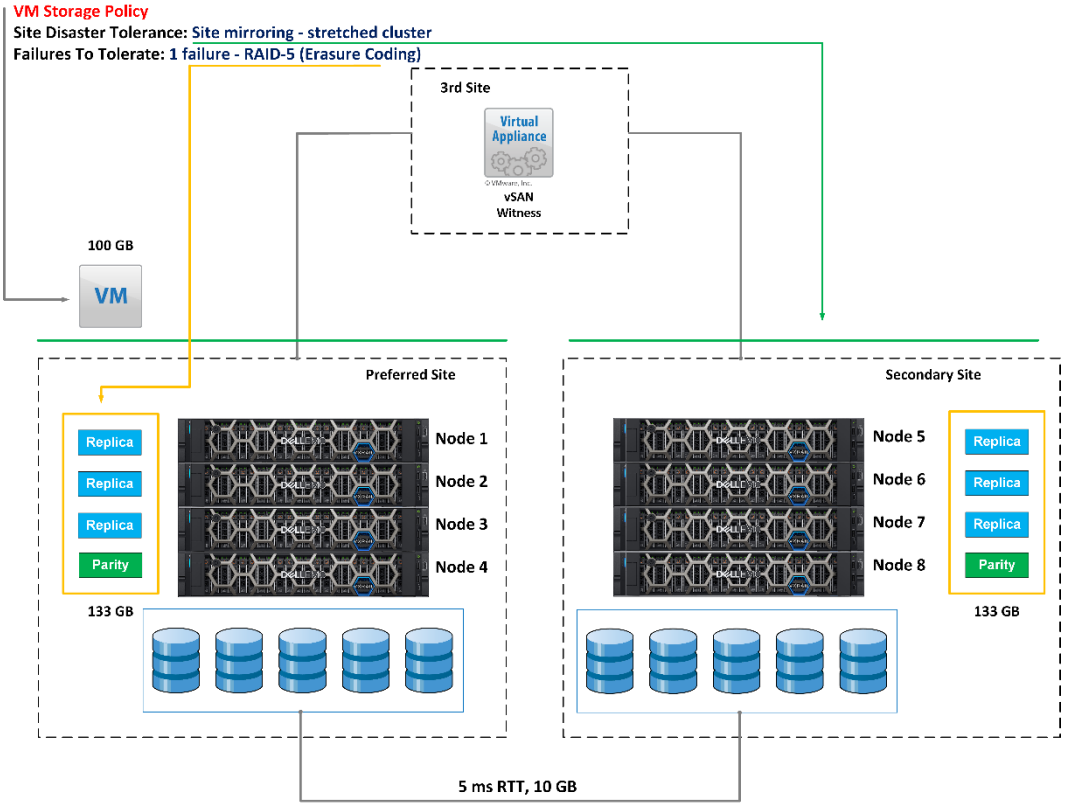
Failures to tolerate: 1 failure - RAID-1 (Mirroring)

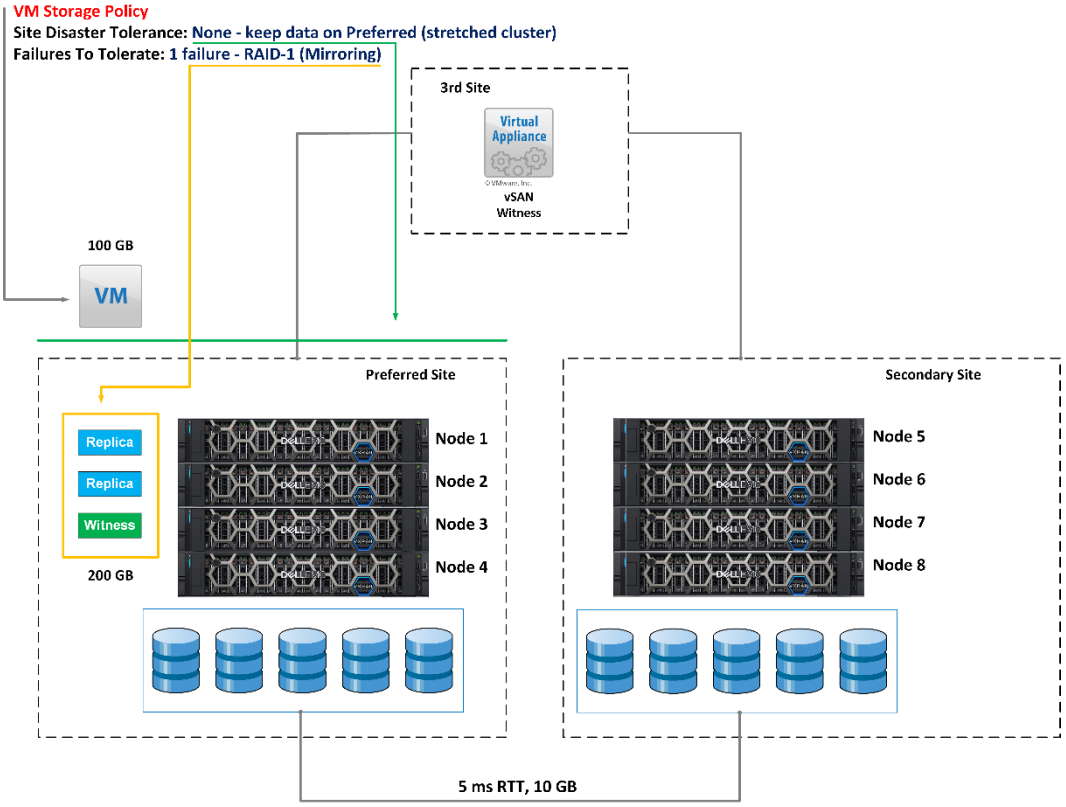
- No data redundancy
- No data redundancy with host affinity
- 1 failure - RAID-1 (Mirroring)
- 1 failure - RAID-5 (Erasure Coding)
- 2 failures - RAID-1 (Mirroring)
- 2 failures - RAID-6 (Erasure Coding)
- 3 failures - RAID-1 (Mirroring)

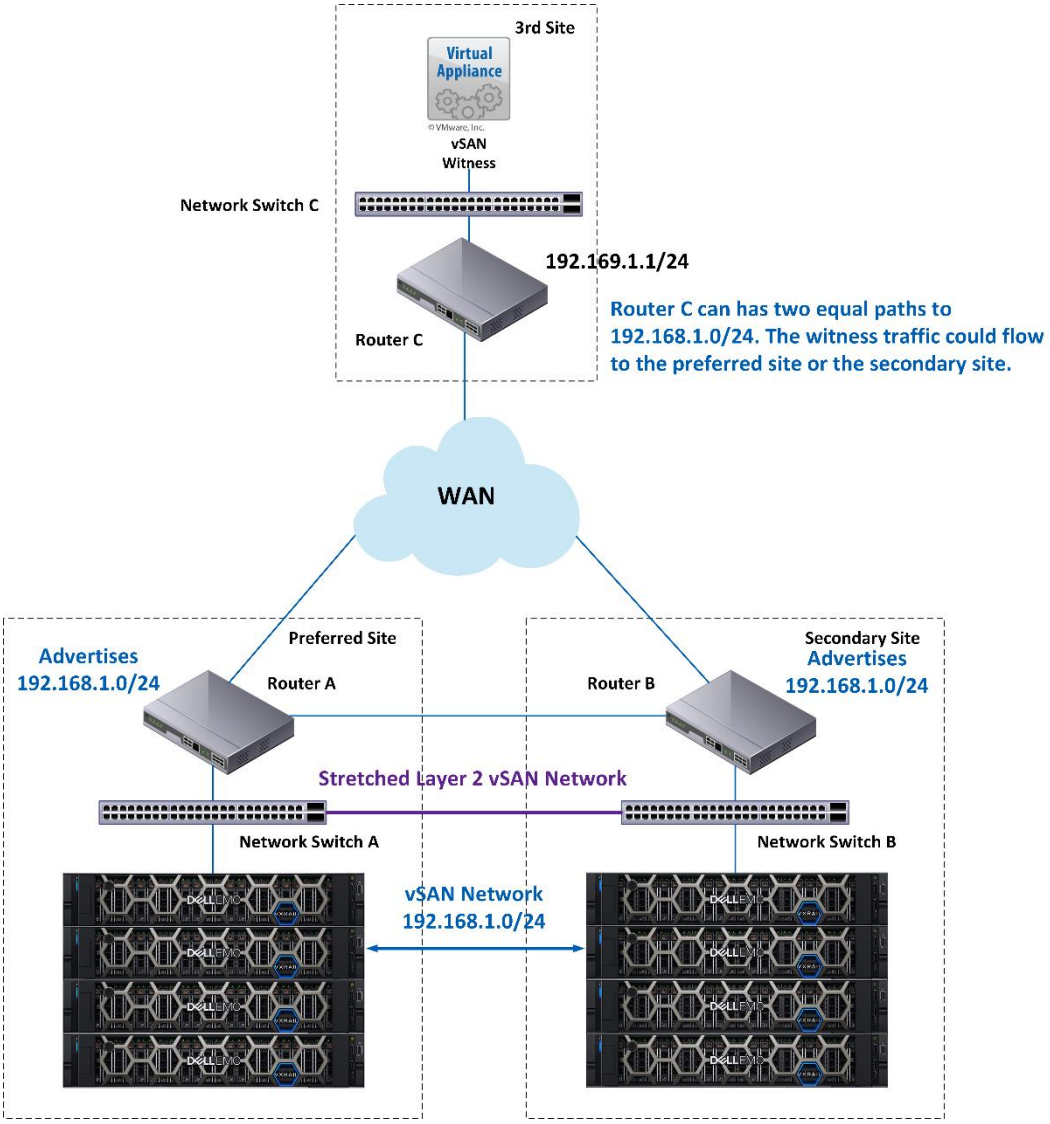
ld be 200 GB

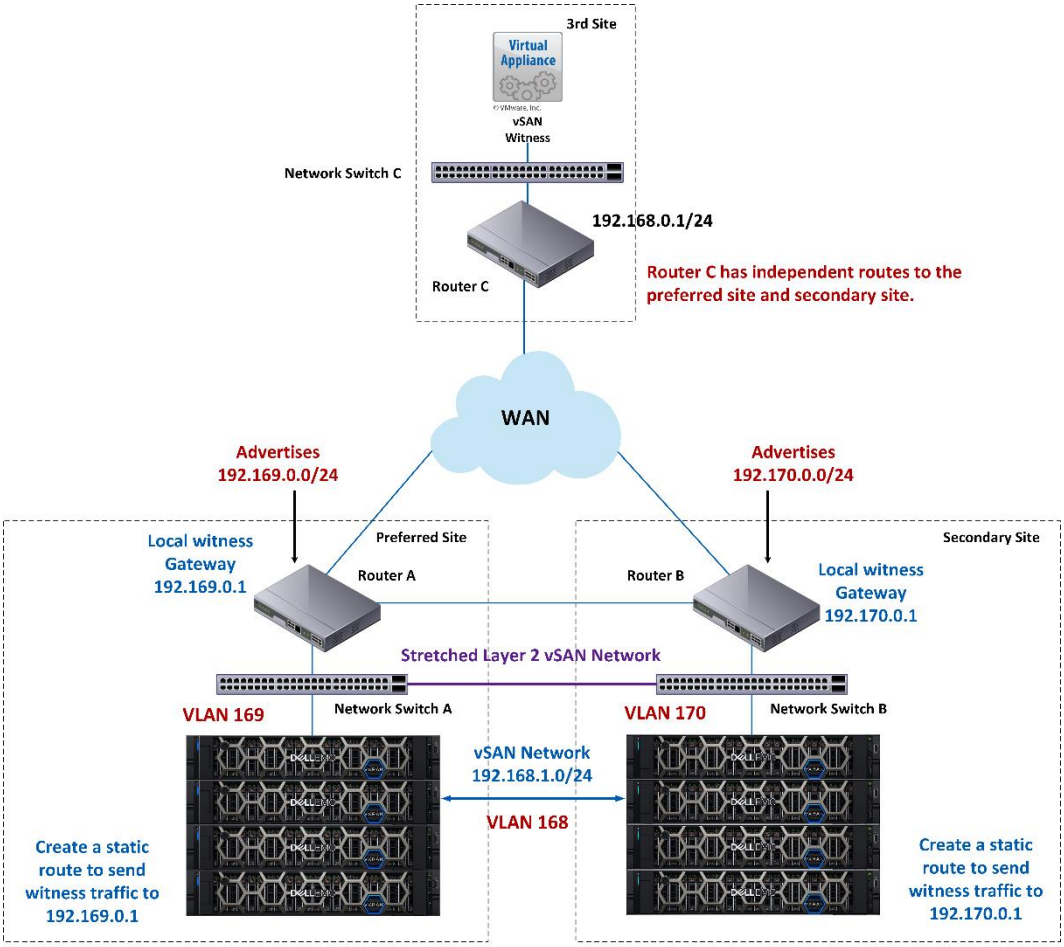
CANCEL | BACK | NEXT



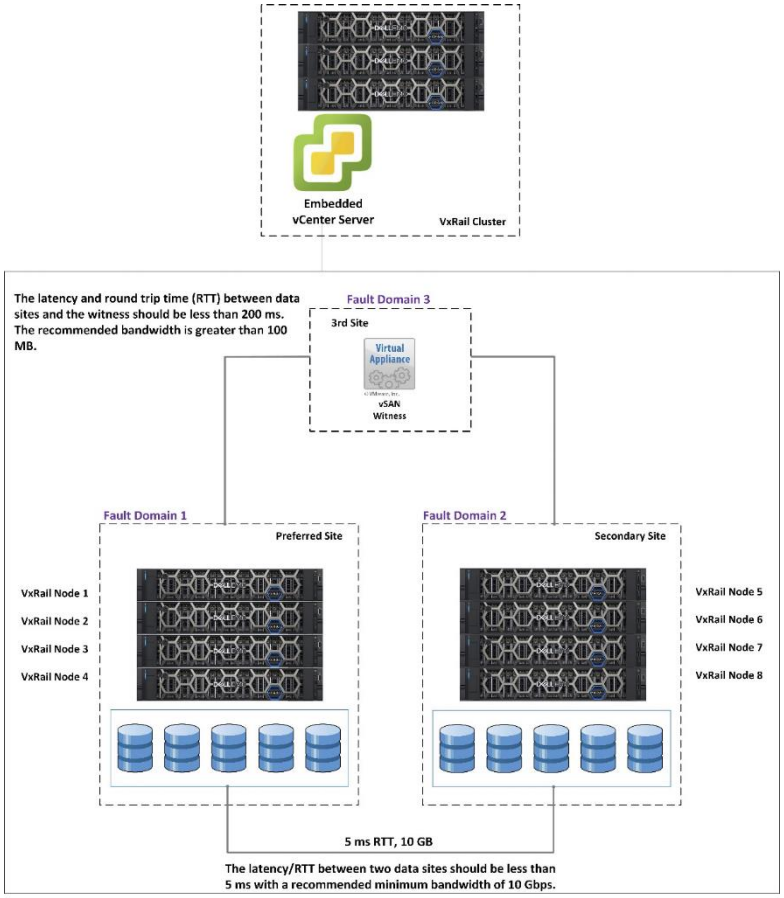

VM Storage Policy
Site Disaster Tolerance: Site mirroring - stretched cluster
Failures To Tolerate: 1 failure - RAID-5 (Erasure Coding)
3rd Site
Virtual Appliance
vSAN Witness
100 GB
VM
Preferred Site
Secondary Site
Replica
Replica
Replica
Parity
133 GB
Node 1
Node 2
Node 3
Node 4
Node 5
Node 6
Node 7
Node 8
Replica
Replica
Replica
Parity
133 GB
5 ms RTT, 10 GB

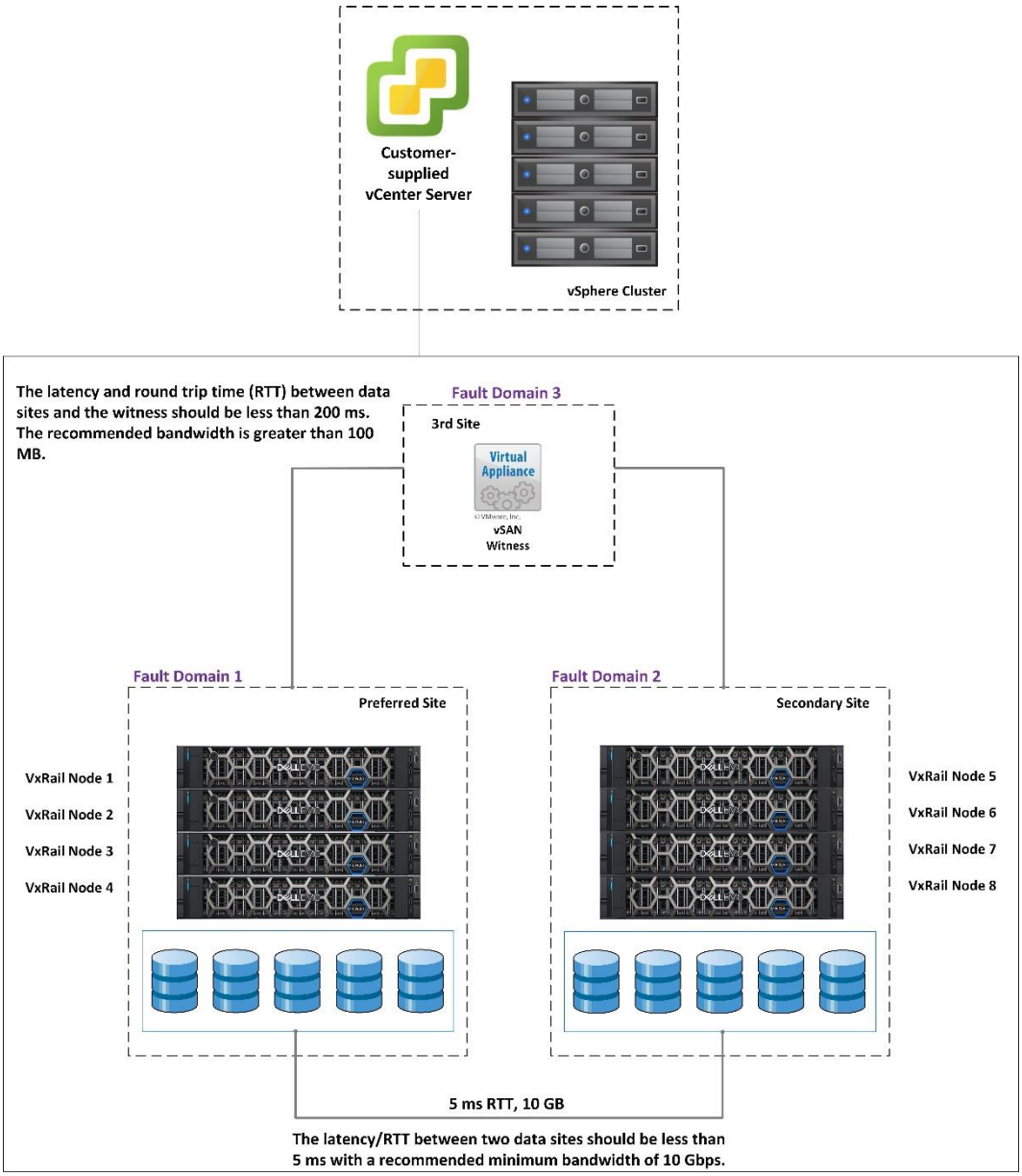

VM Storage Policy
Site Disaster Tolerance: None - keep data on Preferred (stretched cluster)
Failures To Tolerate: 1 failure - RAID-1 (Mirroring)
3rd Site
Virtual Appliance
vSAN Witness
100 GB
VM
Preferred Site
Secondary Site
Replica
Replica
Witness
200 GB
Node 1
Node 2
Node 3
Node 4
Node 5
Node 6
Node 7
Node 8
5 ms RTT, 10 GB


3rd Site
Virtual Appliance
© VMware, Inc.
vSAN Witness
Network Switch C
192.169.1.1/24
Router C
Router C can has two equal paths to 192.168.1.0/24. The witness traffic could flow to the preferred site or the secondary site.
WAN
Preferred Site
Advertises 192.168.1.0/24
Router A
Router B
Secondary Site
Advertises 192.168.1.0/24
Stretched Layer 2 vSAN Network
Network Switch A
Network Switch B
vSAN Network 192.168.1.0/24




The VxRail nodes have contiguous IP addresses


Embedded
vCenter Server
VxRail Cluster
The latency and round trip time (RTT) between data sites and the witness should be less than 200 ms. The recommended bandwidth is greater than 100 MB.
Fault Domain 3
3rd Site
Virtual Appliance
vSAN Witness
Fault Domain 1
Preferred Site
VxRail Node 1
VxRail Node 2
VxRail Node 3
VxRail Node 4
Fault Domain 2
Secondary Site
VxRail Node 5
VxRail Node 6
VxRail Node 7
VxRail Node 8
5 ms RTT, 10 GB
The latency/RTT between two data sites should be less than 5 ms with a recommended minimum bandwidth of 10 Gbps.


Customer-supplied vCenter Server
vSphere Cluster
The latency and round trip time (RTT) between data sites and the witness should be less than 200 ms. The recommended bandwidth is greater than 100 MB.
Fault Domain 3
3rd Site
Virtual Appliance
vSAN Witness
Fault Domain 1
Preferred Site
Fault Domain 2
Secondary Site
VxRail Node 1
VxRail Node 2
VxRail Node 3
VxRail Node 4
VxRail Node 5
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VxRail Node 8
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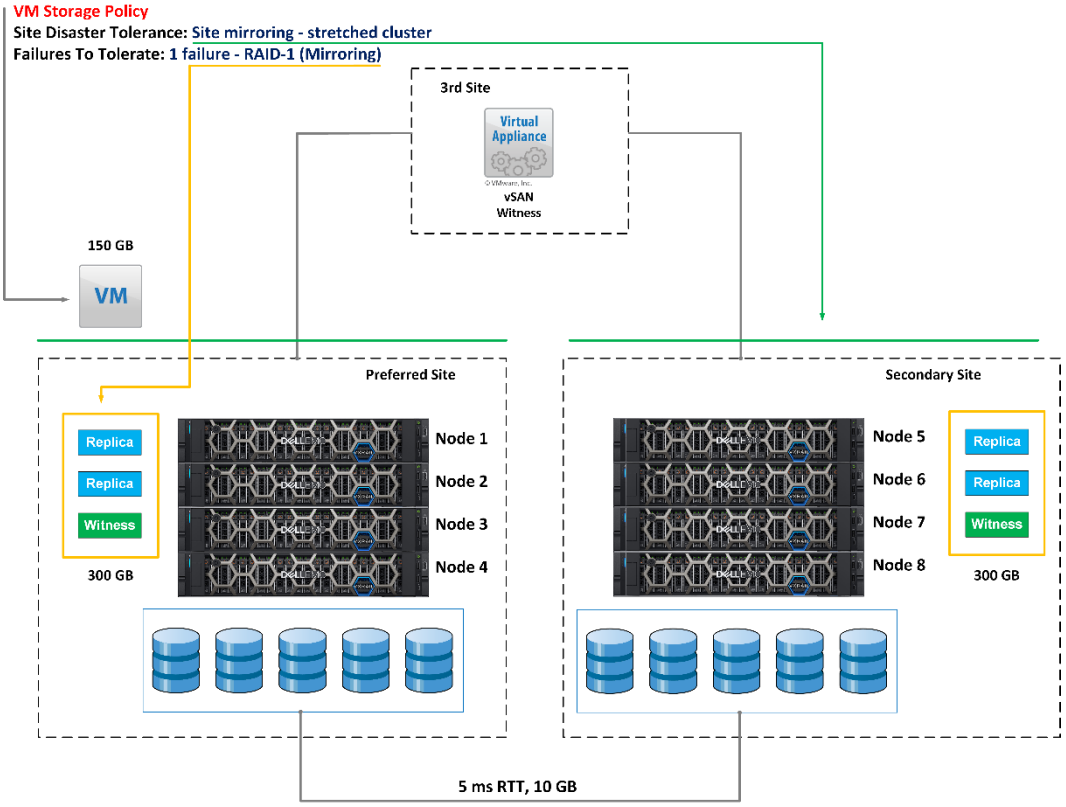
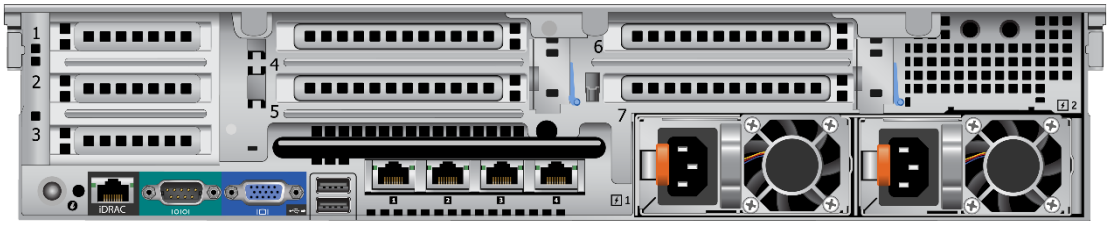
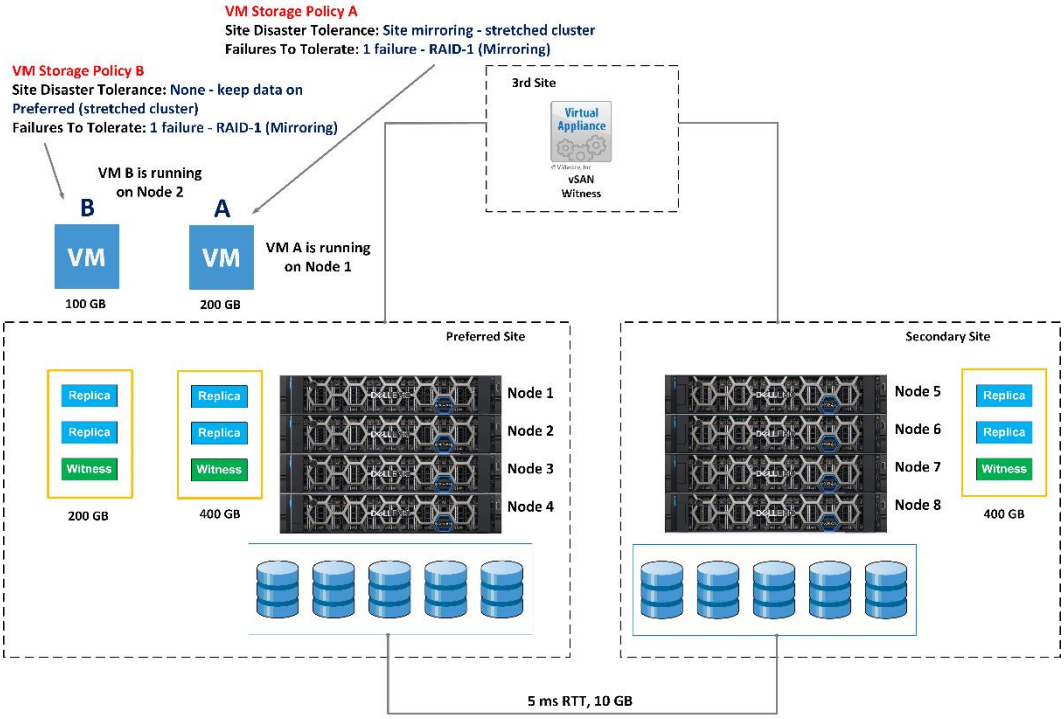
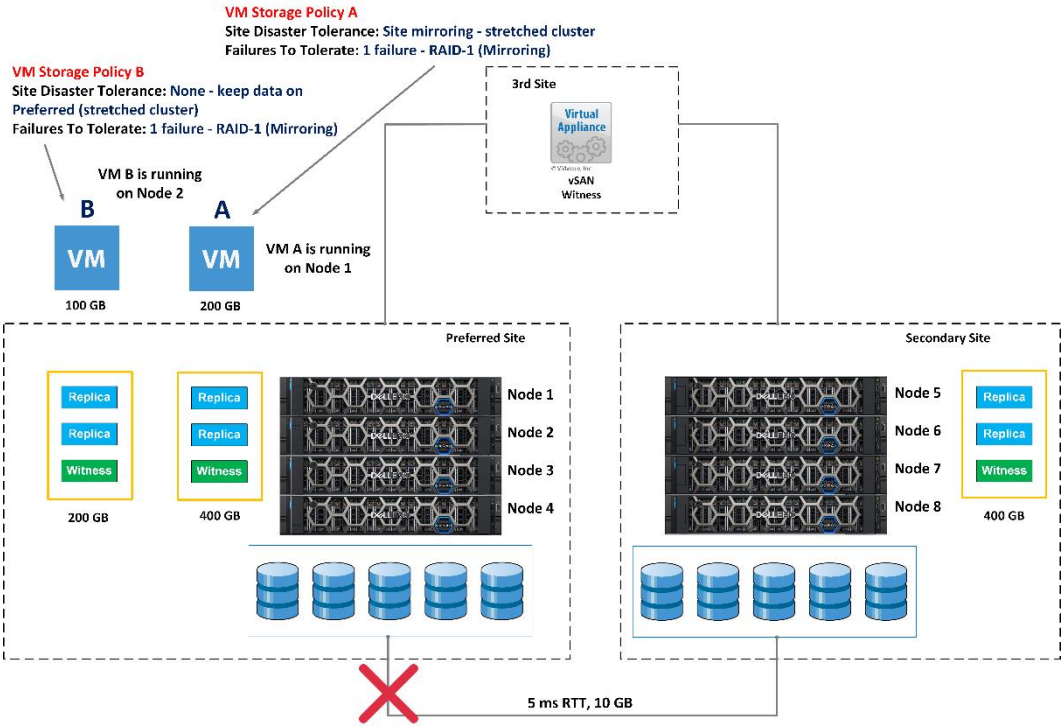



**P1 P2 P3 P4**

**Intel Ethernet X710 Quad Port 10GbE**


VM Storage Policy A
Site Disaster Tolerance: Site mirroring - stretched cluster
Failures To Tolerate: 1 failure - RAID-1 (Mirroring)
VM Storage Policy B
Site Disaster Tolerance: None - keep data on Preferred (stretched cluster)
Failures To Tolerate: 1 failure - RAID-1 (Mirroring)
3rd Site
Virtual Appliance
vSAN Witness
VM B is running on Node 2
B
A
VM
VM
VM A is running on Node 1
100 GB
200 GB
Preferred Site
Secondary Site
Replica
Replica
Witness
Node 1
Node 2
Node 3
Node 4
Node 5
Node 6
Node 7
Node 8
200 GB
400 GB
400 GB
5 ms RTT, 10 GB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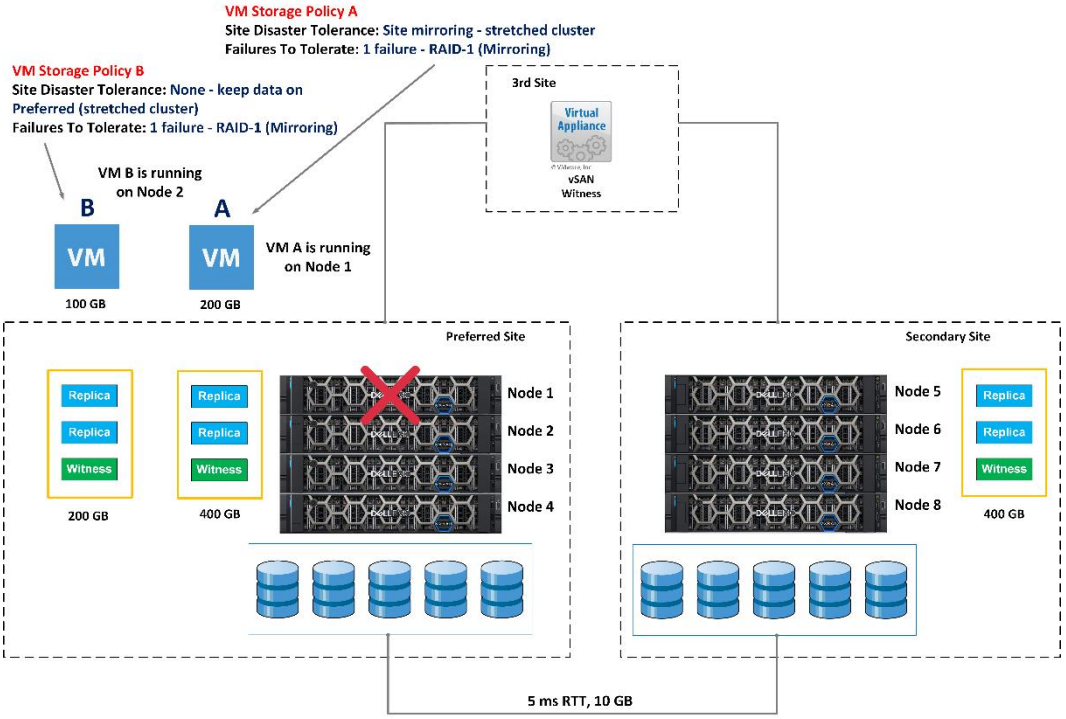
Secondary Site
Replica
Replica
Witness
Node 1
Node 2
Node 3
Node 4
Node 5
Node 6
Node 7
Node 8
200 GB
400 GB
400 GB
5 ms RTT, 10 GB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100 GB
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Preferred Site
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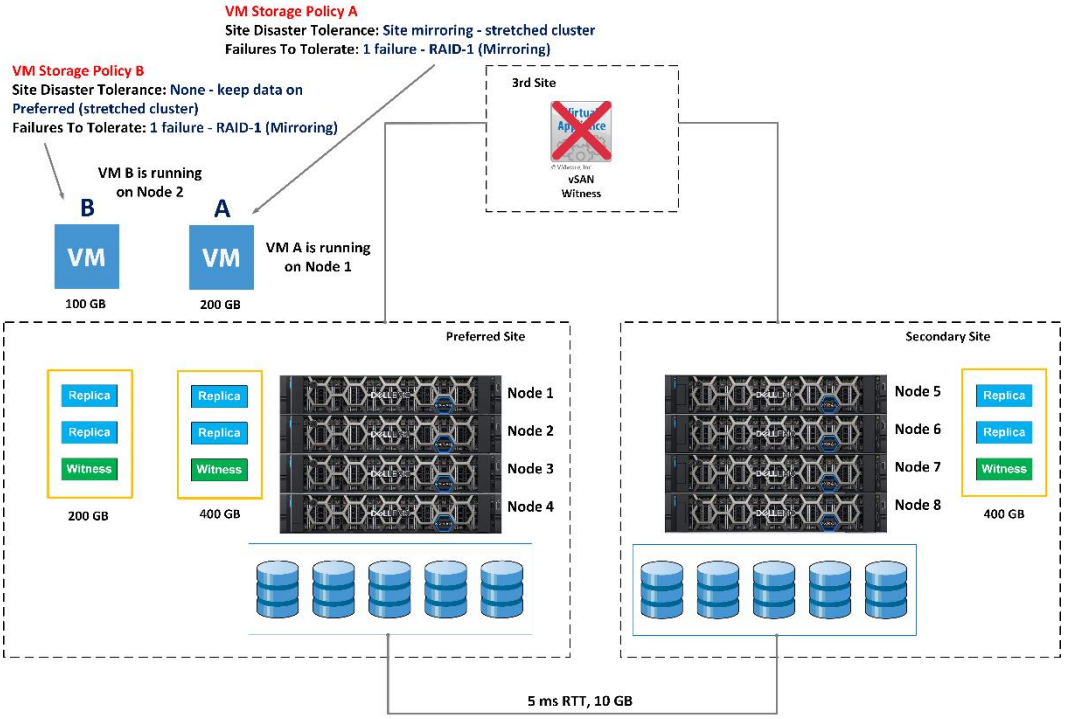
Replica
Witness
200 GB
Replica
Replica
Witness
400 GB
Node 1
Node 2
Node 3
Node 4
Node 5
Node 6
Node 7
Node 8
Replica
Replica
Witness
400 GB
5 ms RTT, 10 GB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VM Storage Policy B
Site Disaster Tolerance: None - keep data on Preferred (stretched cluster)
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vSAN Witness
VM B is running on Node 2
B
A
VM
VM
VM A is running on Node 1
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200 GB
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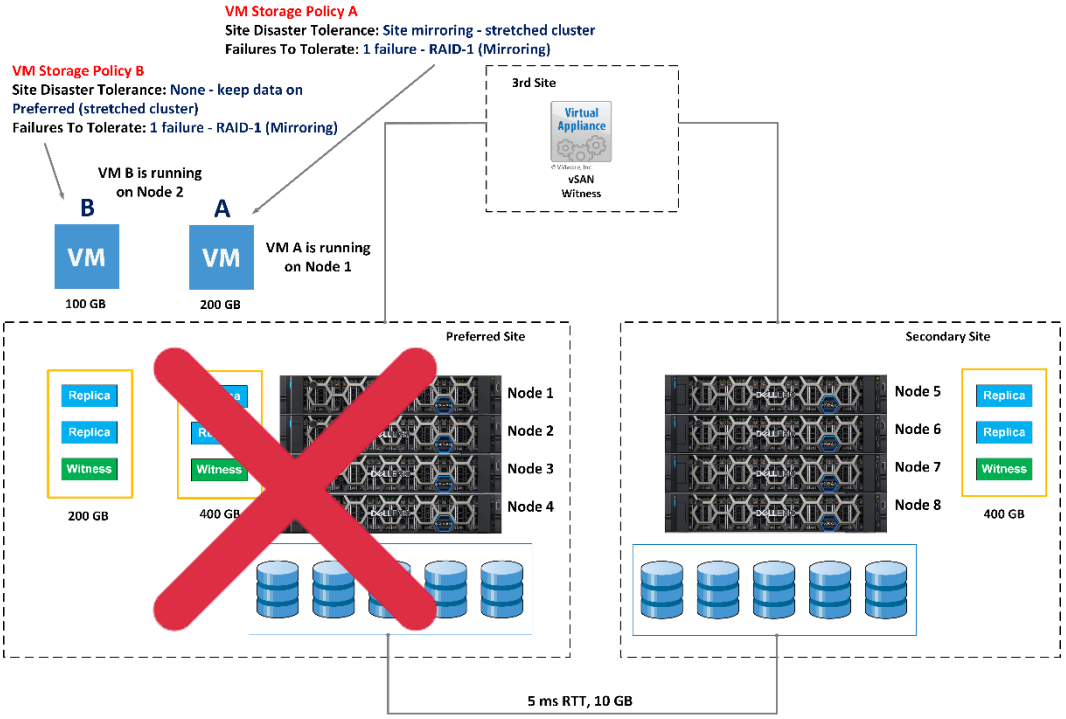
Secondary Site
Replica
Replica
Witness
200 GB
Replica
Replica
Witness
400 GB
Node 1
Node 2
Node 3
Node 4
Node 5
Node 6
Node 7
Node 8
Replica
Replica
Witness
400 GB
5 ms RTT, 10 GB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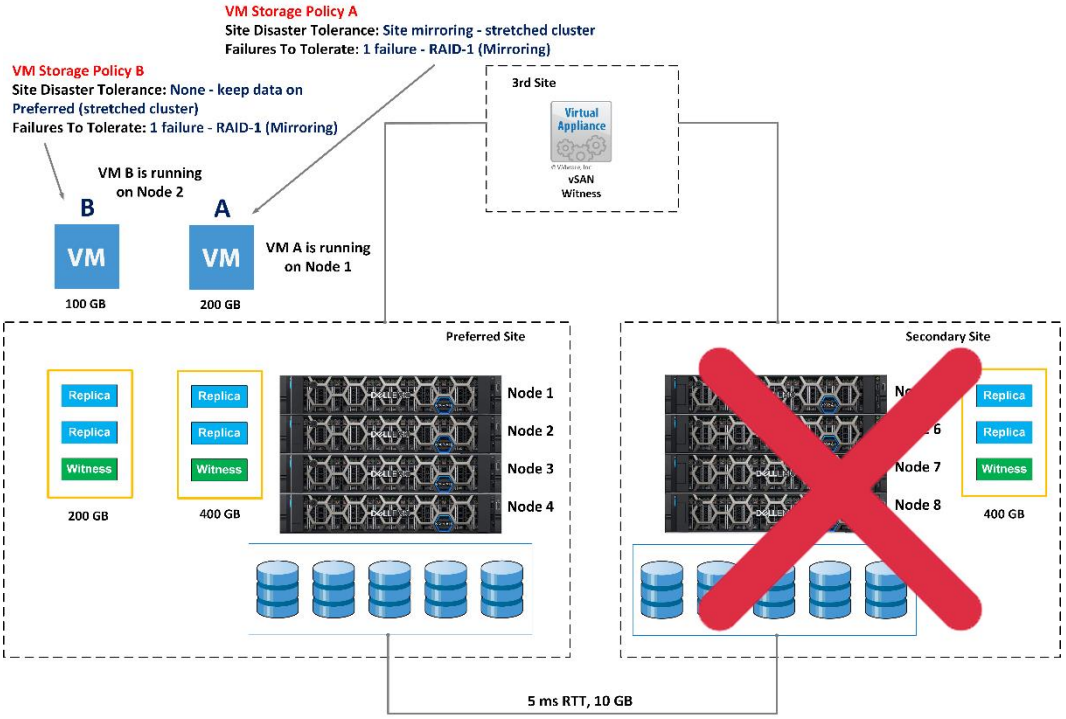
B
A
VM
VM
100 GB
200 GB
VM A is running on Node 1
3rd Site
Virtual Appliance
vSAN Witness
Preferred Site
Secondary Site
Replica
Replica
Witness
200 GB
Witness
400 GB
Node 1
Node 2
Node 3
Node 4
Node 5
Node 6
Node 7
Node 8
Replica
Replica
Witness
400 GB
5 ms RTT, 10 GB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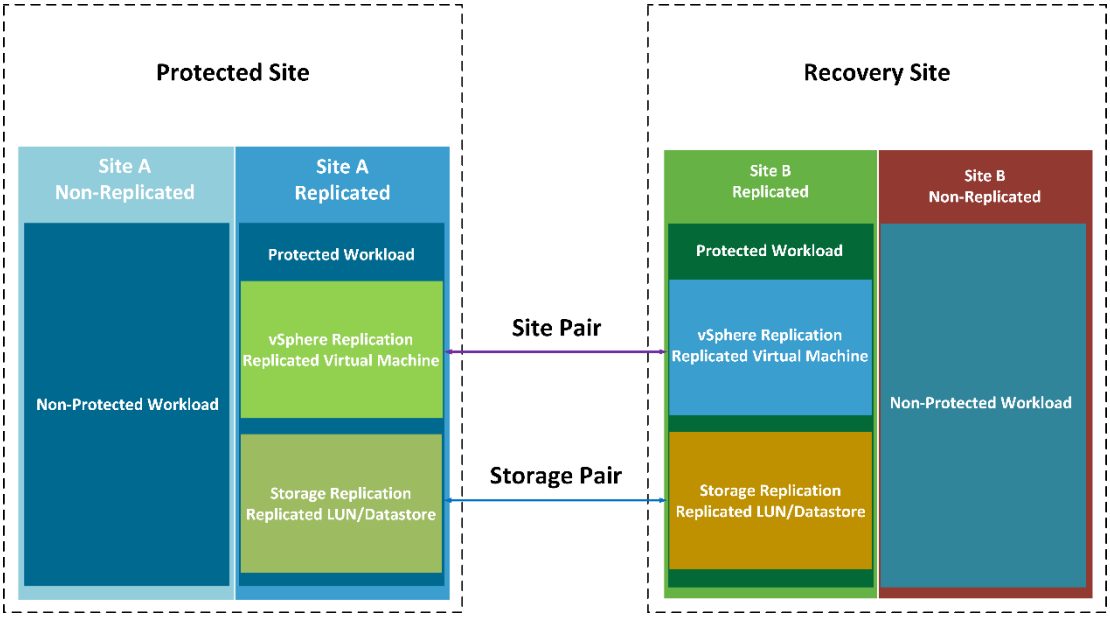
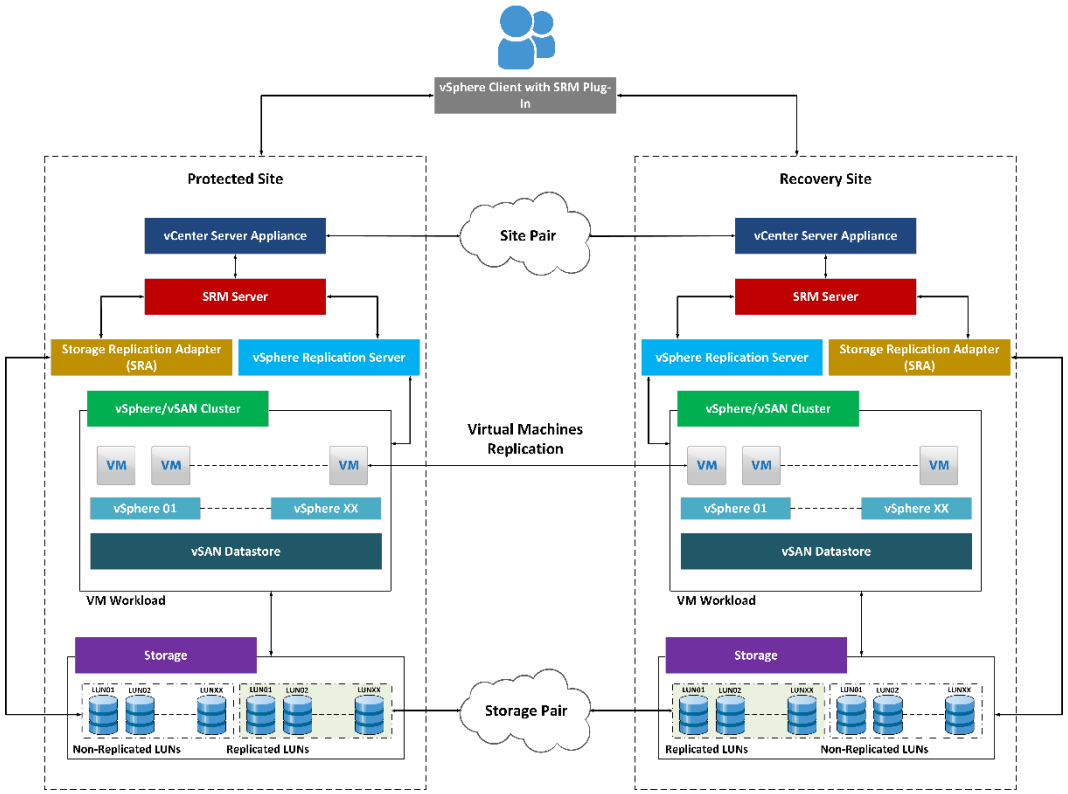
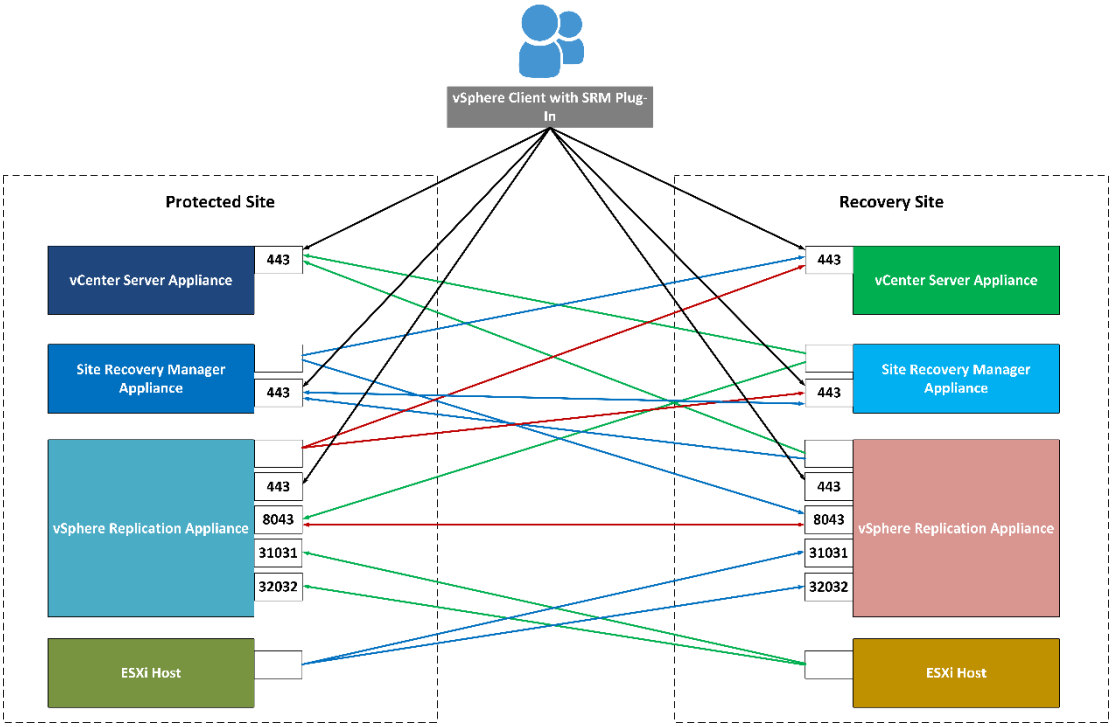
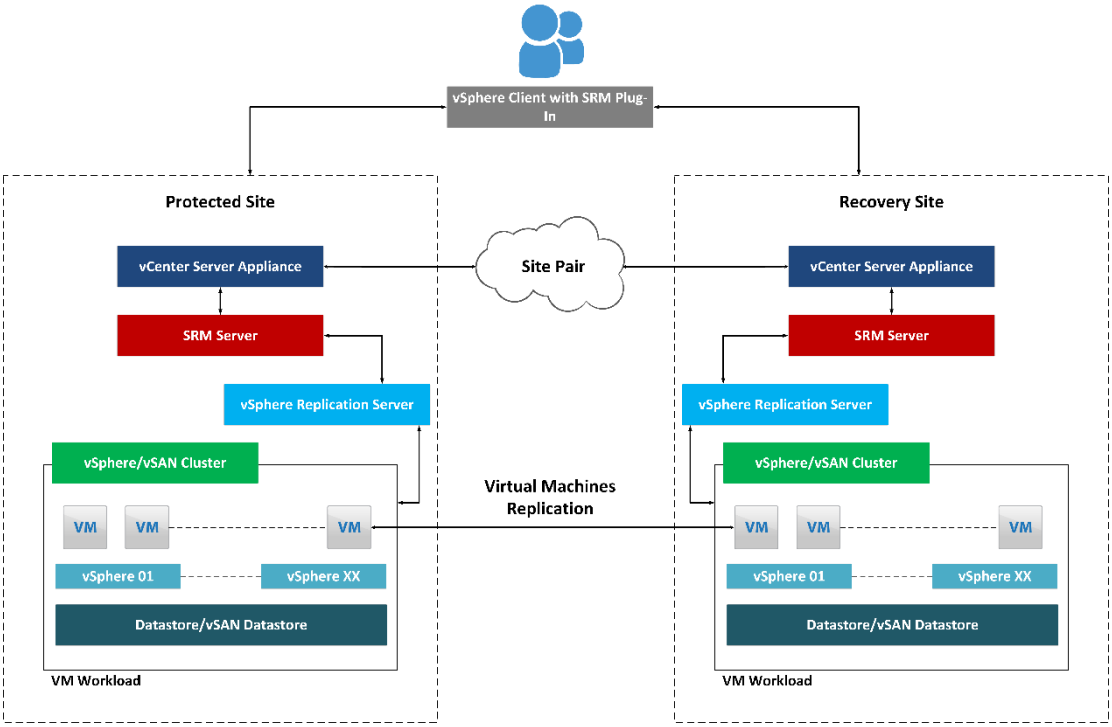
Site Disaster Tolerance: Site mirroring - stretched cluster
Failures To Tolerate: 1 failure - RAID-1 (Mirroring)
VM Storage Policy B
Site Disaster Tolerance: None - keep data on Preferred (stretched cluster)
Failures To Tolerate: 1 failure - RAID-1 (Mirroring)
VM B is running on Node 2
B
A
VM
VM
100 GB
200 GB
VM A is running on Node 1
3rd Site
Virtual Appliance
vSAN Witness
Preferred Site
Secondary Site
Replica
Replica
Witness
200 GB
Replica
Replica
Witness
400 GB
Node 1
Node 2
Node 3
Node 4
Node 7
Node 8
Replica
Replica
Witness
400 GB
5 ms RTT, 10 GB

# Chapter 8: Design of VxRail with SRM




vSphere Client with SRM Plug-In
Protected Site
Recovery Site
vCenter Server Appliance
443
Site Recovery Manager Appliance
443
vSphere Replication Appliance
443
8043
31031
32032
ESXi Host
443
vCenter Server Appliance
443
Site Recovery Manager Appliance
443
8043
31031
32032
vSphere Replication Appliance
ESXi Host


vSphere Client with SRM Plug-In
Protected Site
Recovery Site
Site Pair
vCenter Server Appliance
SRM Server
vSphere Replication Server
vSphere/vSAN Cluster
VM
VM
VM
vSphere 01
vSphere XX
Datastore/vSAN Datastore
VM Workload
Virtual Machines Replication
vCenter Server Appliance
SRM Server
vSphere Replication Server
vSphere/vSAN Cluster
VM
VM
VM
vSphere 01
vSphere XX
Datastore/vSAN Datastore
VM Workload

# VMware Compatibility Guide

Search Compatibility Guide: (e.g. compatibility or esx or 3.0) | All Listings | Search

What are you looking for: Site Recovery Manager (SRM) for SRA | Compatibility Guides | Help | Current Results: 1

**Product Release Version:**
All
SRM 8.5
SRM 8.4
SRM 8.3
SRM 8.2
SRM 8.1
SRM 6.5
SRM 6.1
SRM 6.0
SRM 5.8
SRM 5.5
SRM 5.5 Update1

**Partner Name:**
All
3PAR
Cisco
DataCore Software Corporation
Datrium Inc.,
Dell EMC
Dell Inc.
Dot Hill
FalconStor Software
Fujitsu
GreenBytes
Hewlett Packard Enterprise

**Protocols:**
All
FC
iSCSI
NAS
SAS
SVD

**SRA Features:**
All
Dynamic Access Restriction (DAR)
IPv6 compatible
Standard storage
Stretched storage
VASA SRA

**SRA Name:**
DellEMC RecoverPoint SRA
Dot Hill AssuredSAN SRA
EMC Isilon Storage Replication Adapter
EMC SRDF Adapter
EMC SRDF Adapter for VMware Site Rec
EMC SRDF SRA
EMC Unity Block SRA
EMC Unity File SRA
EMC ViPR SRA
EMC VNX SRA with MirrorView Enabler f
EMC VNX SRA with VNX Replicator Enab
EMC VNXe Block SRA
EMC VNXe SRA
EMC VPLEX Storage Replication Adapter
Exos X SRA

**Keyword:**

**Posted Date Range:** All

Update and View Results | Reset

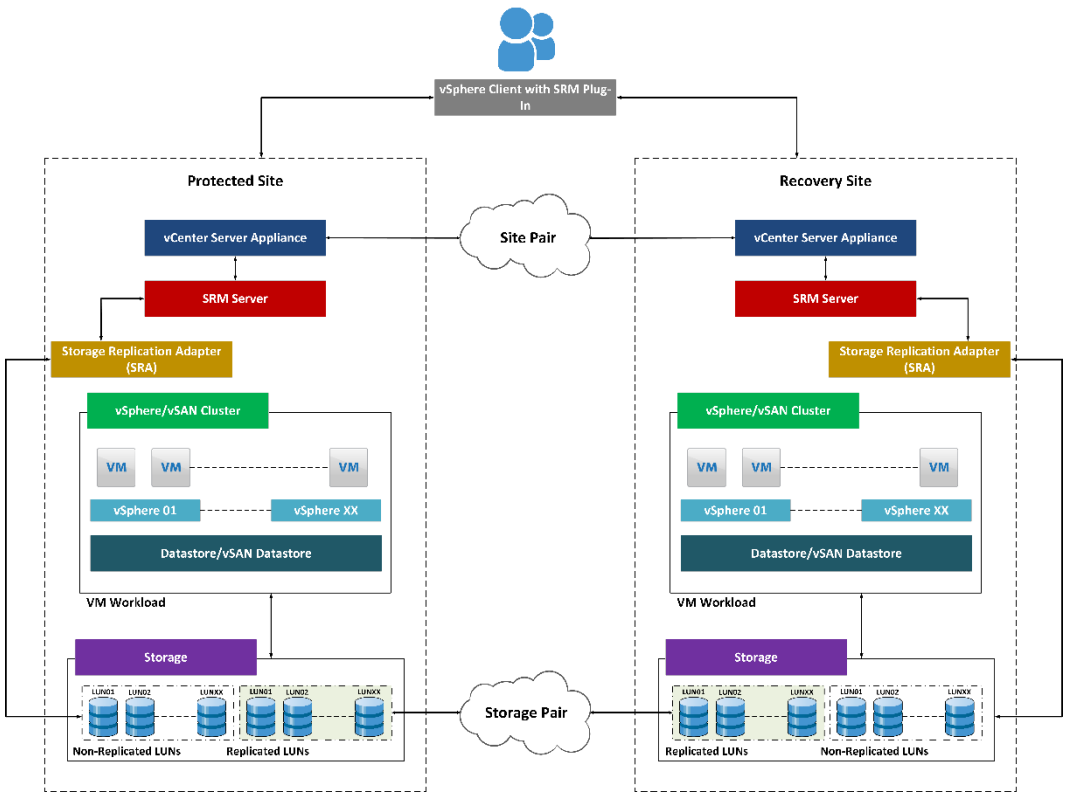
Click here to **Read** Important Support Information

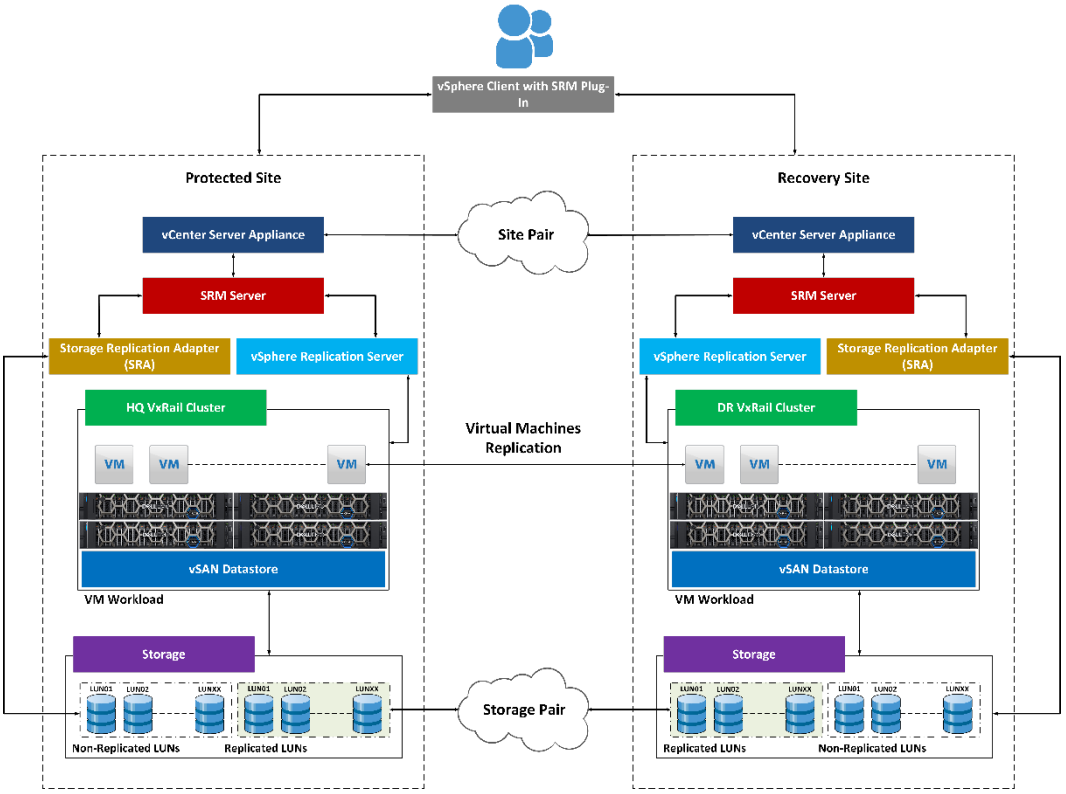
**Click on the 'Model' to view more details and to subscribe to RSS feeds.**

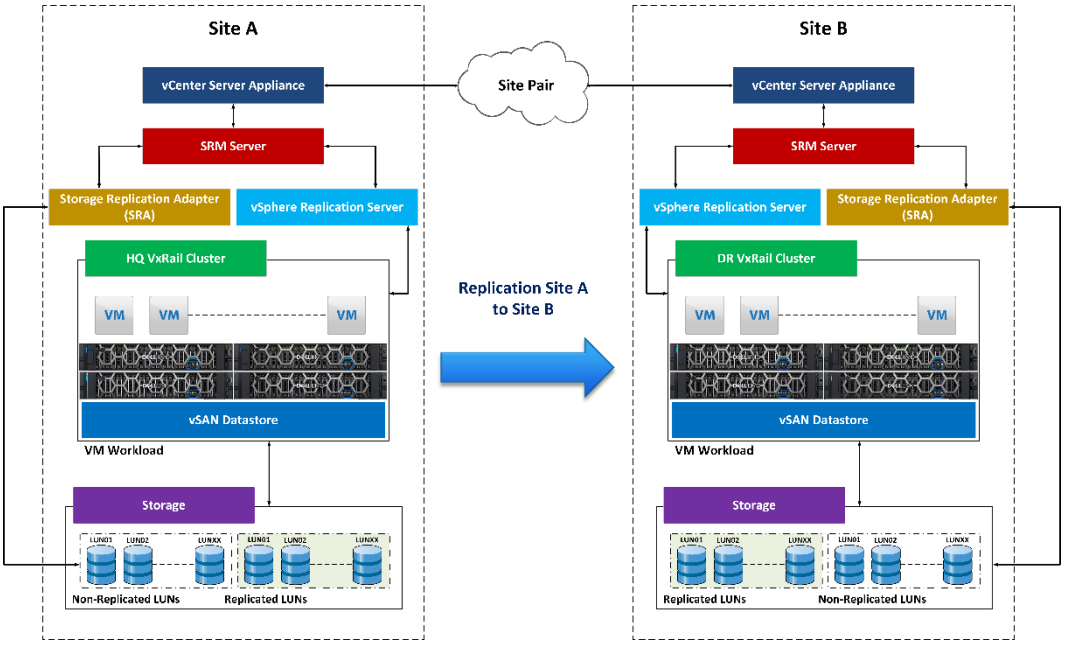
Bookmark | Print | Export to CSV

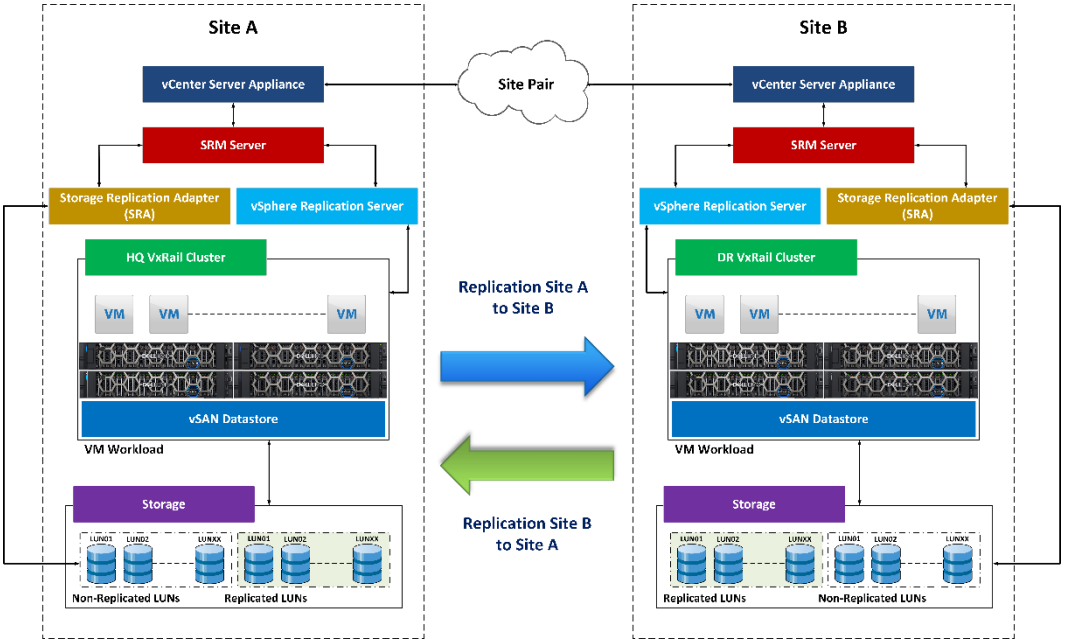
**Search Results:** Your search for" Site Recovery Manager (SRM) for SRA " returned **one result** Back to Top Turn Off Auto Scroll Display: 10

| Partner Name | SRA Name | OS Type | SRM Version(s) |
|---|---|---|---|
| Dell EMC | EMC Unity Block SRA 5.0.4.146 | Windows | SRM 8.3 SRM 8.2 SRM 8.1 SRM 6.5 |
| | | Photon | SRM 8.5 SRM 8.4 SRM 8.3 SRM 8.2 |




vSphere Client with SRM Plug-In
Protected Site
Recovery Site
Site Pair
vCenter Server Appliance
SRM Server
Storage Replication Adapter (SRA)
vSphere Replication Server
HQ VxRail Cluster
DR VxRail Cluster
Virtual Machines Replication
VM
vSAN Datastore
VM Workload
Storage
Storage Pair
Non-Replicated LUNs
Replicated LUNs


Site A
Site B
Site Pair
vCenter Server Appliance
SRM Server
Storage Replication Adapter (SRA)
vSphere Replication Server
HQ VxRail Cluster
DR VxRail Cluster
Replication Site A to Site B
VM
vSAN Datastore
VM Workload
Storage
Non-Replicated LUNs
Replicated LUNs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vCenter Server Appliance
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HQ VxRail Cluster
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LUN01
LUN02
LUNXX
Non-Replicated LUNs
Replicated LUNs
Site Pair
Replication Site A to Site B
Replication Site B to Site A
Site B
vCenter Server Appliance
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VM Workload
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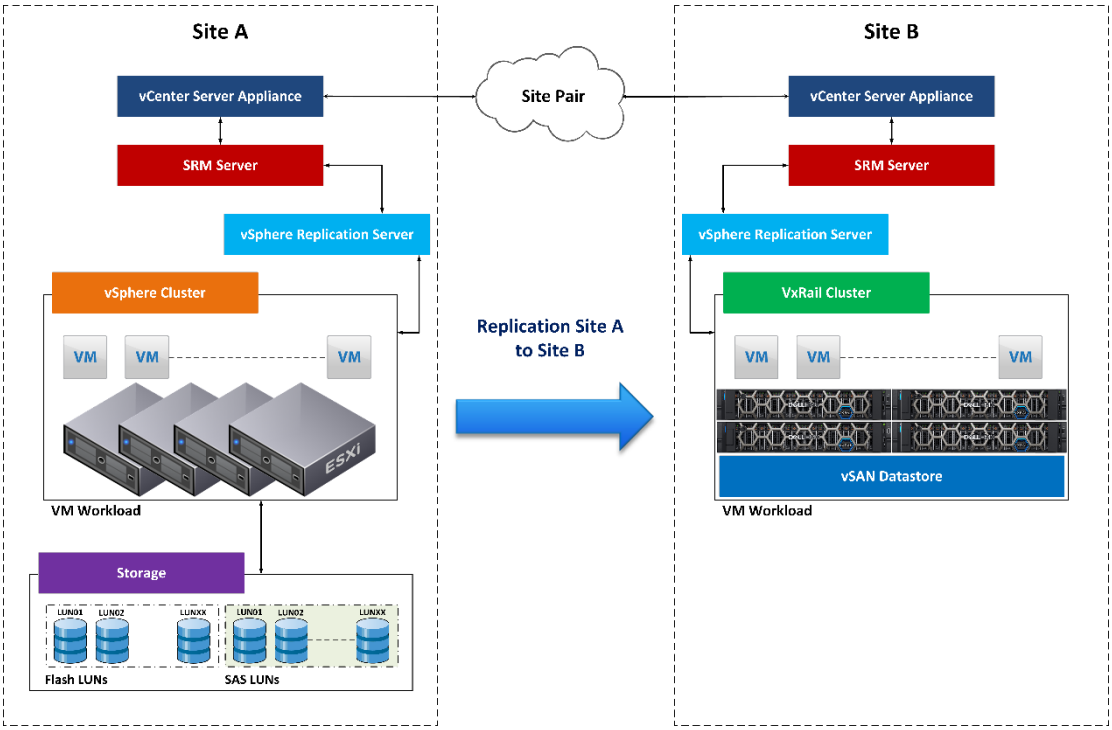
LUN01
LUN02
LUNXX
Replicated LUNs
Non-Replicated LUNs


Site A
vCenter Server Appliance
SRM Server
vSphere Replication Server
vSphere Cluster
VM
VM
VM
ESXi
VM Workload
Storage
LUN01
LUN02
LUNXX
Flash LUNs
SAS LUNs
Site Pair
Replication Site A to Site B
Site B
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VxRail Cluster
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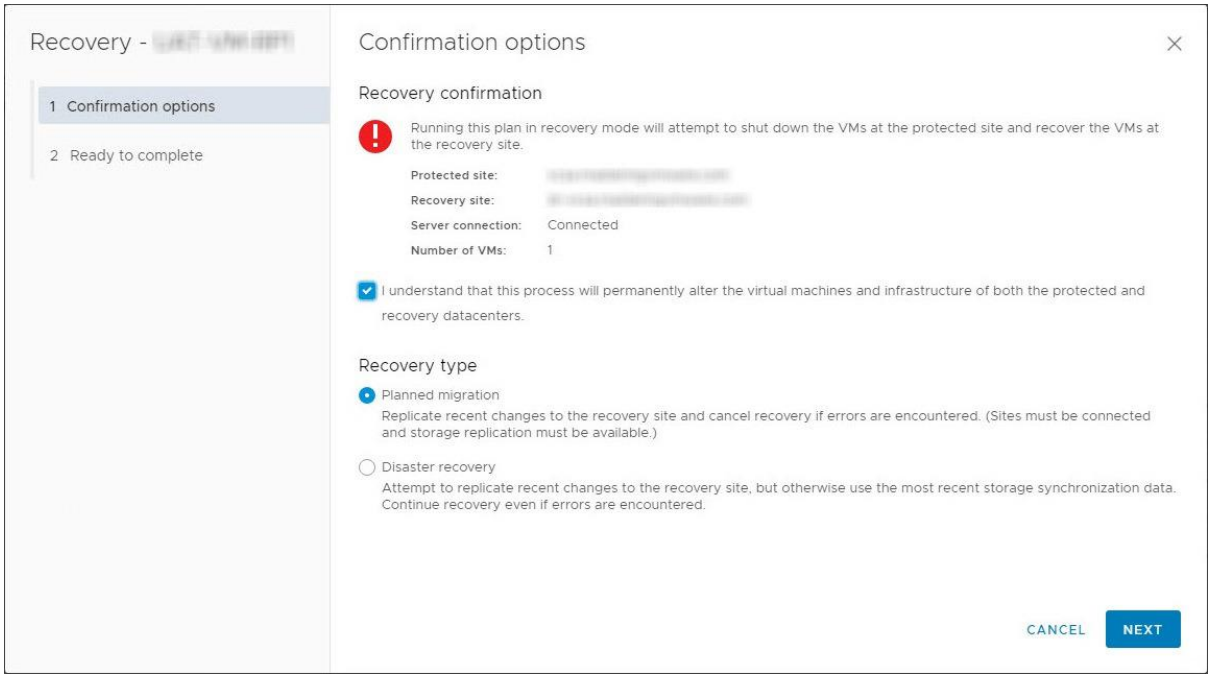
VM
vSAN Datastore
VM Workload


Recovery -
1 Confirmation options
2 Ready to complete
Confirmation options
Recovery confirmation
Running this plan in recovery mode will attempt to shut down the VMs at the protected site and recover the VMs at the recovery site.
Protected site:
Recovery site:
Server connection: Connected
Number of VMs: 1
I understand that this process will permanently alter the virtual machines and infrastructure of both the protected and recovery datacenters.
Recovery type
Planned migration
Replicate recent changes to the recovery site and cancel recovery if errors are encountered. (Sites must be connected and storage replication must be available.)
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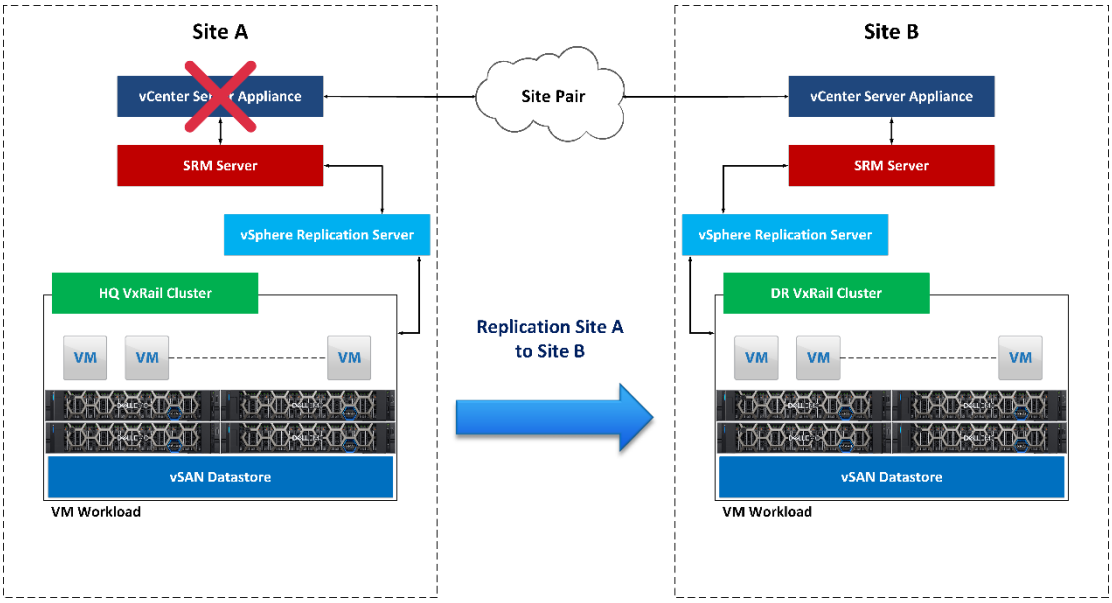
Attempt to replicate recent changes to the recovery site, but otherwise use the most recent storage synchronization data. Continue recovery even if errors are encountered.
CANCEL
NEXT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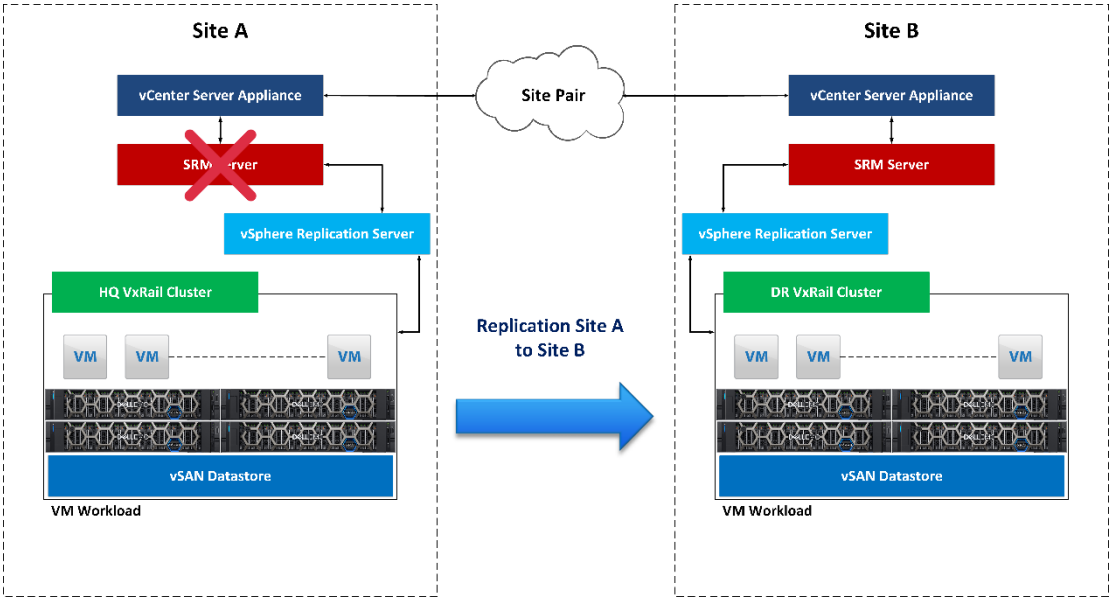
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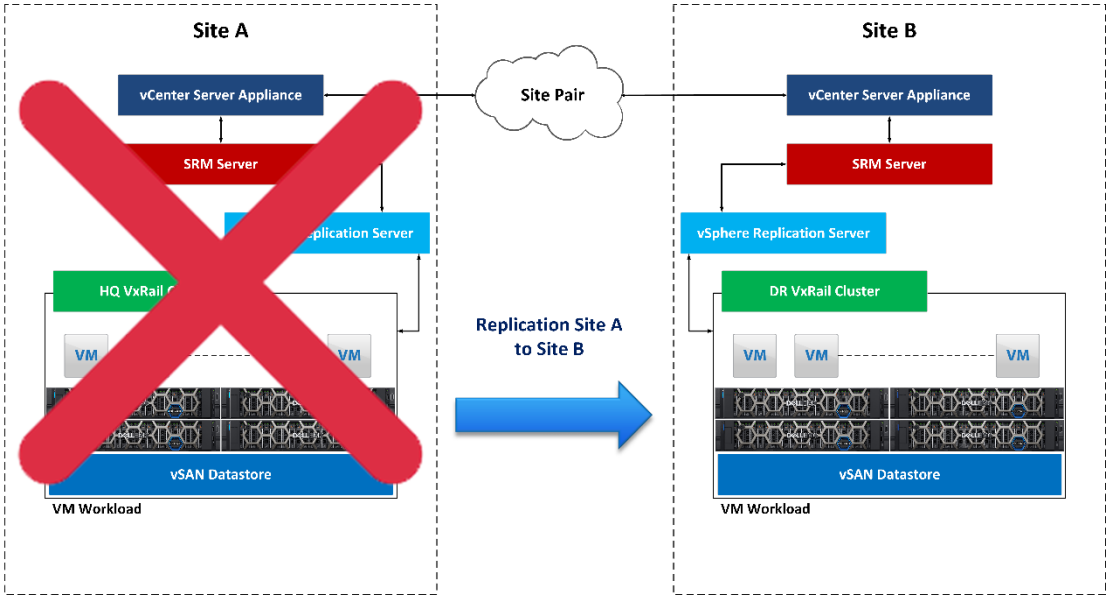
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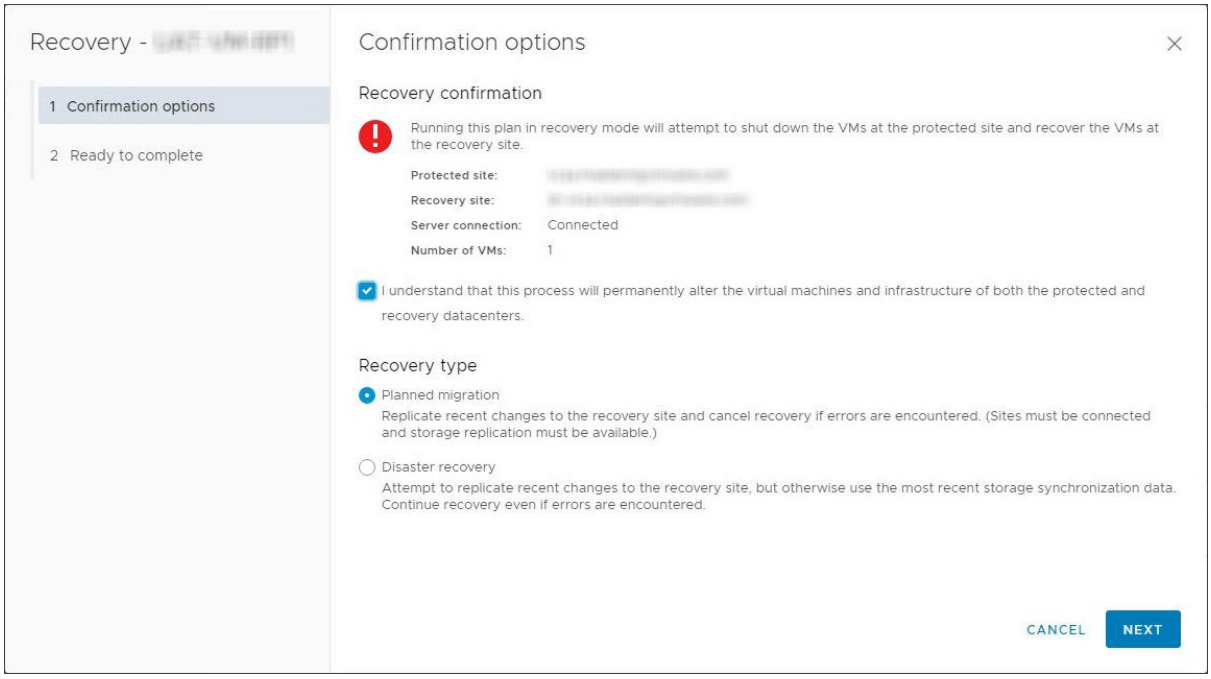
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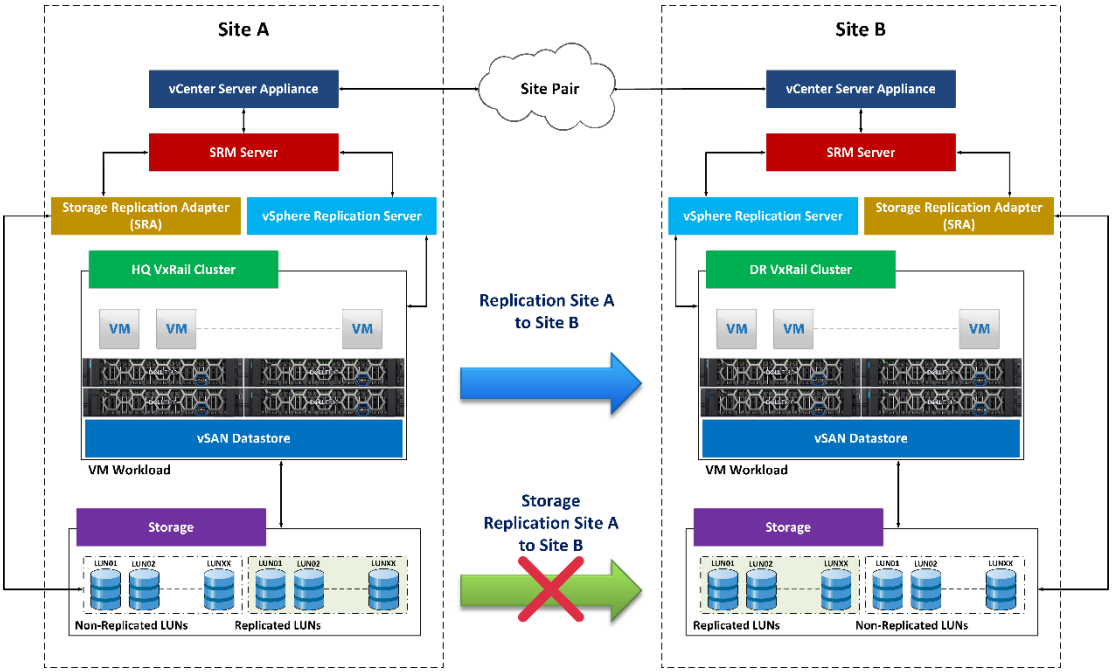
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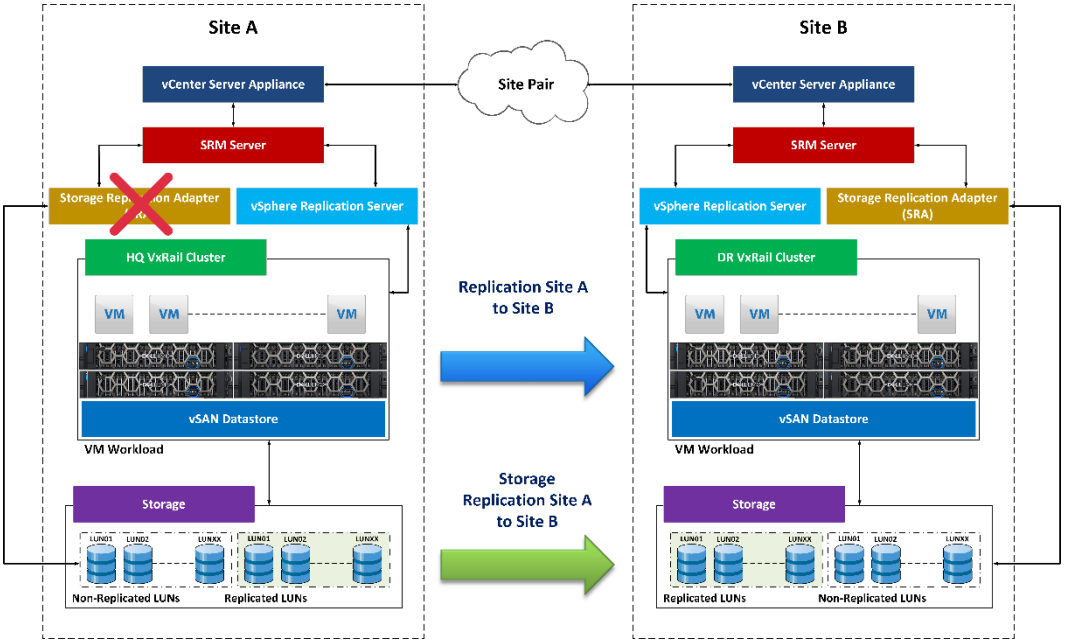
LUN02
LUNXX
Replicated LUNs
Non-Replicated LUNs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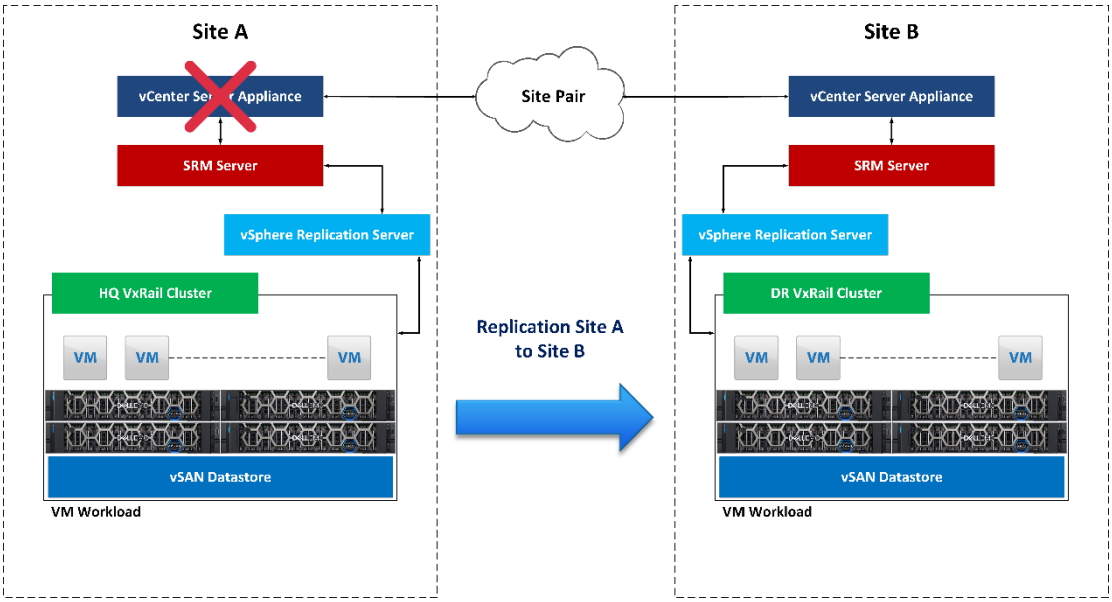
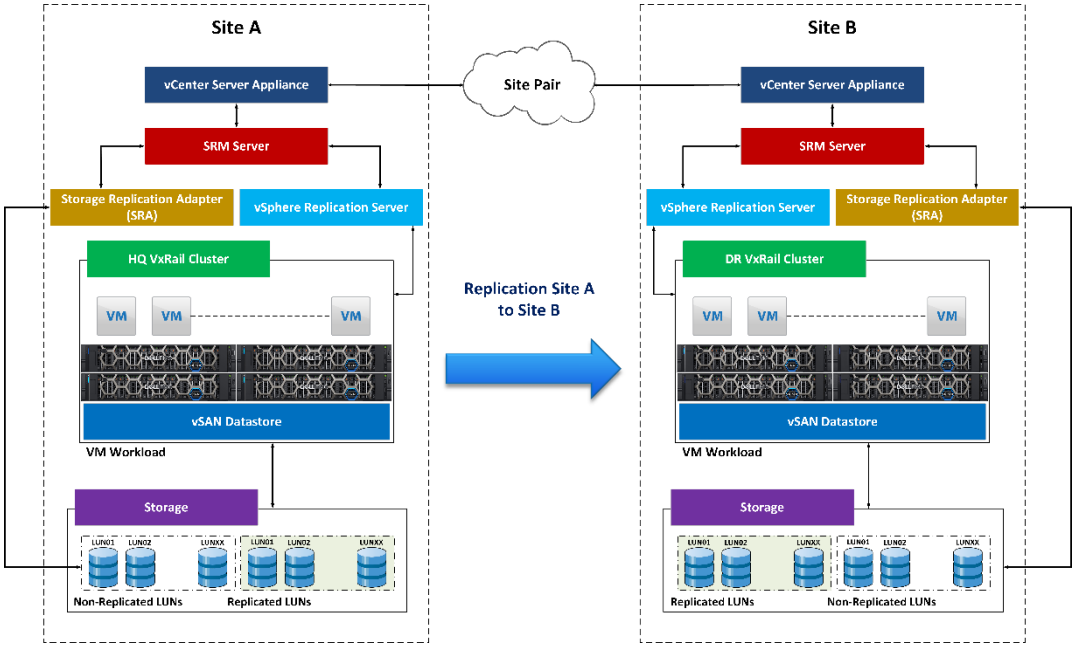
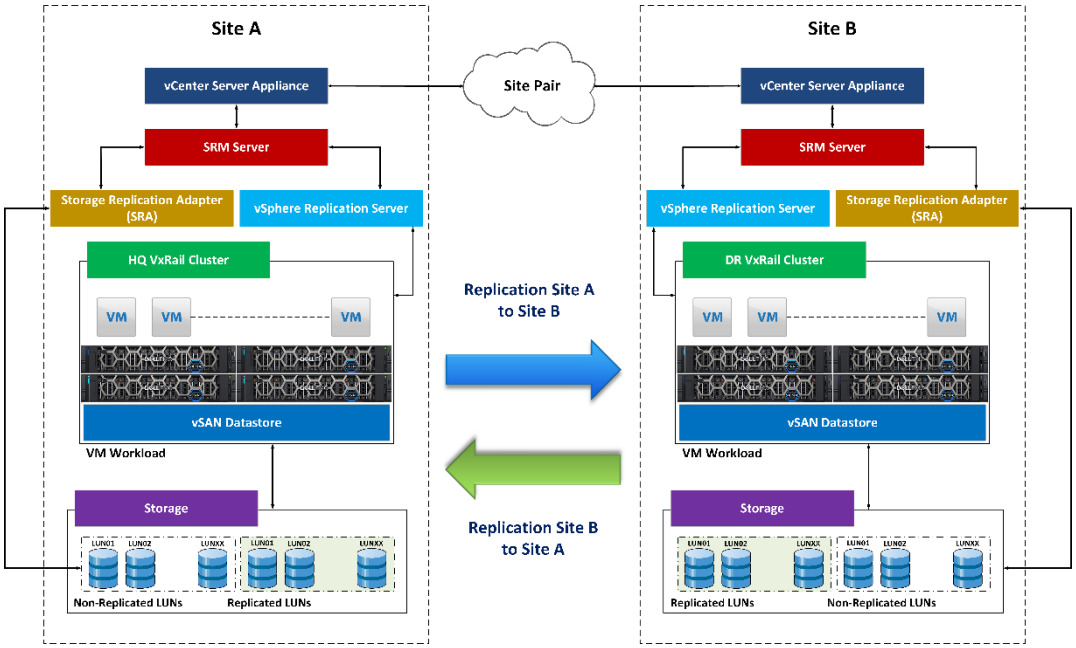
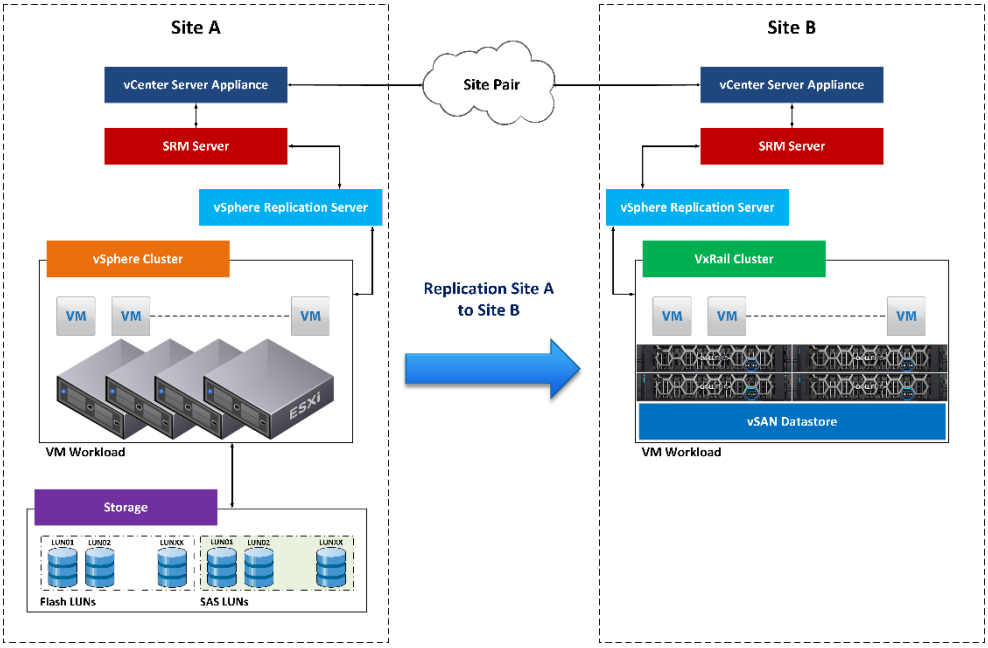
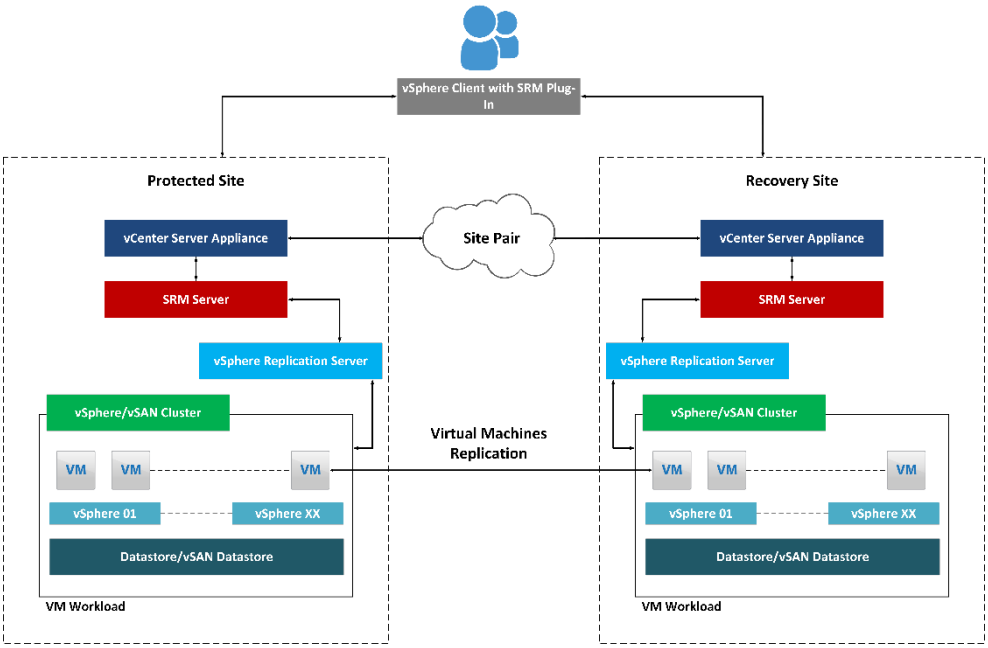
Replication Site A to Site B
Storage Replication Site A to Site B
Site B
vCenter Server Appliance
SRM Server
vSphere Replication Server
Storage Replication Adapter (SRA)
DR VxRail Cluster
VM
VM
VM
vSAN Datastore
VM Workload
Storage
LUN01
LUN02
LUNXX
Replicated LUNs
Non-Replicated LUNs

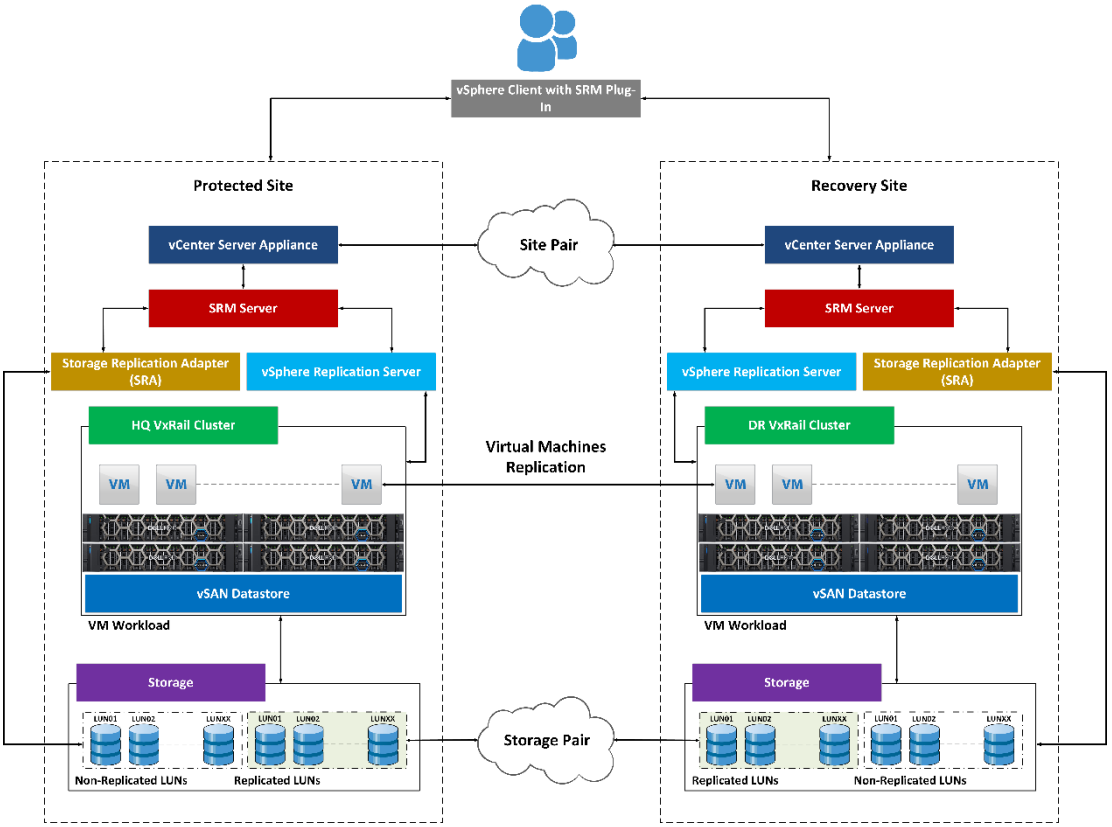

Site A
vCenter Server Appliance
SRM Server
vSphere Replication Server
HQ VxRail Cluster
VM
VM
VM
vSAN Datastore
VM Workload
Site Pair
Replication Site A to Site B
Site B
vCenter Server Appliance
SRM Server
vSphere Replication Server
DR VxRail Cluster
VM
VM
VM
vSAN Datastore
VM Workload


Site A
vCenter Server Appliance
SRM Server
Storage Replication Adapter (SRA)
vSphere Replication Server
HQ VxRail Cluster
VM
VM
VM
vSAN Datastore
VM Workload
Storage
LUN01
LUN02
LUNXX
LUN03
LUN02
LUNXX
Non-Replicated LUNs
Replicated LUNs
Site Pair
Replication Site A to Site B
Site B
vCenter Server Appliance
SRM Server
vSphere Replication Server
Storage Replication Adapter (SRA)
DR VxRail Cluster
VM
VM
VM
vSAN Datastore
VM Workload
Storage
LUN01
LUN02
LUNXX
LUN01
LUN02
LUNXX
Replicated LUNs
Non-Replicated LUNs

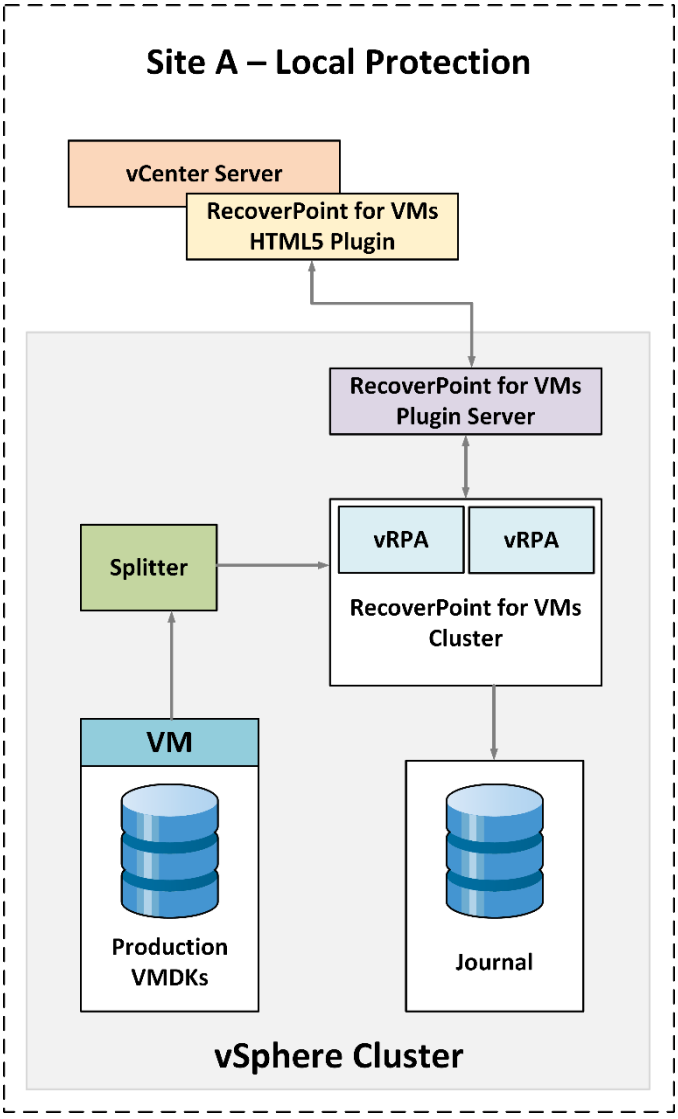

Site A
vCenter Server Appliance
SRM Server
Storage Replication Adapter (SRA)
vSphere Replication Server
HQ VxRail Cluster
VM
VM
VM
vSAN Datastore
VM Workload
Storage
LUN01
LUN02
LUNXX
LUN03
LUN02
LUNXX
Non-Replicated LUNs
Replicated LUNs
Site Pair
Replication Site A to Site B
Replication Site B to Site A
Site B
vCenter Server Appliance
SRM Server
vSphere Replication Server
Storage Replication Adapter (SRA)
DR VxRail Cluster
VM
VM
VM
vSAN Datastore
VM Workload
Storage
LUN01
LUN02
LUNXX
LUN01
LUN02
LUNXX
Replicated LUNs
Non-Replicated LUNs

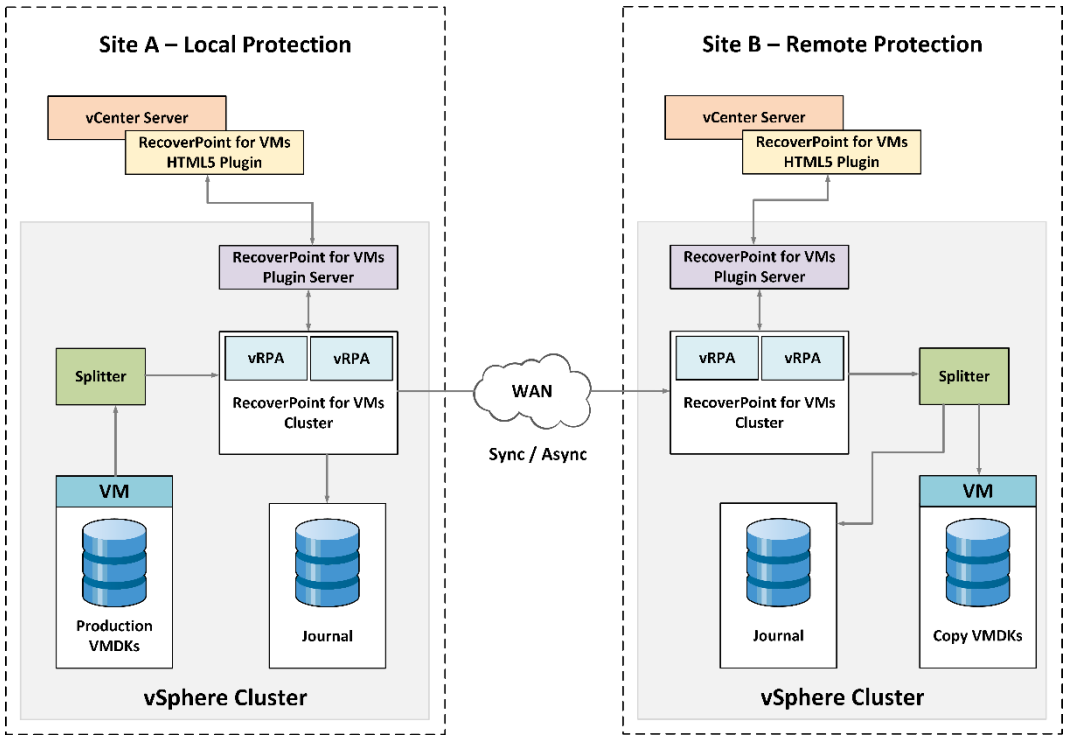

Site A
vCenter Server Appliance
SRM Server
vSphere Replication Server
vSphere Cluster
VM
VM
VM
ESXi
VM Workload
Storage
LUN01
LUN02
LUNXX
LUN01
LUN02
LUNXX
Flash LUNs
SAS LUNs
Site Pair
Replication Site A
to Site B
Site B
vCenter Server Appliance
SRM Server
vSphere Replication Server
VxRail Cluster
VM
VM
VM
vSAN Datastore
VM Workload

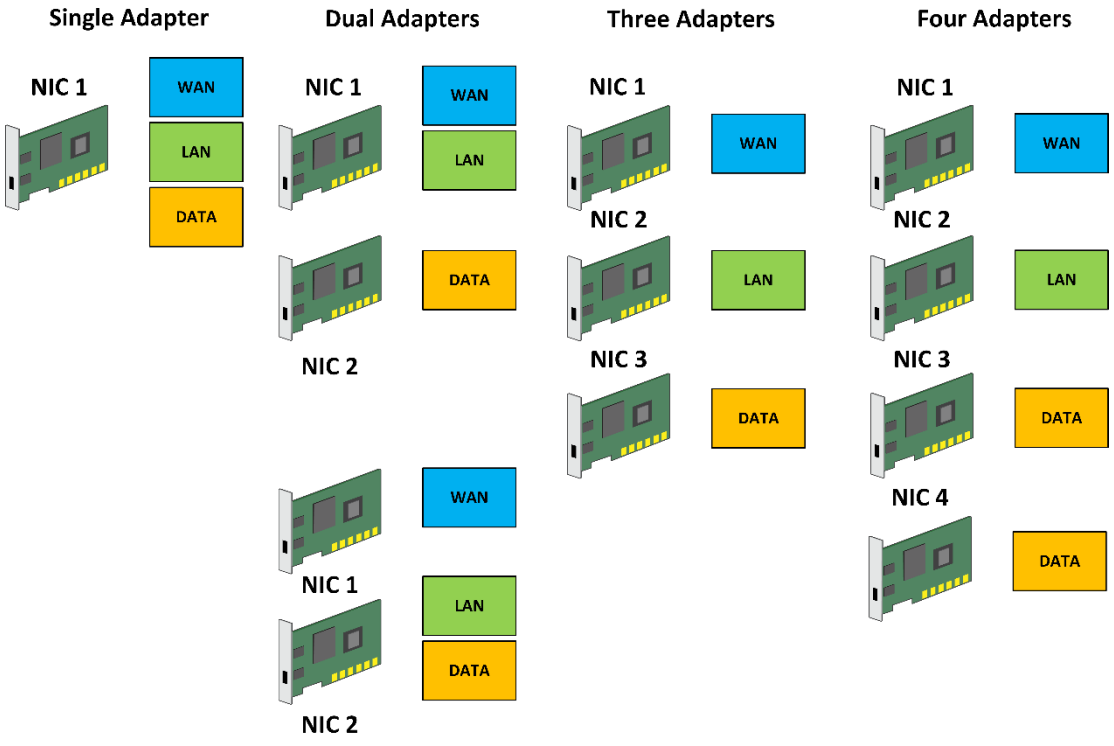

vSphere Client with SRM Plug-In
Protected Site
vCenter Server Appliance
SRM Server
vSphere Replication Server
vSphere/vSAN Cluster
VM
VM
VM
vSphere 01
vSphere XX
Datastore/vSAN Datastore
VM Workload
Site Pair
Virtual Machines
Replication
Recovery Site
vCenter Server Appliance
SRM Server
vSphere Replication Server
vSphere/vSAN Cluster
VM
VM
VM
vSphere 01
vSphere XX
Datastore/vSAN Datastore
VM Workload

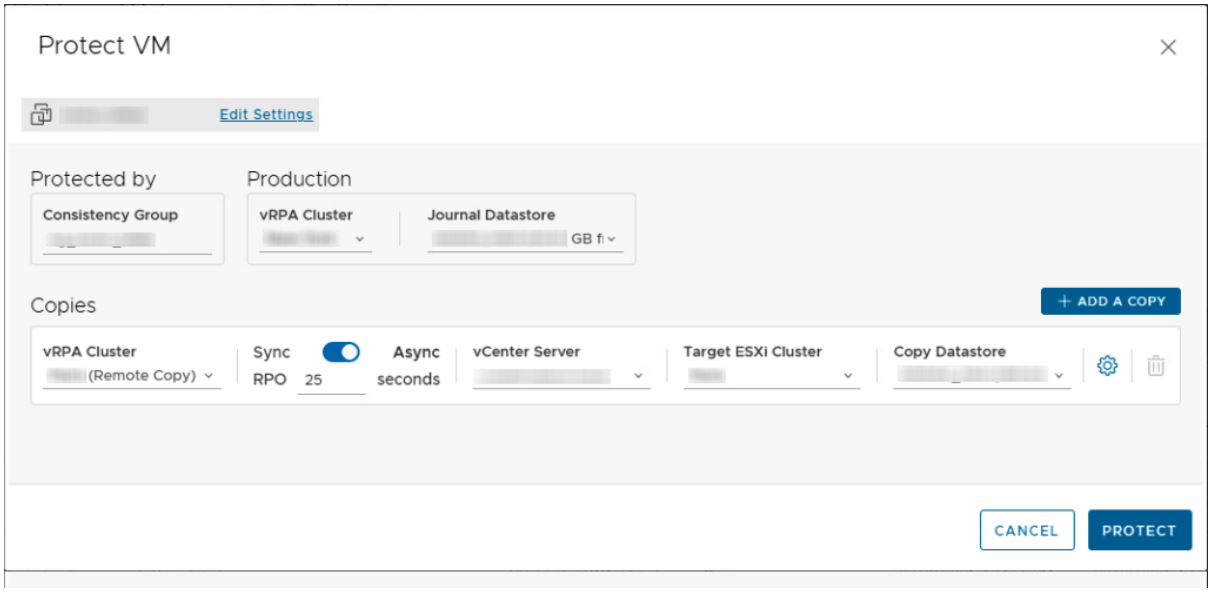

vSphere Client with SRM Plug-In
Protected Site
Recovery Site
Site Pair
vCenter Server Appliance
vCenter Server Appliance
SRM Server
SRM Server
Storage Replication Adapter (SRA)
vSphere Replication Server
vSphere Replication Server
Storage Replication Adapter (SRA)
HQ VxRail Cluster
DR VxRail Cluster
Virtual Machines Replication
VM
VM
VM
VM
VM
VM
vSAN Datastore
vSAN Datastore
VM Workload
VM Workload
Storage
Storage
Storage Pair
Non-Replicated LUNs
Replicated LUNs
Replicated LUNs
Non-Replicated LUNs

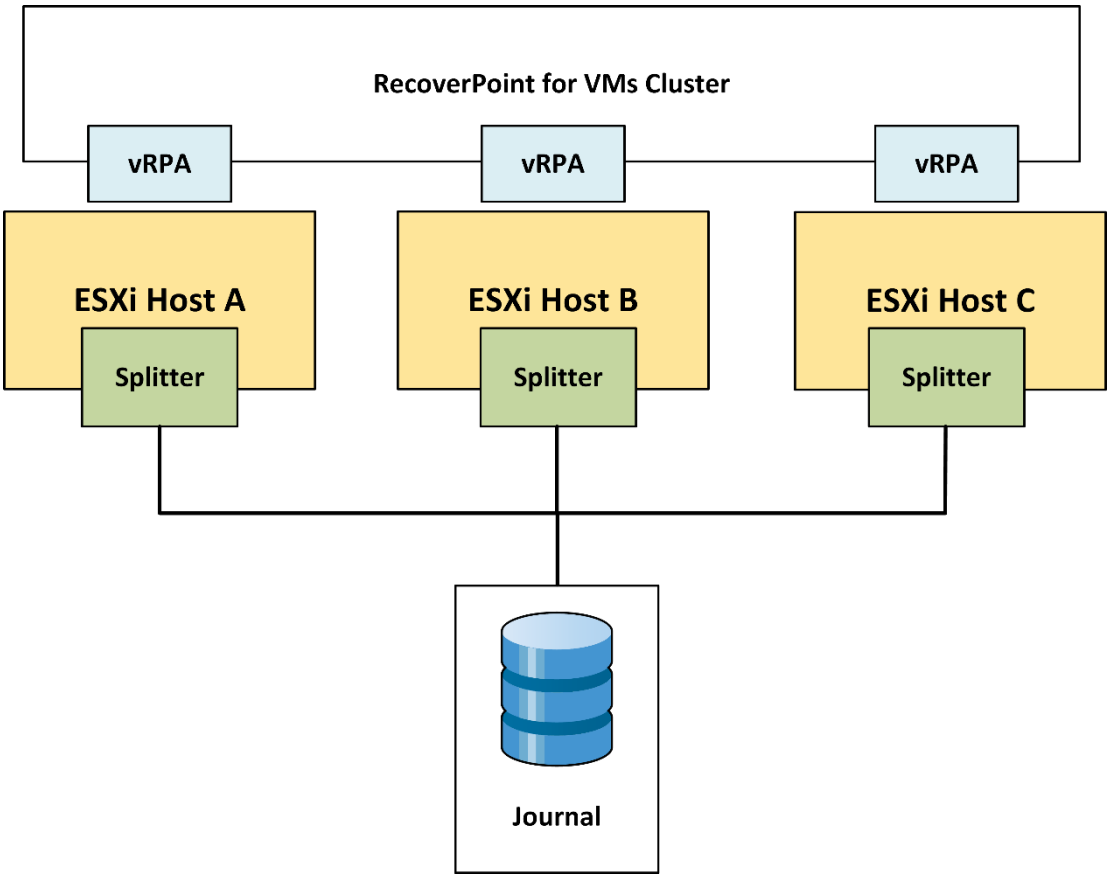
# Chapter 9: Design of RecoverPoint for Virtual Machines on VxRail

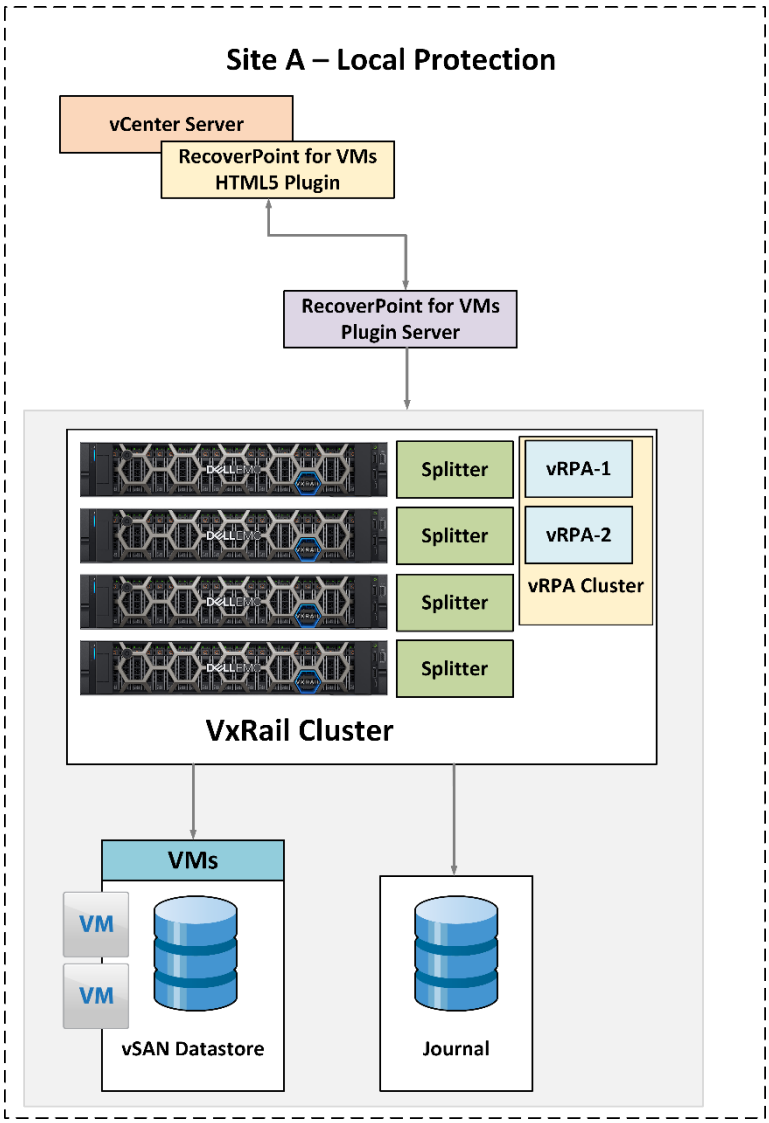


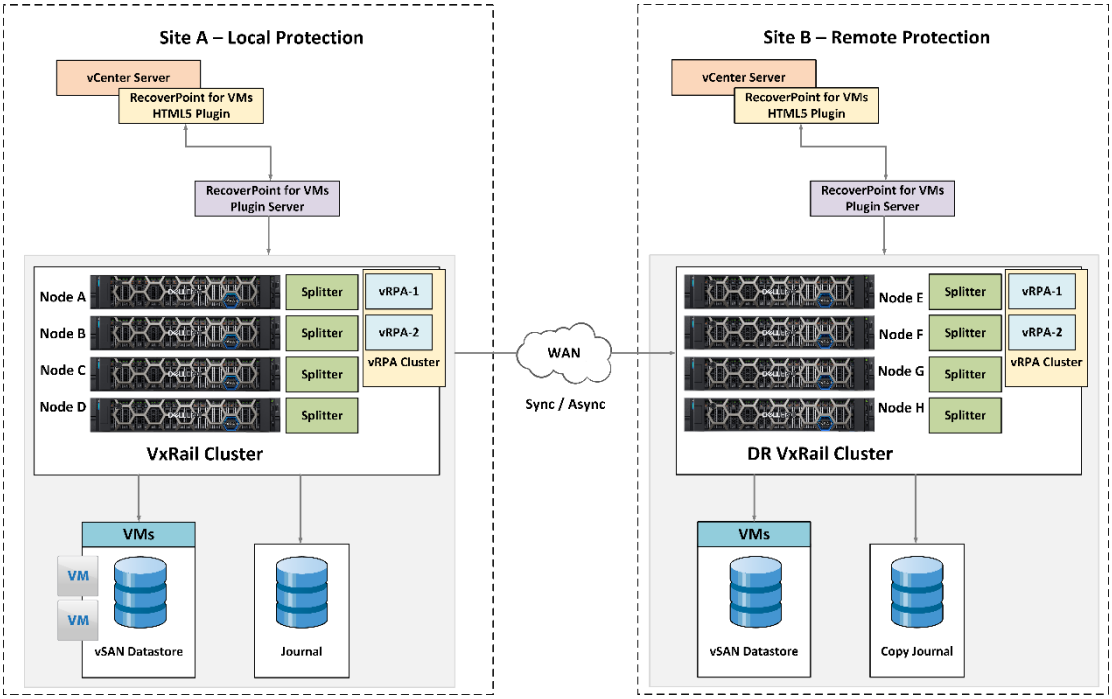

Site A – Local Protection
vCenter Server
RecoverPoint for VMs HTML5 Plugin
RecoverPoint for VMs Plugin Server
Splitter
vRPA
vRPA
RecoverPoint for VMs Cluster
VM
Production VMDKs
Journal
vSphere Cluster
WAN
Sync / Async
Site B – Remote Protection
vCenter Server
RecoverPoint for VMs HTML5 Plugin
RecoverPoint for VMs Plugin Server
vRPA
vRPA
RecoverPoint for VMs Cluster
Splitter
VM
Journal
Copy VMDKs
vSphere Cluster

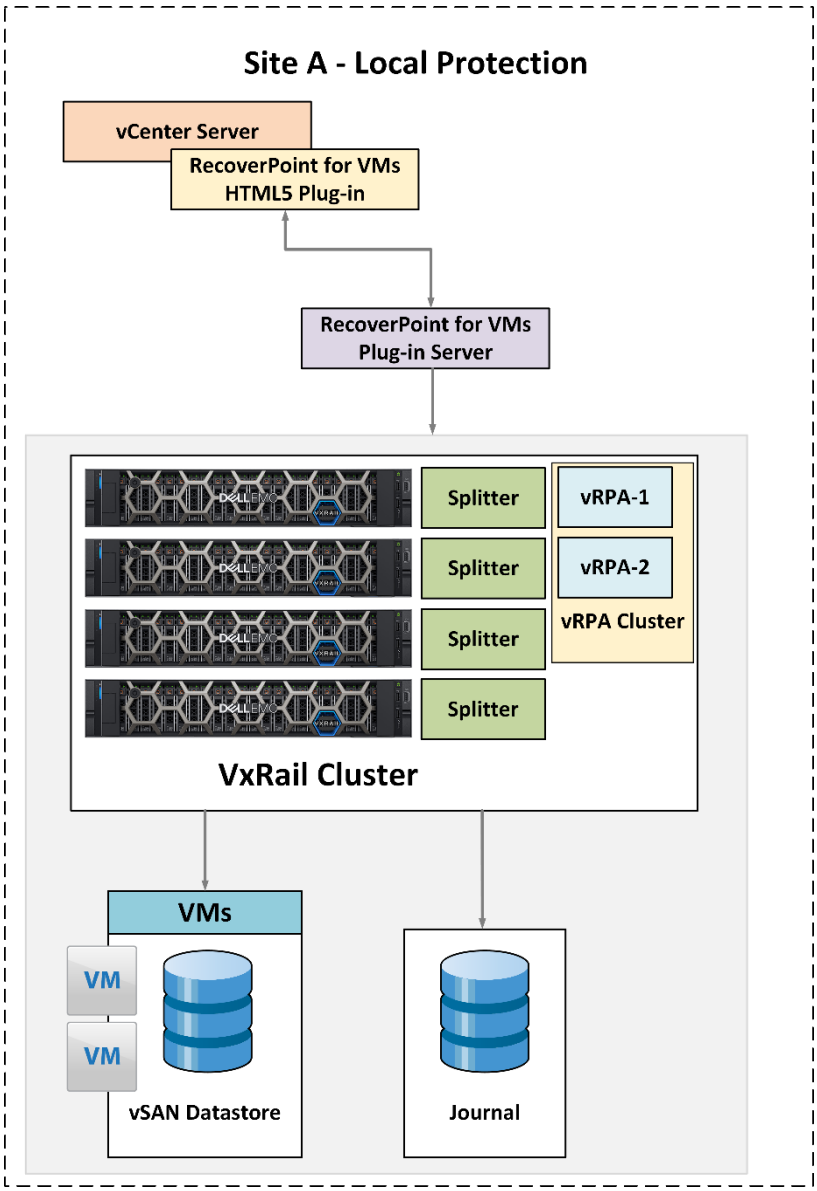

Single Adapter
NIC 1
WAN
LAN
DATA
Dual Adapters
NIC 1
WAN
LAN
NIC 2
DATA
NIC 1
WAN
LAN
NIC 2
DATA
Three Adapters
NIC 1
WAN
NIC 2
LAN
NIC 3
DATA
Four Adapters
NIC 1
WAN
NIC 2
LAN
NIC 3
DATA
NIC 4
DATA


Protect VM
Edit Settings
Protected by
Consistency Group
Production
vRPA Cluster
Journal Datastore
Copies
+ ADD A COPY
vRPA Cluster
(Remote Copy)
Sync
Async
RPO
25
seconds
vCenter Server
Target ESXi Cluster
Copy Datastore
CANCEL
PROTECT


RecoverPoint for VMs Cluster
vRPA
vRPA
vRPA
ESXi Host A
ESXi Host B
ESXi Host C
Splitter
Splitter
Splitter
Journal

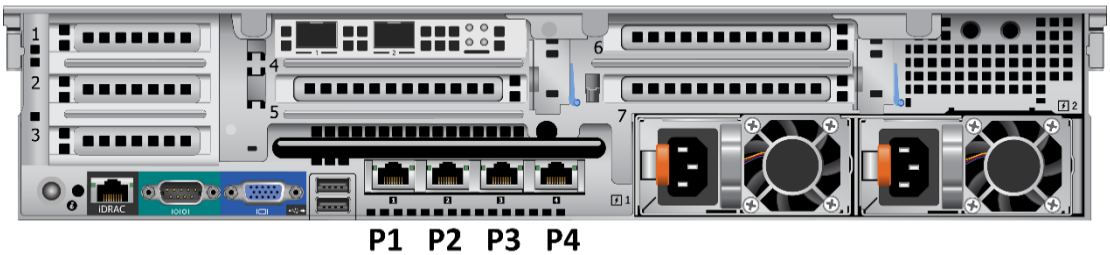

Site A – Local Protection
vCenter Server
RecoverPoint for VMs HTML5 Plugin
RecoverPoint for VMs Plugin Server
Splitter
Splitter
Splitter
Splitter
vRPA-1
vRPA-2
vRPA Cluster
VxRail Cluster
VMs
VM
VM
vSAN Datastore
Journal


Site A – Local Protection
vCenter Server
RecoverPoint for VMs HTML5 Plugin
RecoverPoint for VMs Plugin Server
Node A
Node B
Node C
Node D
Splitter
Splitter
Splitter
Splitter
vRPA-1
vRPA-2
vRPA Cluster
VxRail Cluster
VMs
VM
VM
vSAN Datastore
Journal
WAN
Sync / Async
Site B – Remote Protection
vCenter Server
RecoverPoint for VMs HTML5 Plugin
RecoverPoint for VMs Plugin Server
Node E
Node F
Node G
Node H
Splitter
Splitter
Splitter
Splitter
vRPA-1
vRPA-2
vRPA Cluster
DR VxRail Cluster
VMs
vSAN Datastore
Copy Journal



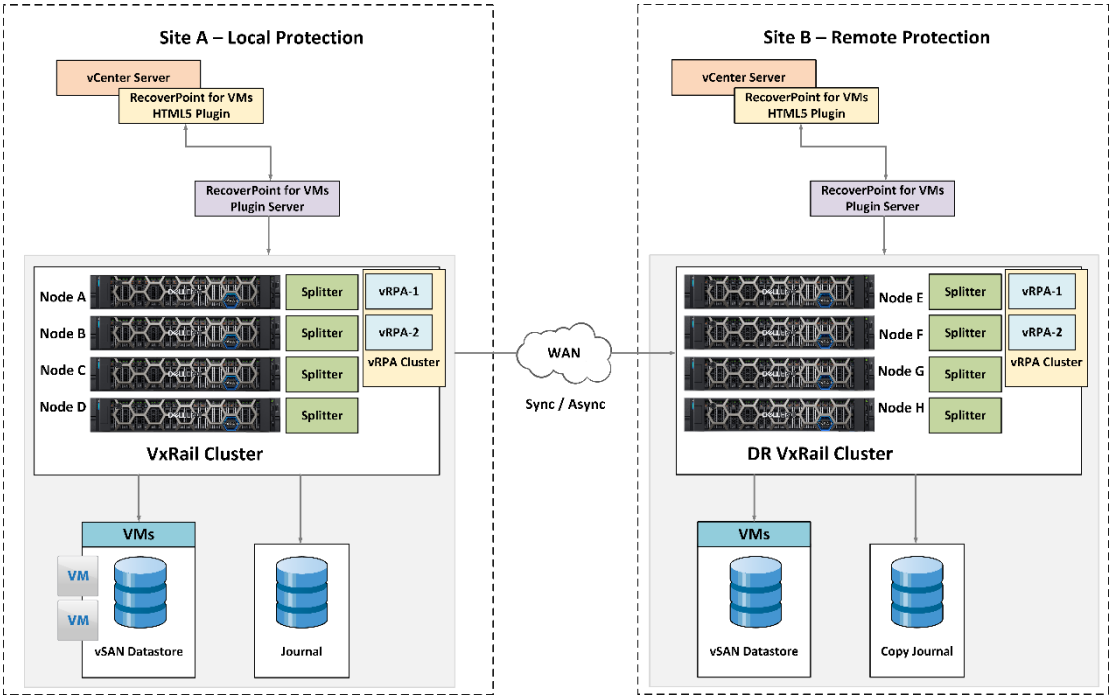

Intel X710 Dual Port 10GbE SFP+

P5 P6



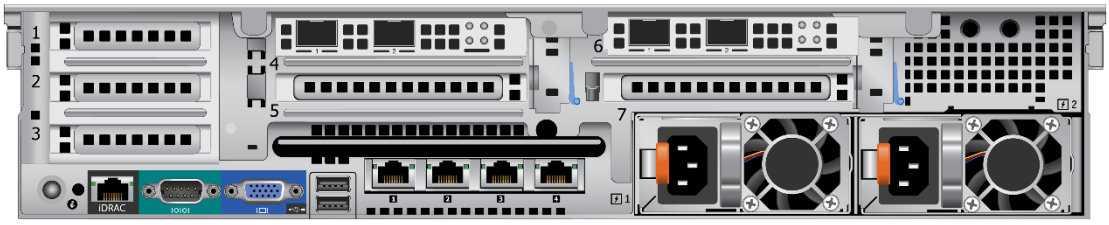
P1 P2 P3 P4

Intel Ethernet X710 Quad Port 10GbE



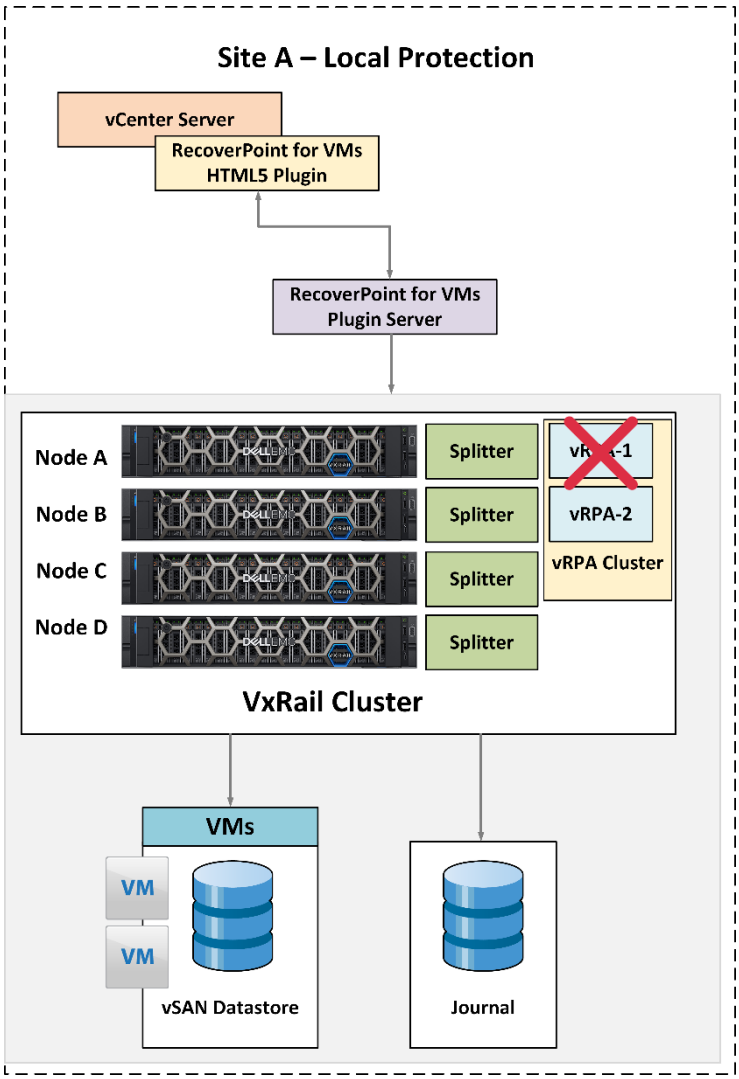

1st Intel X710 Dual Port 10GbE SFP+ 2nd Intel X710 Dual Port 10GbE SFP+

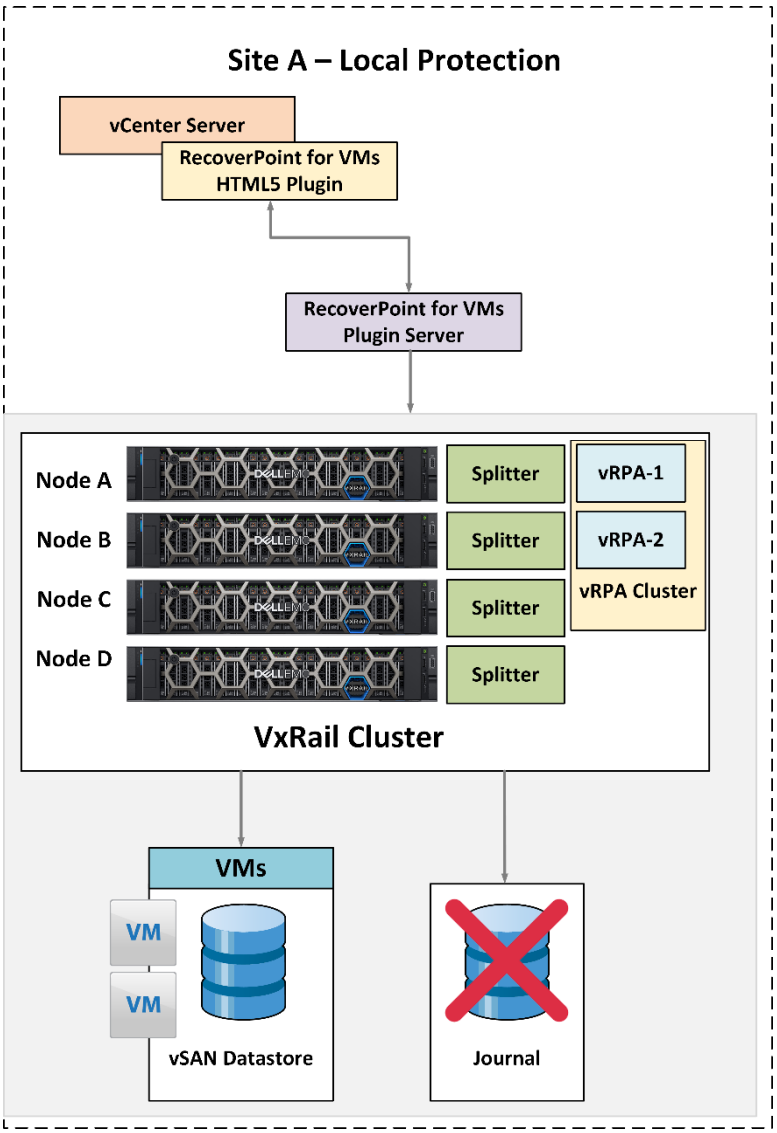
P5 P6 P7 P8

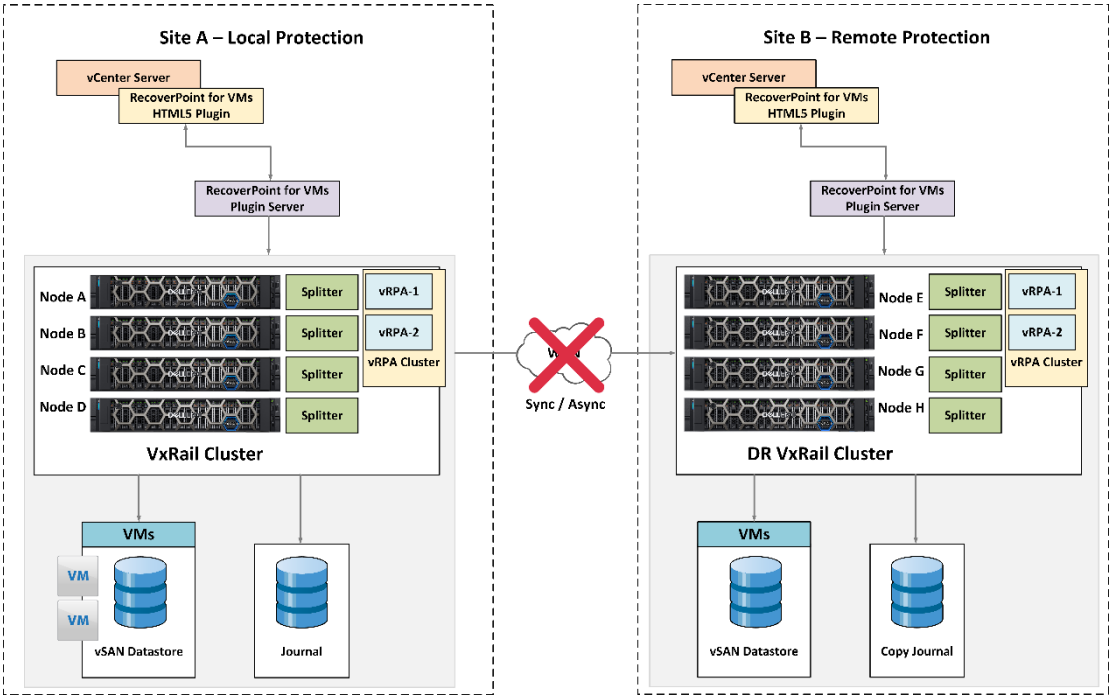


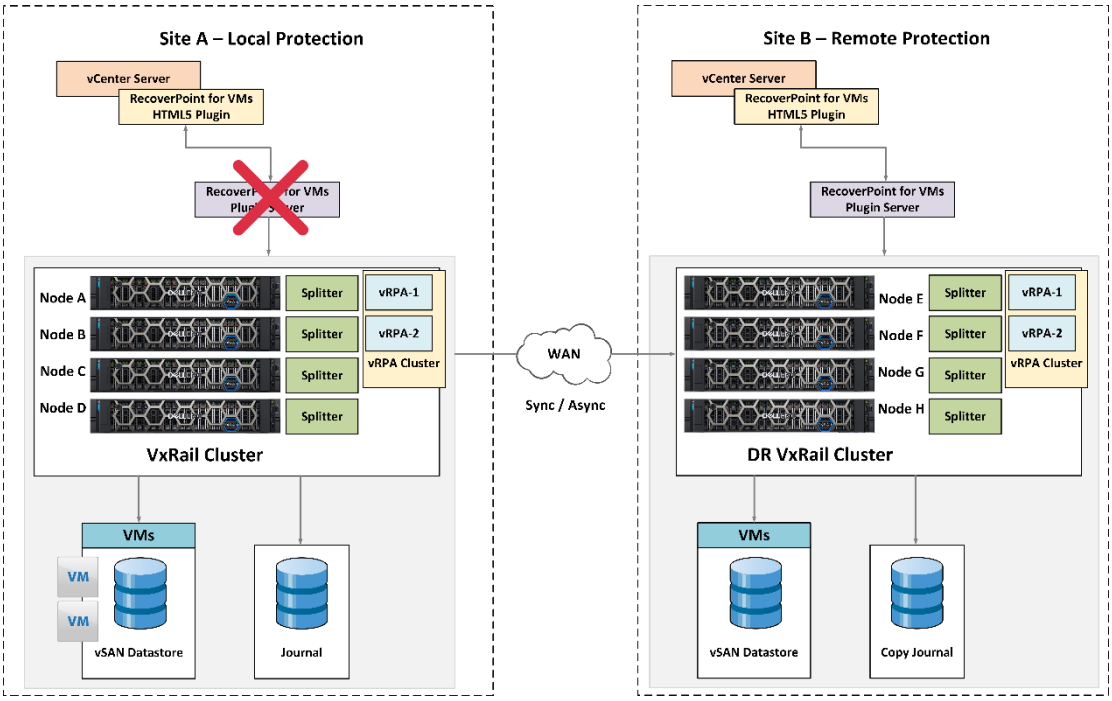

P1 P2 P3 P4

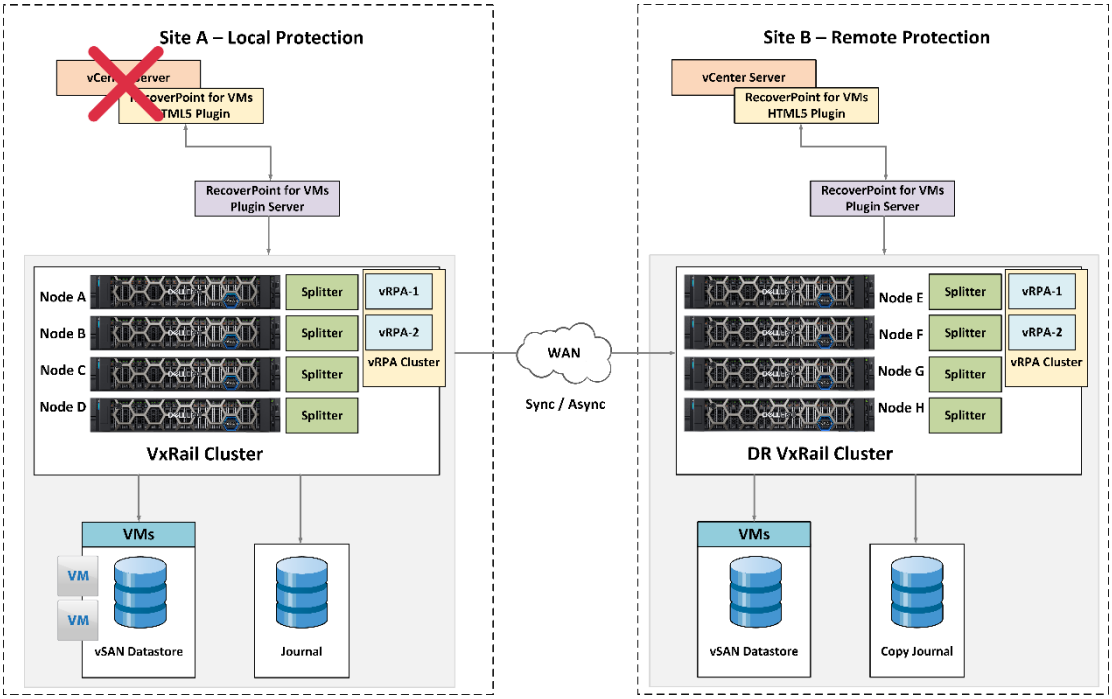
Intel Ethernet X710 Quad Port 10GbE

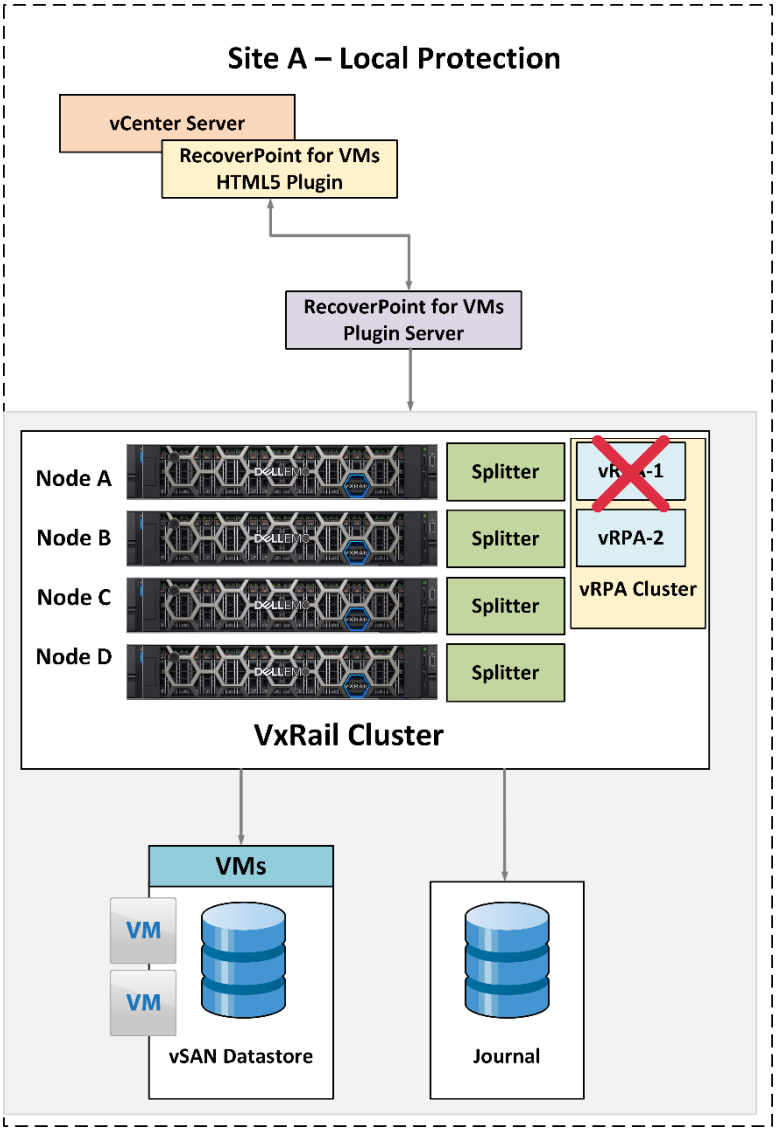

Site A – Local Protection
vCenter Server
RecoverPoint for VMs HTML5 Plugin
RecoverPoint for VMs Plugin Server
Node A
Node B
Node C
Node D
Splitter
Splitter
Splitter
Splitter
vRPA-1
vRPA-2
vRPA Cluster
VxRail Cluster
VMs
VM
VM
vSAN Datastore
Journal

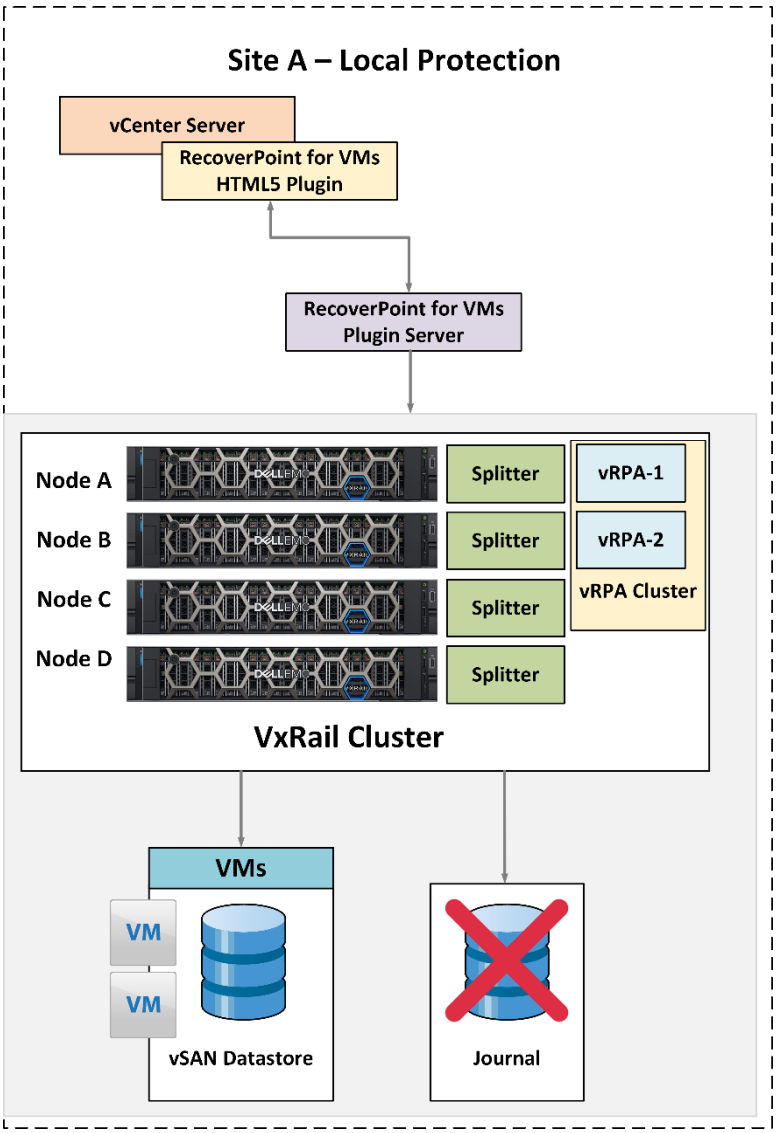

Site A – Local Protection
vCenter Server
RecoverPoint for VMs HTML5 Plugin
RecoverPoint for VMs Plugin Server
Node A
Node B
Node C
Node D
Splitter
Splitter
Splitter
Splitter
vRPA-1
vRPA-2
vRPA Cluster
VxRail Cluster
VMs
VM
VM
vSAN Datastore
Journal

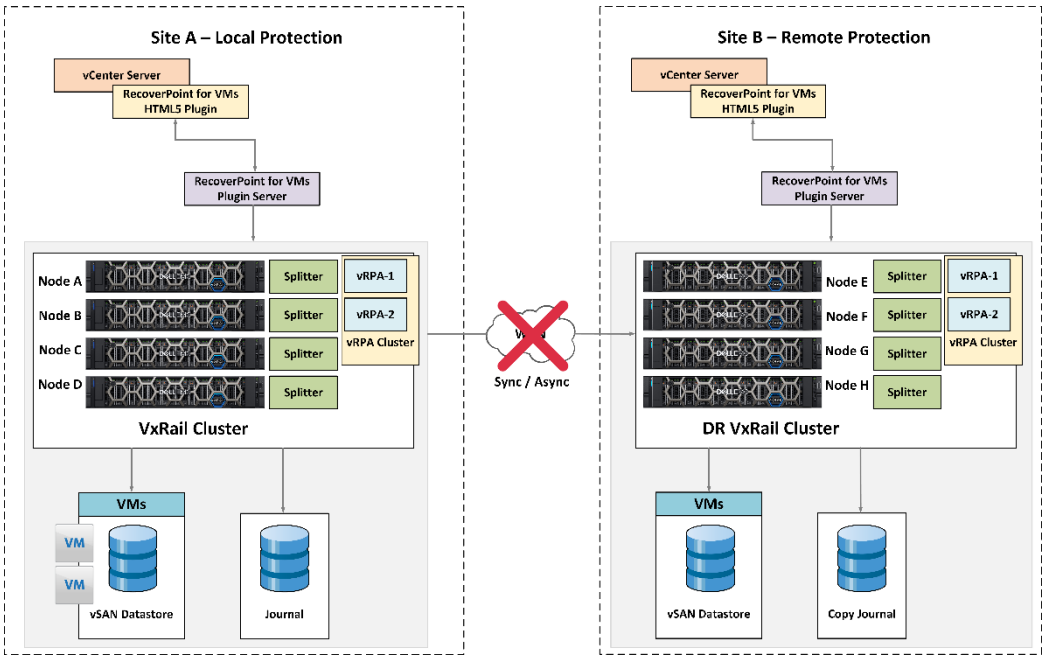

Site A – Local Protection
vCenter Server
RecoverPoint for VMs HTML5 Plugin
RecoverPoint for VMs Plugin Server
Node A
Node B
Node C
Node D
Splitter
vRPA-1
vRPA-2
vRPA Cluster
VxRail Cluster
VMs
VM
VM
vSAN Datastore
Journal
Sync / Async
Site B – Remote Protection
vCenter Server
RecoverPoint for VMs HTML5 Plugin
RecoverPoint for VMs Plugin Server
Node E
Node F
Node G
Node H
Splitter
vRPA-1
vRPA-2
vRPA Cluster
DR VxRail Cluster
VMs
vSAN Datastore
Copy Journal

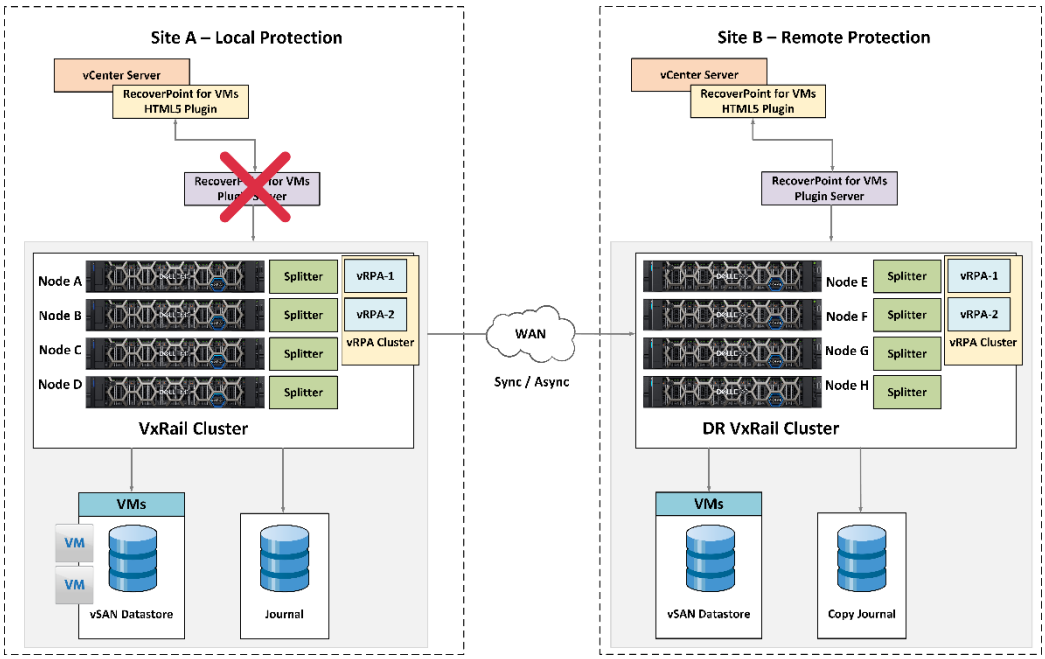

Site A – Local Protection
vCenter Server
RecoverPoint for VMs HTML5 Plugin
RecoverPoint for VMs Plugin Server
Node A
Node B
Node C
Node D
Splitter
vRPA-1
vRPA-2
vRPA Cluster
VxRail Cluster
VMs
VM
VM
vSAN Datastore
Journal
WAN
Sync / Async
Site B – Remote Protection
vCenter Server
RecoverPoint for VMs HTML5 Plugin
RecoverPoint for VMs Plugin Server
Node E
Node F
Node G
Node H
Splitter
vRPA-1
vRPA-2
vRPA Cluster
DR VxRail Cluster
VMs
vSAN Datastore
Copy Journal

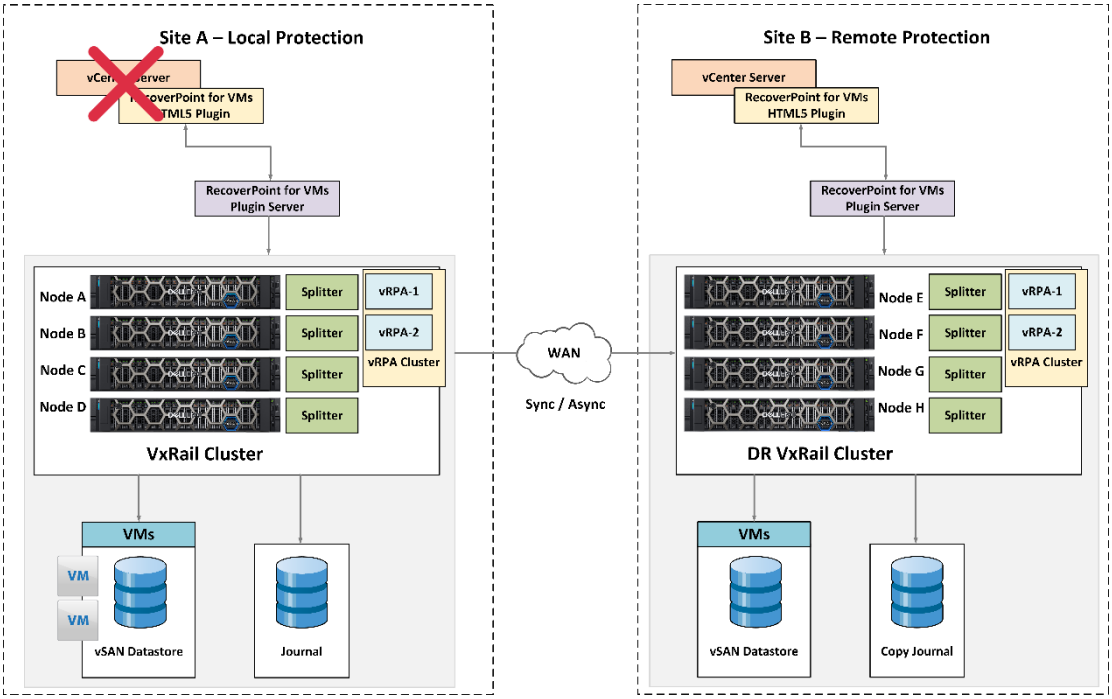

Site A – Local Protection
RecoverPoint for VMs
Plugin Server
Node A
Node B
Node C
Node D
Splitter
vRPA-1
vRPA-2
vRPA Cluster
VxRail Cluster
VMs
VM
VM
vSAN Datastore
Journal
WAN
Sync / Async
Site B – Remote Protection
vCenter Server
RecoverPoint for VMs
HTML5 Plugin
RecoverPoint for VMs
Plugin Server
Node E
Node F
Node G
Node H
Splitter
vRPA-1
vRPA-2
vRPA Cluster
DR VxRail Cluster
VMs
vSAN Datastore
Copy Journal


Site A – Local Protection
vCenter Server
RecoverPoint for VMs HTML5 Plugin
RecoverPoint for VMs Plugin Server
Node A
Node B
Node C
Node D
Splitter
Splitter
Splitter
Splitter
vRPA-2
vRPA Cluster
VxRail Cluster
VMs
VM
VM
vSAN Datastore
Journal

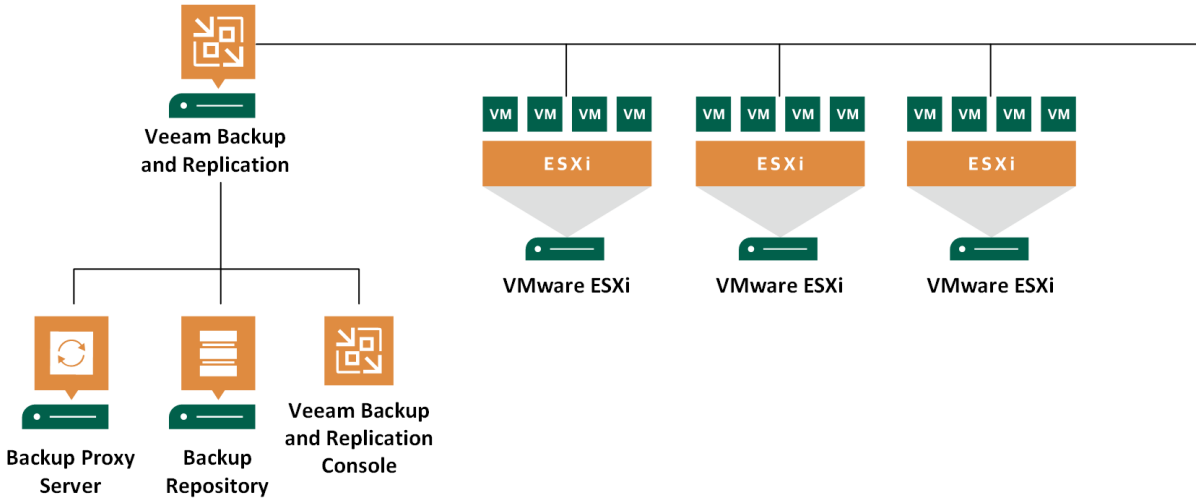

Site A – Local Protection
vCenter Server
RecoverPoint for VMs HTML5 Plugin
RecoverPoint for VMs Plugin Server
Node A
Node B
Node C
Node D
Splitter
Splitter
Splitter
Splitter
vRPA-1
vRPA-2
vRPA Cluster
VxRail Cluster
VMs
VM
VM
vSAN Datastore
Journal

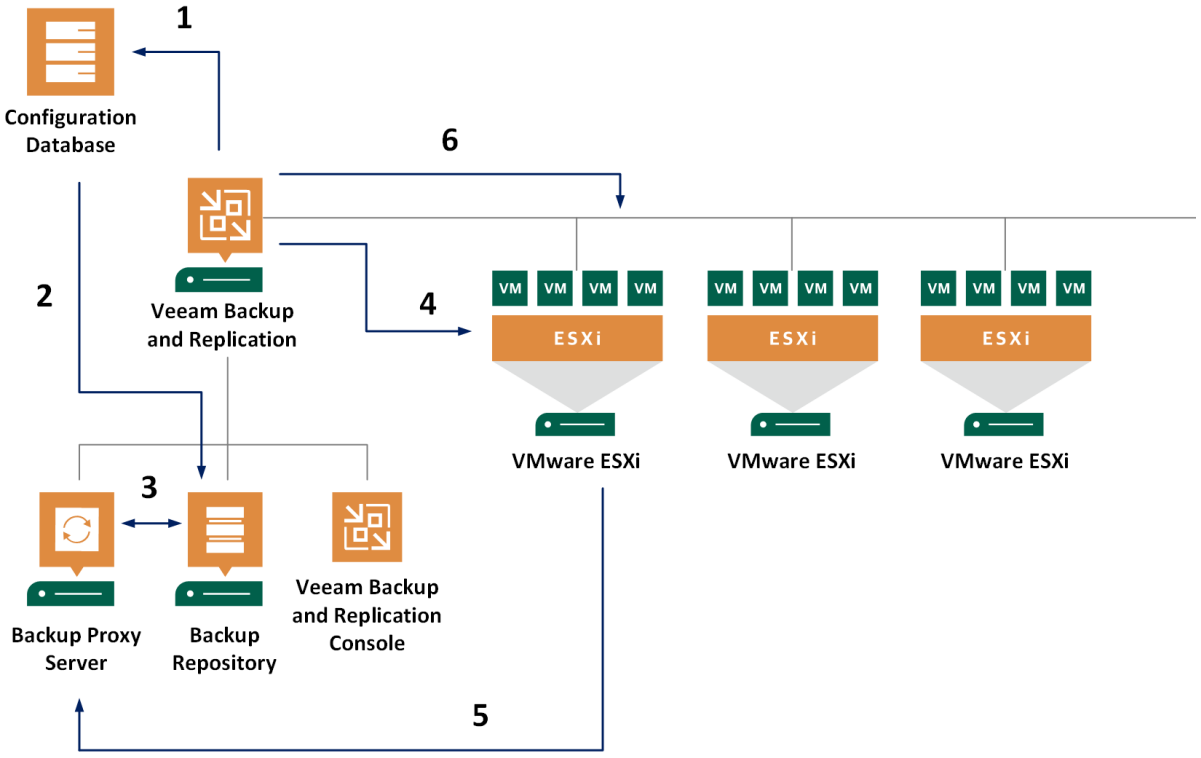

Site A – Local Protection
vCenter Server
RecoverPoint for VMs HTML5 Plugin
RecoverPoint for VMs Plugin Server
Node A
Node B
Node C
Node D
Splitter
vRPA-1
vRPA-2
vRPA Cluster
VxRail Cluster
VMs
VM
VM
vSAN Datastore
Journal
Sync / Async
Site B – Remote Protection
vCenter Server
RecoverPoint for VMs HTML5 Plugin
RecoverPoint for VMs Plugin Server
Node E
Node F
Node G
Node H
Splitter
vRPA-1
vRPA-2
vRPA Cluster
DR VxRail Cluster
VMs
vSAN Datastore
Copy Journal

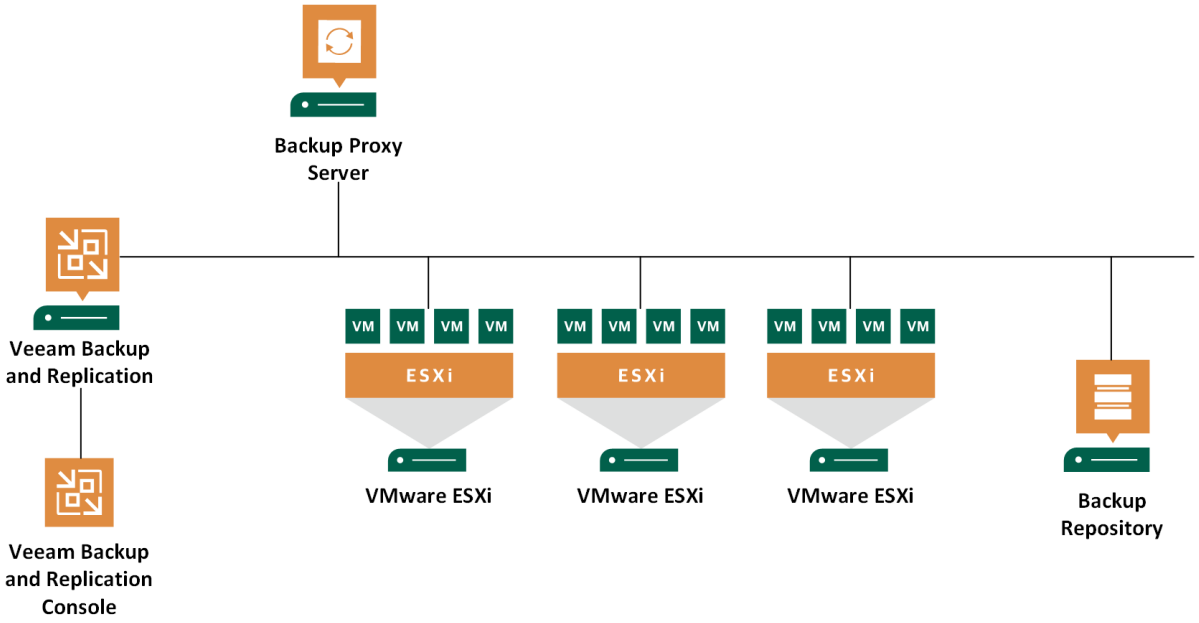

Site A – Local Protection
vCenter Server
RecoverPoint for VMs HTML5 Plugin
RecoverPoint for VMs Plugin Server
Node A
Node B
Node C
Node D
Splitter
vRPA-1
vRPA-2
vRPA Cluster
VxRail Cluster
VMs
VM
VM
vSAN Datastore
Journal
WAN
Sync / Async
Site B – Remote Protection
vCenter Server
RecoverPoint for VMs HTML5 Plugin
RecoverPoint for VMs Plugin Server
Node E
Node F
Node G
Node H
Splitter
vRPA-1
vRPA-2
vRPA Cluster
DR VxRail Cluster
VMs
vSAN Datastore
Copy Journal

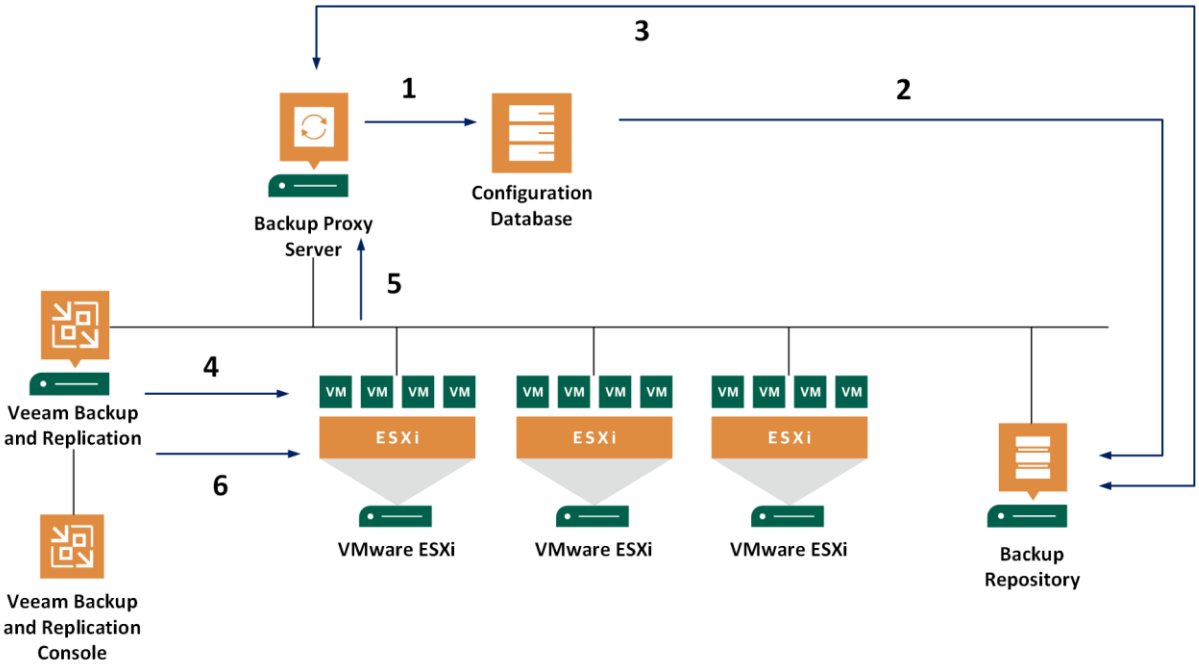

Site A – Local Protection
RecoverPoint for VMs
Plugin Server
Node A
Node B
Node C
Node D
Splitter
vRPA-1
vRPA-2
vRPA Cluster
VxRail Cluster
VMs
VM
VM
vSAN Datastore
Journal
WAN
Sync / Async
Site B – Remote Protection
vCenter Server
RecoverPoint for VMs
HTML5 Plugin
RecoverPoint for VMs
Plugin Server
Node E
Node F
Node G
Node H
Splitter
vRPA-1
vRPA-2
vRPA Cluster
DR VxRail Cluster
VMs
vSAN Datastore
Copy Journal

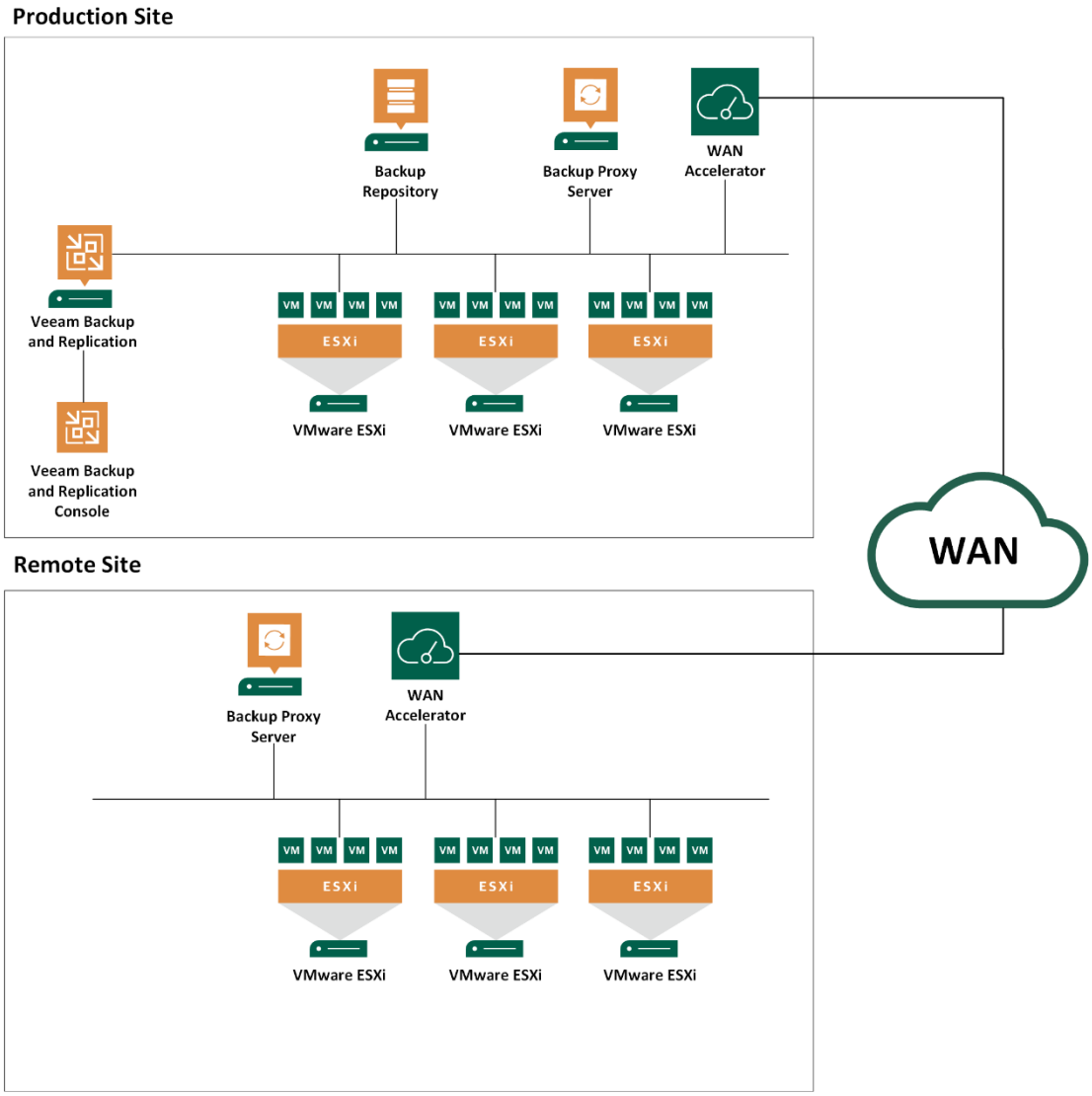
# Chapter 10: Design of VxRail with Veeam Backup

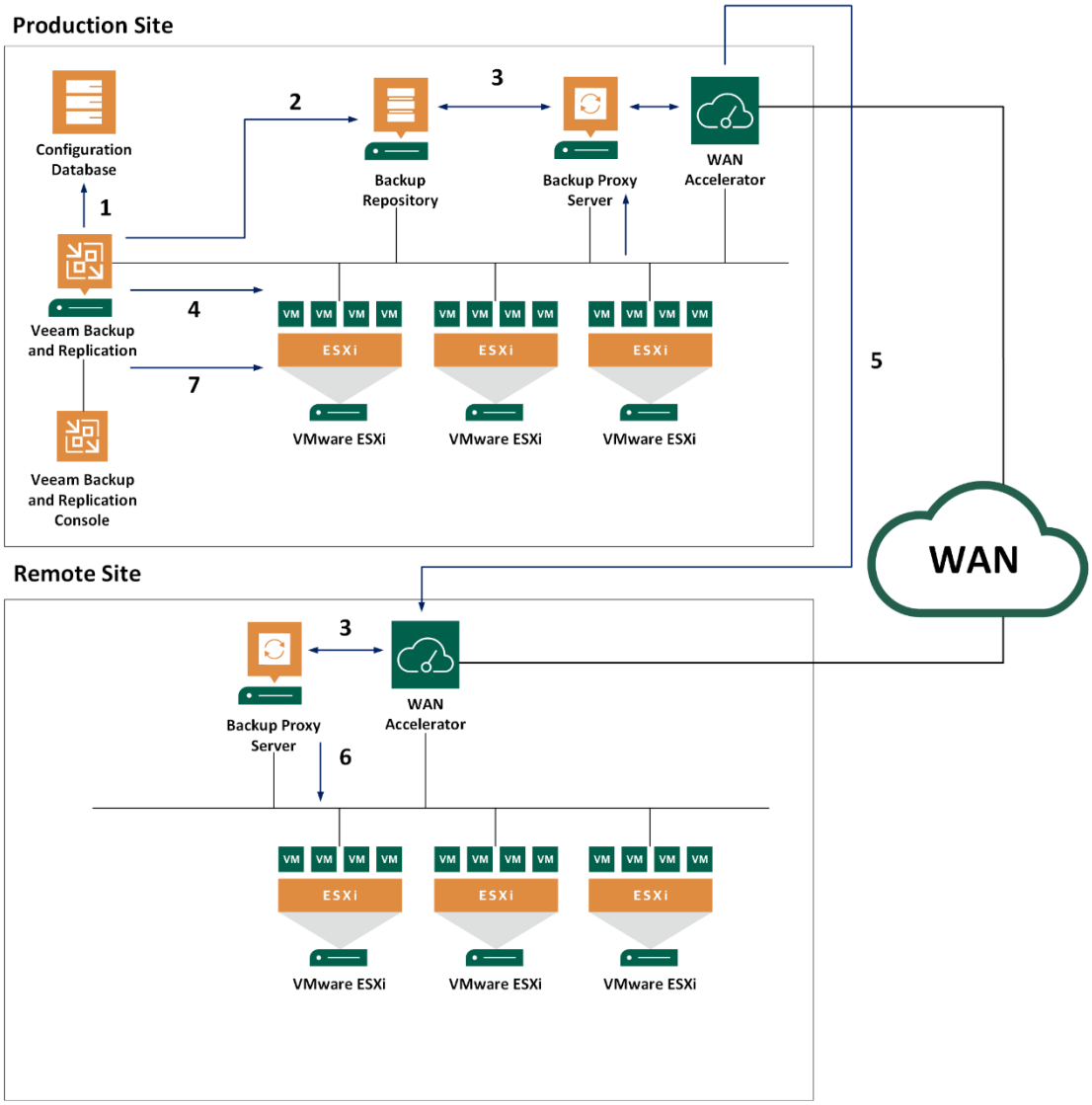


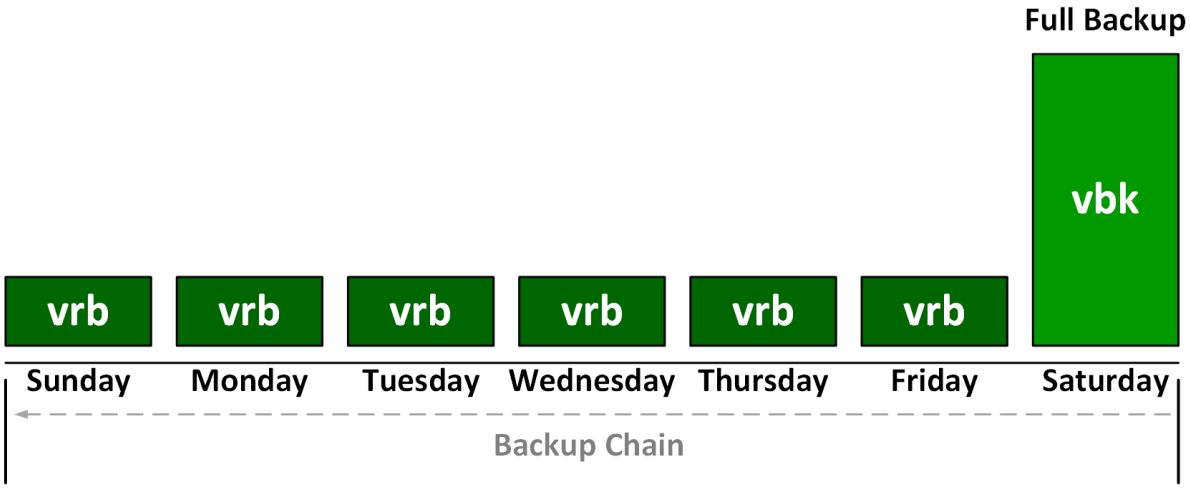

Backup Proxy Server
Veeam Backup and Replication
VM
ESXi
VMware ESXi
Backup Repository
Veeam Backup and Replication Console

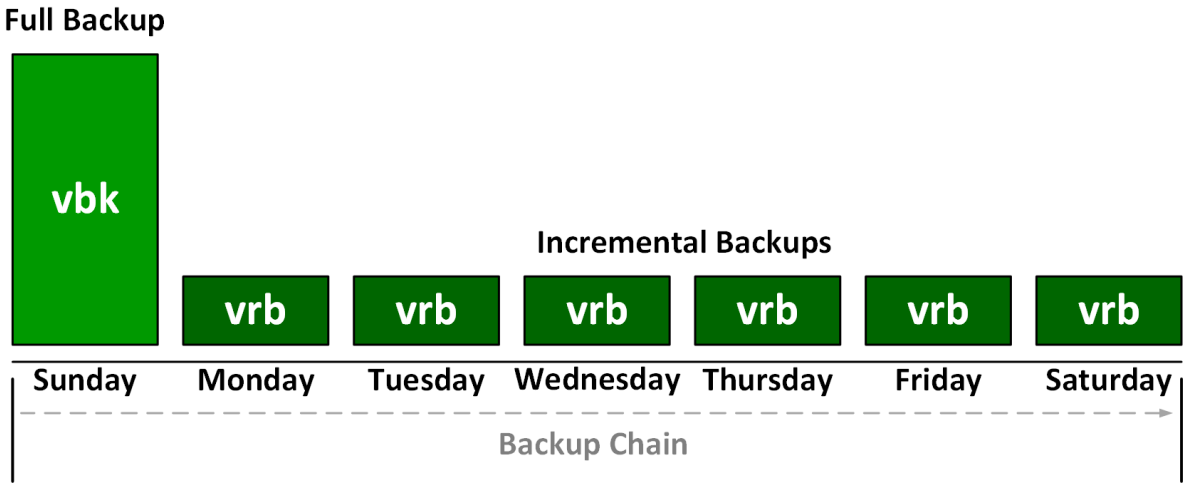

3
1
2
Backup Proxy Server
Configuration Database
5
4
6
Veeam Backup and Replication
VM
ESXi
VMware ESXi
Backup Repository
Veeam Backup and Replication Console

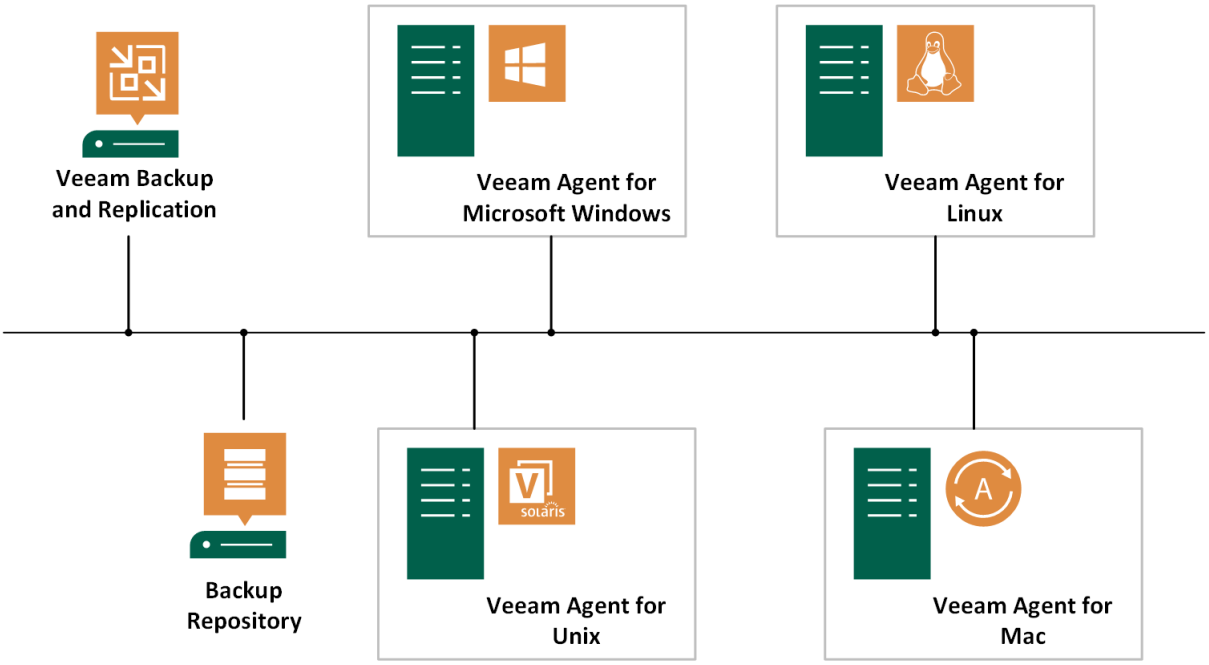

Production Site
Backup Repository
Backup Proxy Server
WAN Accelerator
Veeam Backup and Replication
Veeam Backup and Replication Console
VM
ESXi
VMware ESXi
WAN
Remote Site
Backup Proxy Server
WAN Accelerator
VM
ESXi
VMware ESXi

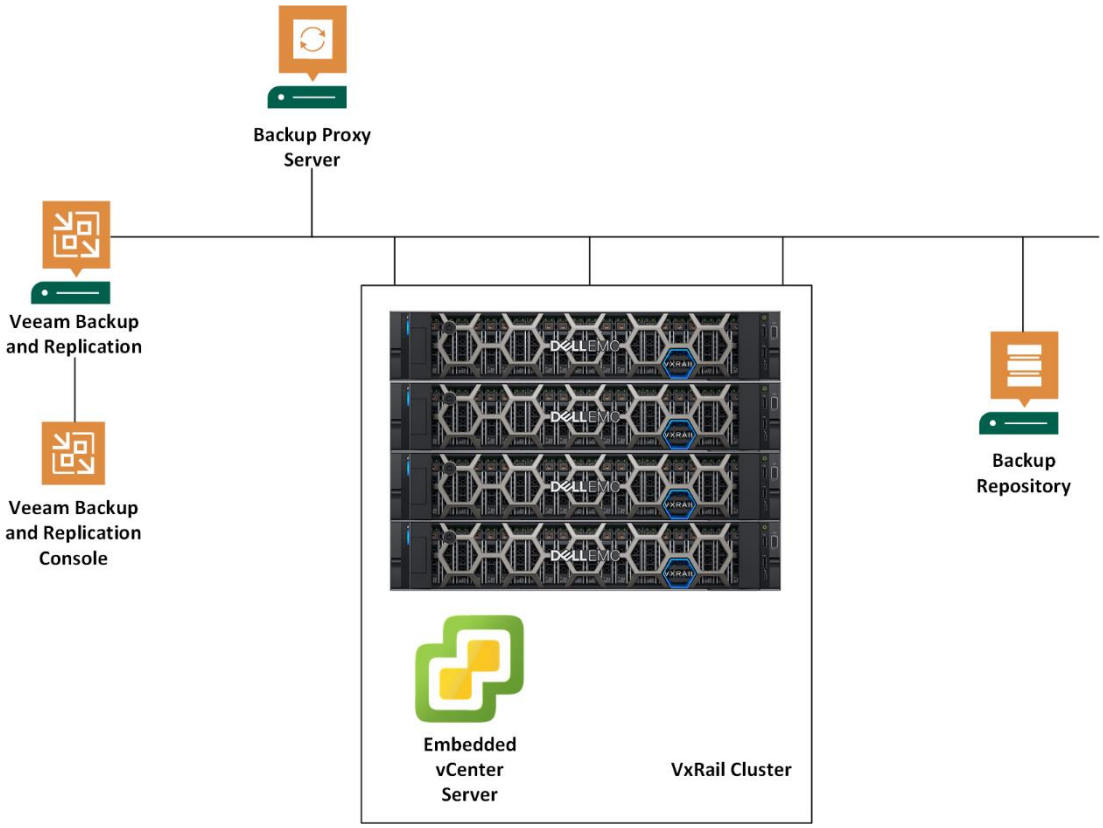

Production Site
Configuration Database
1
2
Backup Repository
3
Backup Proxy Server
WAN Accelerator
Veeam Backup and Replication
4
7
VM
ESXi
VMware ESXi
Veeam Backup and Replication Console
5
WAN
Remote Site
3
Backup Proxy Server
WAN Accelerator
6
VM
ESXi
VMware ESXi

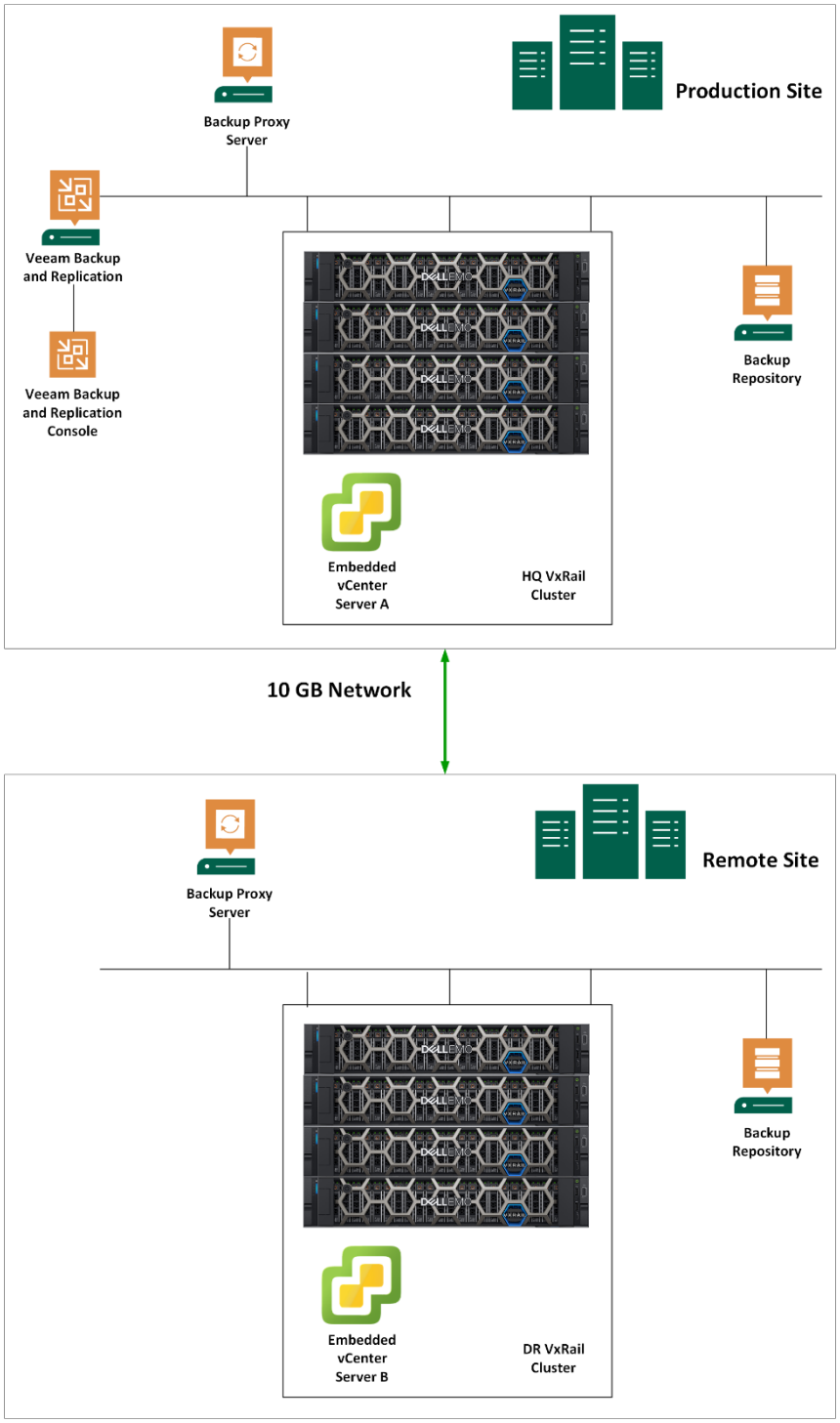

Master the 3-2-1 Rule
Or, the 3-2-1-1-0 Rule...
3
Different copies of data
.vbk
.vbk
.vbk
2
Different media
1
of which is off-site
datacenter
cloud
tape
1
Is offline
0
No errors after backup recoverability verification

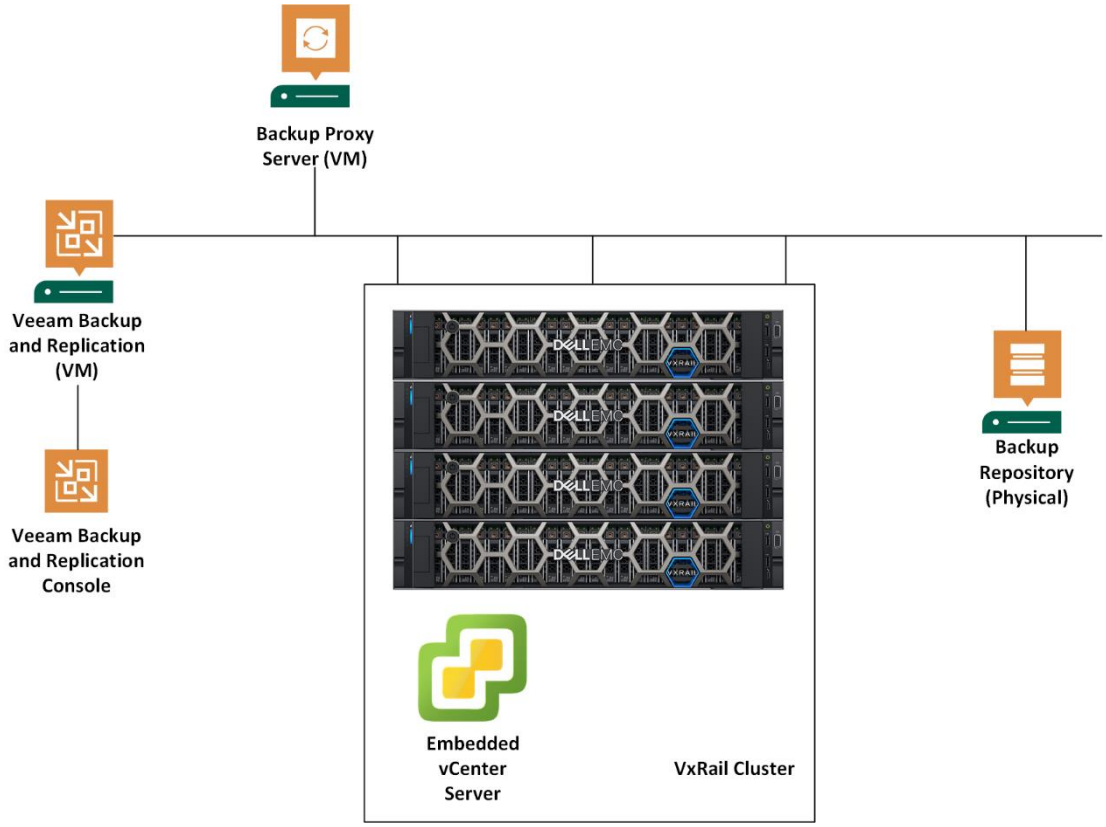

Full Backup
vbk
vrb
vrb
vrb
vrb
vrb
vrb
Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Backup Chain


Full Backup
vbk
Incremental Backups
vrb
vrb
vrb
vrb
vrb
vrb
Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Backup Chain

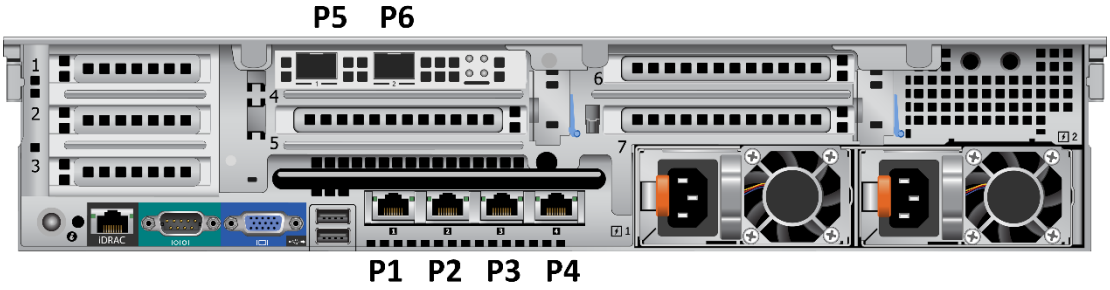

Veeam Backup and Replication
Veeam Agent for Microsoft Windows
Veeam Agent for Linux
Backup Repository
Veeam Agent for Unix
Veeam Agent for Mac


Backup Proxy Server
Veeam Backup and Replication
Veeam Backup and Replication Console
Embedded vCenter Server
VxRail Cluster
Backup Repository

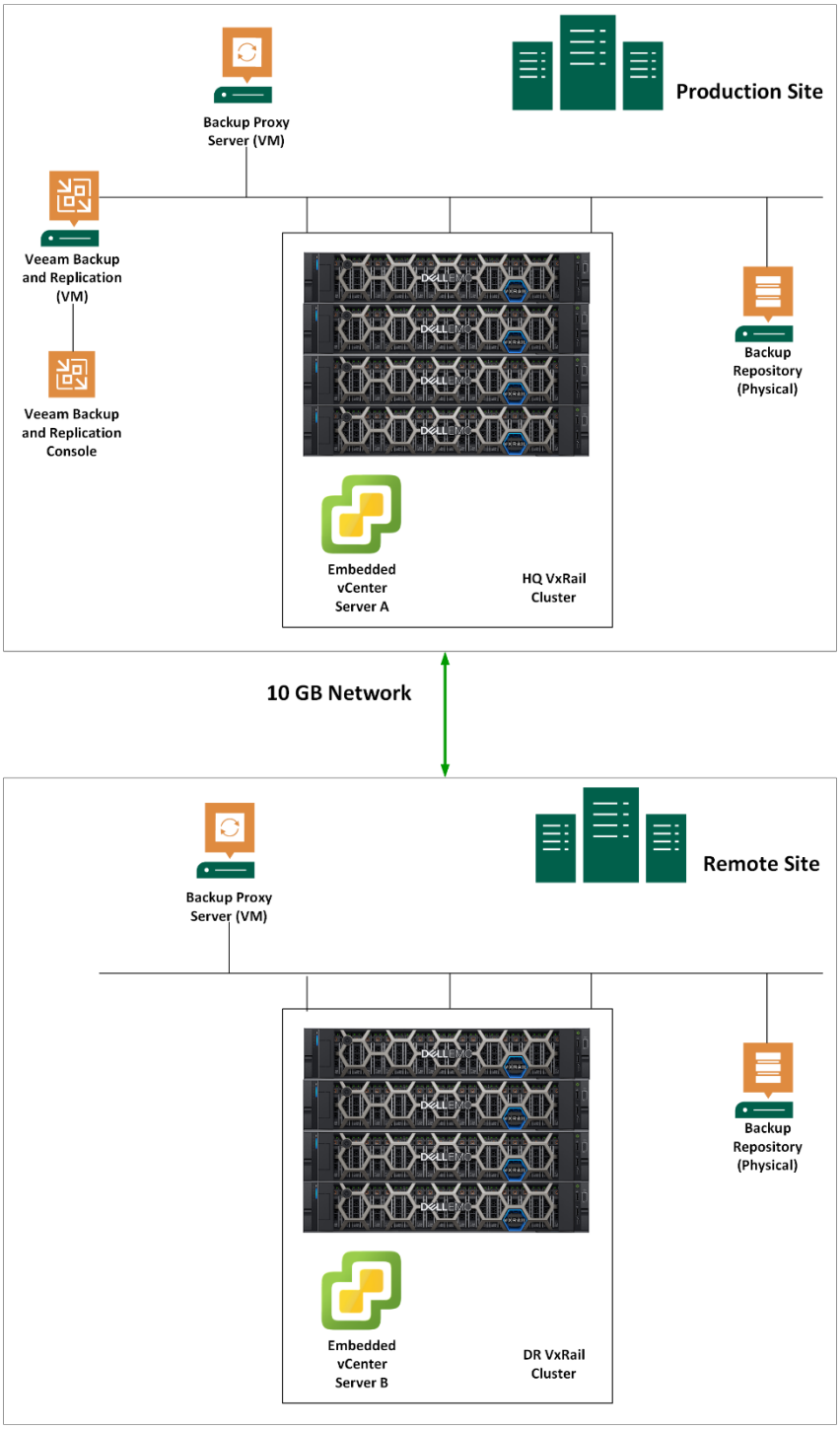

Production Site
Backup Proxy Server
Veeam Backup and Replication
Veeam Backup and Replication Console
Backup Repository
Embedded vCenter Server A
HQ VxRail Cluster
10 GB Network
Remote Site
Backup Proxy Server
Backup Repository
Embedded vCenter Server B
DR VxRail Cluster

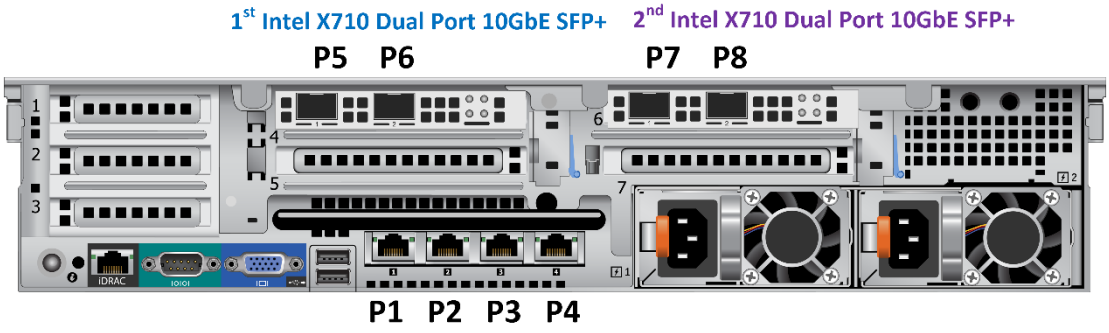


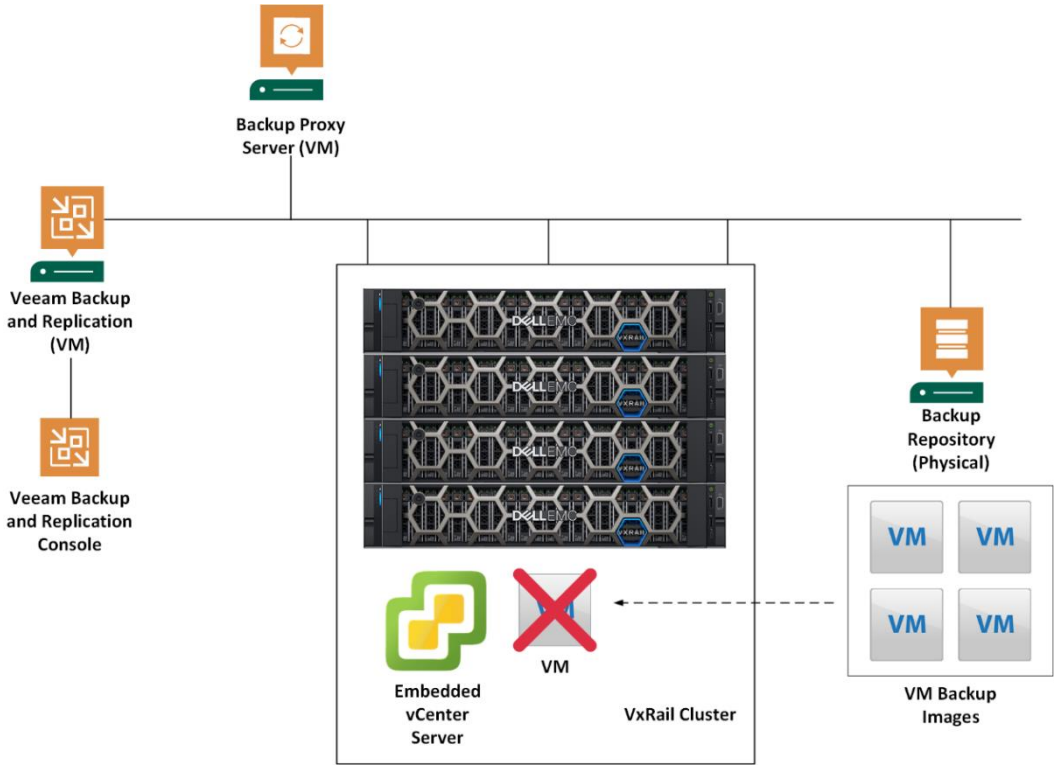

Intel X710 Dual Port 10GbE SFP+

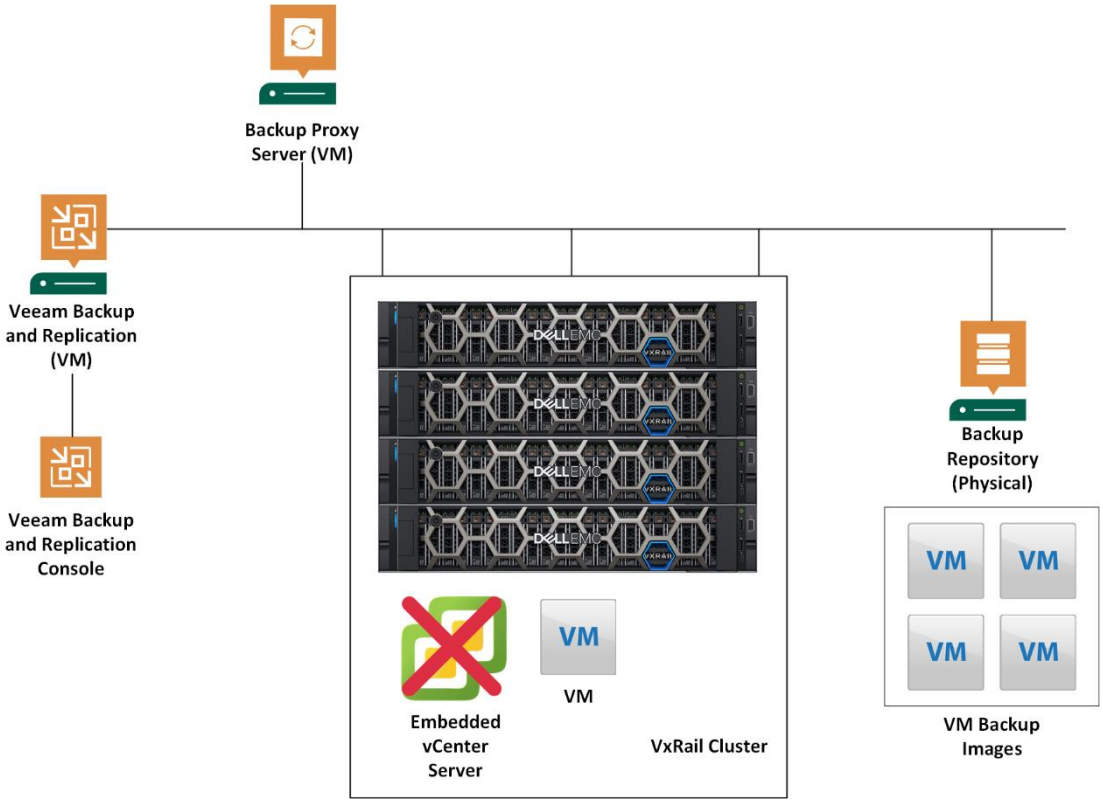


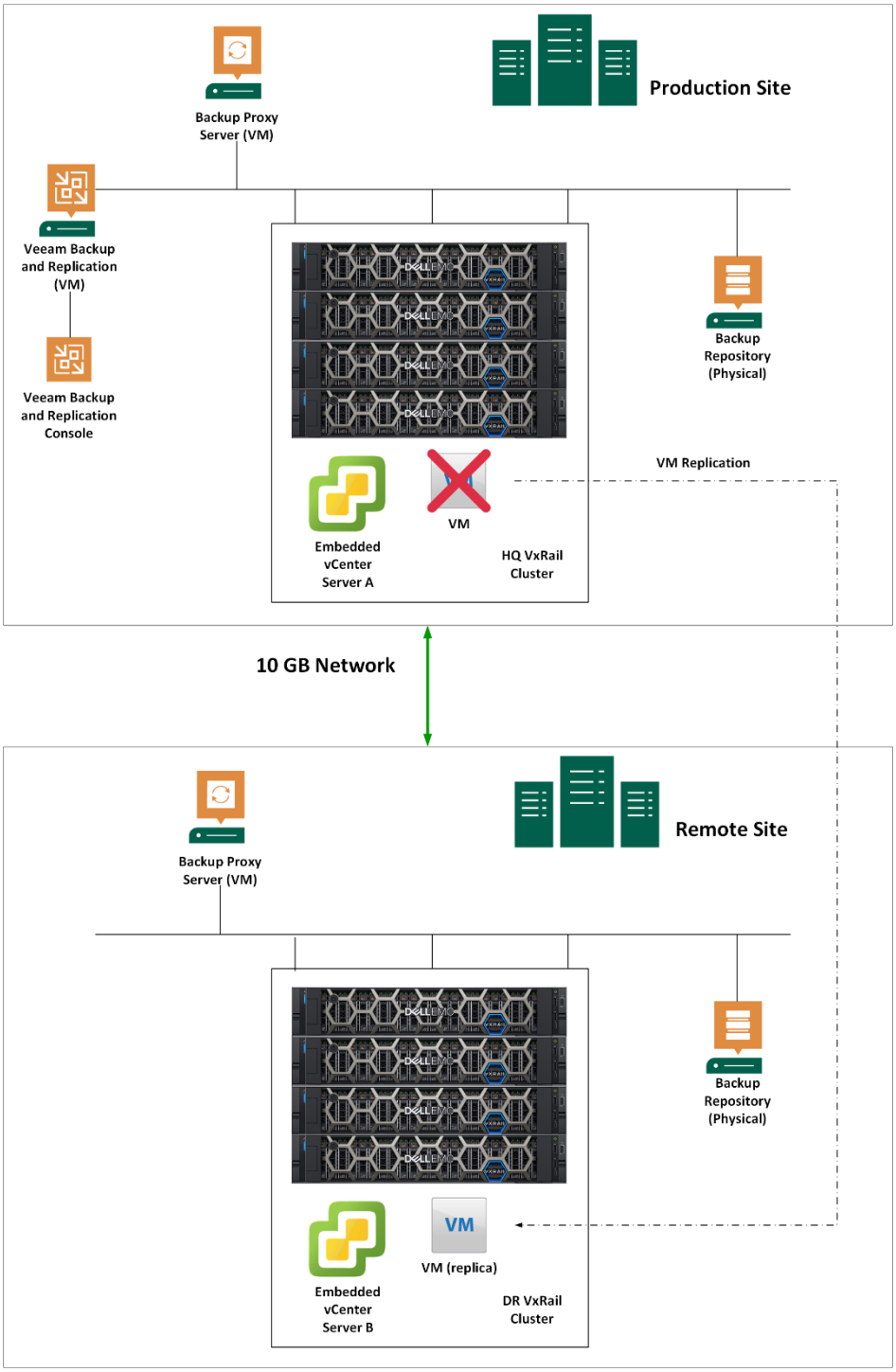

Intel Ethernet X710 Quad Port 10GbE

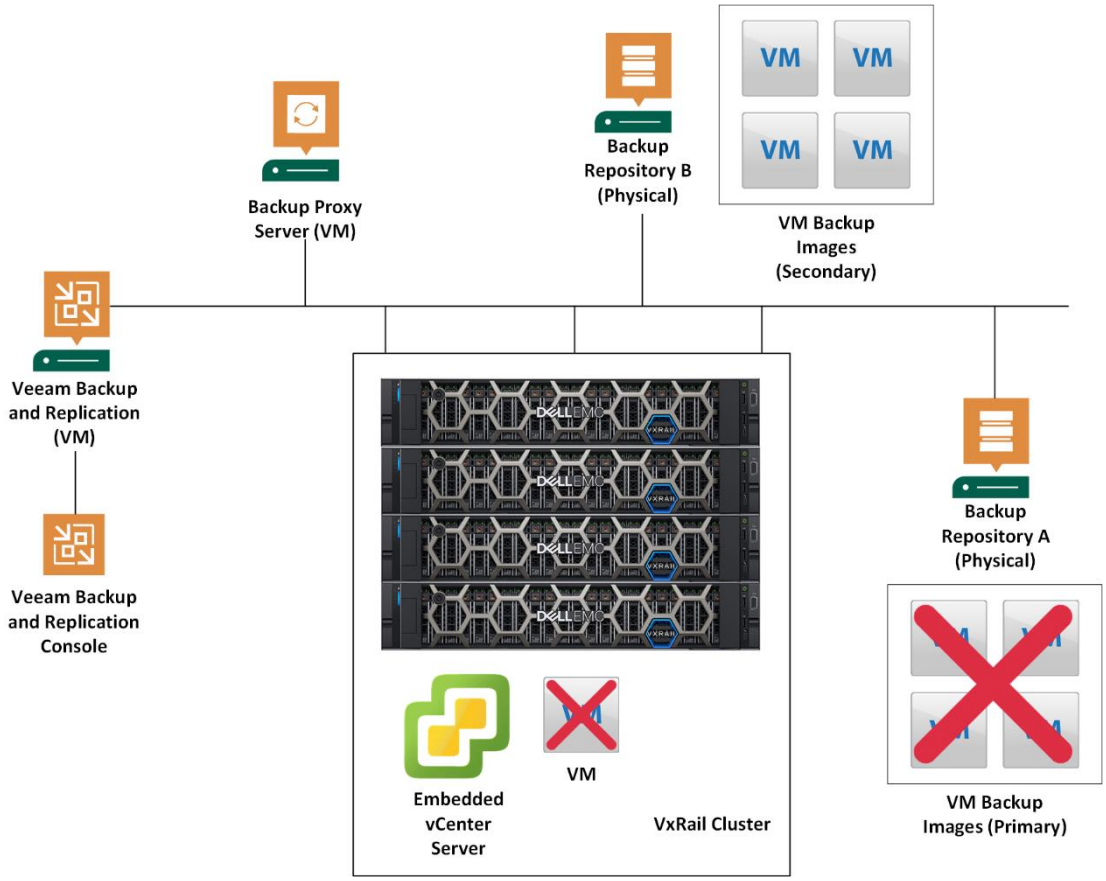

Production Site
Backup Proxy Server (VM)
Veeam Backup and Replication (VM)
Veeam Backup and Replication Console
Backup Repository (Physical)
Embedded vCenter Server A
HQ VxRail Cluster
10 GB Network
Remote Site
Backup Proxy Server (VM)
Backup Repository (Physical)
Embedded vCenter Server B
DR VxRail Cluster

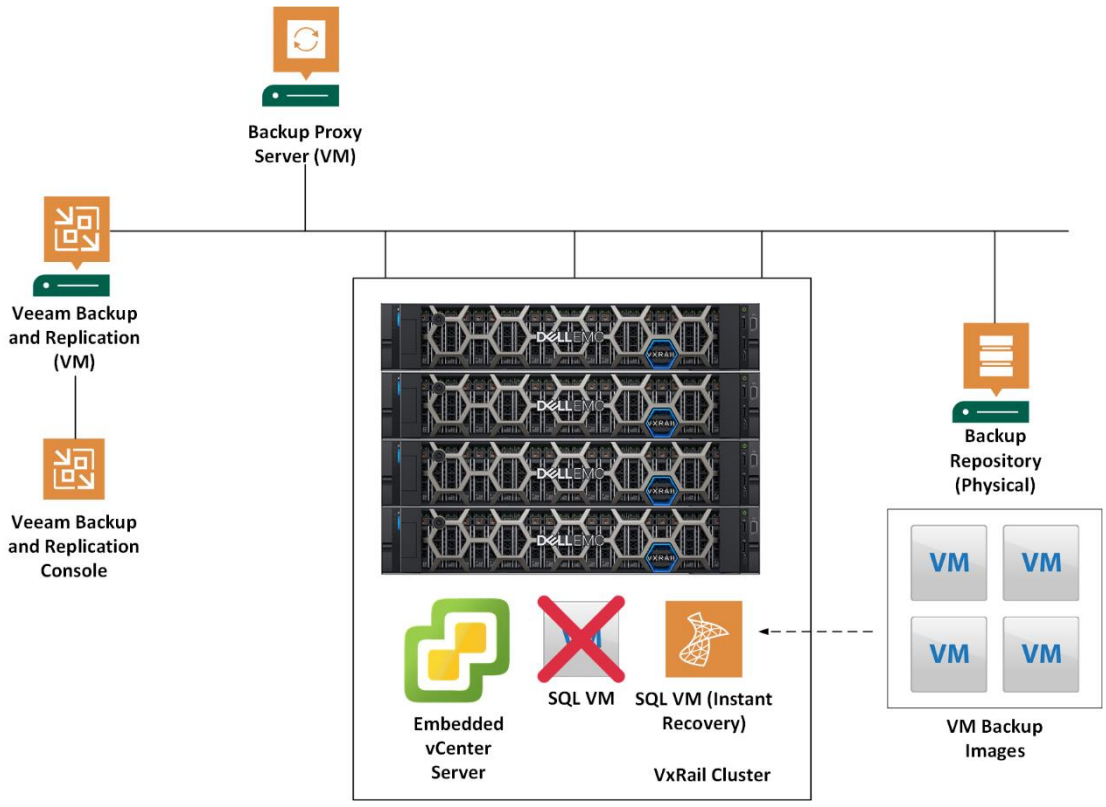

1st Intel X710 Dual Port 10GbE SFP+
2nd Intel X710 Dual Port 10GbE SFP+
P5 P6
P7 P8
P1 P2 P3 P4
Intel Ethernet X710 Quad Port 10GbE

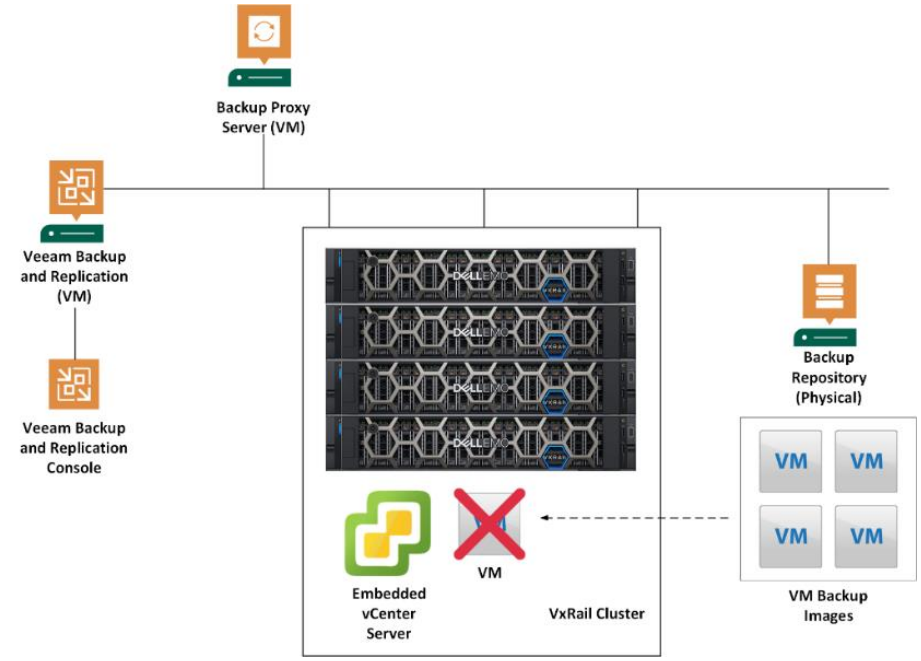

Backup Proxy Server (VM)
Veeam Backup and Replication (VM)
Veeam Backup and Replication Console
Embedded vCenter Server
VM
VxRail Cluster
Backup Repository (Physical)
VM
VM
VM
VM
VM Backup Images

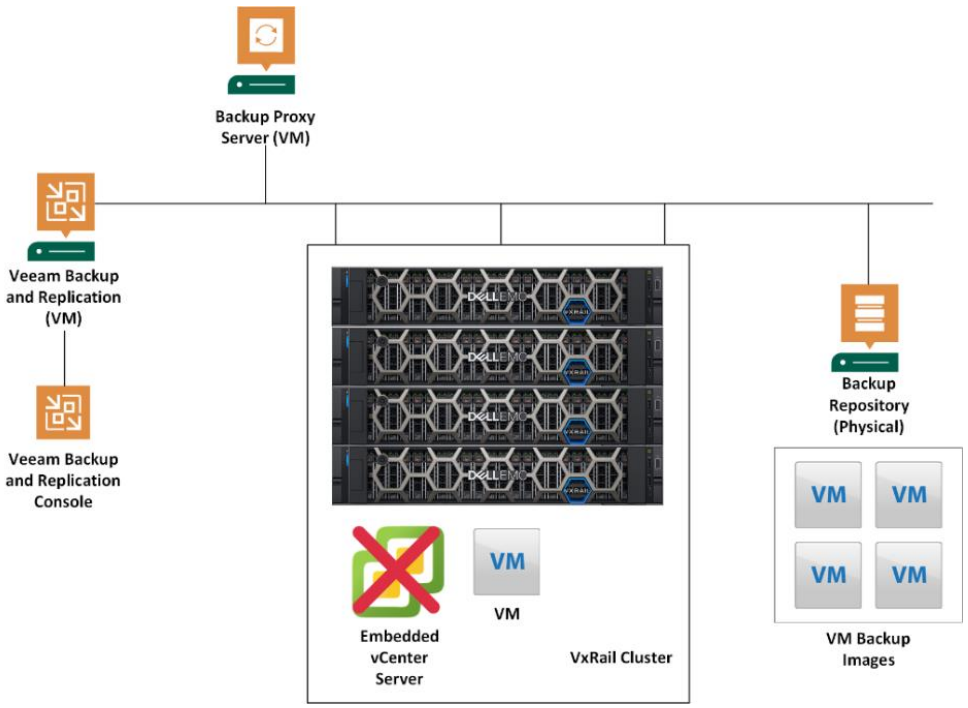

Backup Proxy Server (VM)
Veeam Backup and Replication (VM)
Veeam Backup and Replication Console
Backup Repository (Physical)
VM
VM
VM
VM
VM
Embedded vCenter Server
VxRail Cluster
VM Backup Images

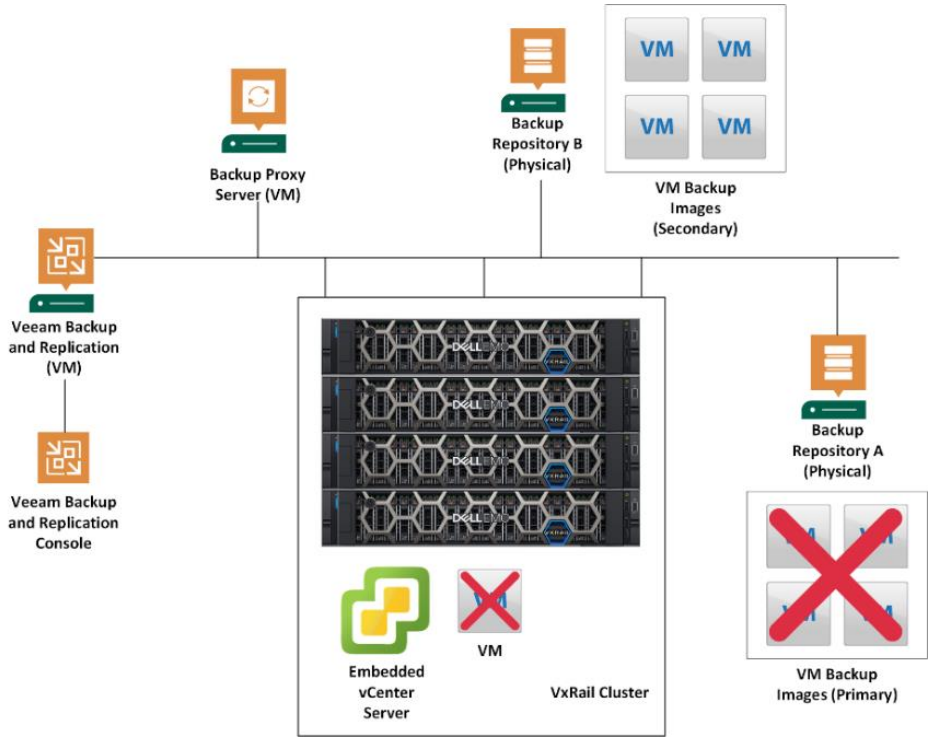

Production Site
Backup Proxy Server (VM)
Veeam Backup and Replication (VM)
Veeam Backup and Replication Console
Backup Repository (Physical)
VM Replication
VM
Embedded vCenter Server A
HQ VxRail Cluster
10 GB Network
Remote Site
Backup Proxy Server (VM)
Backup Repository (Physical)
VM
VM (replica)
Embedded vCenter Server B
DR VxRail Cluster

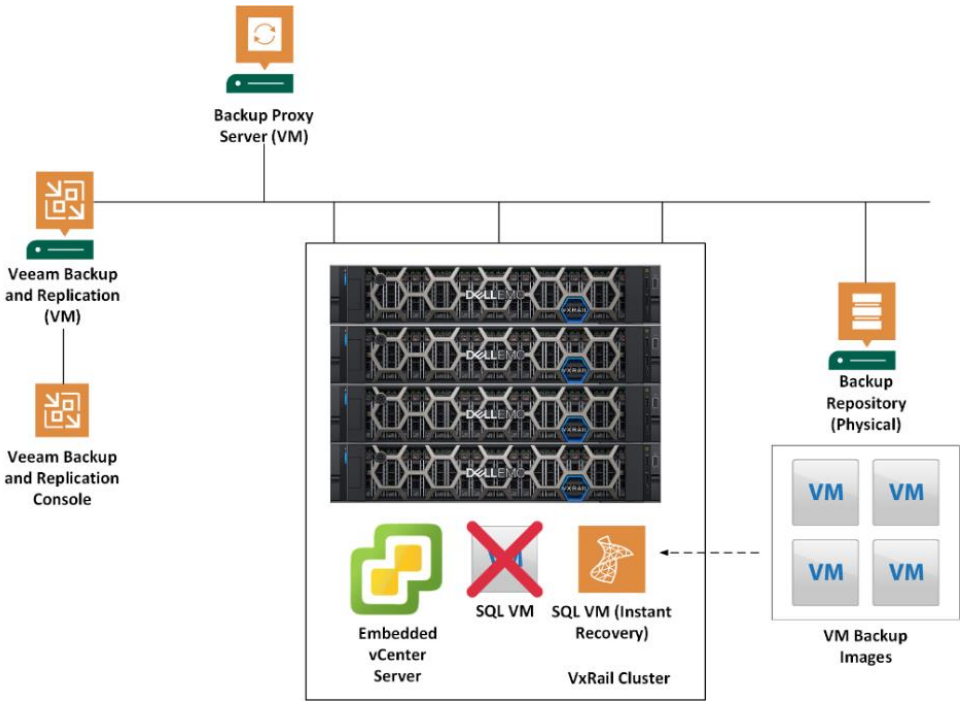

VM
VM
VM
VM
Backup Repository B (Physical)
VM Backup Images (Secondary)
Backup Proxy Server (VM)
Veeam Backup and Replication (VM)
Veeam Backup and Replication Console
Backup Repository A (Physical)
VM
Embedded vCenter Server
VM
VxRail Cluster
VM Backup Images (Primary)


Backup Proxy Server (VM)
Veeam Backup and Replication (VM)
Veeam Backup and Replication Console
Backup Repository (Physical)
Embedded vCenter Server
SQL VM
SQL VM (Instant Recovery)
VxRail Cluster
VM
VM
VM
VM
VM Backup Images


Backup Proxy
Server (VM)
Veeam Backup
and Replication
(VM)
Veeam Backup
and Replication
Console
Backup
Repository
(Physical)
VM
VM
VM
VM
Embedded
vCenter
Server
VM
VxRail Cluster
VM Backup
Images


Backup Proxy
Server (VM)
Veeam Backup
and Replication
(VM)
Veeam Backup
and Replication
Console
Backup
Repository
(Physical)
VM
VM
VM
VM
Embedded
vCenter
Server
VM
VxRail Cluster
VM Backup
Images


Backup Proxy Server (VM)
Backup Repository B (Physical)
VM
VM
VM
VM
VM Backup Images (Secondary)
Veeam Backup and Replication (VM)
Veeam Backup and Replication Console
Backup Repository A (Physical)
VM
Embedded vCenter Server
VxRail Cluster
VM Backup Images (Primary)


Backup Proxy Server (VM)
Veeam Backup and Replication (VM)
Veeam Backup and Replication Console
Backup Repository (Physical)
VM
VM
VM
VM
Embedded vCenter Server
SQL VM
SQL VM (Instant Recovery)
VxRail Cluster
VM Backup Images