

Configure a Windows Server Failover Cluster



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Overview



Modify quorum options

Configure network adapters for failover clustering

Configure cluster workload options

Configure cluster sets



Windows Server 2022: Implement and Manage Windows Server High Availability

Implement a Windows Server Failover Cluster

Configure a Windows Server Failover Cluster

Manage a Windows Server Failover Cluster

Manage Failover Clustering

Implement and Manage Storage Spaces Direct



Cluster Quorum Options



About Quorum



Quorum determines number of failures required to take cluster offline

1 node or witness = 1 vote

Cluster requires a decided majority (no tie)

Should have odd number of total voters

- 4-node cluster, 3 voters must be online

Quorum Configuration Options

Disk witness

Not supported with S2D; good for single-site clusters

File share witness

SMB share on server; best for multi-site clusters

Cloud witness

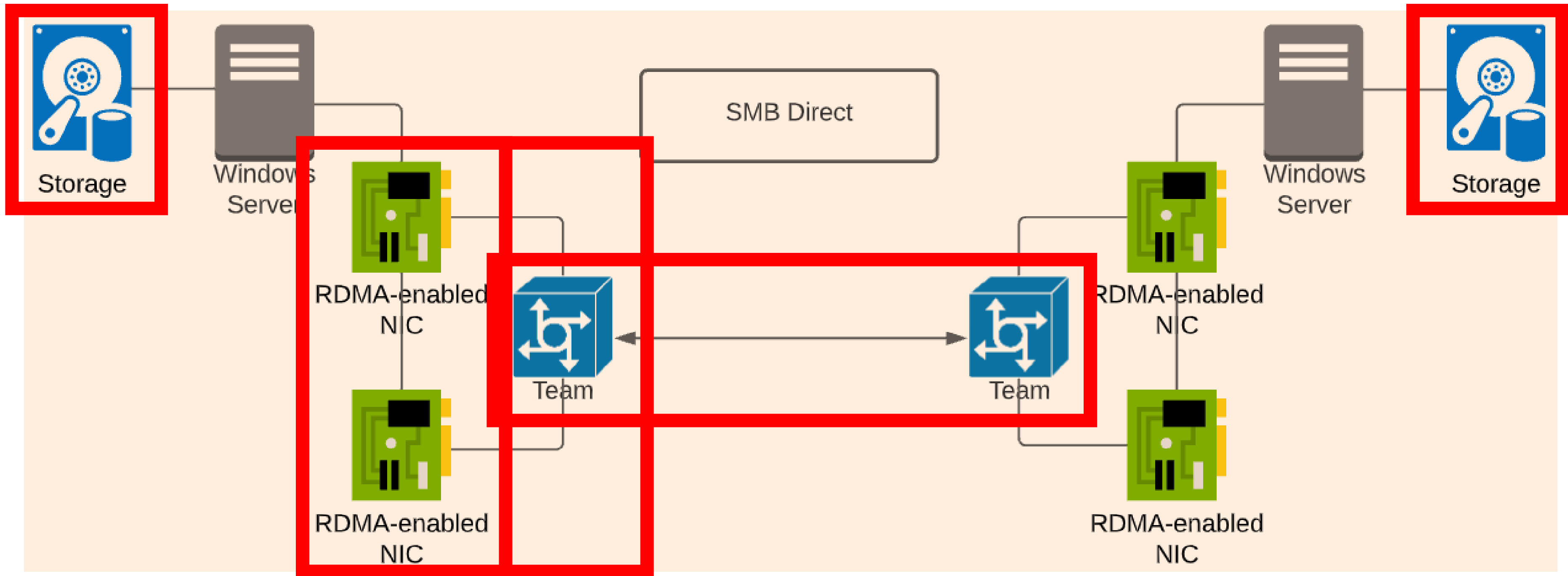
SMB share on Azure storage account



Cluster Networking



SMB Direct and RDMA



Cluster Workload Options



Windows Server Clustered Roles

DFS Namespace

File Server

Virtual Machine

Replica Broker

DHCP Server

**Generic
App/Script/Service**



Cluster-Aware Updating (CAU)



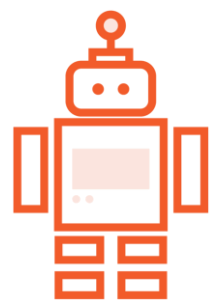
Automates software updates without sacrificing high availability



Server feature with separate UI and PowerShell cmdlets



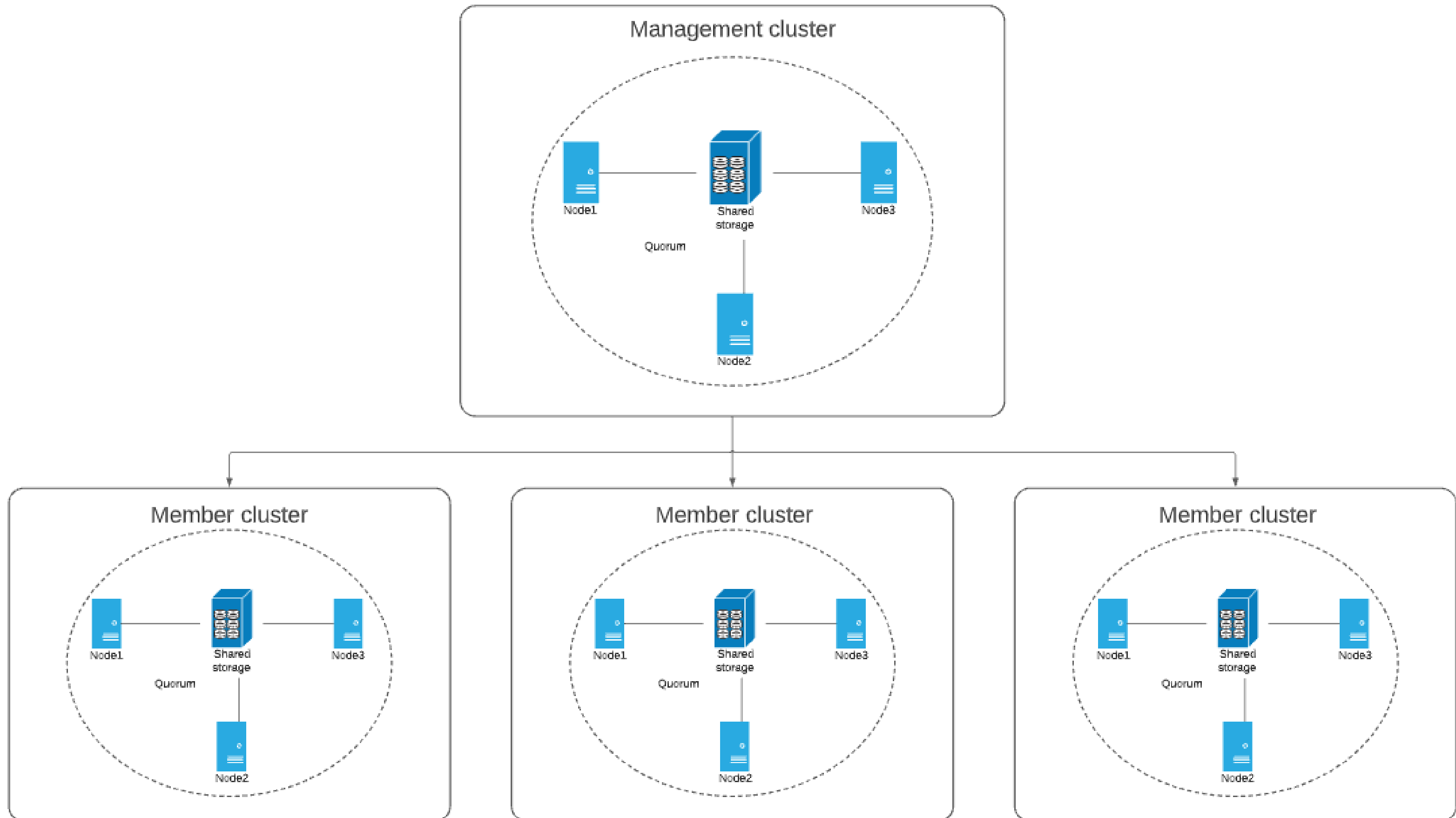
Scheduled self-updating runs



Automates node drain, reboot, and failback during update process

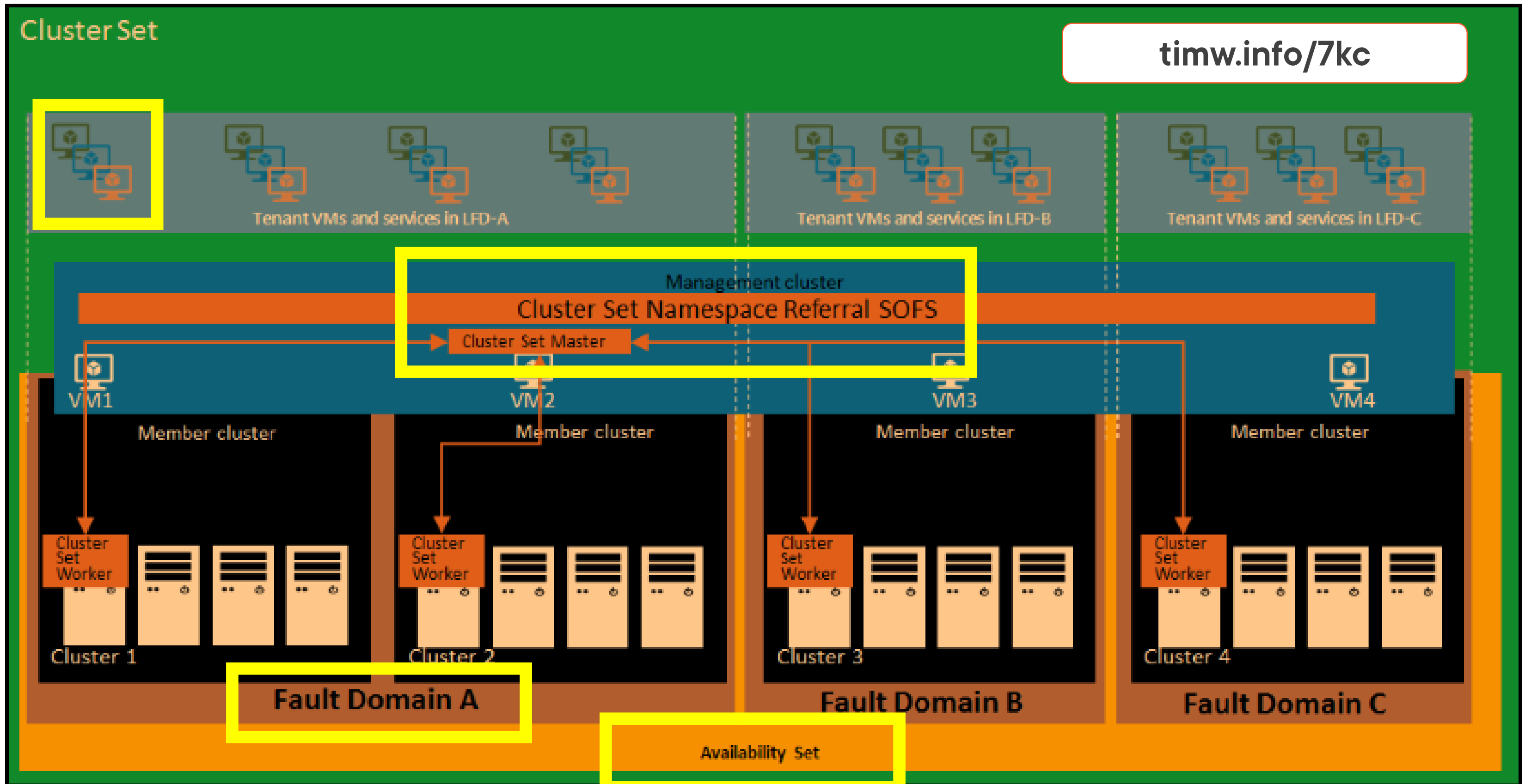


Cluster Set



Cluster Set

timw.info/7kc



Demo



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Configure quorum options

S2D setup

Cluster-aware updating

Deploy a highly available VM



Summary



The investments Microsoft made to clustering in the past few years have been in the realms of:

- High availability (stretch cluster, cluster sets, NIC teaming)
- Performance (RDMA, SMB Direct)

Don't forget you can do most of this virtually with Hyper-V

- Particularly useful for AZ-801 exam prep



Up Next:

Manage a Windows Server Failover Cluster

