

Disaster Recovery with Planning & Deployment

Description

A managed DR and failover solution powered by the Microsoft Azure Site Recovery (ASR) service; that provides On-Prem to Azure or Azure to Azure based solutions incorporating the following capabilities:

- Replication of single or multiple virtual machines.
- Replication integrity monitoring.
- Failover orchestration – The control and management of the failover process, including the order actions are performed and the process required to complete each action.
- Planned failover testing – Testing and validation of the failover process. This allows a controlled failover operation to be performed while allowing the main (primary) system to remain operational.
- Failback and data reconciliation – Post a failover event, any changes in data (in other words, data created on the failed-over system during the failover event) will be replicated and merged back into the source (primary) system.

Capabilities

A managed failover experience, delivered as an integrated service and consultation solution using the core engine and features of Microsoft Azure Site Recovery (ASR) services.

At the time of a planned and unplanned failover, users will lose access to services and resources. These will become available again post the failover cycle completion.

The length of time this cycle takes to complete will vary depending on:

- The number of VM's.
- Source data change rate.
- Pending data to be written to Azure storage accounts.
- The complexity and size of the application that is failing over.
- Number and nature of the failover (recovery plan) steps.
- Performance/Type of Azure storage account used for failed over resource.

The following core capabilities are supported:

- Full support for all non-guest clustered workload VMs (Virtual machines sharing one or more virtual hard disks) that operate on Microsoft Hyper-V, including all Windows and non-Windows-based operating systems within the current Microsoft Hyper-V and Azure-supported OS list.
- Full support for ASR orchestration capabilities, including script injection at VM boot.
- Support for network translation (virtual NIC IP injection) or network IP range porting (network virtualisation; VXLAN) on remote replication target.
- Replication time internal support between the following ranges:

- Thirty seconds to 15 minutes (RPO will be dependent on Storage and connectivity performance).

Client Requirements

The use of DR services requires the following technologies and services to be available on the client's primary system:

- AS HCI, Windows Server 2019/2022, Azure-based IaaS services, Azure ARC managed Virtual Machine Manager or VMware vSphere-based infrastructure.
- Supported network layer:
 - Physical, including vLAN tagging.
 - Microsoft Software Defined Networking using VXLAN network encapsulation.
- Sufficient network bandwidth between the On-Prem system and replication location to allow replication to complete correctly.
- The bandwidth requirements will be based on the following factors.
 - Number of VMs to be replicated.
 - Replication interval period.
 - Amount of data change (churn rate) within each VM within each replication interval period.
 - Recovery Point Objective required.
- The client must supply credentials with the appropriate permission levels if credentials are required to execute recovery steps.

Limitations

- Full synchronous replication is not supported.
- Shared VHDx-based virtual machine clusters are not supported.
- Disk volume-based replication is not supported; all replications must be performed via Hyper-V replication.
- Site-to-Site VPNs cannot be used for VM replication traffic. Traffic must traverse the public internet or Express Route to the public side of Azure.