

# Azure Site Recovery

## For Hyper-V, VMware, and Physical Environments

### Hybrid Cloud Disaster Recovery: Consolidate and Simplify

Modern datacenters are becoming increasingly complex, with a mix of hypervisors and physical assets. Multiple Disaster Recovery solutions are often required to address these increasingly multifaceted environments, which in turn add further complexity. Azure Site Recovery alleviates this challenge by offering comprehensive protection for VMware, Hyper-V, and physical servers, in one robust solution. To further reduce complexity, Azure Site Recovery allows organizations to leverage Azure as their recovery site, negating the need to manage and maintain a secondary site to protect heterogeneous workloads.



United Airlines uses Windows Server 2012 R2 Hyper-V Replica and Microsoft Azure Site Recovery to expedite the migration and consolidation of virtual machines and mission critical services to its new data center in Chicago and provide high availability services when hardware fails.

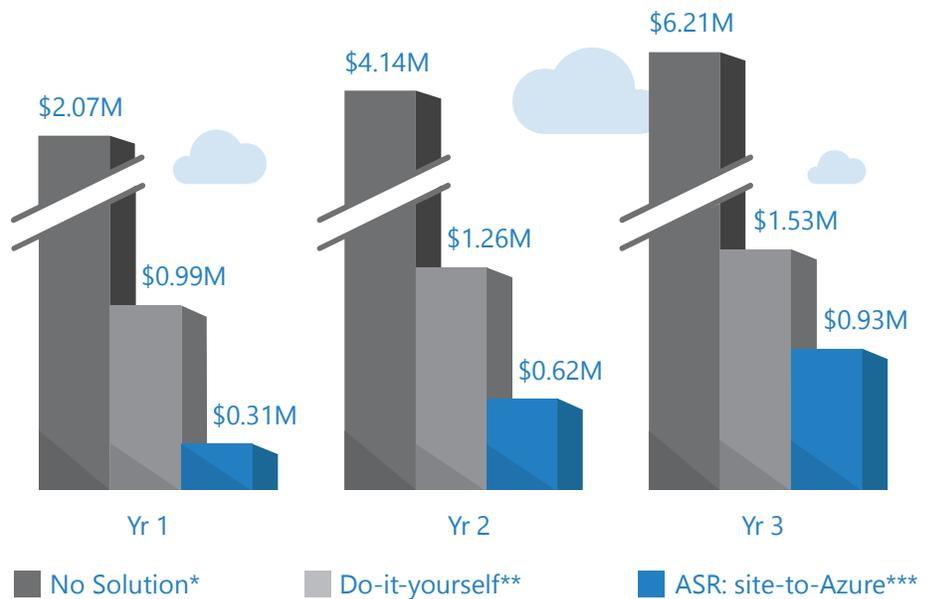


Aston Martin expects to quickly restore IT applications and services following both planned and unplanned downtime. Even if one site goes down, Aston Martin IT staff will always have access to Azure Site Recovery, running on the reliable, scalable Microsoft Azure platform, to orchestrate recovery.

### Cloud Economics

Maintaining a secondary datacenter is an expensive proposition. Significant capital is required for the initial build out and ongoing operating expenses add up quickly. In an ideal world, this secondary site will never be used, but realistically it may be used a few times per year and sit idle the majority of the time. By leveraging Azure as your secondary DR site, capital and operating expenses are replaced with a pay-as-you-go model, thus you only pay for the additional compute when you need it.

### Cumulative Costs Over Three Years - 400 VMs



\*Assumes average cost of datacenter outage (\$690,000), multiplied by number of outages (3)

\*\*Assumes licensing costs, hardware expenses, heating and cooling expenses, and 1 Operations Engineer salary for 400 mid-sized VMs

\*\*\*Assumes list pricing and 1/2 Operations Engineer salary for 400 mid-sized VMs

## Full Featured Disaster Recovery

Tested and proven Disaster Recovery solutions for a wide range of workloads, including Microsoft workloads such as Exchange, SharePoint, SQL Server

- **Protect-to-and-Recover-in-Azure:** Replicate and failover your on-premises applications to Azure, negating the need to build and manage a second datacenter for recovery. Reduce expenses and only pay for compute when you need it.
- **N-Tier Application Consistency:** Detect and stage multi-tier applications and restore them as a group, with specified startup ordering and the ability to insert scripts to bypass the need for manual configurations.
- **Application Replication Support:** Benefit from using SQL AlwaysON and Active Directory replication when your databases and infrastructure components need the least possible RTO. Leverage ASR's inbuilt replication technologies when the same replication technology for all tiers is adequate to meet your application's recovery objectives.
- **No Impact Recovery Plan Testing:** Perform periodic DR drills and testing without any impact to the production or recovery virtual machine.

## Automated VM Protection and Replication

Enable policy-based replication and protection for thousands of virtual machines using a few simple steps

- **At-Scale Configuration:** Configure protection and disaster recovery networking settings that apply to your applications or your entire datacenter for seamless recovery.
- **Low Recovery Point Objective (RPO):** Achieve near-synchronous RPOs, as low as 30s, even when using Azure as your recovery site.
- **Quick Recovery:** Recover from disruptions within minutes and benefit from Azure's 99.9% uptime guarantee.
- **Data Security and Secure Transmission:** Data is encrypted when in transit and at rest in Azure.

## One-Click Orchestrated Recovery

ASR's Recovery Plans provide a customizable framework to implement automated and custom recovery sequencing

- **Automated Failover and Manual Actions:** Leverage scripts and Azure Automation Runbooks to achieve optimal RTO and reduce human errors during recovery.
- **Automated Failback and Reverse Replication:** Failing back to your primary datacenter is just as important as the initial failover. With ASR it is as easy as one click, and comes with the same data protection guarantee as failovers.

## Remote Health Monitoring and Extensibility

With ASR, you also get proactive, continuous monitoring and alerting on issues before your business is impacted. Meet audit and compliance requirements using our robust reporting capabilities. Leverage our capacity planning resources to better plan your resource provisioning and usage. With ASR's PowerShell support, you also get the ability to extend and integrate ASR's functionality.

## Supported Environments

### Platforms

- Hyper-V 2012 and Hyper-V 2012 R2
- vSphere 5.x

### Hosts

Hyper-V to Azure	VMware to Azure
Windows Server 2012 R2	ESXi 5.x
Between Hyper-V Sites	Between VMware Sites
Windows Server 2012	ESX(i) 4.x
Windows Server 2012 R2	ESXi 5.x

### Virtual Machines

Hyper-V to Azure	VMware to Azure
All Guest OSs supported by Azure	Most Guest OSs supported by Azure
Between Hyper-V Sites	Between VMware Sites
All Guest OSs supported by Hyper-V	Wide range of Windows and Linux Guest OSs

### Software

- **System Center Virtual Machine Manager**
  - VMM on System Center 2012 R2 with VMM update rollup 5.0 preview
  - VMM on System Center 2012 R2
  - VMM on System Center 2012 SP1 with latest cumulative update
- **vCenter Server 5.x**
- **Cloud Platform System**
- **Windows Azure Pack**

### Replication Technologies

- **Host-based Hyper-V Replica for Hyper-V environments**
- **Guest-based for VMware and Physical environments**
- **SAN storage array-based for Hyper-V environments**
- **SQL AlwaysON and others**