

Disaster Recovery

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Corporate Overview – ValueMomentum Software Services





- Software & Services Firm
- Financial Services & Insurance focused
- Established in 2000 with HQ in NJ, USA
- 150+ dedicated R&D team
- Executive Leadership and Practice Heads based in the US
- Offshore centers are SSAE 16 SOC 2 certified. Clean Rooms for several clients offshore

23%

Compound Annual Growth Rate since 2000

4

Analysts covering ValueMomentum Software & Services

>65

Clients Served in North America 1,850+

Global employee strength

Top 15

IT Services Vendor for North American P&C Carriers by # of customers*

14

>5 Year Customer Relationships Average ~8 years

BUSINESS FOCUS



- Banking & Lending
- Capital Markets



- Property & Casualty
- Healthcare
- Life & Annuities



- What is Disaster Recovery?
- Why DR Matters?
- Backup, HA and DR?
- DR Topologies and Use cases
- Key Metrics
- Azure Site Recovery
- Demo
- Questions

Disaster Recovery



What is Disaster Recovery





"Disaster recovery (DR) is focused on recovering from a catastrophic loss of application functionality"

DR is a subset of Business Continuity Plan (BCP)

DR can standalone without BCP



What is BCP?





"The processes and procedures of an organization to ensure mission-critical business functions can remain operational during and after a disaster."

BCP is Proactive, DR is Reactive
BCP focus on Business, DR focus on Technical

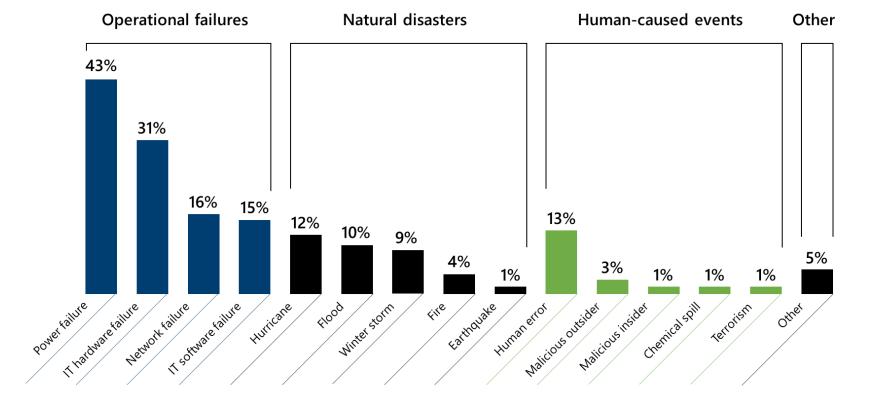


Why Disaster Recovery Matters?





- ❖ Before it takes millions of dollars to restore the infrastructure after a disaster, it is better to have DR plan in action (test the failovers) and be sure of the plan.
- ❖ Cost Effective & Time Efficient
- With a proper DR plan, application downtime can be reduced.
- ❖ Most common cause for DR is not natural disasters, however impact is severe





Backup, HA and DR

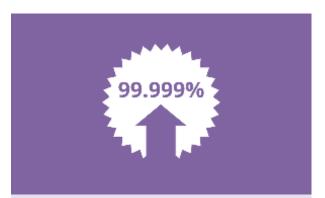






Backup

First Level of BCP Corruptions, Rollbacks, Deletions etc. Expected Amount of Data loss 3-2-1 Theory



High Availability

To Achieve SLA Resiliency till Site Level No Data loss Expected N+1 to N+N Theory



Disaster Recovery

Last Level of BCP Mitigates Site Failures Expected Amount of Data loss

Considerable disruption to Service

RTO within Minutes and RPO in Seconds



Topologies of DR





Single Site

Cold Site

Warm Site

Hot Site

No DR Site

No Offsite Backups

Re-Deployment

Data Availability

No Infra

Unpredicted disruption to Service

High RTO and RPO

Active-Passive

Data and Infra Availability

Periodic Replication

Considerable disruption to Service

RTO within Minutes and RPO in Seconds

Active-Active

Data and Infra Availability

Continuous replication

Minimal disruption to Service

RTO and RPOs are nearly Zero



DR Use Cases





Test Failovers

Recovery
Drills &
Compliance

Planned Failovers

Disaster Avoidance Unplanned Failover

Real Disaster



DR Key Metrics



RPO

Recovery Point Objective

RTO

Recovery Time Objective

MTBF

Mean Time
Between Failures

MTTR

Mean Time To Recover



DR Services on Azure





- Azure provides breadth and depth solutions for business continuity and disaster recovery
- "Geo-replication" of storage account to secondary regions
- Azure provides easy and inexpensive deployment of a could service (compared to onpremises).
- "Azure Site Recovery" is the DR Service Offering from Azure
- ❖ ASR offers recovery plan, test failover groups & test failover cleanup.



Azure Site Recovery (ASR)



Azure Site Recovery (A Quick Summary)





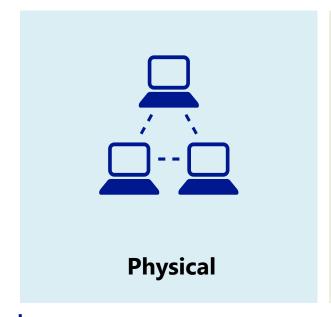
- Offers Replication, Failover and Failback
- DR for Hyper-V, VMWare and Physical Servers
- * **RPO** of Seconds and **RTO** of Minutes
- Orchestrated Recovery Plans for DR
- Application Consistency Recovery Points
- ❖ No Impact DR Drills with Test Failover
- Create on-demand test copies in Azure

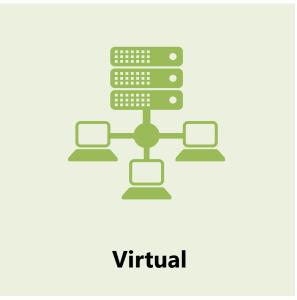


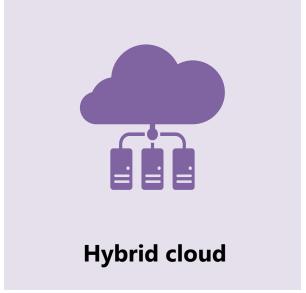
Your IT solutions are not silo

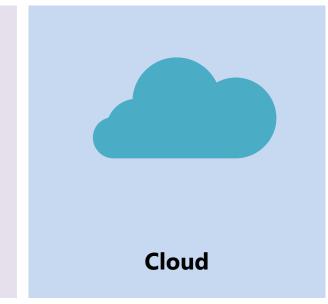












On-premises—built and managed infrastructure

Cloud—flexible, remote infrastructure

ASR works across all four scenarios



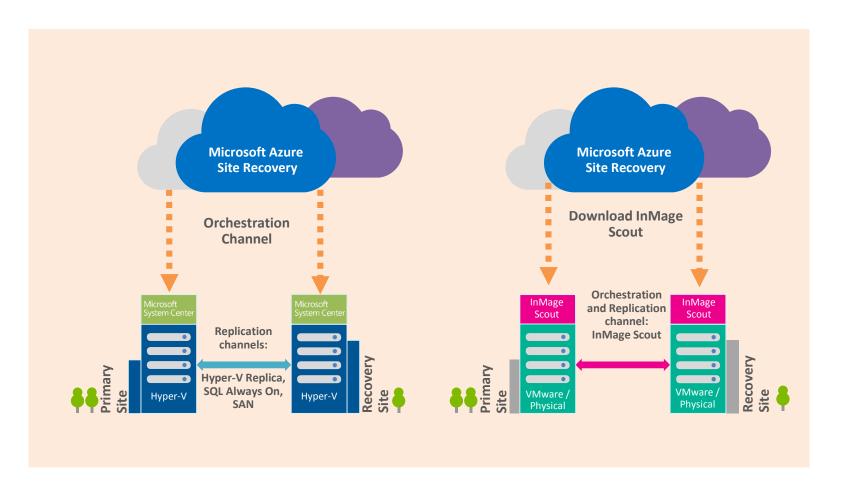
ASR Supports...





On-Premises to On-Premises

- Hyper-V to Hyper-V
- VMWare/Physical to VMWare/Physical





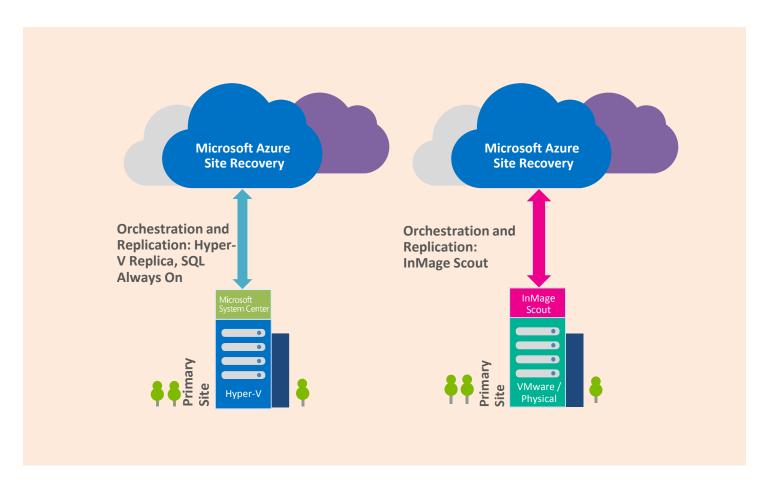
ASR Supports...





On-Premises to Azure

- Hyper-V to Azure
- VMWare/Physical to Azure





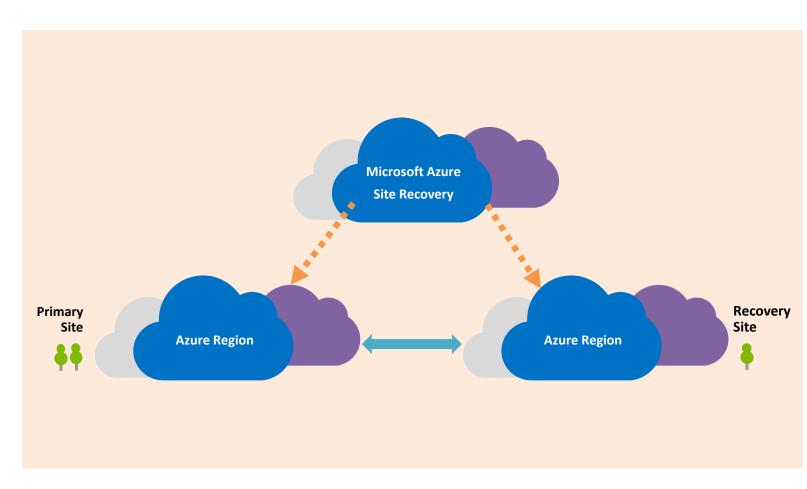
ASR Supports...





Azure to Azure (Preview)

- Azure Region to Region
- Geographic Cluster





Azure Site Recovery Service





Automated Protection

- Delivers ongoing replication of virtual machines
- Integrates with Hyper-V Replica and System Centre Virtual Machine Manager Technologies
- Workload Data remains in your network

Continuous Health Monitoring

- Continuous and remotely monitors application availability
- Only virtual machine manager servers communicate directly with Azure

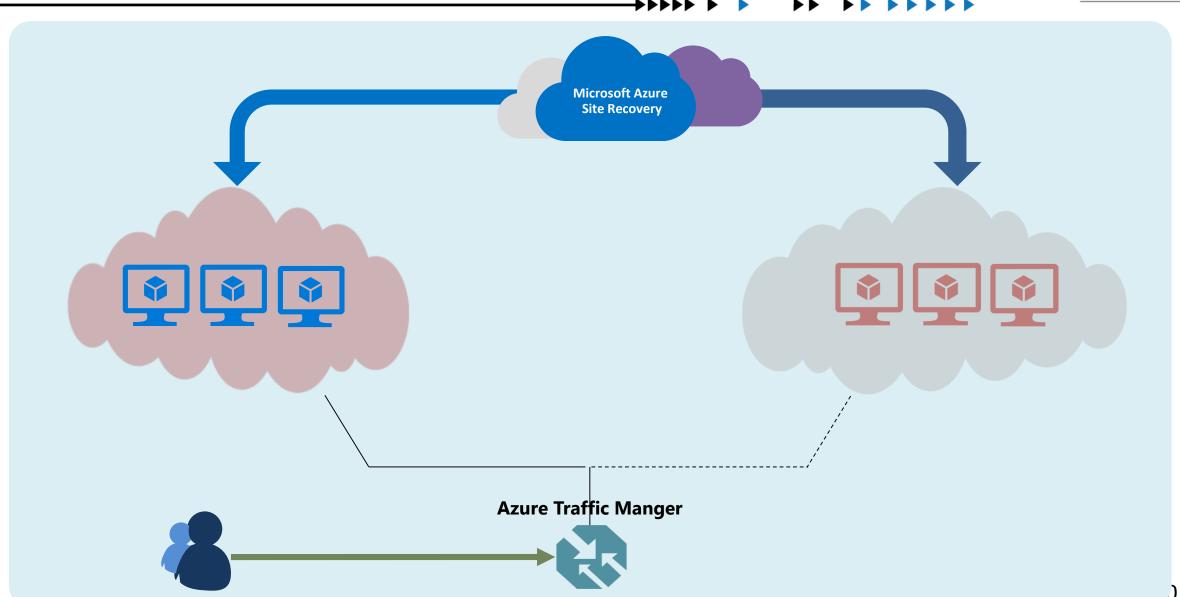
Orchestrated Recovery

- Orderly recover of Virtual Machines that compose multi-tier services
- Offers customizable recovery plans
- Simplifies recovery plan testing



Demo Architecture





Demo

Let's see it in action



Questions?



Thank You

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