

Disaster Recovery – How to NOT do it

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A Bit About Me

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Five kids under 10 and they are all crazy!

12 passenger van + all electric car

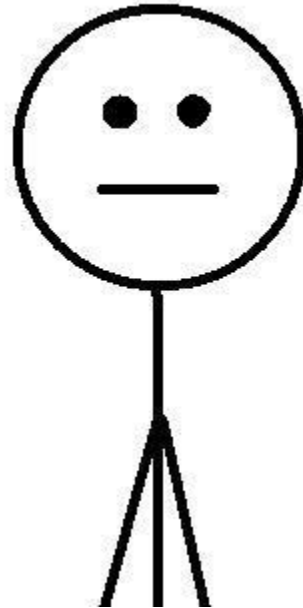


This is Sam

Sam checks the backups

Sam loves SRX

Sam has two different internet pipes



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Sam loves his SAN - it has redundancy!

Sam has a cold DR datacenter that “match

Sam keeps the DR/BC checklist in a file on one of the servers

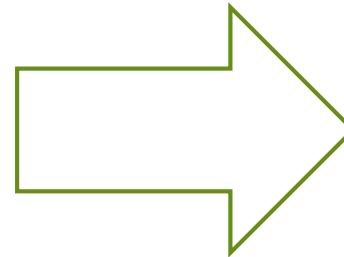
Sam is proud of his “strategy”

- Has never done a live failover to the cold datacenter
- The network redundancy for the internet doesn't extend to the cold datacenter
 - Who needs internet in an emergency?
- The support contract on his SAN is out of date
- Those backups? Well, that's a third party backup tool from a company that no longer exists
 - Oh, and these aren't really backups, they are “in VM file backups”
- The equipment in the DR datacenter is really just a closet in another building that SRX points to



Sam lives on an island. In the Caribbean. And it's mid summer. And it's 2017.

Backups



DON'T BE LIKE SAM

Now, Sam has a problem



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- Hurricane? We're up high.
- Power? We have a generator!
- DR? The closet flooded too
- Recovery? I've got hard drives!

The anatomy of a crisis

- ▶ The datacenter is gone and it isn't coming back
- ▶ Power will be out for months
- ▶ SAN replication and SRX to the "closet" won't work because it too flooded and the power is out for months
- ▶ The DR plan? Literally floated away. What server is what?
- ▶ Our data is on a third party software tool that no longer is in business and is really just a DIFFERENTIAL disk copy to several external USB hard disks going back months.
 - ▶ And there's corruption everywhere, checking the backups meant looking to see if the files were present

Microsoft ... HELP!

- ▶ Day 1: arranged a private jet to ferry the disks to the mainland
- ▶ Day 2: MS Disaster Response team spins up Azure and starts working with network team on site to hook the Azure network into a personal hotspot.
 - ▶ The island is served by a single fiber cable, which is cut. Cell towers? Nope. Satellite? Getting closer!
 - ▶ Azure Import / Export vs. Network Load / Databox – funny story!

Microsoft ... HELP!

- ▶ Day 3-10: MSDR manually creates new VMs in Azure and copies raw data into the VMs to look like their old datacenter.
 - ▶ What about domain controllers?
 - ▶ What about SQL db backups?
 - ▶ What about servers running 32 bit OS? 2003?

Don't Be Like Sam

- ▶ Day 10-15: Work with Sam to reconstitute what's left and bring them online.

How Could Sam Do Better Next Time?

1. Always validate your backups – we can do lots of magical things, fixing disk corruption isn't typically one of them (although we tried!)
2. Plan for a lift and shift –
 1. disasters happen and thankfully most customers are now virtualized on premise
 2. make sure the backups are VM based backups that can be easily moved into the cloud without manual reconstruction
 1. in VM content backups are great for single file recovery, not as great for moving an entire datacenter

More Thoughts on Sam

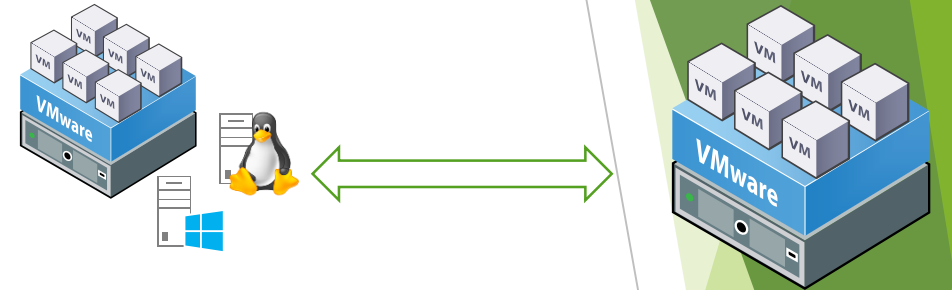
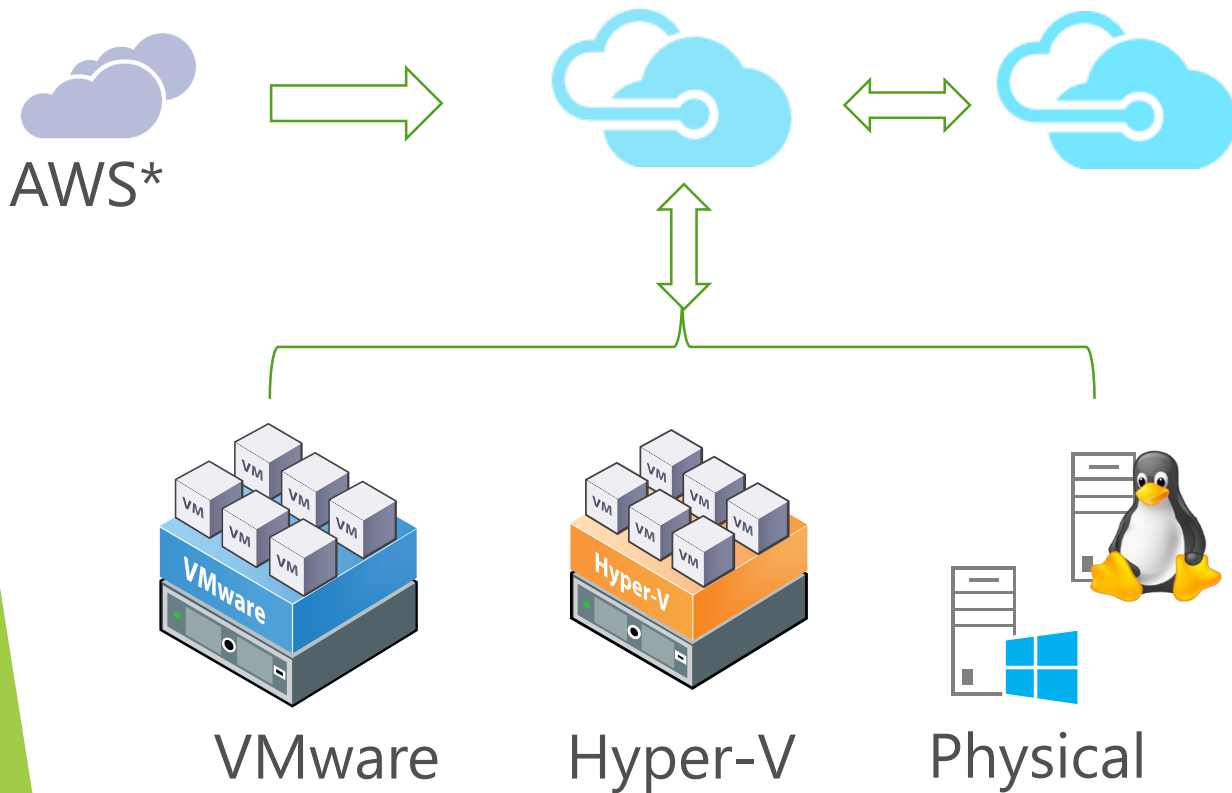
1. Networking in a disaster is key
 1. Can you actually execute the plan?
 2. Applications have to talk to home/customers/employees
2. If the documentation of your environment (including the DR plans) is on the servers that get lost in the disaster, they are not very useful.
 1. Recovery in the blind is a bad way to do recovery.
3. In a catastrophic/natural disaster, the MS Disaster Response team is a great first step resource for discovering options for recovery, eliminating red tape and finding contacts that can do amazing things like fly some hard drives off an island when no one else can.

SOMETHING BETTER!

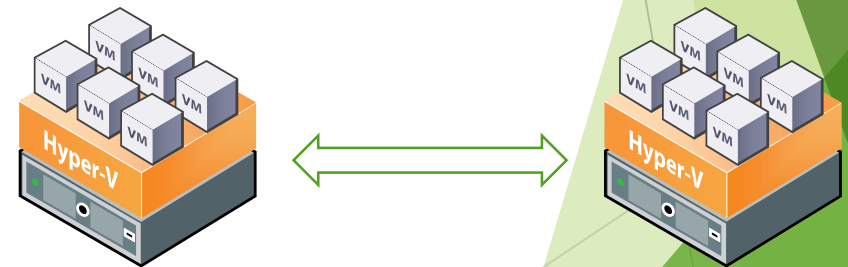
Site to Azure Recovery Solution

Any Cloud

Site to Site



Physical/VMware to VMware



VMM to VMM



Windows

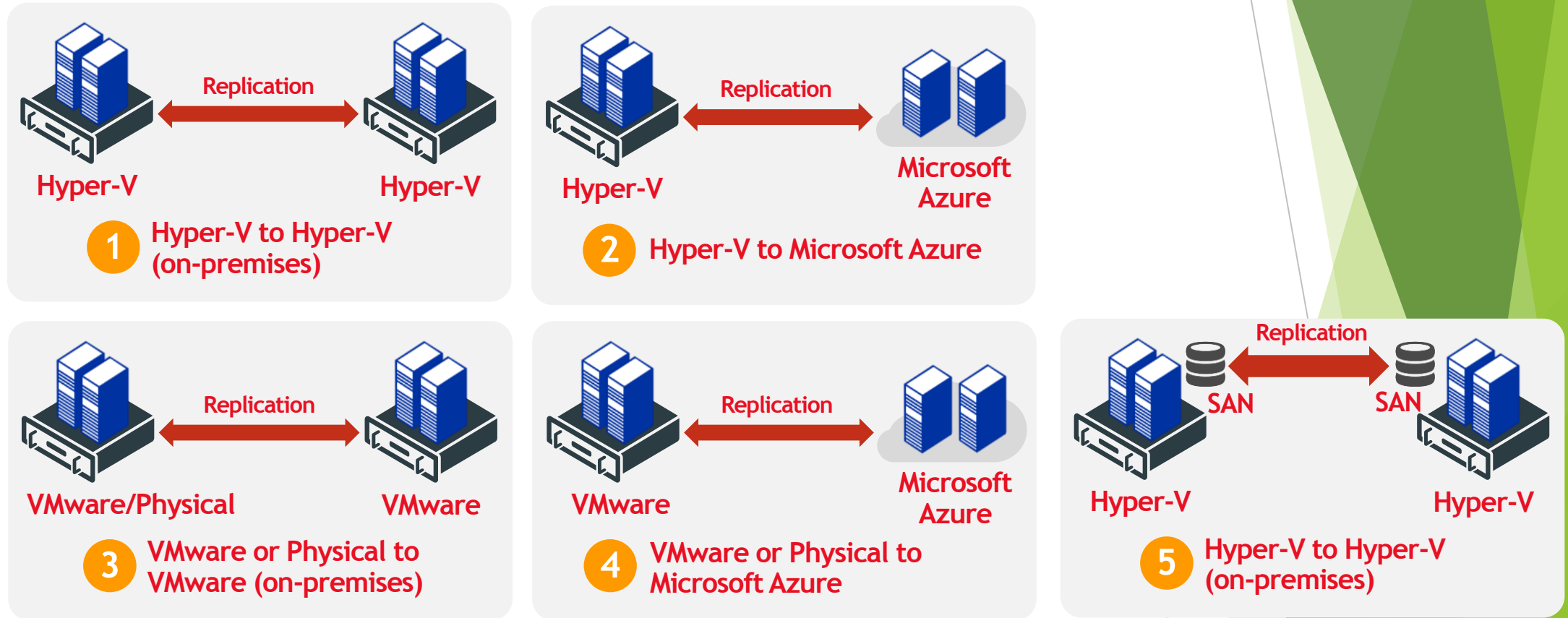
Any OS



Linux

Azure Site Recovery

One solution for multiple infrastructures



Protect important applications by coordinating the replication and recovery of private clouds across sites. Protect your applications to your own second site, a hoster's site, or even use Microsoft Azure as your disaster recovery site

There still has to be a network!

- Throughput
- Latency
- Internal end users
 - Thick apps?
- Customers

Security is Still Relevant

- Encryption
 - On the disk
 - In the VMs
 - In the data
 - (don't store the keys in a VM with the DR plan)
- Sovereignty
- Access Control when the DCs are dead

What about Azure Based DR/BC?

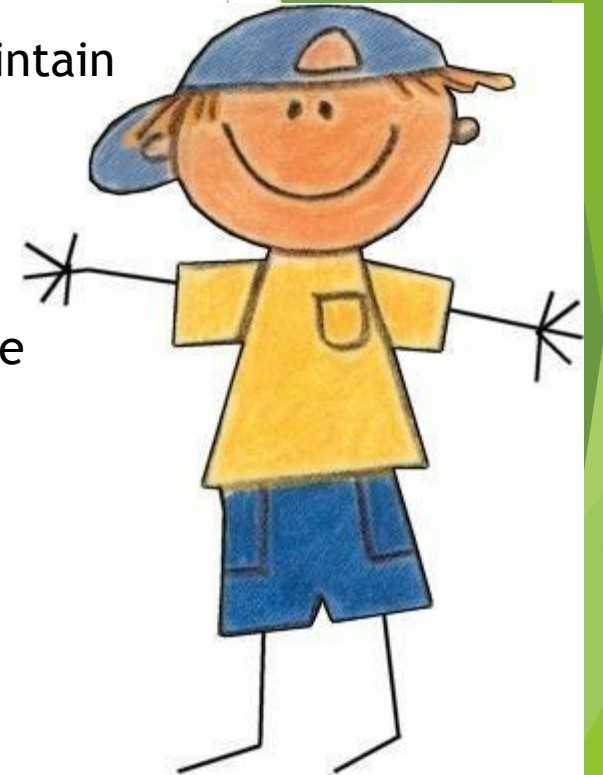
- ▶ Ahhhh South Central and lightning strikes!
- ▶ What happened?
- ▶ What are we doing about it?
- ▶ Why you still have to work with DR/BC when in the cloud?
 - ▶ Your disaster may not be our disaster
 - ▶ Our disasters could take a bit
- ▶ Azure to Azure with ASR and Partner Solutions – totally supported!
- ▶ Paired Regions matter
- ▶ Watch the network and avoid networking loops!
- ▶ Best outcome = active/active with Traffic Manager/Front Door in front of your apps.

Making Sam a Hero!

Save money - Azure is less expensive than a datacenter and easier to maintain

Recover faster - Azure can be online for you faster than your network can be rebuilt

Ability to practice - DR exercises are meaningless if you can't confirm live



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Third Party Solutions are Amazing Too!

- ▶ Zerto – 8 second RTO anyone?
- ▶ CommVault – DR direct to the cloud with file level restore!
- ▶ Veeam – Cplat excellence and works nicely with your SANs
- ▶ ...and more!

Thank you!