



Backup is dead...Restore is
born...in the cloud!

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Common questions

Where to start

Build your Restore Capabilities

Design your Backup Strategy

Which technology to leverage

End results





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Where to start





What is backup all about?

- Q: What is the purpose of your backup?
- A: RESTORE!
- House insurance
- Where to start





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Understanding your business

- Business Services
- Tearing of your Business Services
- Walk through a BIA and TRA





Critical Applications – TIER1

- What are the crown jewels of the business?
- These are the applications that the business **absolutely** need to keep running.

Customer facing
applications



Accounting
applications

ERP



Any application tied to
generating revenue





Enterprise Applications – TIER 2

- Business Services that have high use in the business
- These are the applications that have high and wide use across the entire organization
- Outages impact at an enterprise level

Email (Exchange)
S4B



HRMS
SharePoint
CRM



Any application the business
needs day to day but is **NOT**
tied to revenue





Important Applications – TEIR3

- Business Services on a departmental level
- No impact on revenue or at an enterprise level

Research and development
application



Printing application
Marketing application



Department specific. Not tied to
revenue or does not have enterprise
wide impact.





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3-2-2 & 3-2-1 Rules

Tier 1:

3 copies

2 types of media

2 off-site copies

Tier 2:

3 copies

2 types of media

1 off-site copy



Why 2 off-site copies?

April 11th 2016: An administrator wiped his entire company servers, 1500+ customers data, and all their backups.

<https://serverfault.com/questions/769357/recovering-from-a-rm-rf>

9
▲
▼
★
48

This question already has an answer here:
[Monday morning mistake: sudo rm -rf --no-preserve-root /](#) 5 answers

I run a small [hosting provider](#) with more or less [1535 customers](#) and I use Ansible to automate some operations to be run on all servers. Last night I [accidentally ran](#), on all servers, a Bash script with a `rm -rf {foo}/{bar}` with those variables undefined due to a bug in the code above this line.

All servers got deleted and the offsite backups too because the remote storage was mounted just before by the same script (that is a backup maintenance script).

How I can recover from a `rm -rf /` now in a timely manner?

centos7 data-recovery

share

edited yesterday 105 ● 4

asked yesterday 185 ● 1 ● 2 ● 10

locked by [user] ♦ yesterday
This post has been locked due to the high amount of off-topic comments generated. For extended discussions, please use [chat](#).

marked as duplicate by [user] ♦ yesterday
This question has been asked before and already has an answer. If those answers do not fully address your question, please [ask a new question](#).

13 If you really don't have any backups I am sorry to say but you just nuked your entire company. – [user] yesterday

18 Well, you should have been thinking about how to protect your customers' data **before** nuking them. I won't even begin enumerating how many errors are simultaneously required in order to be able to **completely erase all your servers and all your backups in a single strike**. This is not bad luck: it's astonishingly bad design reinforced by complete carelessness. – [user] yesterday





Your toolbox

- How could you define “Downtime”, “Data loss” and “Level of recovery”?
- RTO
- RPO
- RLO





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Restore Capabilities





The concept of a Recovery plan

- Build a Business Continuity plan
- Sort out the Business Services and their dependencies
- Define and monitor your Service Level Agreements
- Perform continually restore-test for tier 1
- Automation



Service Level Agreements

"A service-level agreement (SLA) is a part of a standardized service contract where a service is formally defined.

Particular aspects of the service – scope, quality, responsibilities – are agreed between the service provider and the service user. "





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Business Continuity Tools

- Data Protection Manager
- Azure Backup
- Azure Backup Server
- Azure Site Recovery
- Hyper-V Replica





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Data Protection Manager

- Been around since 2006
- D-D-C solution
- Technology dependent (so far) on the VSS architecture
- DPM protection of Azure IaaS
- New features in 2016 release





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DPM 2016 – New features

Mixed-mode clustering protection

Resilient Change Tracking (RCT)

Storage Spaces Direct

Virtual TPM

MBS (former MDS)





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DPM 2016 - MBS





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Azure Backup

- Backup Azure IaaS
- Basic DR within the cloud concept
- RTO





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Azure Backup Server

- Project Venus
- No System Center license needed
- DPM server
- Azure integration via MARS
- SQL Server 2014 included
- No tape support
- Vmware support (17th Nov 2016)



Hyper-V Replica

- Easy tool to get started
- Management via VMM or Hyper-V Manager
- Asynchronously replicate a VM to a replication site
- Basic "*Disaster Recovery*" tool
- No need for shared storage between sites
- Can replicate every 30 second





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Azure Site Recovery

- Takes Hyper-V replica to the next level
- Manages:
 - Hyper-V
 - Vmware
 - Physical Servers
- X-platform
 - Linux / Unix





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DEMO





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Wrap it up...end results

- Build a Business Continuity Plan
- Restore tests
- Proactive monitoring not reactive
- Validate your strategies
- Rehearse and Practice





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Q&A

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