

Your Last Line of Defense

A Guide to Disaster-proof Data Backup and Restore

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FACT

Most businesses only need
10% data restored,
to be 90% operational!

The State of Data Backup



The backup of data has become every day.

Data discipline replaced with terabyte drives.

Cover your bases, keep everything mentality.



The State of Data Backup



Backup planned by IT techs

System owner expects restore within hours

NOT the system owner

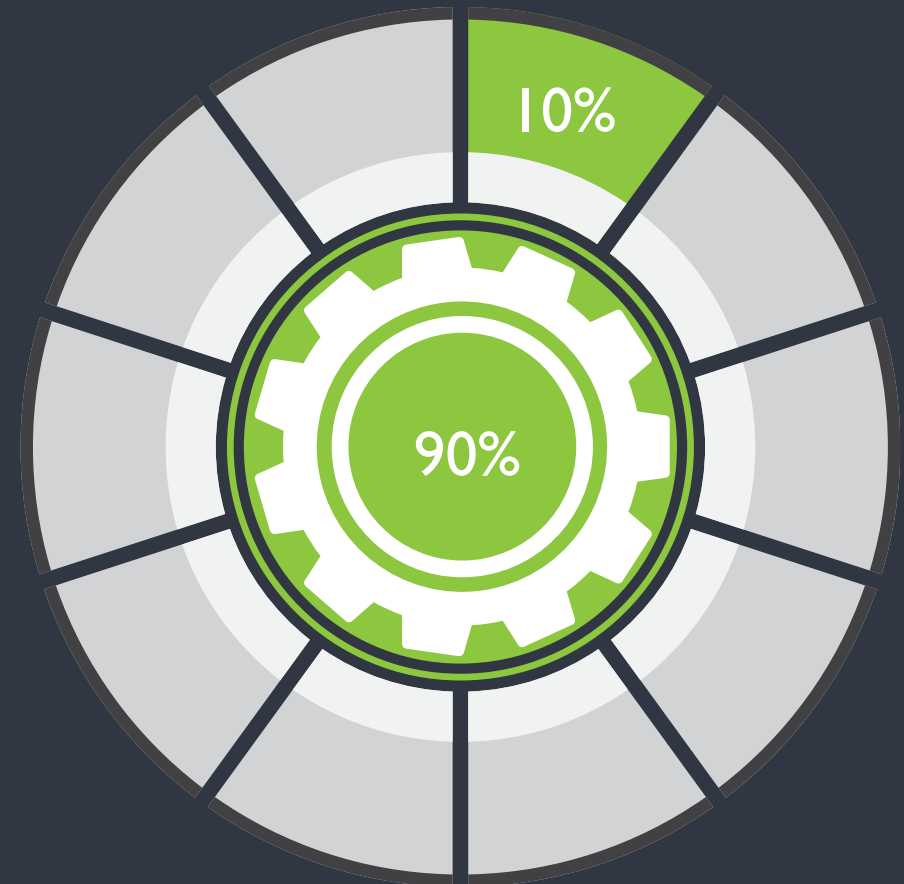
The 10% Rule

Most businesses only need 10% of their data restored to be 90% operational

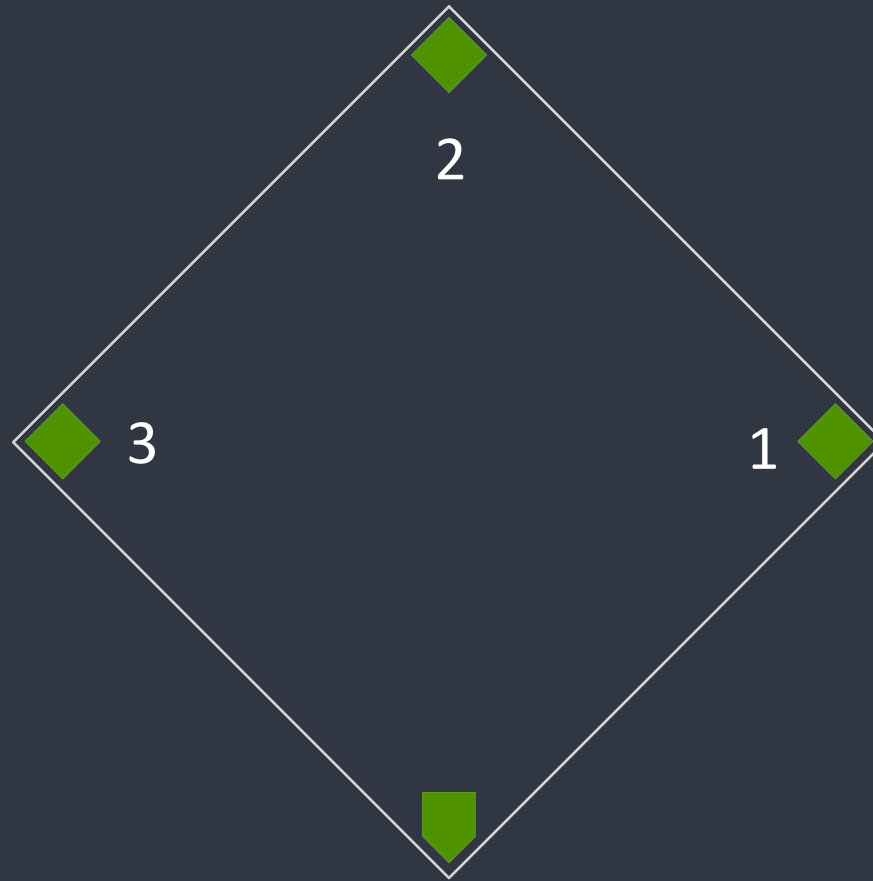
Prioritize your restore, 1 - 2 - 3

Involve system and data owners

Put out the fire, then rebuild



How do you cover all your bases?



More Important; How do you **Recover** all your bases?

Plan the restore...



and you've planned the backup

What do you restore first?



Mail System



Management
Email Only



Phone System



Website/Shop



CRM



Finance/Billing System



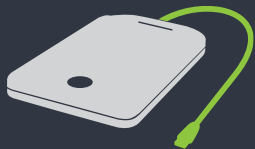
Manufacturing System



HR/Payroll System

EVERYTHING?

360° Backup and Restore



Local Restore



Off-site Restore



Single File Restore



E-mail/Calendar Restore



Database Restore



Server Image Restore



Virtual Server Restore

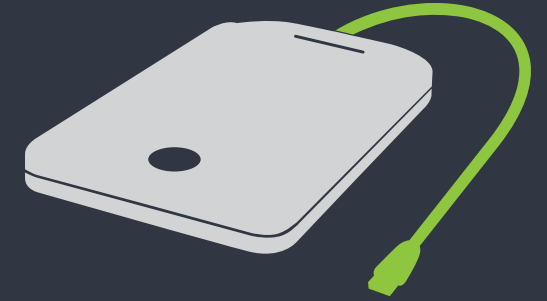


Same-day Roll-back



Disaster Recovery

Local Restore



- Use an external hard drive or storage server
 - Use for restore of large files, smaller files usually take same time to restore from Cloud Backup
 - Fast, random access, multiple file versions
 - 1 TB USB drive cost around \$50
 - Set long retention/archive time
 - Spread load by attaching a drive to each server
 - Swap and store drive when full

Off-site/Cloud Restore



- Protects data against **any** on-site incidents
- Can be accessed from any location
- Divide & Conquer, split systems into adequate number of well named backup sets:
 - Easy to locate data
 - Different schedules, retention periods and settings
 - Allow backups and restores to run in parallel
 - Purpose build Backup with Restore in mind

Single File Restore

- Use it to save the day in minutes with a few clicks
 - Select backup-set, browse to file, click restore
 - Options for earlier version and restore destination
- Cloud Restore is the fastest in most cases
 - But restore larger files from local storage if possible
- Use this to recover from daily mishaps quickly, not for full system restores



E-mail/Calendar Restore

- Usually the highest priority for restore and the single largest file/database to restore
- The nervous system of the company
- Plan which users to restore first, if needed
- Segment into multiple databases based on department/priority
- Use item-level restore to recover single items or individual users while the server is online



Database Restore



- Databases are the heart of most systems, if the database is down the whole system is too!
- Avoid transaction log based backups, backup entire database with DeltaBlock changes
- Live Database Backup, but offline restore
- Set schedule based on priority, minimum once per day.
- Use a reasonable retention period

Server Image Restore

- The most efficient way to restore a complete server is by Image Restore
- Restored image is identical with the server at the time of the backup.
- Can be restored to new/different hardware
- Can be restored as a virtual machine
- Make sure image is both local and off-site
- **Please test and make a plan!**



Virtual Server Restore



- Use VM restore for smaller <50GB servers
- Smaller VMs can be restored directly to host
- Use Image Restore for larger virtual servers
- Don't be fooled by "run direct from backup" VM products, Poor Performance, Not I-click
- Plan and test your restore, test network too
- Watch out! Many Cloud VM Providers do not include backup, nor give you access to such

Same-day Roll-back



- Add Roll-back option to virtual servers to quickly recover from server-wide incidents
- Quick recovery from Crypto/Ransomware attack!
- Just boot server from the 5am mark!
- Limit loss to same day only
- Limit loss even further with incremental restore from hourly backup
- Save storage and only keep the past 2-3 days for Roll-back, any longer is useless
- Use the Local and Cloud Backup for longer retention

Managed Virtual Disaster Recovery



- Prepare a DR Hosted Virtual Secondary Site
- Store Image Backup with Cloud Backup
- Make Cloud Backup include time limited hosting at same Data Center
- Plan post-recovery connectivity, IP's, VPN etc.
- When needed have Cloud Backup service recover complete image to new Virtual Server in matter of hours
- Users can now use the Virtual Server until the primary site has been re-established.
- Swap back to local from Virtual Server, or just keep it

Thank You

Questions? / Comments?

Please visit us at our table and
pick up our Restore Whitepaper

Download this presentation at
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Password: **restore**