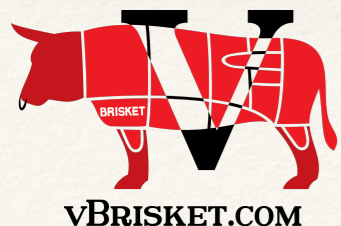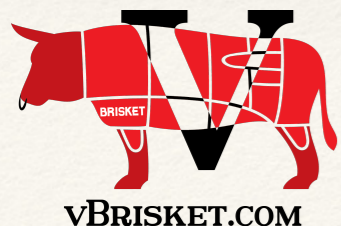vBrisket.com

Disaster Recovery Discussion

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Definition of Disaster Recovery

Disaster Recovery (DR) - A process, policies and procedures that are related to preparing for recovery of technology infrastructure which are vital to an organization after a natural or human induced disaster

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Key Concepts

✓ Business Continuity (BC) - activity performed by an organization to ensure that critical business functions will be available to users

✓ Recovery Point Objective (RPO) - The maximum tolerable period in which data might be lost from an IT service due to a major incident

✓ Recovery Time Objective (RTO) - Duration of time and a service level within which a business process must be restored after a disaster (or disruption) in order to avoid unacceptable consequences associated with a break in BC. Basically it's the period of time between disaster and service recovery.

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Disaster Recovery Plan
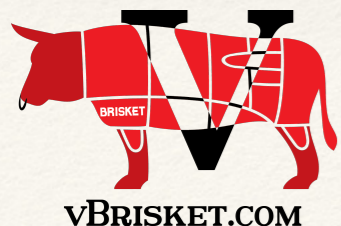
✓ Does your company have a DR Recovery Plan?

✓ Is the DR Recovery Plan up to date?

✓ Do you have the resources to execute the plan?

✓ Do you have a copy of your DR Recovery Plan offsite?

✓ Does everyone know their responsibilities?

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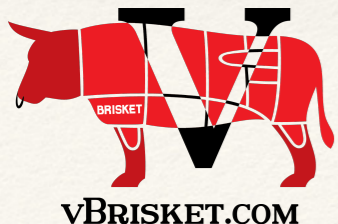
Disaster Recovery Plan

Types of Failures

1. Partial Failure - some of the services are experiencing an outage
2. Total Failure - the main site is blacked out because of a hazard, the DR site will take over the production site until it is brought back online

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Out of date and before Virtualization

6. Hardware Recovery

Business System

Upon declaration of a disaster, the Hardware Recovery Team Leader will notify IBM AS/400 Protection Express to procure a replacement AS/400 business system. Expected delivery of the system at the Alternative Recovery Location is within 48 hours of notification. System configuration, data restoration and system testing is to be completed within 5 to 7 days of the system delivery. *7-9 TOTAL ?*

Network Infrastructure

The Alternative Recovery Location has been pre-configured for the network equipment and communication services necessary for start-up operations. Additional equipment and services would be purchased and configured as necessary to support extended operations.

Windows Servers

The Hardware Recovery Team will purchase and configure Windows Servers to supply network services (DNS, Email, Network Authentication and File Sharing) necessary for startup operations. Systems configuration, testing, and services restoration is to be completed within 7 days of disaster declaration.
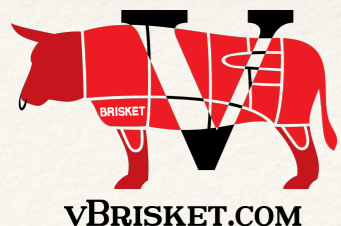
Windows Workstations

The Hardware Recovery Team will purchase and configure 20 Windows Workstations to supply access to the Business System, Email and File Sharing. System configurations are to be completed within 7 days of disaster declaration.
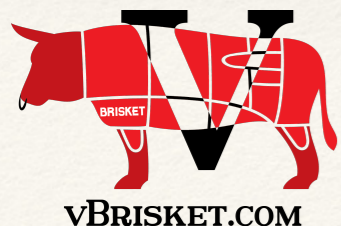
@penlem166
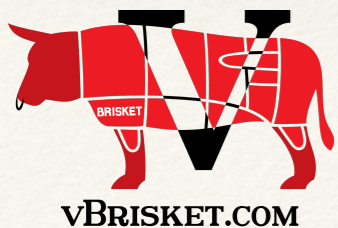
3-2-1 Rule

✓ 3 copies of your data

✓ 2 types of media

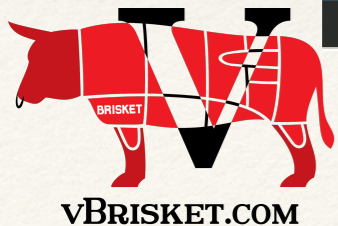✓ 1 copy off-site

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Veeam Backup and Replication 8

✓ I backup all VM's to on-site local storage

✓ I run backup copy jobs to the DR site (without impacting production storage)

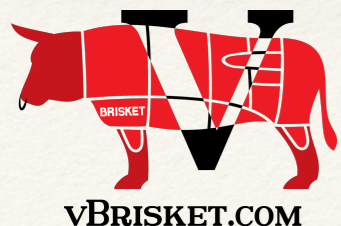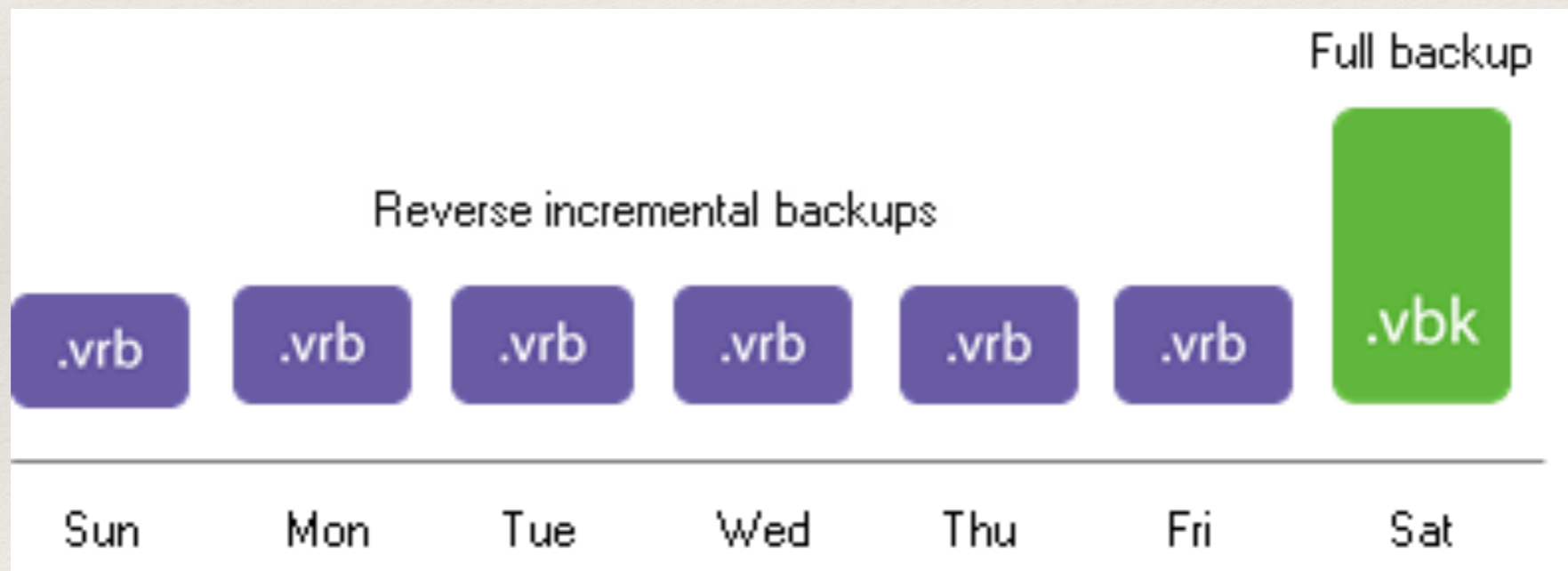✓ I run Replication jobs of all VM's to the DR Cluster and SAN

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Backup Jobs

Reverse Incremental Backup

✓ Reverse Incremental backup - initial full backup and then incrementals, the incrementals are then injected into the full backup and these incrementals are also saved for point in time recovery

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Forward Incremental Backup

✓ Forward Increment Backups - initial full backup and then incremental backups, all backups in the chain need to work or everything is lost after the increment that failed. If you use incremental it is important to to create full or sythentic full backups periodically to avoid long chains in the backup (more of a chance of failure to restore)
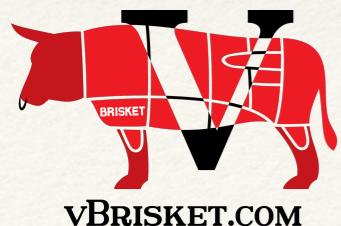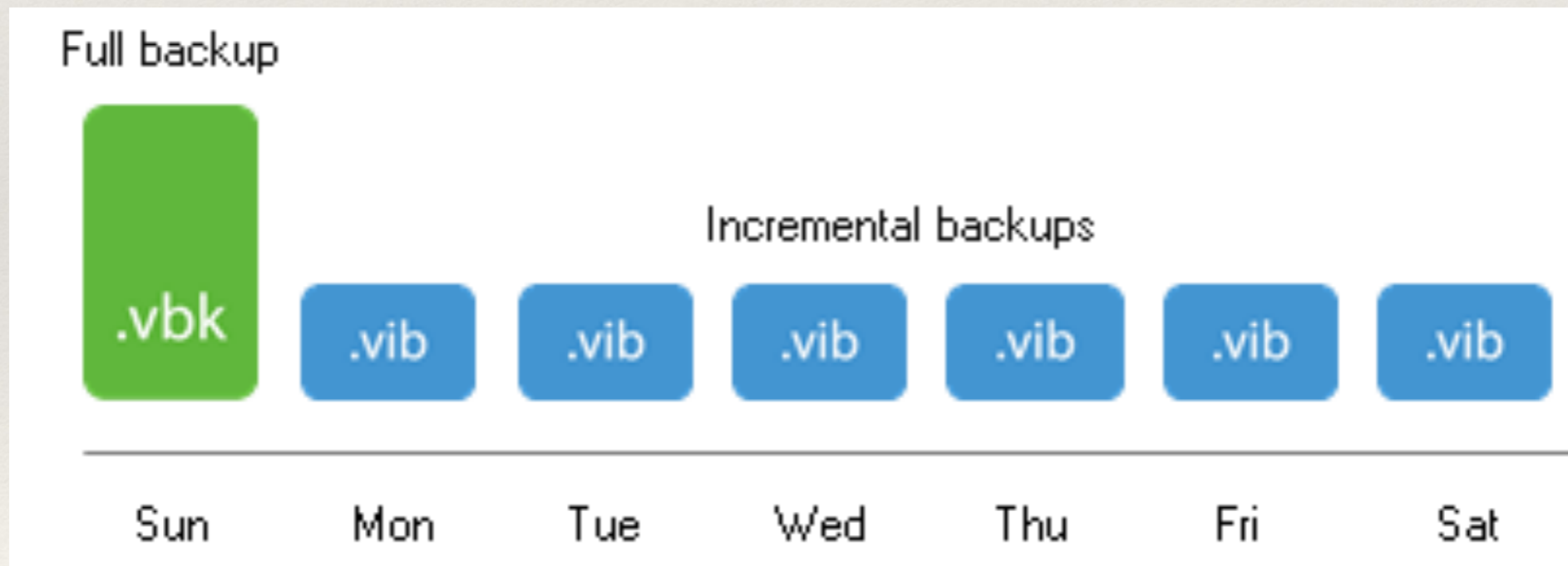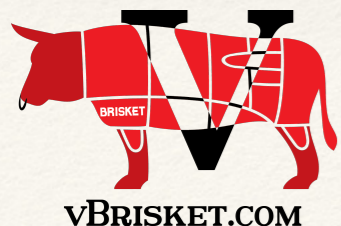
Active Full Backup

✓ Active Full Backup - produces a full backup of a VM from the source, compresses, deduplicates and stores it in a full backup file. It is just like you were running a new backup job for the first time


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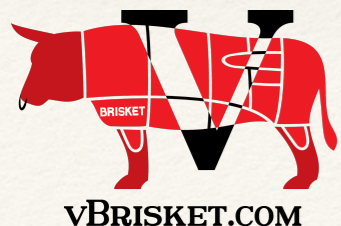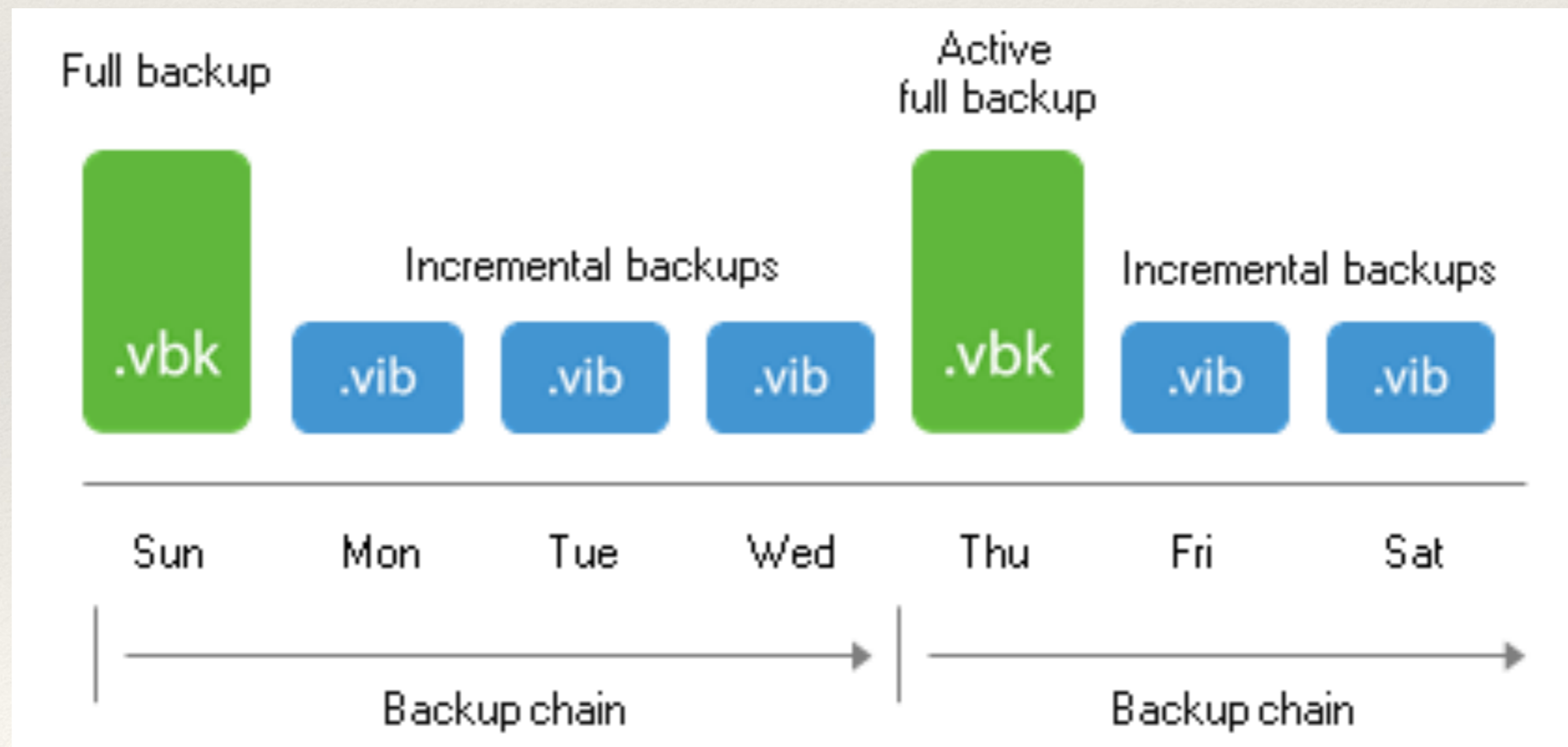
Synthetic Full Backup

✓ Synthetic Full Backup - it uses previous backups and then synthesizes a full backup of those increments without affecting production storage
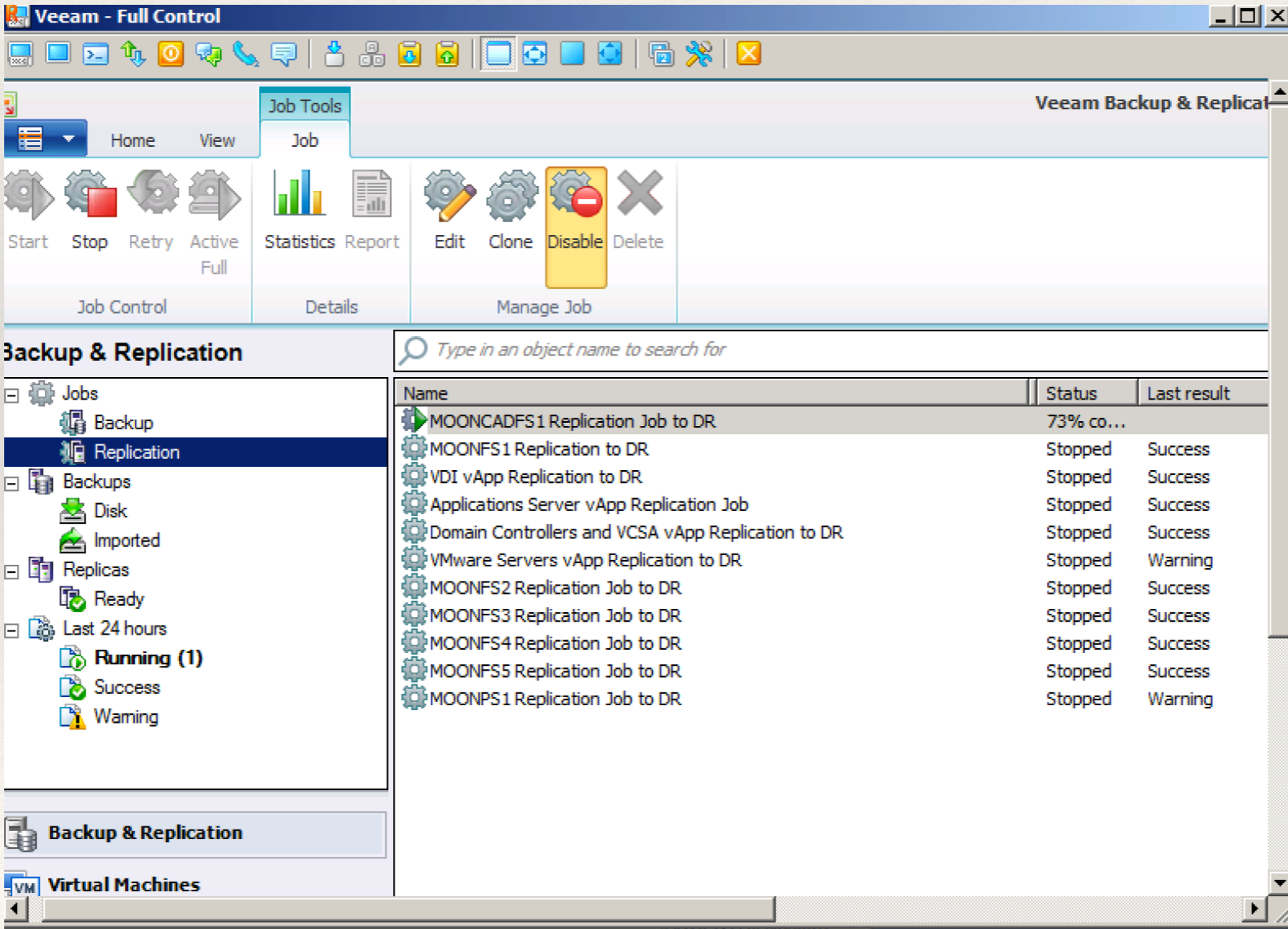

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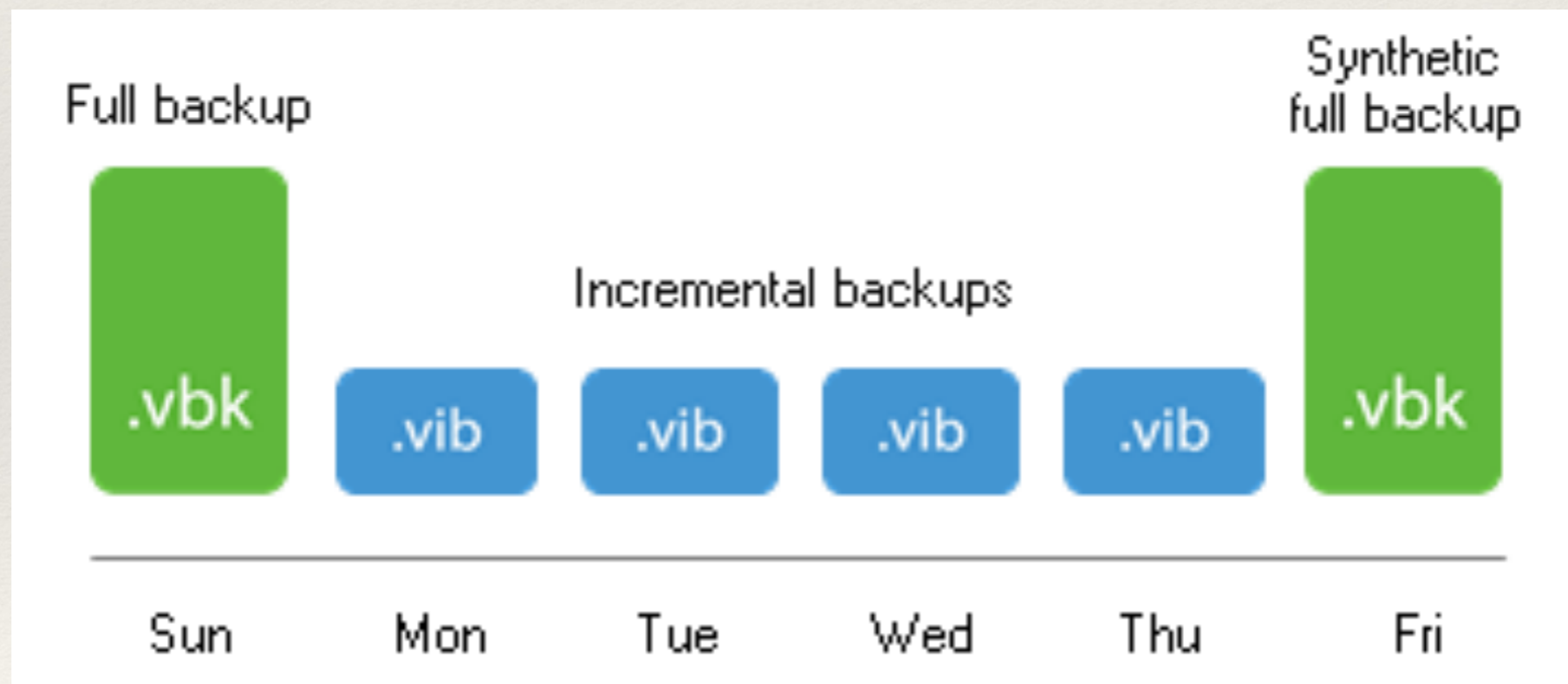
Backup Copy Jobs

✓ Separate job that copies a VM restore point from the source backup repository to the target backup repository
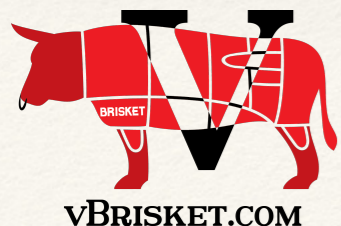
✓ Has no impact on your production storage
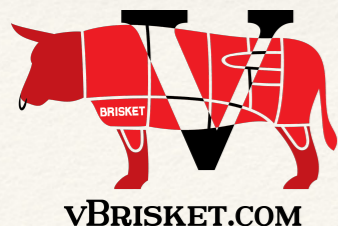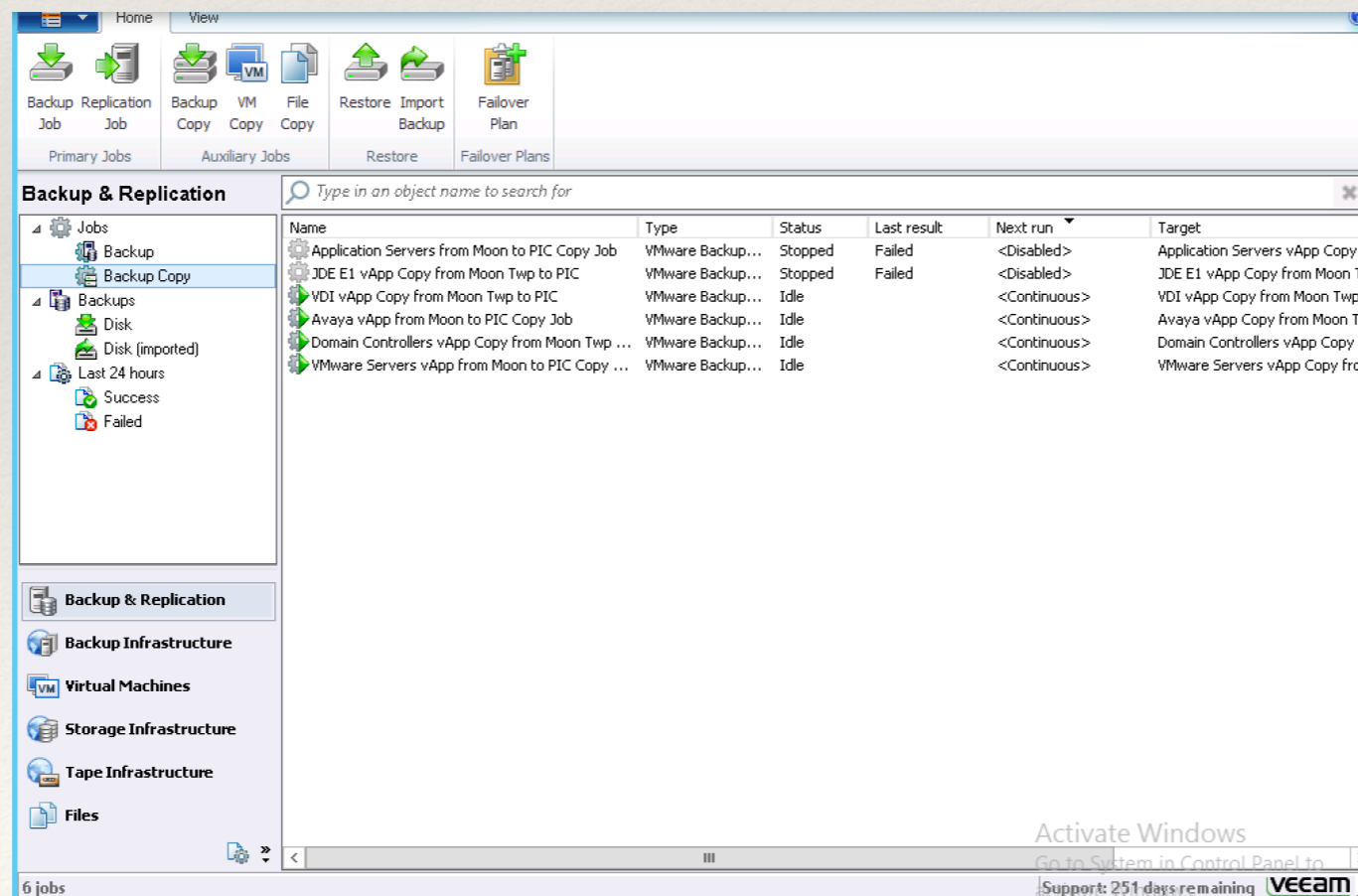
Replication Jobs

✓ Creates a full replica of the VM on the target
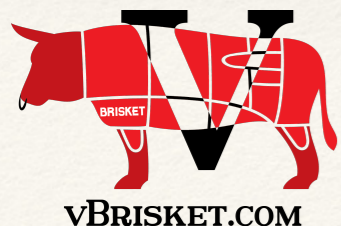
✓ Onsite or Offsite Replication depending on your needs

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Changed Block Tracking

✓ Changed Block Tracking (CBT) - Veeam Backup & Replication queries CBT on vSphere through VADP and gets the list of blocks that have changed since the last run of this particular job

✓ Increases the speed and efficiency of block-level incremental or reverse incremental backups

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Compression

Data compression decreases the size of created backups but affects duration of the backup procedure

1. None
2. Dedup Friendly - low cpu usage and reduces proxy load
3. Optimal (default) - recommended compression level provides best ratio between size and time of backup
4. High - additional 10% compression over optimal at a 10x CPU usage
5. Extreme - provides smallest possible backup file but reduces backup performance. Backup proxies need 6 core cpu's on the proxies

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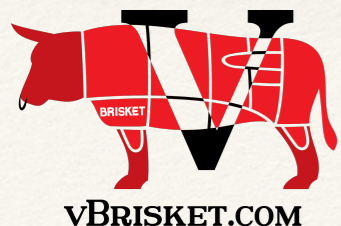
Deduplication

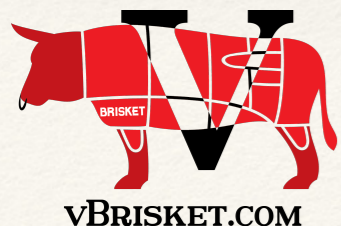✓ When backing up multiple VMs that have similar data blocks (if VMs were created from the same template) those identical blocks or blocks of free space are eliminated, which decreases the size of the created backup file.

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SureBackup

✓ Verify recoverability of every backup by starting and testing your backups in an isolated network

✓ SureBackup uses vPower for Recovery Verification

✓ You know your backups are truly working

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vPower NFS Service

✓ Windows service that runs on a Windows backup repository server and enables it to act as an NFS server

✓ Enables Veeam Backup & Replication to mount a compressed and deduplicated backup file as a regular VMDK file directly to the ESX(i) host via NFS, so ESX(i) hosts get transparent access to backed up VM images
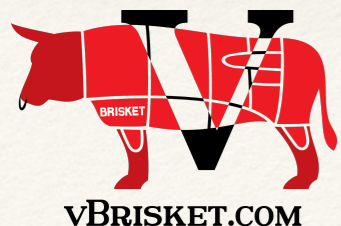
New Features in Veeam B&R 8

✓ SureReplica - lets you validate your DR environment without impacting the production infrastructure

✓ Snapshot Hunter - detects and automatically consolidates hidden VM snapshots

✓ integration with NetApp Storage Snapshots

✓ Veeam Cloud Connect

✓ End to End Encryption

✓ WAN Acceleration for Replication Jobs

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Links

http://helpcenter.veeam.com/backup/80/vsphere/index.html
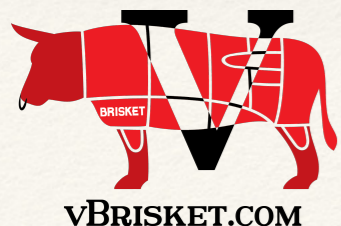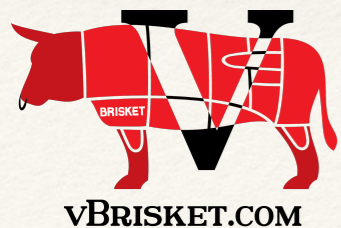
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Thank You!!

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