

LESSON 6.2

98-365 Windows Server Administration Fundamentals

Understand Business Continuity

Lesson Overview

In this lesson, you will learn about:

- Business continuity
- Data redundancy
- Data availability
- Disaster recovery

Anticipatory Set

What methods can be employed by a system administrator to maintain business continuity?

Business Continuity

- Business continuity—the activity performed by an organization to ensure that critical business functions will be available to customers, suppliers, regulators, and other entities as required 24 hours a day to those functions.
- Methods used to maintain business continuity may include but is not limited to:
 - Creating a Disaster Recovery Plan (DRP)
 - Data backups
 - Server clustering
 - Off-site backups
 - Using Uninterruptable Power Supply (UPS)
 - Implementing alternative power sources.

Data Redundancy

- Data redundancy—a property of some disk arrays (most commonly in RAID systems) which provides fault tolerance, so that all or part of the data stored in the array can be recovered in the case of disk failure.
 - RAID 1—Mirrored disk drives.
 - RAID 5—Data striping with parity
- fault tolerance —the property that enables a system to continue operating properly in the event of the failure of some of its components.

Data Redundancy

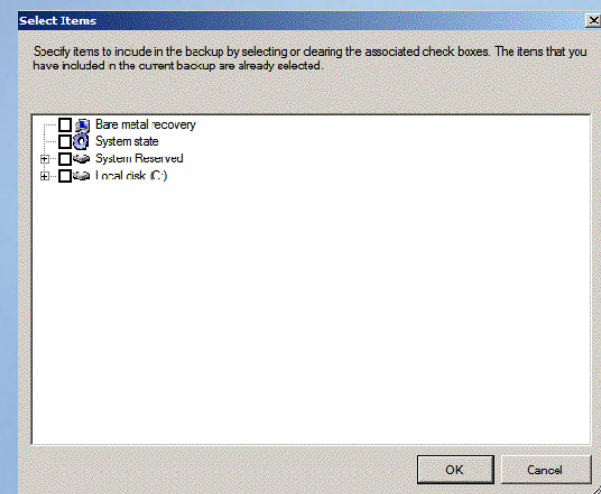
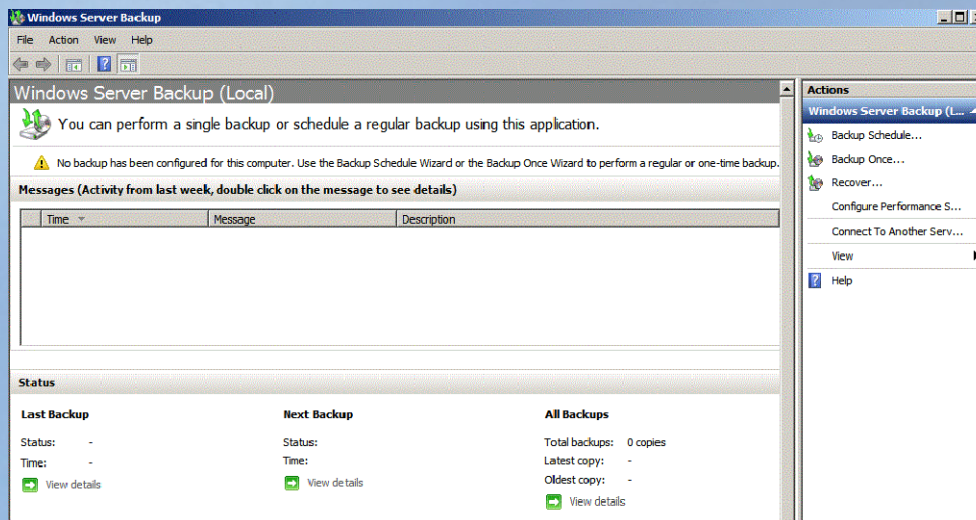
- Windows® Server Backup (WSB)—provides a basic backup and recovery solution for computers running the Windows Server 2008® operating system.
- WSB is not installed by default. It must be added as a Feature through Server Manager:
 1. Click Start->All Programs->Administrative Tools->Click Server Manager.
 2. Click on the Features Summary Section, Click Add Features on the right.
 3. Expand Windows Server Backup Features and select Windows Server Backup and Command-line Tools.
 4. Click Next and then click Install.
 5. When it is finished installing, click Close.

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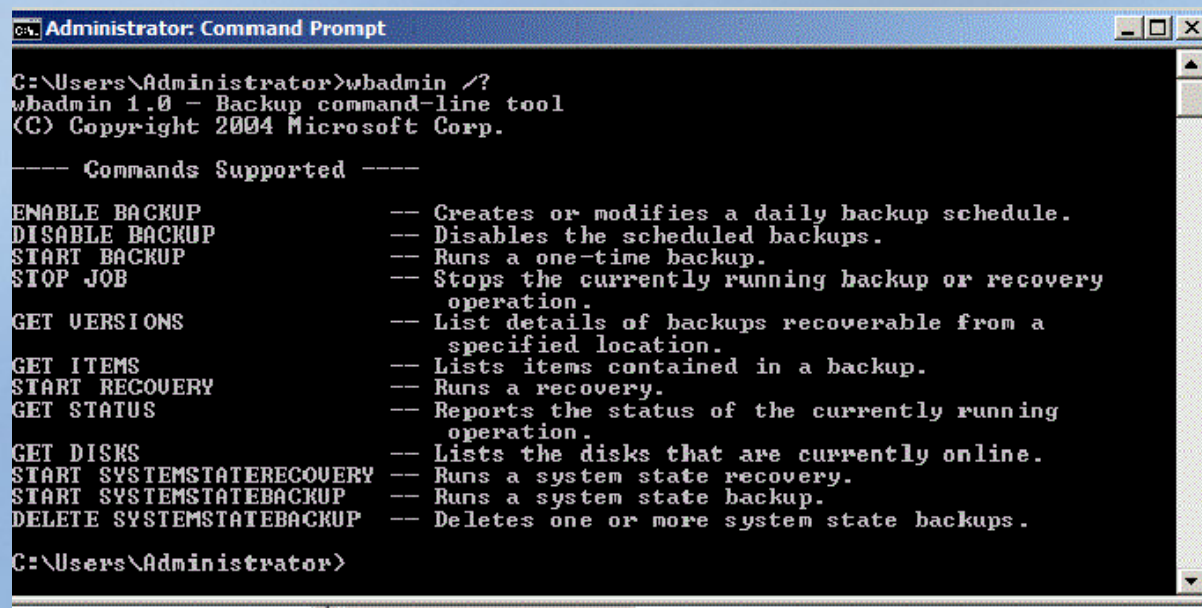
Data Redundancy

- Backups can be scheduled to run at different times using **Backup Schedule...**
- Individual backups can be run using the **Backup Once...** option
- Data can be restored using the **Recover...** option.
- Full server backups can be run or individual items can be selected.



Data Redundancy

Backups and recoveries can also be performed through the command-line using **wbadmin.exe**.



```
Administrator: Command Prompt
C:\Users\Administrator>wbadmin /?
wbadmin 1.0 - Backup command-line tool
(C) Copyright 2004 Microsoft Corp.

---- Commands Supported ----

ENABLE BACKUP          -- Creates or modifies a daily backup schedule.
DISABLE BACKUP         -- Disables the scheduled backups.
START BACKUP           -- Runs a one-time backup.
STOP JOB               -- Stops the currently running backup or recovery
                        operation.
GET VERSIONS           -- List details of backups recoverable from a
                        specified location.
GET ITEMS              -- Lists items contained in a backup.
START RECOVERY         -- Runs a recovery.
GET STATUS             -- Reports the status of the currently running
                        operation.
GET DISKS              -- Lists the disks that are currently online.
START SYSTEMSTATERECOVERY -- Runs a system state recovery.
START SYSTEMSTATEBACKUP -- Runs a system state backup.
DELETE SYSTEMSTATEBACKUP -- Deletes one or more system state backups.

C:\Users\Administrator>
```


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Data Availability

- Clustering—a group of independent network servers that operate as if they were a single unit. By enabling one server to take over for another, a cluster network enhances stability and minimizes or eliminates downtime caused by application or system failure.
- Folder Redirection—a feature that allows users and administrators to redirect the path of a folder to a new location. The new location can be a folder on the local computer or a directory on a network share.
 - Can allow a users personal data or profiles to be available throughout the network, regardless of what computer they are working on.
 - My Documents is a folder that is typically redirected from the local hard drive to a network share.
 - This prevents data loss in the event of a disk failure on the local system, while providing a means to backup the data from a network share. Also makes the data available from more than one system.

Data Availability

- Uninterruptable Power Supply (UPS)—a device, connected between a computer and a power source, that ensures that electrical flow to the computer is not interrupted because of a blackout and, in most cases, protects the computer against potentially damaging events.
 - Not intended to maintain power to the computer for an extended amount of time.
 - Designed to provide enough power to safely power down the equipment.
- If extended power is required, an alternative power source such as a power generator must be implemented.
 - Hospitals, airports and security firms are examples of companies that would require an alternative power source.

Disaster Recovery

- Disaster recovery—the process, policies and procedures related to preparing for recovery or continuation of the technology infrastructure critical to an organization after a natural or human-induced disaster.
- Recovery may include, but is not limited to:
 - File/data recovery—can range from recovering a single file to entire volume of data.
 - Active Directory® recovery—restoring a domain controller's system state back by booting into **Directory Services Restore Mode** in the Advanced Boot Options. This includes a recovery of the Active Directory Domain Services database.
 - Bare-metal recovery—restoring an entire operating system onto new hardware.
 - Data center recovery—restoring a data-center to an off site location with the use of redundant backups and equipment.

Disaster Recovery Plan

- Can range from a simple task to recovering an entire data center.
- The disaster recover plan may include but is not limited to:
 - Detailed procedures to restore mission critical machines.
 - Procedures should be developed that a non-IT person could perform them.
 - Detailed location of all backup software, media and tapes.
 - Detailed map of the network infrastructure including:
 - IP subnets and IP assignments
 - Network port numbers and locations
 - Detailed list of all service providers:
 - Internet
 - Telecommunications

Lesson Review

- What must be restored in order to recover Active Directory Domain Services?
- What is a bare-metal recovery?
- What is the command to perform a backup through the command line?