Module: 14- Identity with Windows Server

31. Explain the process of installing and configuring Hyper-V virtualization in Windows Server 2016.

ANS.

**Install Hyper-V Role**: In *Server Manager*, go to *Add Roles and Features*, select **Hyper-V** and follow the wizard.

**Restart Server**: After installation, restart the server.

**Open Hyper-V Manager**: From *Server Manager* > *Tools*, select **Hyper-V Manager**.

**Create Virtual Switch**: In Hyper-V Manager, click *Virtual Switch Manager*, create a virtual switch for network connectivity.

**Create Virtual Machines (VMs)**: Click *New* > *Virtual Machine* in Hyper-V Manager, and follow the wizard to create and configure VMs.

32. How do you monitor server performance and manage event logs in Windows Server?

ANS.

**Monitoring Server Performance and Managing Event Logs in Windows Server**:

1. **Monitor Performance**:
   * Use *Task Manager* or *Performance Monitor* (from *Server Manager* > *Tools*).
   * In *Performance Monitor*, create custom data collector sets to track system performance (CPU, memory, disk usage).
2. **Manage Event Logs**:
   * Open *Event Viewer* (from *Server Manager* > *Tools*).
   * View logs for system, security, and application events.
   * Use *Filter Current Log* to search for specific events or errors.

33. Describe the different types of storage options available in Windows Server.

ANS.

1. **Direct Attached Storage (DAS)**: Physical storage directly connected to the server, such as internal hard drives or external USB drives.
2. **Network Attached Storage (NAS)**: Storage devices connected to the network, accessible by multiple servers or clients.
3. **Storage Area Network (SAN)**: A high-performance, dedicated network of storage devices that provide block-level access to data.
4. **ReFS (Resilient File System)**: A newer file system offering improved data integrity and resilience for storage volumes.
5. **Storage Spaces**: A feature that allows pooling multiple physical drives into a single storage pool for flexible and scalable storage management.
6. **iSCSI**: A protocol used to link storage devices over a network, providing block-level access to storage over TCP/IP.

34. What is the role of File Server in Windows Server, and how do you configure it?

ANS.

**File Server Role** in Windows Server manages and provides shared access to files and directories over a network.

**Configuration**:

1. **Install File Server Role**: In *Server Manager*, go to *Add Roles and Features*, select **File and Storage Services** > **File Server**.
2. **Create Shared Folders**: After installation, go to *Server Manager* > *File and Storage Services*, and create shared folders by right-clicking and selecting *New Share*.
3. **Set Permissions**: Configure NTFS and share permissions to control access to the shared folders.
4. **Access Shared Files**: Users can access the shared files over the network using file paths.

35. Explain the process of implementing and managing Distributed File System (DFS) in Windows Server 2016.

ANS.

**Implementing and Managing DFS in Windows Server 2016**:

**Install DFS Role**: In *Server Manager*, go to *Add Roles and Features*, select **DFS Namespaces** and **DFS Replication**.

**Create DFS Namespace**: Open *DFS Management*, right-click *Namespaces*, and select *New Namespace*. Choose a server and configure the namespace.

**Create Folders in DFS Namespace**: Right-click the namespace, select *New Folder*, and define the folder targets (shared folders on different servers).

**Configure DFS Replication**: In *DFS Management*, right-click *Replication*, select *New Replication Group*, and configure replication settings between servers.

**Monitor DFS**: Use *DFS Management* to manage namespaces, replication, and monitor replication status.

36. Discuss the built-in backup and recovery options available in Windows Server 2016 or 2019.

ANS.

**Backup and Recovery in Windows Server 2016/2019**:

1. **Windows Server Backup**: Create and schedule full or custom backups, including system state and volumes.
2. **System Image Recovery**: Backup the entire server for full recovery.
3. **File History**: Backup user files and restore previous versions.
4. **Recovery Options**: Use *System Restore* or *WinRE* for troubleshooting and recovery.

37. How do you configure Windows Server Backup to back up critical data?

ANS.

1. **Install Windows Server Backup**: Go to *Server Manager* > *Add Roles and Features*, and install **Windows Server Backup**.
2. **Open Windows Server Backup**: From *Server Manager* > *Tools*, select **Windows Server Backup**.
3. **Create a Backup**: Click *Backup Once* for a one-time backup or *Backup Schedule* for recurring backups.
4. **Select Backup Type**: Choose *Custom* to select specific files, folders, or volumes (e.g., critical data).
5. **Set Backup Destination**: Choose a backup destination (e.g., external drive or network share).
6. **Schedule Backup**: If desired, set the backup to run at regular intervals.

38. Explain the steps for restoring files and folders using Windows Server Backup.

ANS.

1. **Open Windows Server Backup**: From *Server Manager* > *Tools*, select **Windows Server Backup**.
2. **Select Restore**: In the right pane, click *Recover*.
3. **Choose Backup Location**: Select the location of the backup (local or remote).
4. **Select Backup Date**: Choose the backup date containing the files/folders to restore.
5. **Select Items to Restore**: Choose *Files and Folders* and select the specific files or folders.
6. **Restore Destination**: Choose to restore to the original or a different location.
7. **Start Restore**: Click *Recover* to restore the selected data.

39. What are some common troubleshooting techniques for Windows Server startup issues?

ANS.

1. **Safe Mode**: Boot into Safe Mode to diagnose driver or software conflicts.
2. **Last Known Good Configuration**: Use this option to revert to the last successful startup settings.
3. **Startup Repair**: Use the *Windows Recovery Environment (WinRE)* to run *Startup Repair*.
4. **Event Viewer**: Check *Event Viewer* for error logs related to boot issues.
5. **System Restore**: Roll back the system to a previous restore point.
6. **Boot from Installation Media**: Use a bootable USB/DVD to repair or reinstall Windows Server.
7. **Check Hardware**: Ensure all hardware components are properly connected and functioning.

40. How do you troubleshoot network connectivity problems in Windows Server?

ANS.

1. **Check Physical Connections**: Ensure cables and hardware (NIC, router, etc.) are properly connected.
2. **Verify IP Configuration**: Use ipconfig to check IP address, subnet, and gateway settings.
3. **Ping Test**: Use ping to test connectivity to local and remote devices.
4. **Check Firewall Settings**: Ensure Windows Firewall or third-party firewalls are not blocking traffic.
5. **Verify DNS Settings**: Use nslookup to test DNS resolution.
6. **Use Tracert**: Run tracert to identify where the connection is failing.
7. **Review Event Logs**: Check *Event Viewer* for network-related errors.

41. Discuss common Active Directory-related issues and their troubleshooting steps.

ANS.

1. **Replication Failures**: Check network, run repadmin /replsummary, resolve DNS issues.
2. **Login Issues**: Verify credentials, check account status, run dcdiag.
3. **Group Policy Issues**: Use gpresult /r, run gpupdate, check for inheritance conflicts.
4. **DNS Issues**: Verify DNS settings, run nslookup, check lookup zones.
5. **Account Lockouts**: Check *Event Viewer* for lockout events, identify invalid logon sources.

42. Explain how to troubleshoot performance problems on Windows Server 2016 or 2019.

ANS.

1. **Check Task Manager**: Monitor CPU, memory, and disk usage for high resource consumption.
2. **Use Performance Monitor**: Create custom data collector sets to track performance metrics.
3. **Review Event Viewer**: Check for system or application errors impacting performance.
4. **Check Disk Space**: Ensure sufficient disk space and defragment if necessary.
5. **Run Resource Diagnostic Tools**: Use tools like chkdsk, sfc /scannow, or diskpart to diagnose issues.