# Windows Server Interview Questions And Answers

## Introduction

Preparing for a Windows Server administration interview requires more than just memorizing commands; it demands a deep understanding of the infrastructure, security, and troubleshooting that keep enterprise environments running smoothly. Whether you are a seasoned system administrator or a newcomer aiming for a role in IT operations, mastering **Windows Server Interview Questions And Answers** is a critical step toward success. This guide covers a comprehensive range of topics—from Active Directory and Group Policy to Hyper-V, networking, and PowerShell automation. Each question is answered with the detail and clarity that interviewers expect, helping you demonstrate practical expertise rather than theoretical recall.

By the end of this article, you will have a solid foundation to confidently tackle common and advanced scenarios, and you will understand the reasoning behind each answer. Let's dive into the core areas that every Windows Server professional must know.

## 1. General Windows Server Concepts

### What is the difference between Windows Server Core and Desktop Experience?

Windows Server Core is a minimal installation option that does not include a graphical user interface (GUI). It provides a command-line environment and reduces the attack surface, lowers maintenance overhead, and consumes fewer resources. Desktop Experience includes the full GUI with features like the Start menu, desktop, and tools like Server Manager. In recent Windows Server versions (2019 and 2022), Microsoft has encouraged the use of Server Core for most workloads, and you can add the Desktop Experience during installation if needed. Interviewers often ask this to gauge your understanding of deployment choices and security best practices.

### Explain the role of Active Directory (AD) in a Windows Server environment.

Active Directory is a directory service that stores information about objects on the network and makes this information easy for administrators and users to find and use. It provides authentication and authorization services, manages domain-joined computers, and centralizes user and resource management. Key components include Domain Controllers (DCs), domains, forests, organizational units (OUs), and Group Policy. A solid grasp of AD is fundamental for any **Windows Server Interview Questions And Answers** discussion because it underpins almost all enterprise identity management.

## 2. Active Directory and Domain Services

### What are the FSMO roles in Active Directory?

Flexible Single Master Operation (FSMO) roles are specialized domain controller tasks that prevent conflicts in a multi-DC environment. There are five FSMO roles:

- **Schema Master** – Manages the schema of the forest.
- **Domain Naming Master** – Controls adding and removing domains from the forest.
- **PDC Emulator** – Handles time synchronization, password changes, and legacy protocols.
- **RID Master** – Allocates Relative ID pools to each DC.
- **Infrastructure Master** – Updates cross-domain object references.

Knowing where these roles reside and how to transfer or seize them is a common interview scenario.

### How do you recover a deleted object in Active Directory?

Windows Server includes an Active Directory Recycle Bin feature (introduced in Windows Server 2008 R2) that allows authorized administrators to restore deleted objects without a backup. The object is preserved in a deleted state for a configurable period (default 180 days). To recover it, you can use the Active Directory Administrative Center (ADAC) and select the object from the “Deleted Objects” container. Alternatively, PowerShell cmdlets like `Get-ADObject -IncludeDeletedObjects` and `Restore-ADObject` provide a scriptable approach. This question tests your familiarity with directory protection mechanisms.

## 3. Group Policy Management

### Explain the order in which Group Policy Objects (GPOs) are applied.

GPO processing follows the LSDOU order: Local, Site, Domain, and then Organizational Unit (OU). Within each level, inheritance is cumulative, but settings can be blocked or enforced. The last applied policy wins in case of conflict unless a policy is set to “Enforced”. Understanding this order is crucial when troubleshooting unexpected policy behavior. A good interview answer should also mention that computer policies are applied during startup and user policies at logon, and that loopback processing can be used for special scenarios like kiosk machines.

### How do you troubleshoot a GPO that is not applying?

Start with `gpresult /r` to display the resultant set of policy for a user or computer. Check event logs under Applications and Services Logs/Microsoft/Windows/GroupPolicy. Verify that the client can reach the Domain Controller and that the SYSVOL share is accessible. Also, examine security filtering and WMI filters, which might exclude the target. Another common issue is replication lag between DCs. An experienced admin will also use the `rsop.msc` (Resultant Set of Policy) snap-in for a GUI-based view.

## 4. Networking and DNS

### What is the role of DNS in a Windows Server environment?

DNS (Domain Name System) is essential for Active Directory to function. It resolves domain names to IP addresses and enables domain controllers to register SRV records that clients query to locate services like LDAP and Kerberos. Windows Server includes a DNS Server role that integrates with AD. Interviewers often ask about conditional forwarders, stub zones, and the impact of DNS misconfiguration on domain join operations. A thorough answer demonstrates understanding of both forward and reverse lookup zones, as well as dynamic updates.

### Explain the difference between a Forwarder and a Conditional Forwarder.

A standard forwarder sends all DNS queries for external names to a specified DNS server (e.g., your ISP’s DNS or a public resolver). A conditional forwarder sends queries only for a specific domain (e.g., `corp.contoso.com`) to a particular DNS server, often used in multi-forest environments or when connecting to a partner’s network. This distinction is a classic **Windows Server Interview Questions And Answers** topic because it tests your ability to design efficient name resolution.

 

## 5. Hyper-V and Virtualization

### What are the different types of virtual switches in Hyper-V?

Hyper-V offers three virtual switch types:

1. **External** – Connects to the physical network, allowing VMs to communicate with external systems.
2. **Internal** – Allows communication only between the host and the VMs, and among VMs on the same host.
3. **Private** – Allows communication only between VMs on the same host, isolating them from the host and external network.

Understanding these types is vital for designing secure and efficient virtual networks. You should also be prepared to discuss NIC teaming and SR-IOV for performance.

### How do you perform a live migration of a virtual machine in Hyper-V?

Live migration moves a running VM from one Hyper-V host to another with zero downtime. Prerequisites include hosts in the same domain or with proper Kerberos delegation, compatible processor versions (or using enhanced session mode), and shared storage (or SMB 3.0). You can initiate a live migration via Failover Cluster Manager (if using Hyper-V over SMB) or Hyper-V Manager by selecting “Move” on the VM. The wizard allows you to move the VMs computer objects, storage, and network settings. Interviewers often ask about constraints and troubleshooting steps, such as checking that both hosts have the same virtual switch names.

## 6. Storage and File Services

### What is Storage Spaces Direct (S2D) and when would you use it?

Storage Spaces Direct is a software-defined storage solution in Windows Server that pools local disks across multiple servers into a single, highly available storage fabric. It uses industry-standard hardware and provides features like erasure coding, caching, and resilience to drive failures. S2D is ideal for hyper-converged infrastructure (HCI) where compute and storage reside on the same nodes. Common interview questions include comparing it to traditional SAN/NAS and understanding the concept of storage tiers and storage classes.

### Explain the difference between NTFS and ReFS.

NTFS (New Technology File System) is the legacy file system with full features like permissions, encryption (EFS), compression, and quotas. ReFS (Resilient File System) is newer, designed for large-scale storage and data integrity. ReFS supports automatic integrity checking, data scrubbing, and real-time corruption detection. However, it lacks some NTFS features (e.g., file-level compression, EFS). ReFS is often used for virtual machine storage (e.g., VHDX files) and high-availability workloads. Your answer should reflect knowledge of when each file system is appropriate.

## 7. Security and Hardening

### What is a Group Managed Service Account (gMSA)?

A gMSA is a special type of service account that Windows Server automatically manages the password for, eliminating the need for manual credential updates. It can be used across multiple servers, and the password is rotated regularly. gMSAs are more secure than traditional service accounts because they reduce the risk of password theft and simplify management. Interviewers may ask you to explain how to create a gMSA using PowerShell and assign it to a service.

### How do you secure a Windows Server against ransomware attacks?

Securing a server involves multiple layers: applying the principle of least privilege, disabling unnecessary services, enabling Windows Defender and using attack surface reduction rules, implementing Windows Firewall with inbound/outbound filtering, using AppLocker or Windows Defender Application Control, enabling Just Enough Administration (JEA), and regularly patching. Also, enable auditing and use tools like the Microsoft Security Compliance Toolkit. A strong answer demonstrates a proactive defense-in-depth strategy, not just a single tool.

## 8. PowerShell and Automation

### How would you write a PowerShell script to export a list of all Active Directory users and their last logon date?

You would use the Active Directory module cmdlets. For example:

```
Get-ADUser -Filter * -Properties LastLogonDate | Select-Object Name, SamAccountName, LastLogonDate | Export-Csv -Path C:\report.csv -NoTypeInformation
```

But note that `LastLogonDate` is not replicated across domain controllers by default (the attribute is `lastLogon`). A more accurate script would query `lastLogon` from all DCs and find the maximum. This question tests your real-world scripting experience and your understanding of AD replication nuances.

### Explain Desired State Configuration (DSC) in Windows Server.

DSC is a configuration management platform in PowerShell that allows you to declaratively specify the desired state of a server (e.g., enabling features, setting registry keys, configuring services). It includes resources for compliance checking and auto-remediation. DSC can be used in push or pull modes and integrates with Azure Automation. Interviewers want to see that you understand infrastructure as code and how DSC reduces configuration drift.

## 9. High Availability and Failover Clustering

### What are the different quorum types in a Windows Server Failover Cluster?

Quorum determines how many votes are needed for a cluster to remain operational. The types include:

- **Node Majority** – Each node has one vote; used for clusters with an odd number of nodes.
- **Node and Disk Majority** – Adds a disk witness (a shared disk).
- **Node and File Share Majority** – Uses a file share witness.
- **No Majority: Disk Only** – The disk witness is the only tiebreaker (rarely used).

Understanding quorum settings is critical for disaster recovery planning.

### How do you perform a rolling upgrade of a Windows Server cluster?

A rolling upgrade allows you to upgrade the operating system of cluster nodes one at a time without downtime. In Windows Server 2016 and later, you can perform a cluster-aware updating or use the `Invoke-CauRun` command. The process involves draining the node of roles, upgrading the OS, and then bringing it back online. The cluster functional level can be updated only after all nodes are upgraded. This question assesses your knowledge of minimizing disruption during maintenance.

## 10. Troubleshooting and Monitoring

### Describe the purpose of the Windows Server Event Log and how you would analyze it for security events.

The Event Log records system, security, and application events. Security logs are especially important for auditing logon attempts, privilege use, and object access. You can filter logs in Event Viewer or use PowerShell cmdlets like `Get-WinEvent`.

 