An isometric illustration showing three black server racks with blue vertical light bars. To the right, a person is sitting at a white desk with a computer monitor, keyboard, and mouse, looking towards the server racks. Blue lines representing data connections link the server racks to the workstation.

Department of Information Technology

Lecture 8

Server Management

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# Overview

- Windows Server Backup and Recovery
- Operational Master Roles
- Removing a Domain Controller

# Backup and Recovery

- Windows Server Backup essentially a feature that you can install onto any machine, that provides a set of wizards and other tools for you to perform basic backup and recovery tasks for the server it is installed on.

# Backup and Recovery

- Users can use the Windows Server Backup service to back up full Server, the system state, the selected volumes, and the specified files and folders.

# Backup and Recovery

Add Roles and Features Wizard

## Select features

Before You Begin  
Installation Type  
Server Selection  
Server Roles  
**Features**  
Confirmation  
Results

Select one or more features to install on the selected server.

**Features**

- TFTP Client
- WebDAV Redirector
- Windows Biometric Framework
- Windows Defender Features (Installed)
- Windows Identity Foundation 3.5
- Windows Internal Database
- Windows PowerShell (2 of 5 installed)
- Windows Process Activation Service
- Windows Search Service
- Windows Server Backup**
- Windows Server Migration Tools
- Windows Standards-Based Storage Management
- Windows TIFF IFilter
- WinRM IIS Extension
- WINS Server
- Wireless LAN Service
- VM Shielding Tools for Fabric Management
- WoW64 Support (Installed)
- XPS Viewer

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# Backup and Recovery

The screenshot shows the Windows Server Manager interface. The main area displays a 'WELCOME TO SERVER MANAGER' section with a 'QUICK START' list of five tasks: 1. Configure this local server, 2. Add roles and features, 3. Add other servers to manage, 4. Create a server group, and 5. Connect this server to cloud services. Below this is the 'ROLES AND SERVER GROUPS' section, which shows three roles: AD DS, DNS, and File and Storage Services, each with a 'Manageability' icon and a list of sub-items (Events, Services, Performance, BPA results). On the right side, the 'Tools' menu is open, listing various system utilities. The 'Windows Server Backup' option at the bottom of the list is highlighted with a red rectangular box.

Server Manager Dashboard

WELCOME TO SERVER MANAGER

**1** Configure this local server

2 Add roles and features

3 Add other servers to manage

4 Create a server group

5 Connect this server to cloud services

ROLES AND SERVER GROUPS

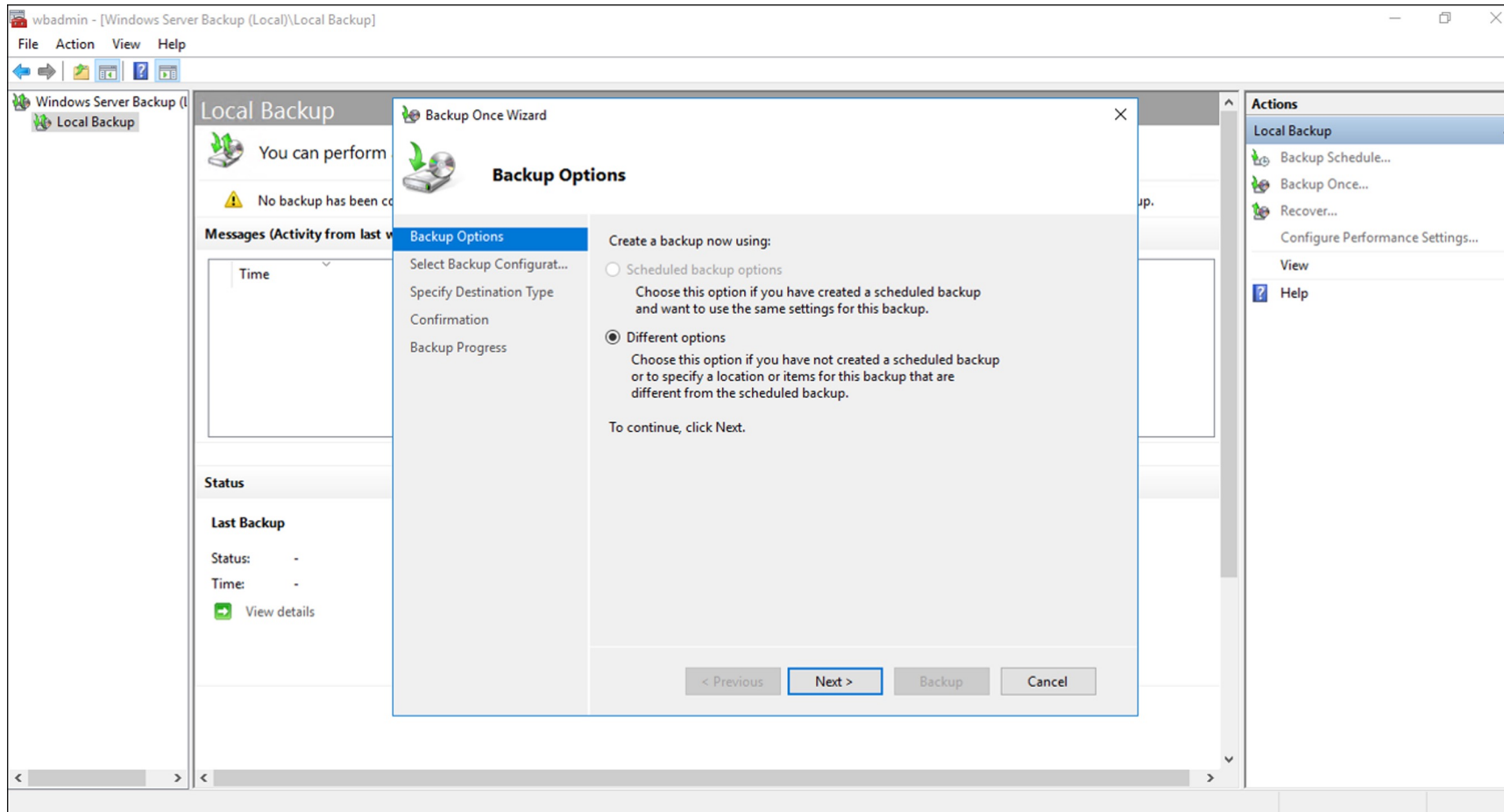
Roles: 3 | Server groups: 1 | Servers total: 1

Role	Count
AD DS	1
DNS	1
File and Storage Services	1

Tools menu items:

- Active Directory Sites and Services
- Active Directory Users and Computers
- ADSI Edit
- Component Services
- Computer Management
- Defragment and Optimize Drives
- Disk Cleanup
- DNS
- Event Viewer
- Group Policy Management
- iSCSI Initiator
- Local Security Policy
- Microsoft Azure Services
- ODBC Data Sources (32-bit)
- ODBC Data Sources (64-bit)
- Performance Monitor
- Print Management
- Resource Monitor
- Services
- System Configuration
- System Information
- Task Scheduler
- Windows Firewall with Advanced Security
- Windows Memory Diagnostic
- Windows PowerShell
- Windows PowerShell (x86)
- Windows PowerShell ISE
- Windows PowerShell ISE (x86)
- Windows Server Backup

# Backup and Recovery



# Managing Operations Masters

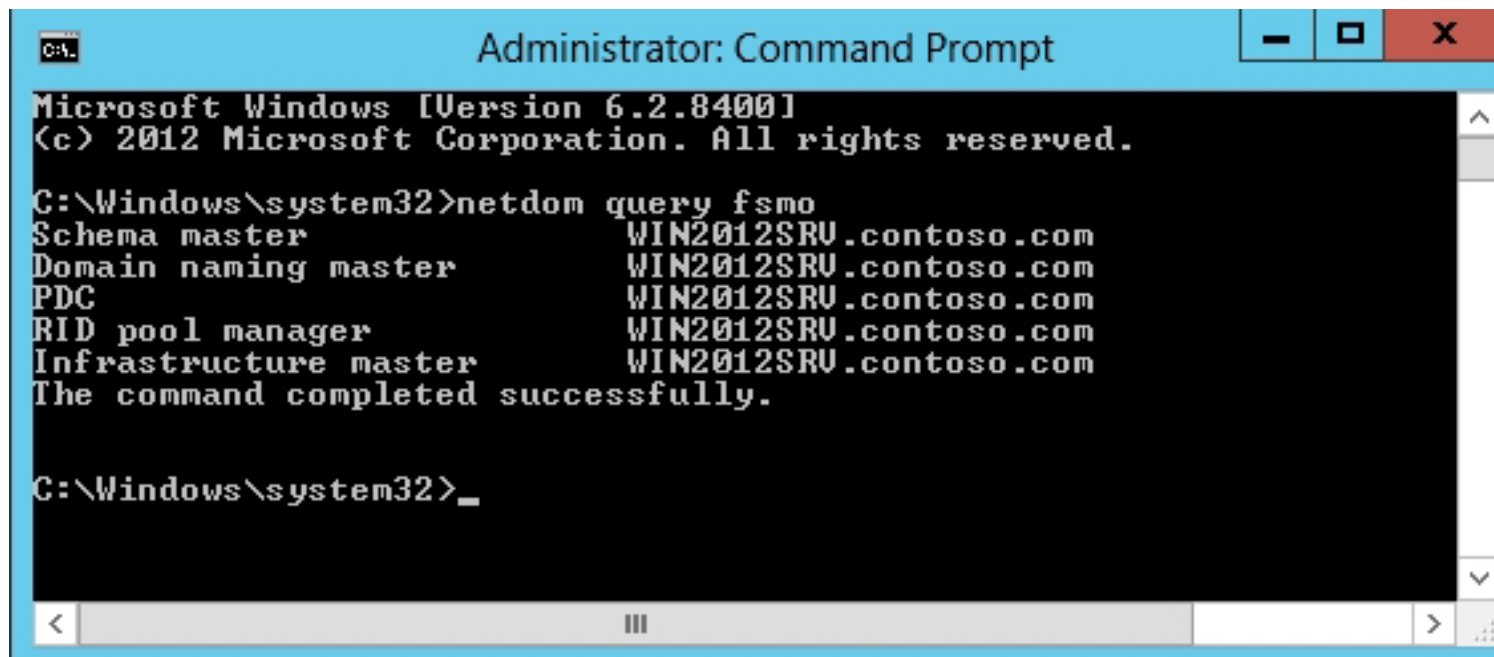
Guidelines for placing the Operations Master roles:

- Place the domain-level roles on high-performance domain controllers.
- Do not place the infrastructure master on a global catalog server unless you have only one domain or all the domain controllers in your forest are also global catalogs.
- The Schema Master and Domain Naming Master should be on domain controllers in the forest-root domain.
- If the Primary Domain Controller (PDC) Emulator becomes overworked, you should offload non-AD DS roles to other servers, upgrade the PDC Emulator, or move the PDC Emulator to a more powerful computer.

# Viewing the Operations Masters Role Holders

- The easiest way to view the holders of all Operations Masters at once:  
`netdom query fsmo`
- To view the RID Masters, PDC Emulators, or Infrastructure Master, use the Active Directory Users and Computers console.

## Viewing Operations Masters



```
Administrator: Command Prompt
Microsoft Windows [Version 6.2.8400]
(c) 2012 Microsoft Corporation. All rights reserved.

C:\Windows\system32>netdom query fsmo
Schema master           WIN2012SRU.contoso.com
Domain naming master   WIN2012SRU.contoso.com
PDC                     WIN2012SRU.contoso.com
RID pool manager       WIN2012SRU.contoso.com
Infrastructure master   WIN2012SRU.contoso.com
The command completed successfully.

C:\Windows\system32>_
```

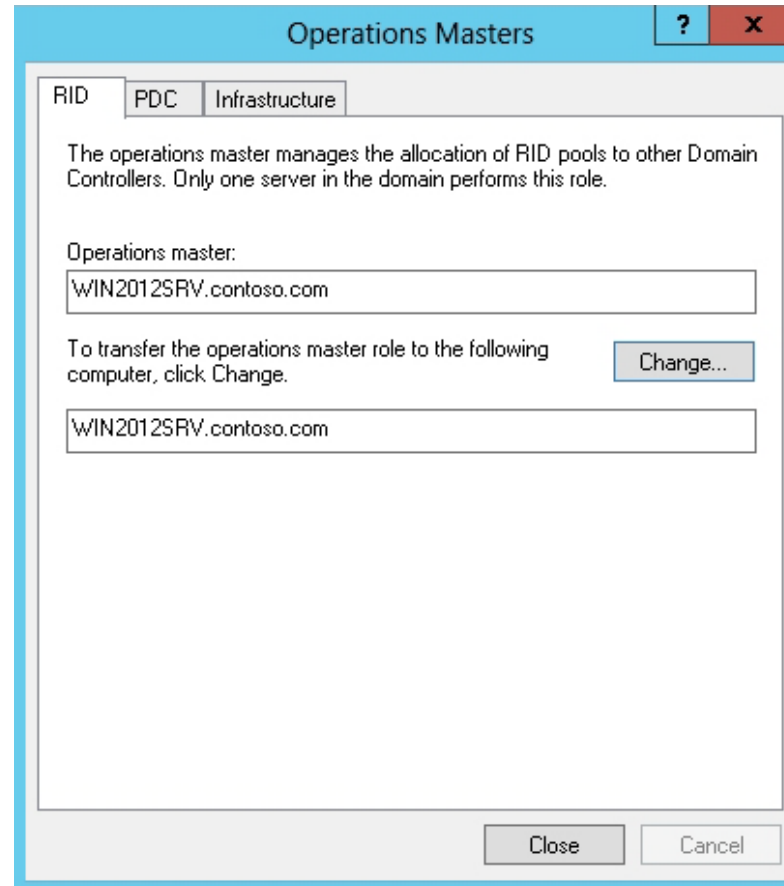
Viewing the holders of the Operations Masters roles at the command prompt

# Viewing the Operations Masters Role Holders

- To view the holder of the Domain Naming Master role, use the Active Directory Domains and Trusts console.
- To view the holder of the Schema Master role, use the Active Directory Schema.

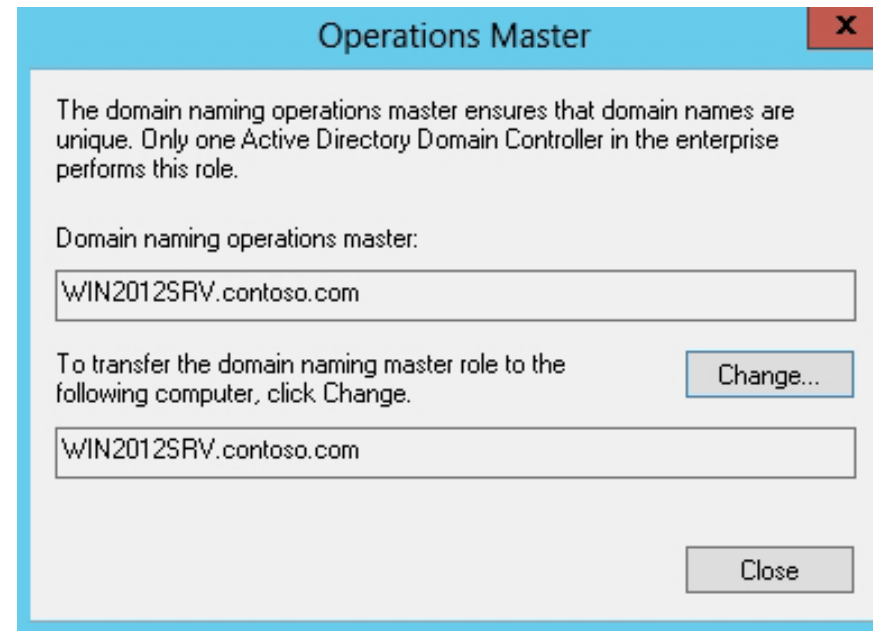


## View the Holders of RID Master, PDC Emulator, or Infrastructure Master



Using the Active Directory Users and Computers console to view the holders of the domain-based Operation Masters roles

## View the Domain Naming Operations Master Role Holder

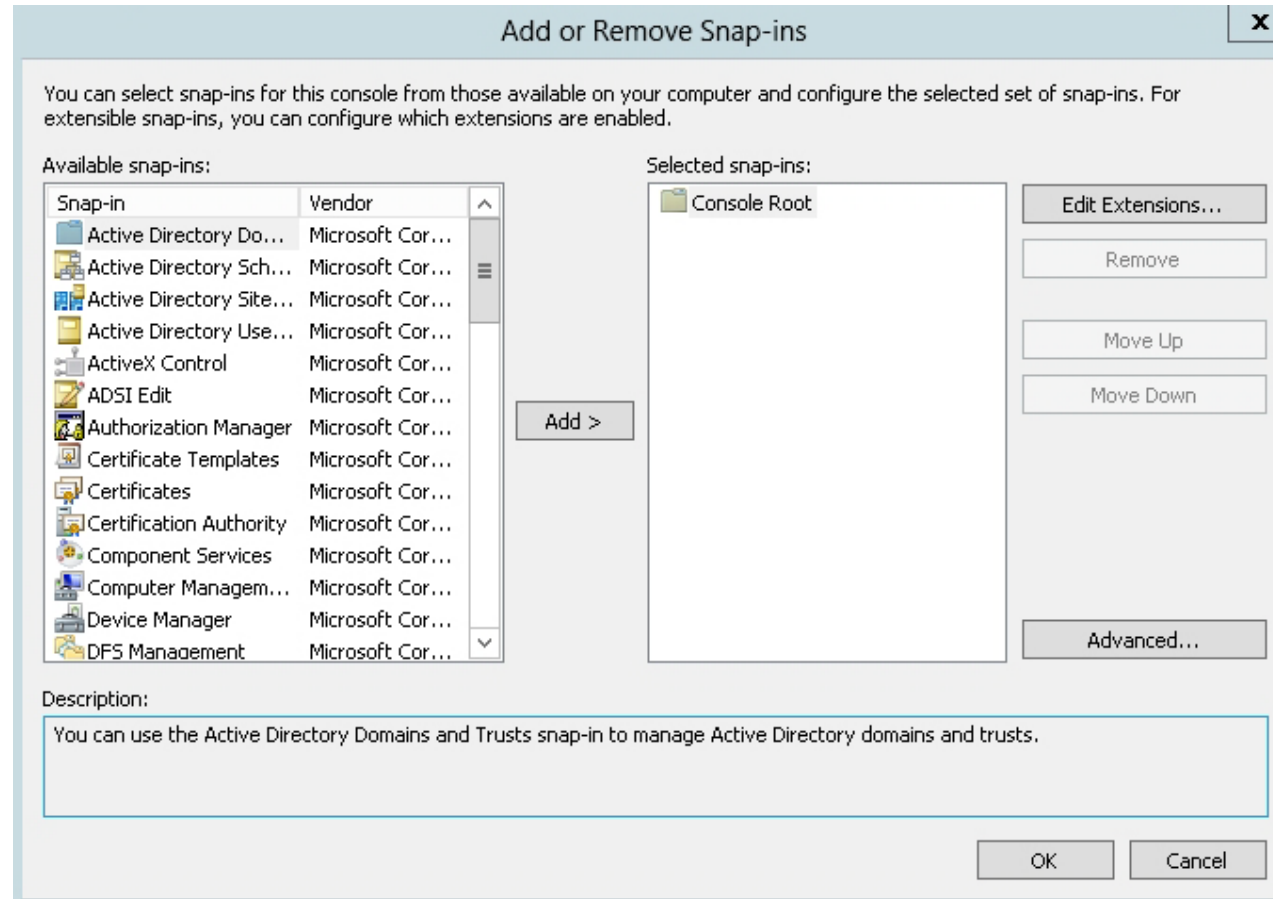


Using the Active Directory Domains and Trusts console to view the holders of the Domain Naming Operations Master

# View the Schema Master Operations Master Role Holder

- For adding schema master do the following steps
- Cmd → regsvr32 schmmgmt.dll

# View the Schema Master Operations Master Role Holder



Opening the Add or Remove Snap-in dialog box

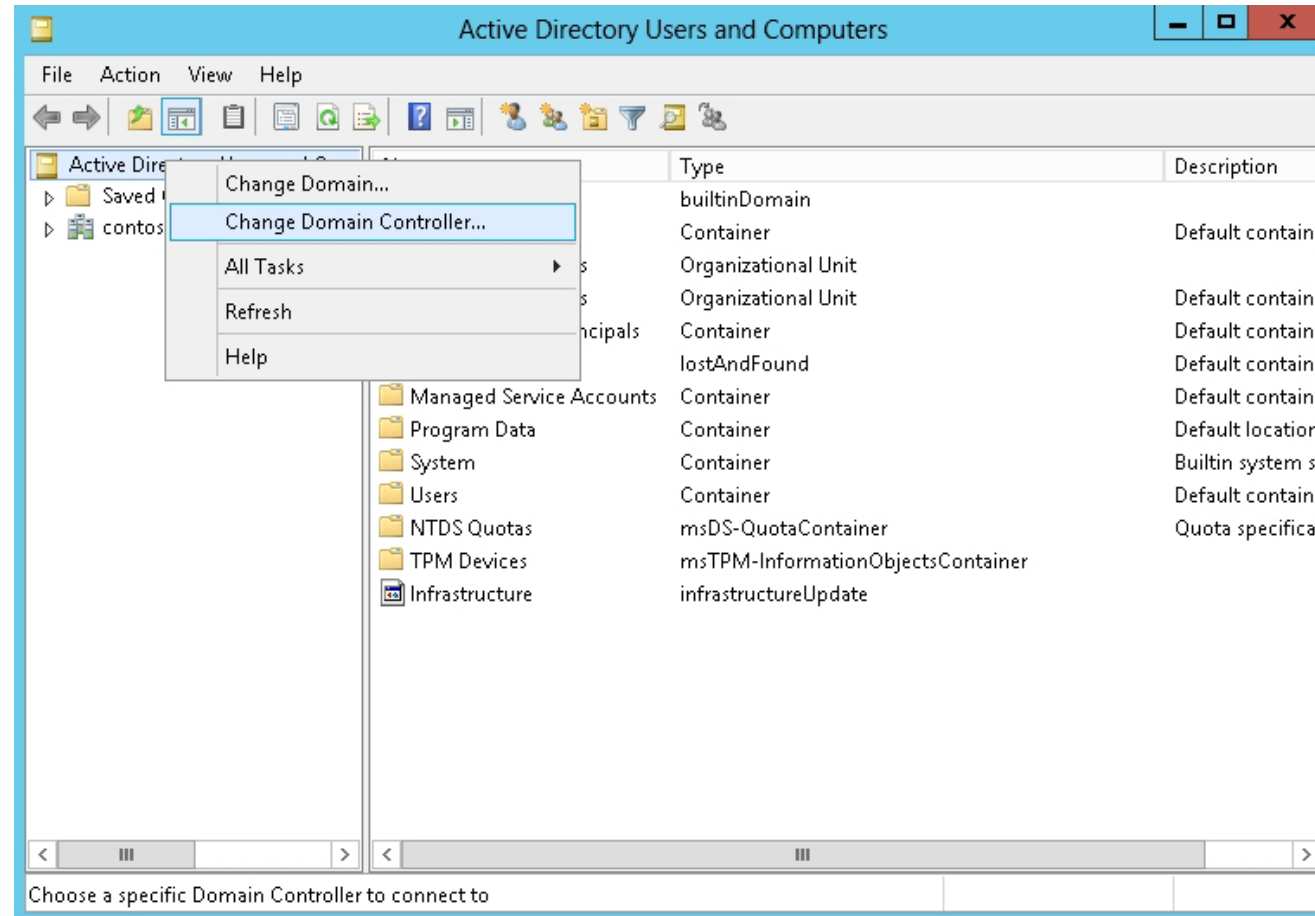
# Transferring the Operations Masters Role

Reasons to transfer the Operations Master:

- Planned maintenance
- Retiring a domain controller that holds a role of Operations Master
- Moving a role of Operations Master to a domain controller with more resources

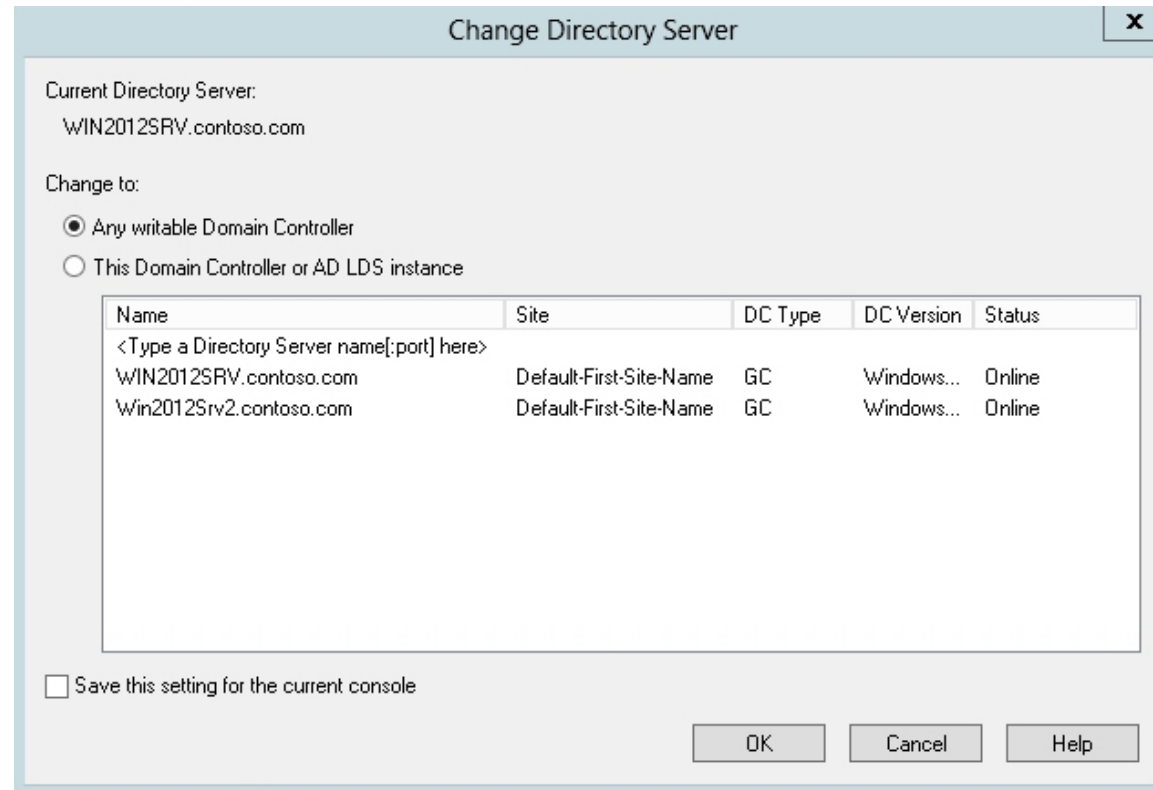
Transferring a FSMO role requires that the source domain controller and the target domain controller be online.

# Transfer the Holders of RID Master, PDC Emulator, or Infrastructure Master



Selecting the Change Domain Controller option

## Transfer the Holders of RID Master, PDC Emulator, or Infrastructure Master

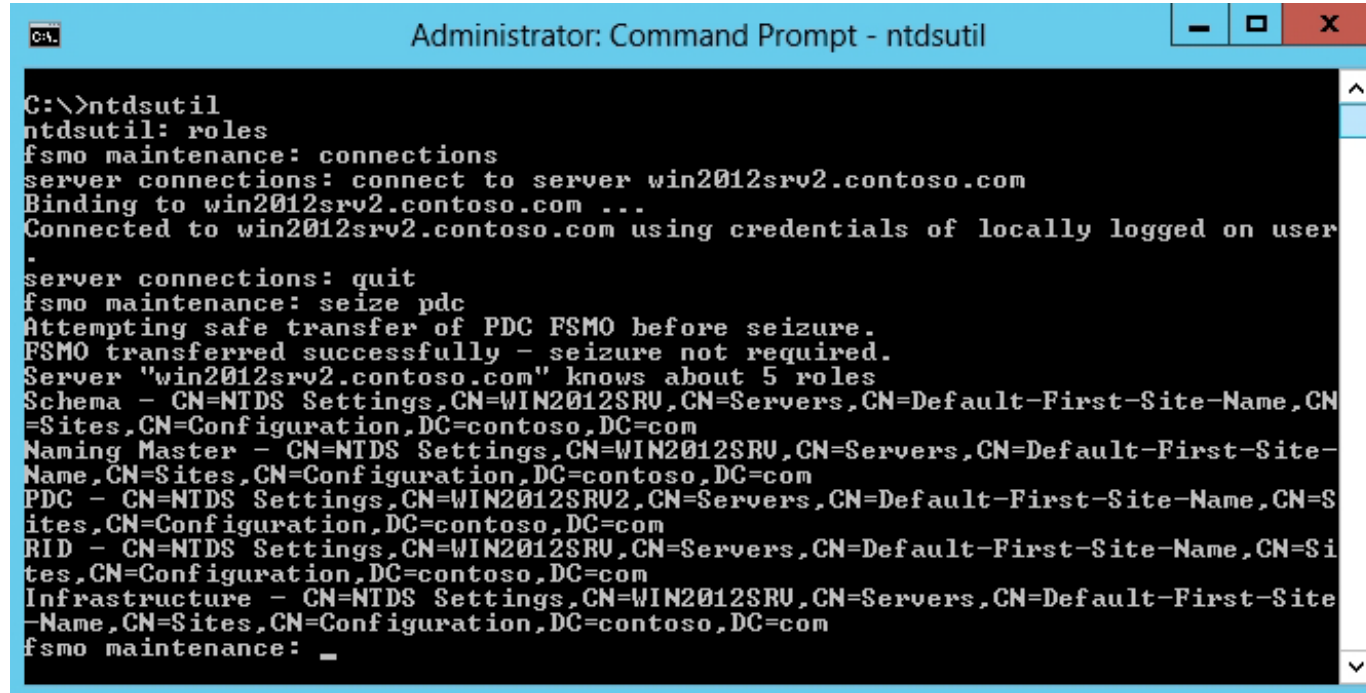


Selecting a domain controller to transfer the role to

# Seizing the Operations Masters Role

- If a domain controller that holds an Operations Master role has an unrecoverable failure, you cannot transfer roles because the current domain controller is not online. Therefore, you need to seize the role.
- Seizing a FSMO role is a drastic measure that should be performed only in the event of a permanent role holder failure.
- To seize a role of an Operations Master, you use the `ntdsutil.exe` utility.

## Seize the Role of an Operations Master Holder



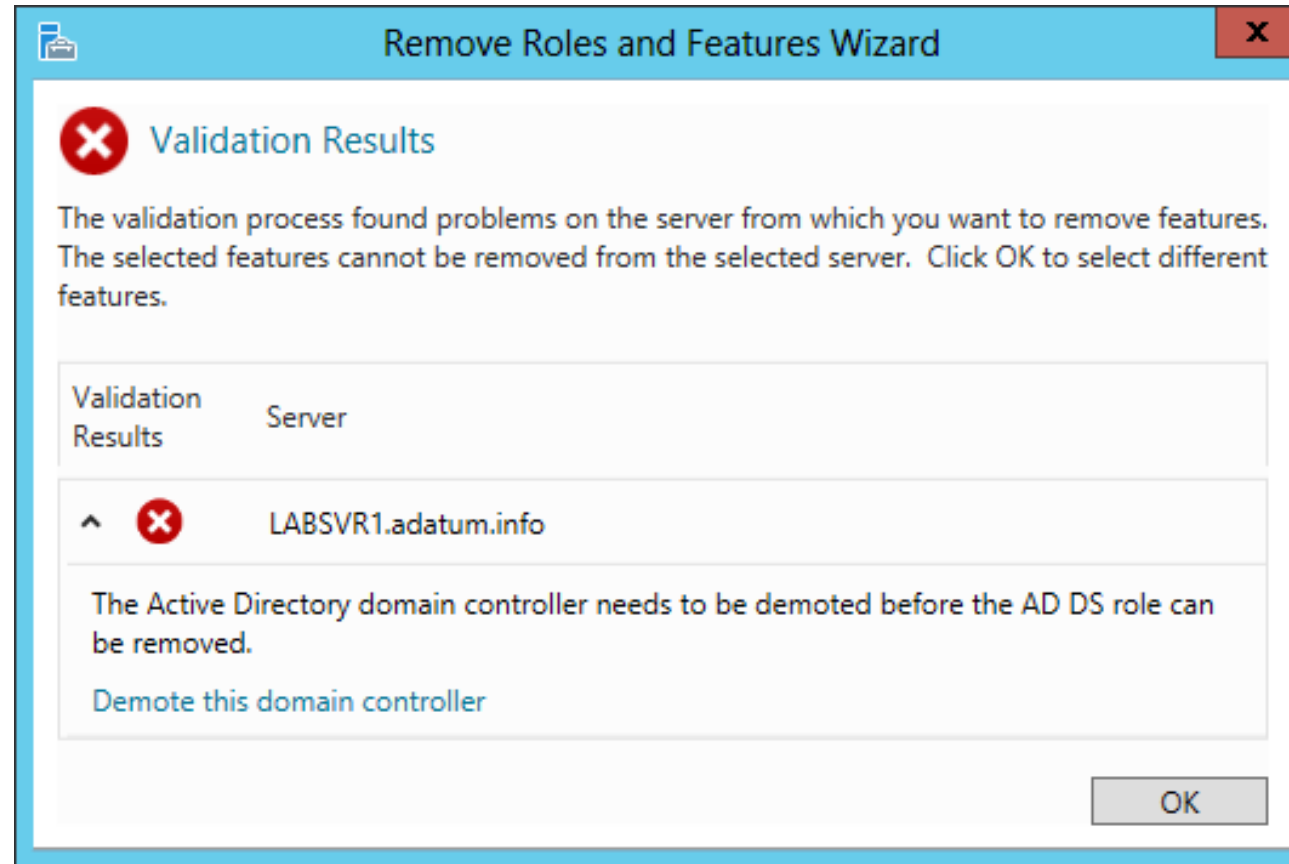
```
C:\>ntdsutil
ntdsutil: roles
fsmo maintenance: connections
server connections: connect to server win2012srv2.contoso.com
Binding to win2012srv2.contoso.com ...
Connected to win2012srv2.contoso.com using credentials of locally logged on user
server connections: quit
fsmo maintenance: seize pdc
Attempting safe transfer of PDC FSMO before seizure.
FSMO transferred successfully - seizure not required.
Server "win2012srv2.contoso.com" knows about 5 roles
Schema - CN=NTDS Settings,CN=WIN2012SRU,CN=Servers,CN=Default-First-Site-Name,CN=
=Sites,CN=Configuration,DC=contoso,DC=com
Naming Master - CN=NTDS Settings,CN=WIN2012SRU,CN=Servers,CN=Default-First-Site-
Name,CN= Sites,CN=Configuration,DC=contoso,DC=com
PDC - CN=NTDS Settings,CN=WIN2012SRU2,CN=Servers,CN=Default-First-Site-Name,CN=S
ites,CN=Configuration,DC=contoso,DC=com
RID - CN=NTDS Settings,CN=WIN2012SRU,CN=Servers,CN=Default-First-Site-Name,CN=Si
tes,CN=Configuration,DC=contoso,DC=com
Infrastructure - CN=NTDS Settings,CN=WIN2012SRU,CN=Servers,CN=Default-First-Site-
Name,CN= Sites,CN=Configuration,DC=contoso,DC=com
fsmo maintenance: _
```

Seizing the PDC Emulator role

# Removing a Domain Controller

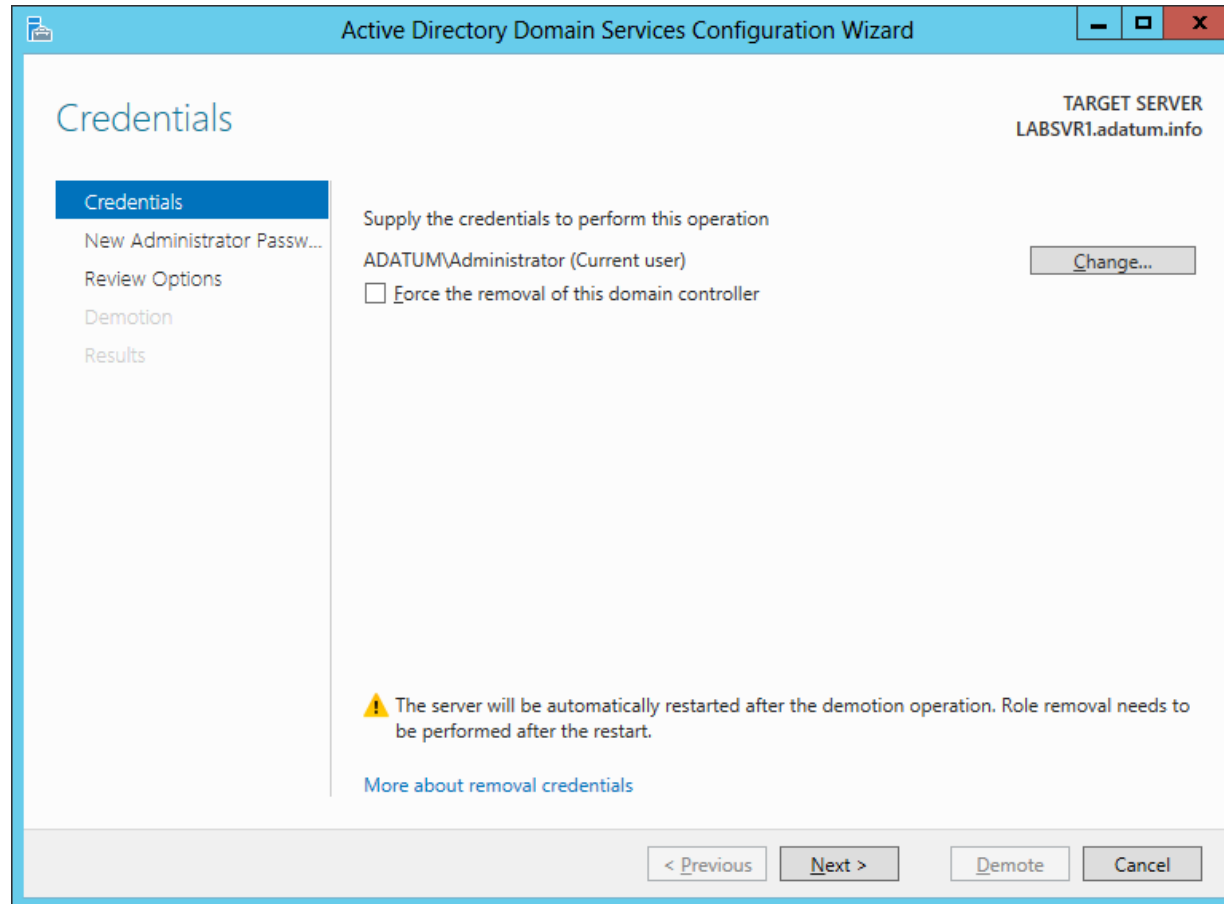
- To remove a domain controller from an AD DS installation, you must begin by running the Remove Roles and Features Wizard.
- Select *Demote this Domain Controller*.

## Remove a Domain Controller



The Validation Results dialog box of the Remove Roles and Features Wizard

# Remove a Domain Controller



The Credentials page of the Active Directory Domain Services Configuration Wizard

# Remove a Domain Controller

The screenshot shows the 'Active Directory Domain Services Configuration Wizard' window. The title bar includes a minimize, maximize, and close button. The main content area is titled 'New Administrator Password' and shows the 'TARGET SERVER' as 'LABSVR1.adatum.info'. On the left, a navigation pane lists 'Credentials', 'New Administrator Passw...', 'Review Options', 'Demotion', and 'Results'. The 'New Administrator Passw...' option is selected. The main area contains two password input fields: 'Password:' and 'Confirm password:', both with red asterisks indicating required fields. At the bottom, there are four buttons: '< Previous', 'Next >', 'Demote', and 'Cancel'. A link 'More about removal administrator password' is located at the bottom left of the main area.

The New Administrator Password page of the Active Directory Domain Services Configuration Wizard