

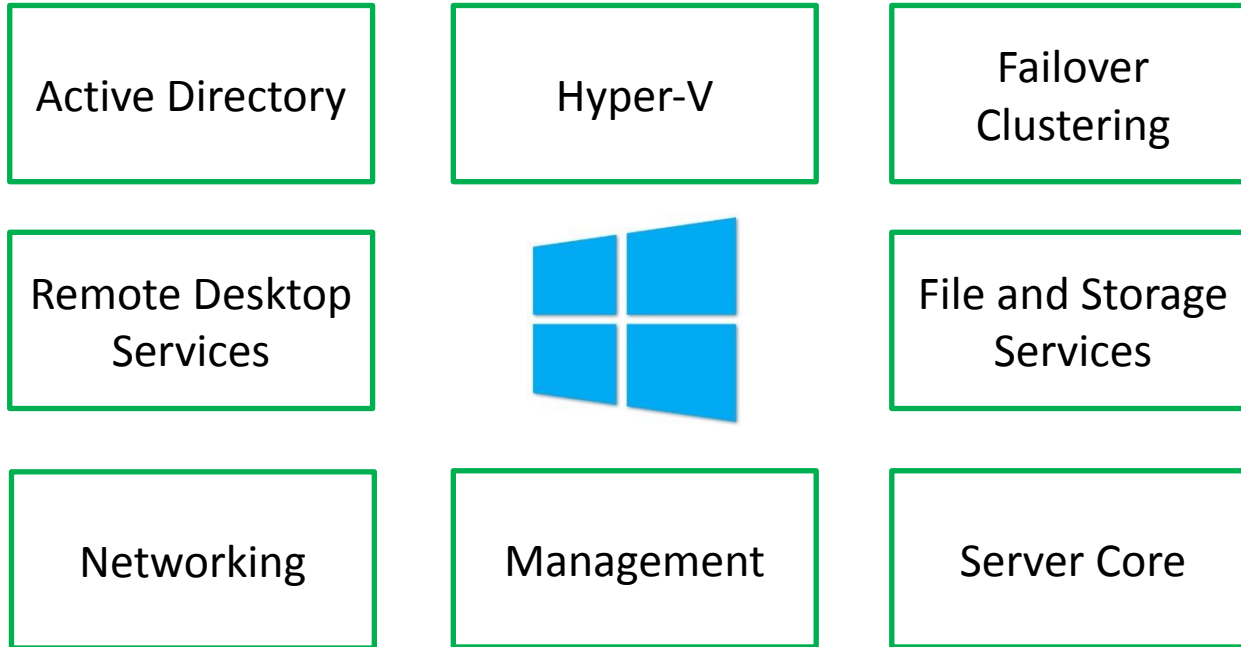


Горинов Максим: МСТ, MCITP:Enterprise Administrator

WINDOWS SERVER “8” BETA ТЕХНИЧЕСКИЙ ОБЗОР

МСР CLUB. ПЕРМЬ. АПРЕЛЬ 2012

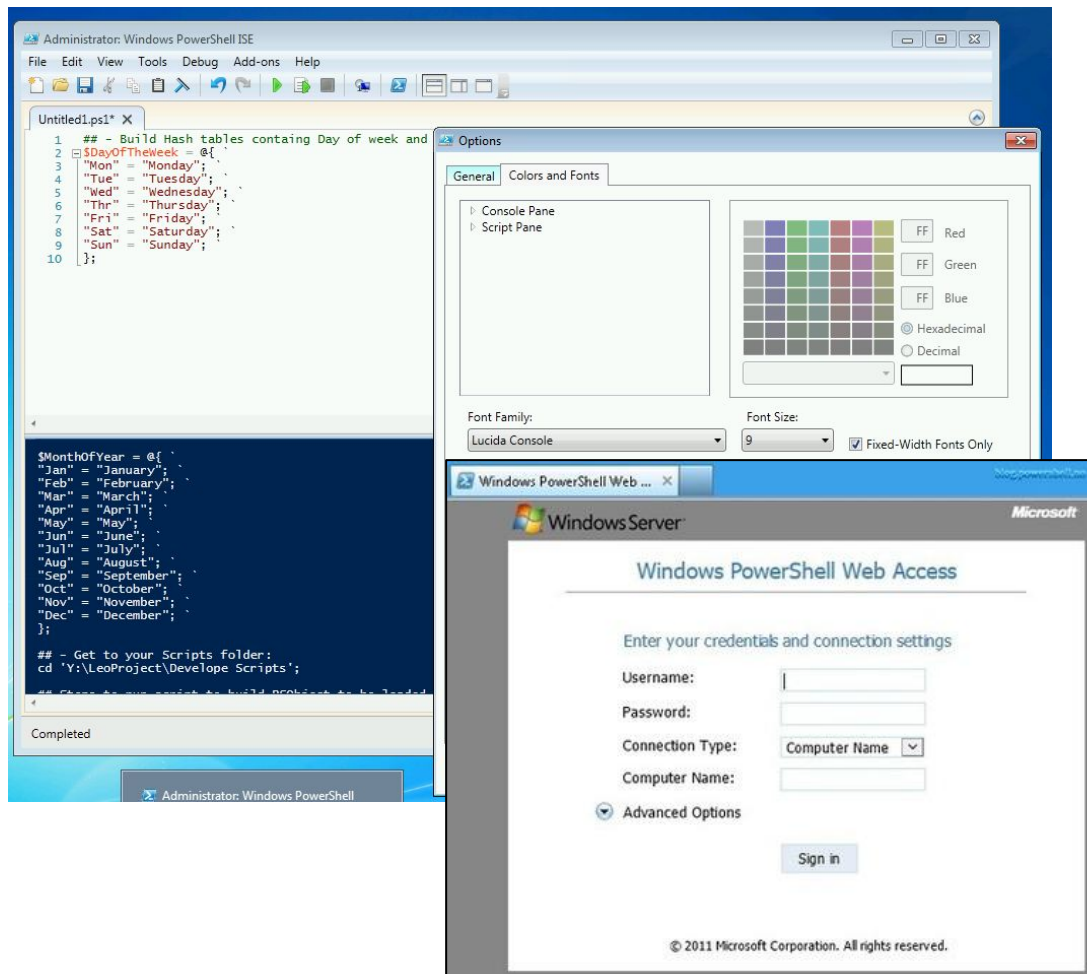
Новые и улучшенные технологии в Windows Server “8”



Windows Server “8”: Management

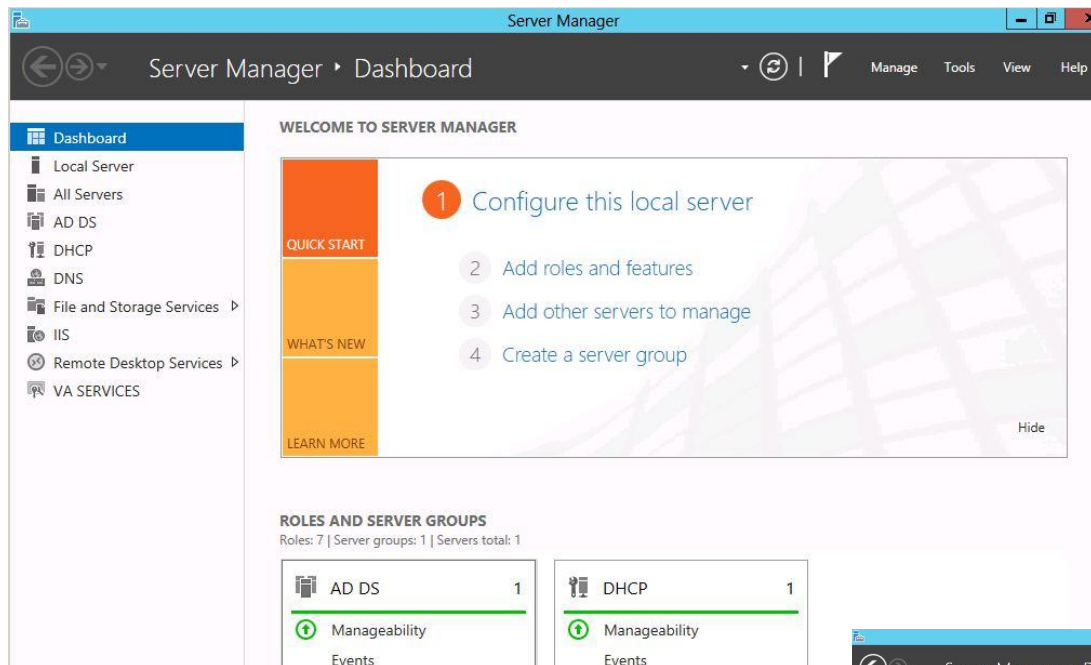
- PowerShell 3.0
- Server Manager
- Offline VHD Deployment

Management: PowerShell 3.0

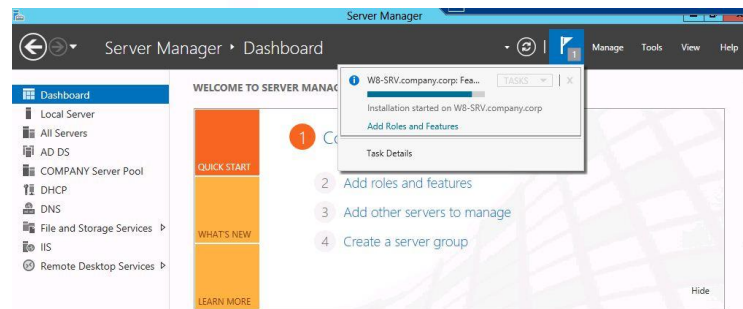


- PowerShell Workflow
- Переподключение к удаленной сессии
- PowerShell Web Access

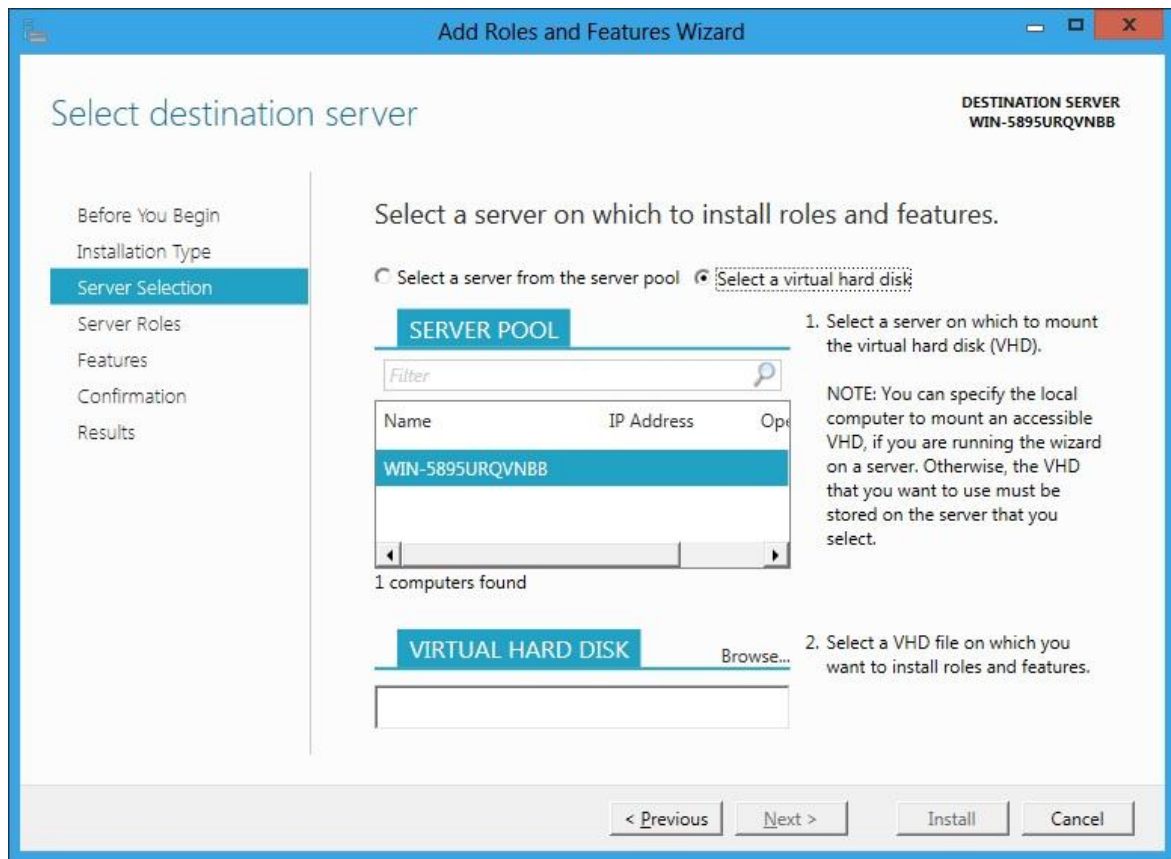
Management: Server Manager



- WPF приложение накладываемое на PowerShell
- Мультисерверное управление
 - File Storage Management
 - Remote Desktop Services
 - IP Address Management (IPAM)
- Запуск утилит управления в контексте управляемого сервера



Management: Offline VHD Deployment

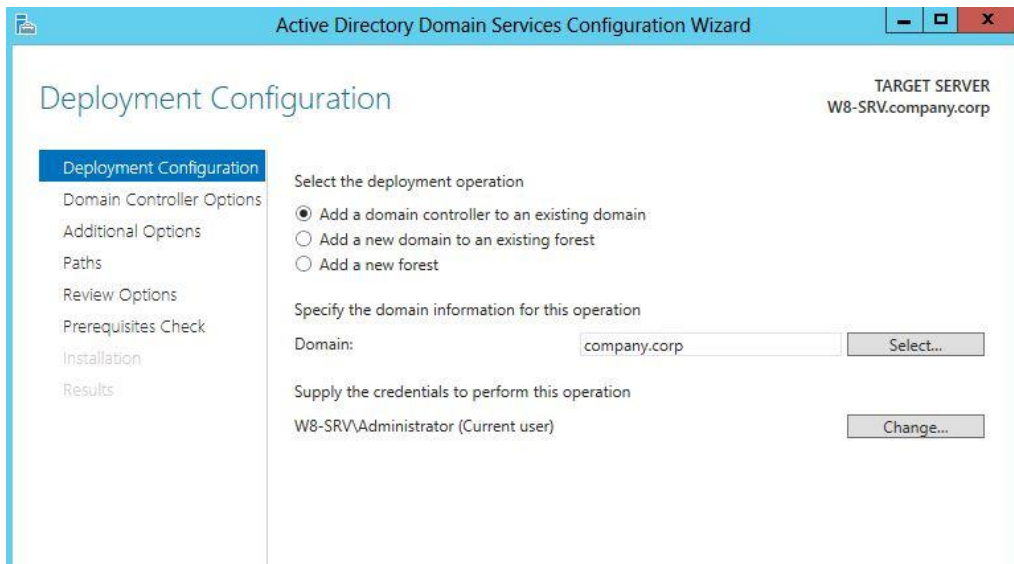


Offline Servicing для выключенных виртуальных машин

Windows Server “8”: Active Directory

- ADDS Configuration Wizard
- DC Cloning
- DC Virtualization
- Dynamic Access Control

Active Directory: ADDS Configuration Wizard

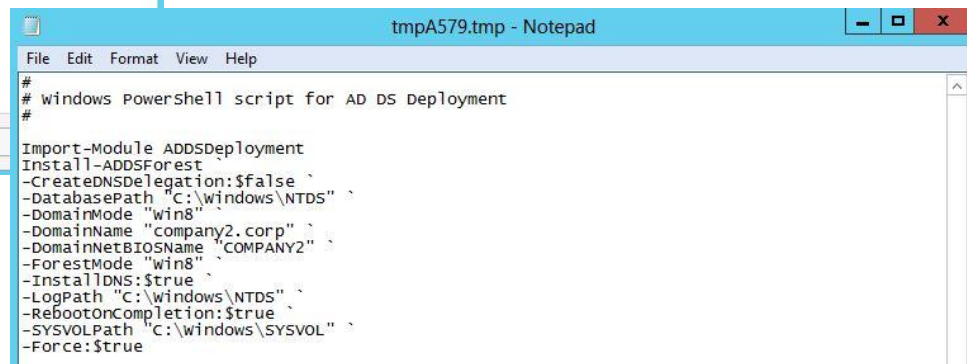


□ Интеграция в Server Manager

- DCPROMO
- ADPREP

□ Возможность запуска на удаленных серверах

□ Визард позволяет экспортировать скрипт развертывания ADDS через PowerShell



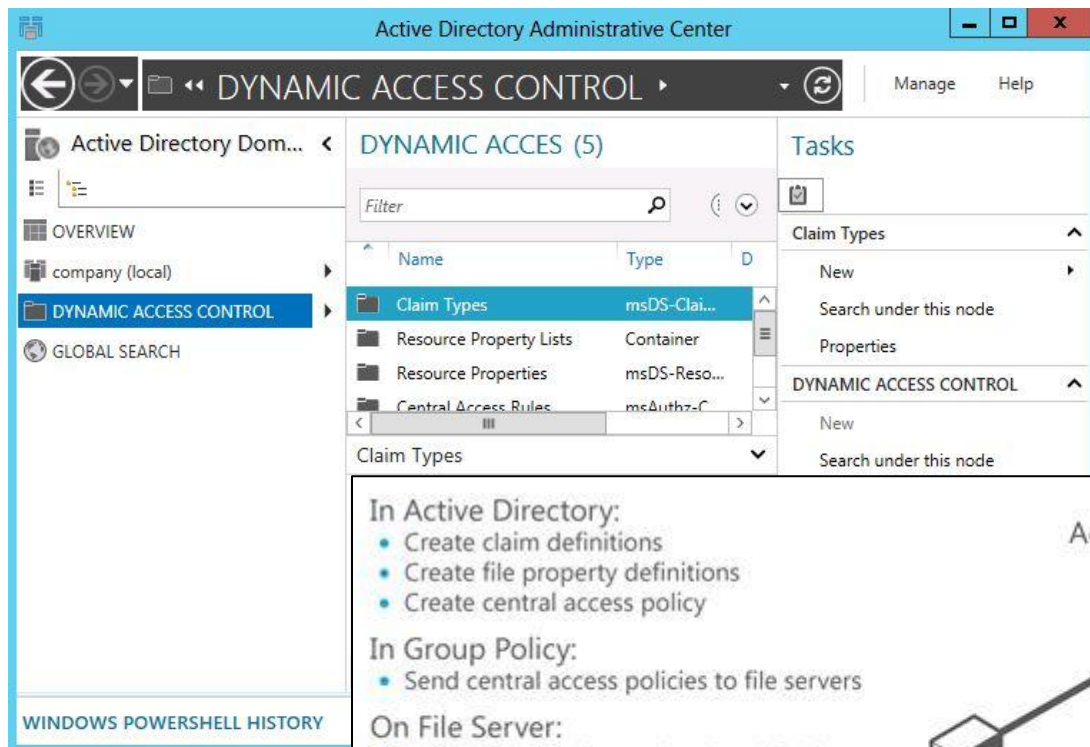


⋮ · Domain Controller cloning is at 2% completion...

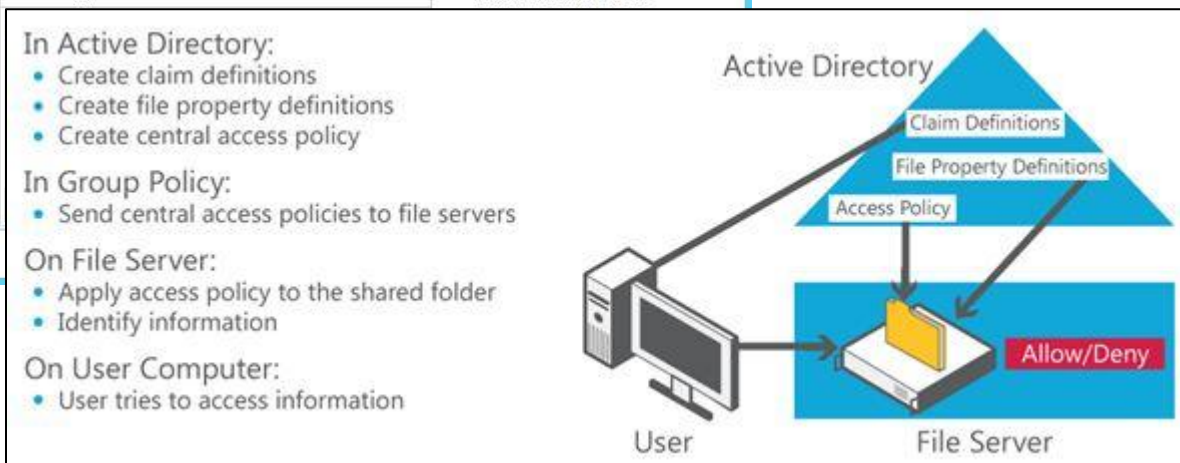
 Windows Server 8 Beta

- Возможность клонирования виртуализованного доменного контроллера
- Virtual machine Generation ID

Active Directory: Dynamic Access Control



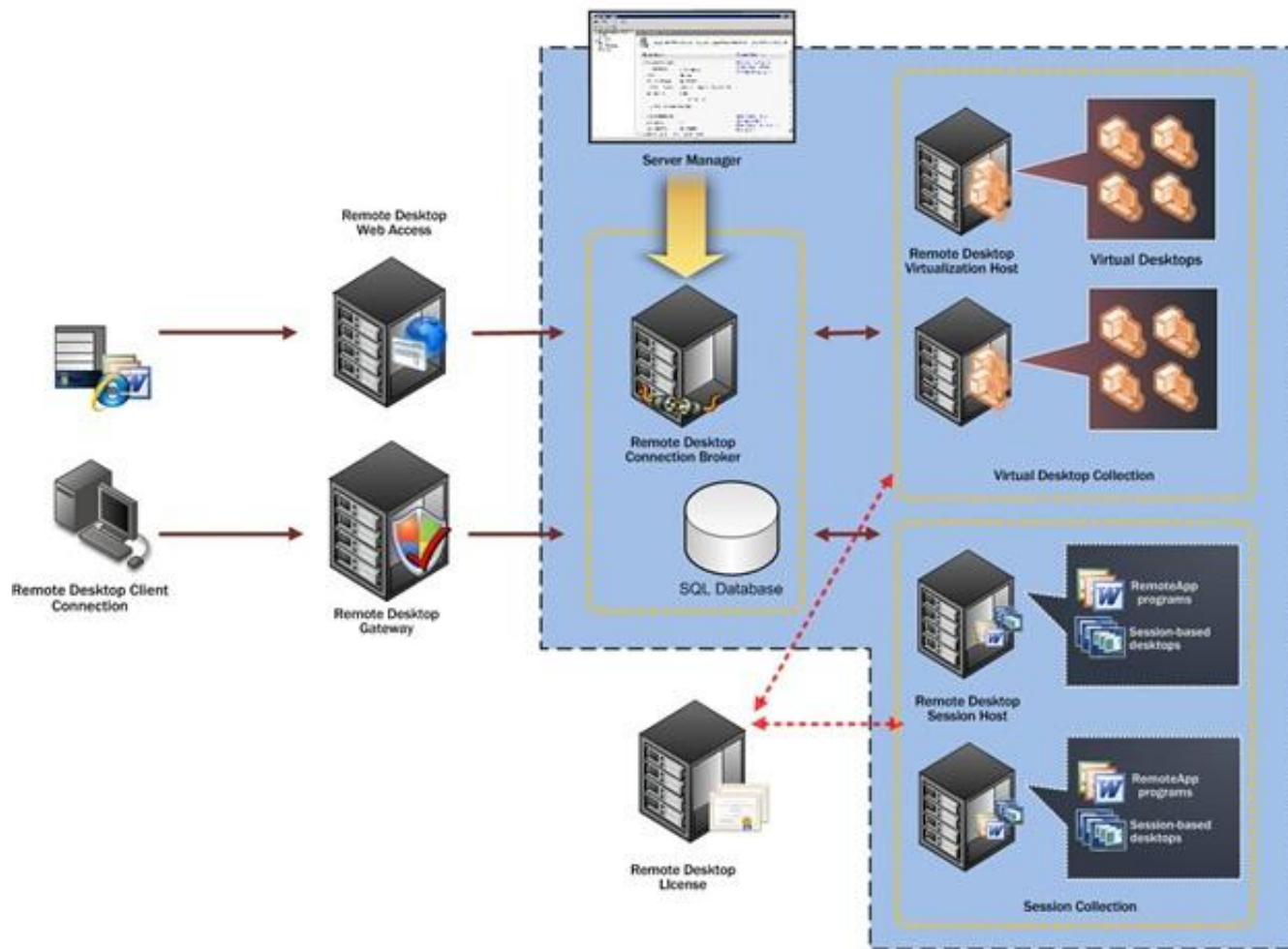
- Новый движок аудита
- Аудит доступа к файлам
- Применение RMS шаблонов к файлам



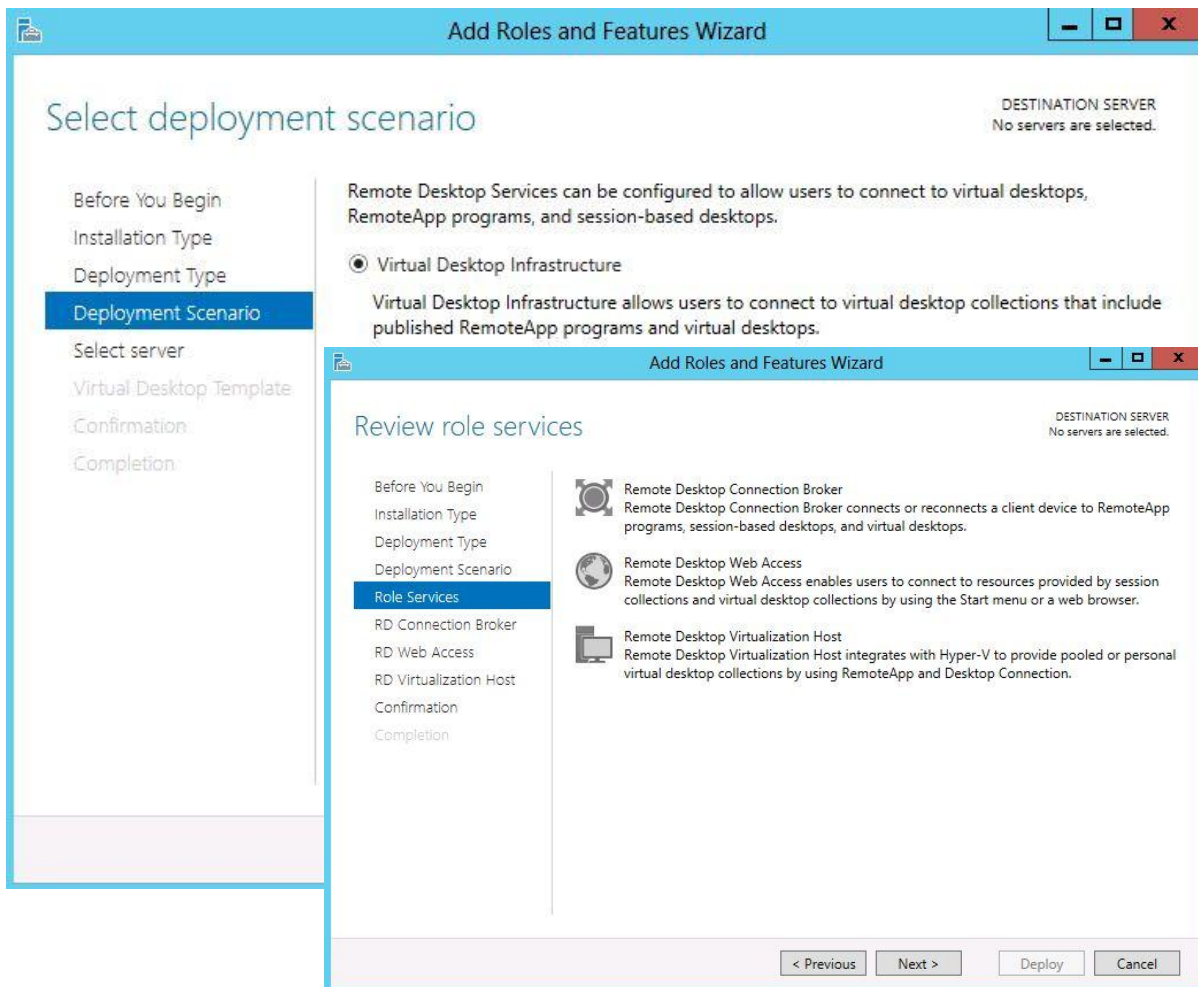
Windows Server “8”: Remote Desktop Services (RDS)

- Архитектура
- VDI Scenario-based Installation
- RDS Scenario-based Installation
- RemoteFX

RDS: Архитектура

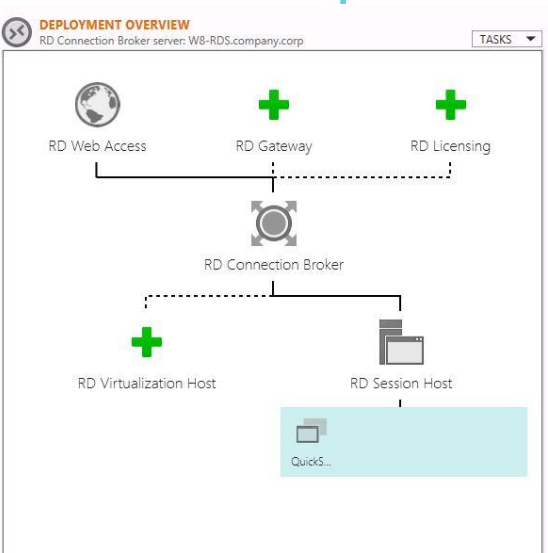
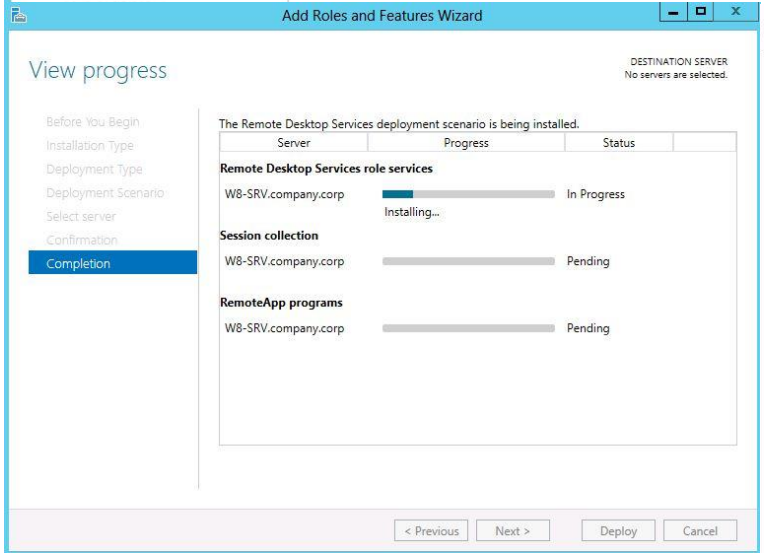


RDS: VDI Scenario-based Installation



- Standard Deployment
- Quick Start
 - RD Connection Broker
 - RD Web Access
 - RD Virtualization Host

RDS: RDS Scenario-based Installation



- Standard Deployment
- Quick Start
 - RD Connection Broker
 - RD Web Access
 - RD Session Host
 - RemoteAPP Publishing

- ❑ RemoteFX USB Redirection RDSH

 - All-in-One Printer

 - Scanner

 - Biometric

 - Webcam

 - VoIP

- ❑ Оптимизированная производительность для WAN

 - RemoteFX Autodetect

 - RemoteFX Progressive Download

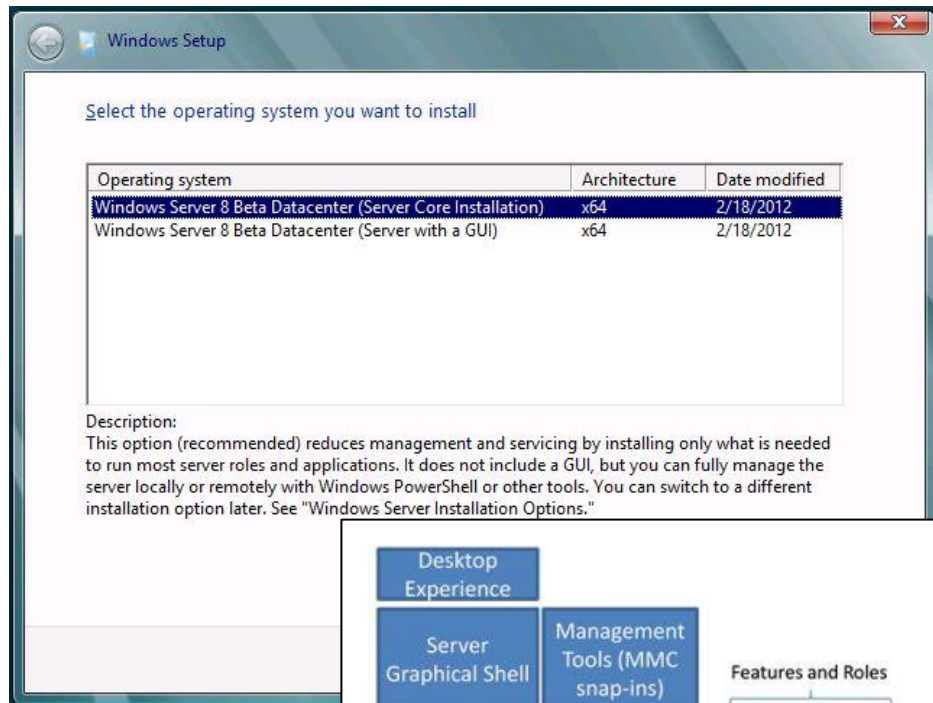
 - RemoteFX Media Streaming

- ❑ Multitouch Redirection

Windows Server “8”: Server Core

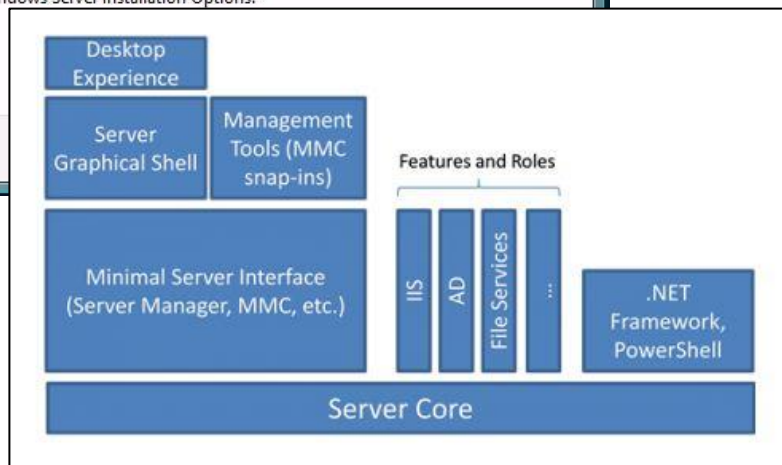
- Архитектура
- Поддерживаемые роли
- Minimal Server Interface
- Переключение между GUI / Core
- Переключение между GUI / Core через PS
- Переключение между Core / GUI

Server Core: Архитектура



□ Server Core:

- Минимальная общая база для всех редакций Windows Server
- Рекомендуемая по умолчанию опция установки ОС



Server Core: Поддерживаемые роли

ADDS /ADCS / ADLDS /
ADRMS

DHCP

DNS

File and Storage Services

Hyper-V

RRAS

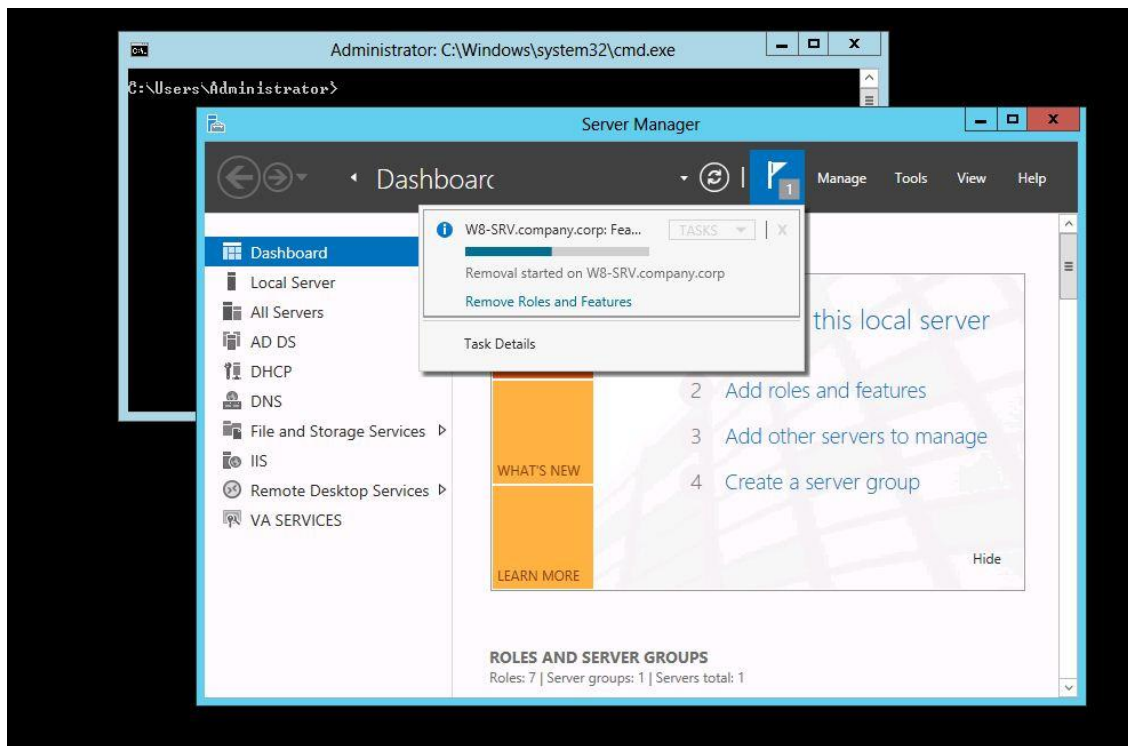
Streaming Media Server

Web Server

WSUS

Print and Document
Services

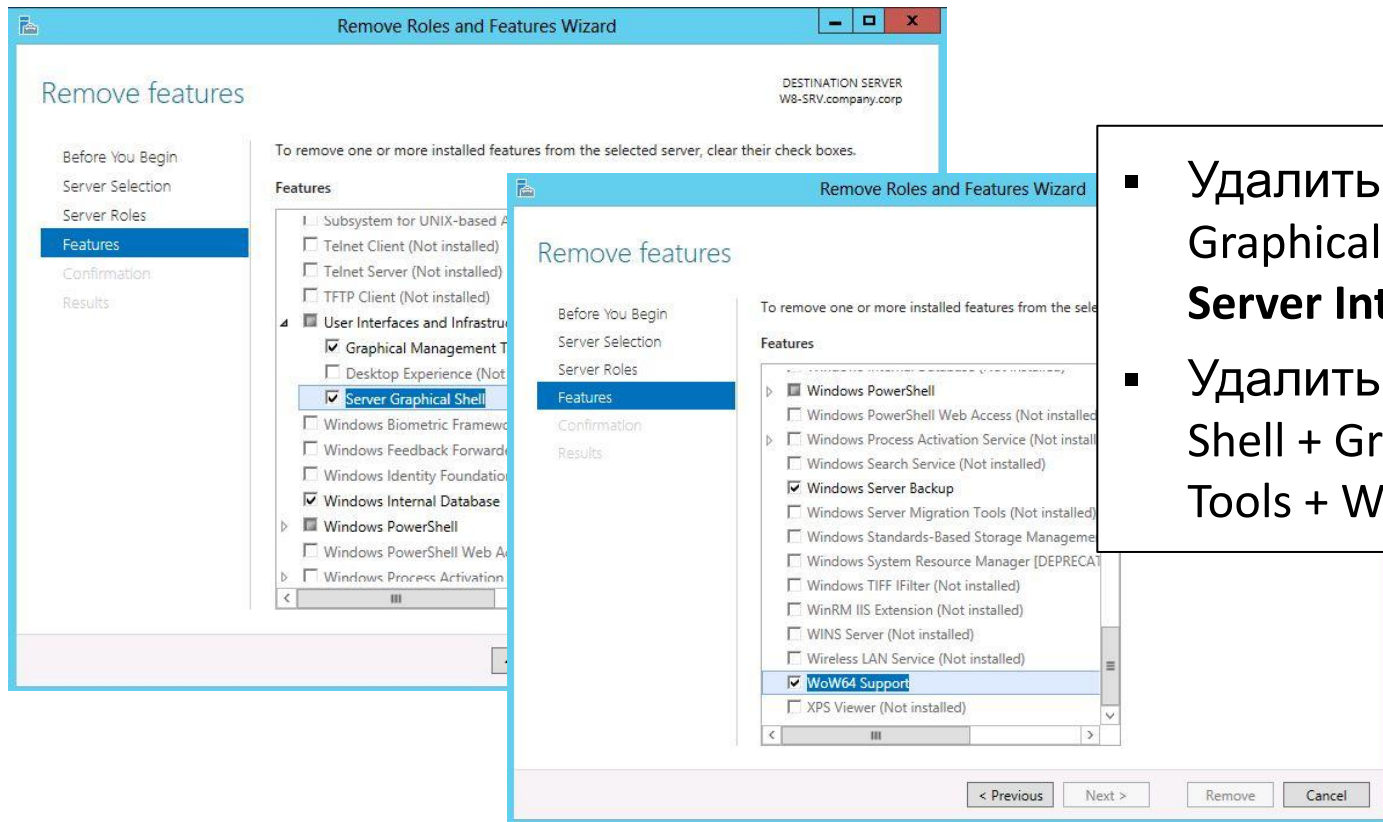
Server Core: Minimal Server Interface



Minimal Server Interface (исключает):

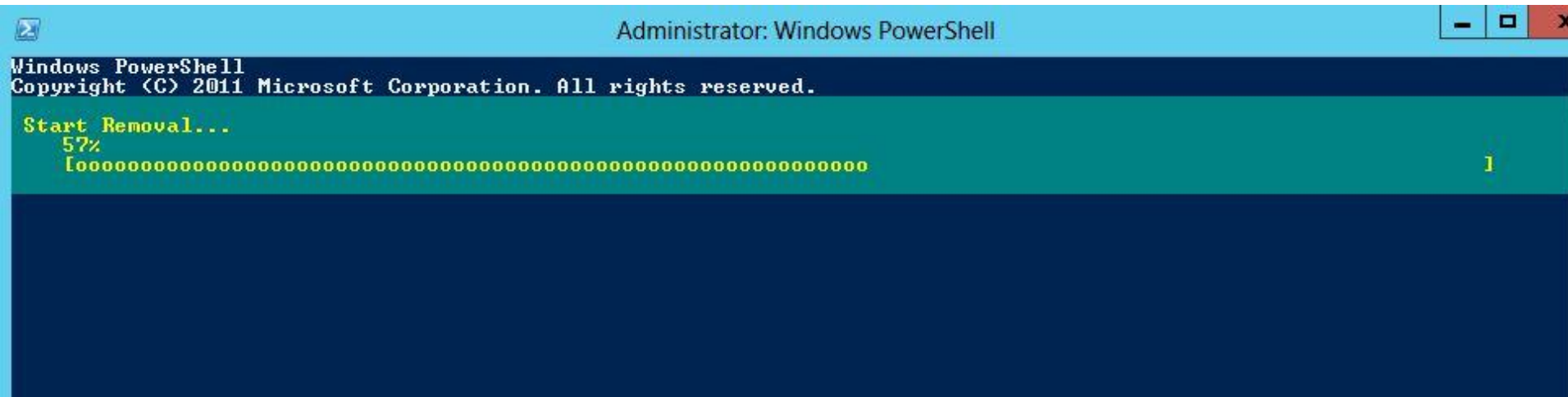
- IE
- Desktop
- Explorer
- Metro Apps support
- Multimedia support
- Desktop Experience

Server Core: Переключение между GUI / Core



- Удалить ТОЛЬКО Server Graphical Shell = **Minimal Server Interface**
- Удалить Server Graphical Shell + Graphical Management Tools + WoW64 = **Server Core**

Server Core: Переключение между GUI / Core через PS



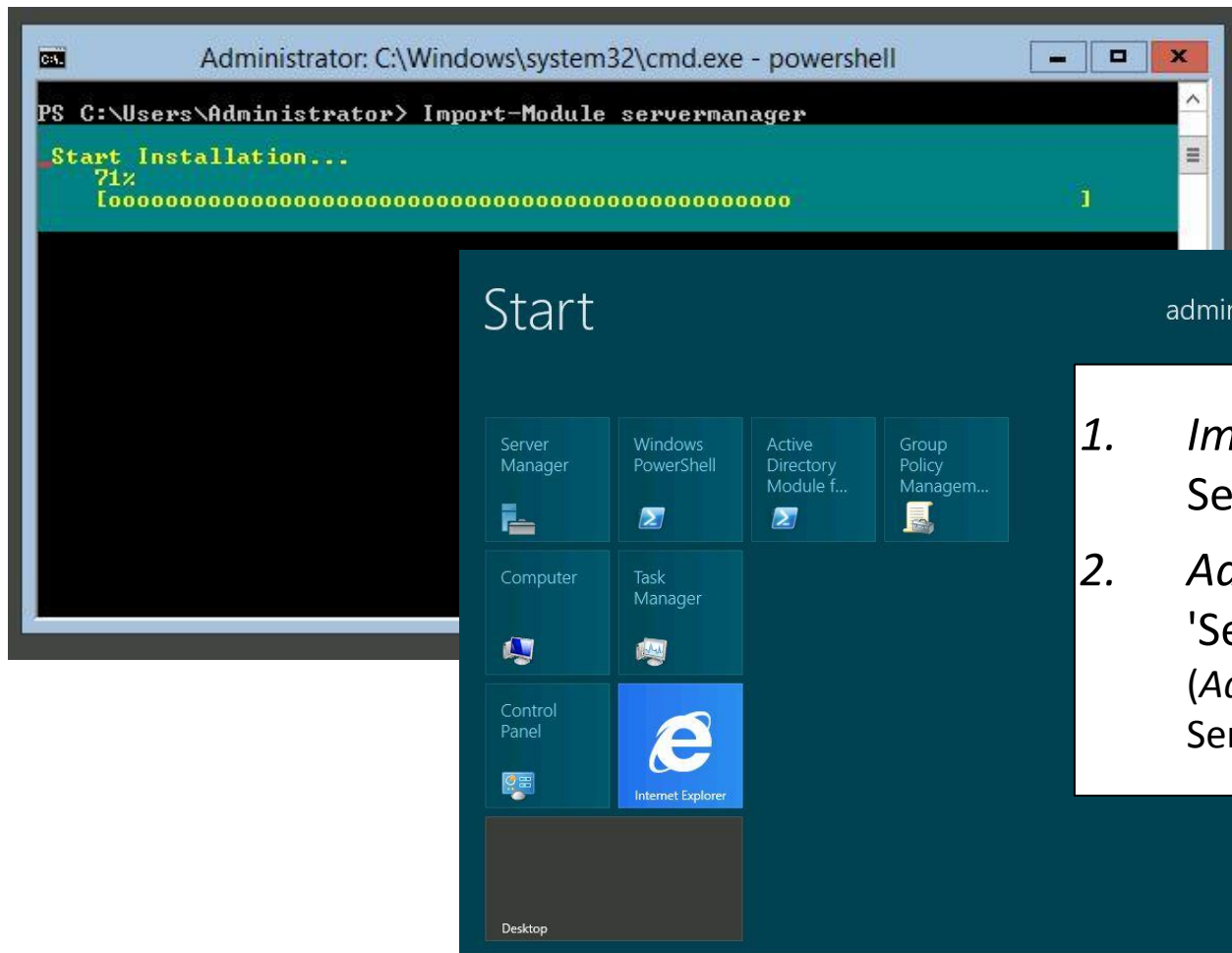
The screenshot shows a Windows PowerShell window titled "Administrator: Windows PowerShell". The console output includes the text "Start Removal..." followed by "57%" and a progress bar consisting of 57 green characters. The progress bar is followed by a vertical bar and the number "1".

```
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) 2011 Microsoft Corporation. All rights reserved.

Start Removal...
57%
[ooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooo| 1
```

- `Uninstall-WindowsFeature Server-Gui-Mgmt-Infra -Restart`

Server Core: Переключение между Core / GUI



1. *Import-Module ServerManager*
2. *Add-WindowsFeature -Name 'Server-Gui-Shell' -Restart (Add-WindowsFeature -Name Server-Gui-Mgmt-Infra -Restart)*

Windows Server “8”: Hyper-V

- Обзор новых возможностей
- Обзор улучшенных возможностей
- PowerShell Automation
- Dynamic Memory
- Hyper-V Replica
- Virtual Machine Storage Migration
- Virtual Machine Mobility

Hyper-V: НОВЫЕ ВОЗМОЖНОСТИ

Hyper-V module
PowerShell

Hyper-V Replica

Resource Metering

Simplified Authorization

SR-IOV

Storage Migration

SMB v2 File Share
Storage

Virtual Fibre Channel

Storage Deduplication

Offloaded Data Transfer

Dynamic Memory

Virtual Machine Mobility

Live Migration

VHDX / Large Sector Disk

Virtual Switch

Масштабируемость

Hyper-V: PowerShell Automation

The screenshot shows a Windows PowerShell session with the following commands and output:

```
PS C:\Users\Administrator> import-module hyper-v
PS C:\Users\Administrator> get-command -module hyper-v
```

Capability	Name	ModuleName
Cmdlet	Add-VMVDvdDrive	hyper-v
Cmdlet	Add-VMFibreChannelHba	hyper-v
Cmdlet	Add-VMHardDiskDrive	hyper-v
Cmdlet	Add-VMMigrationNetwork	hyper-v
Cmdlet	Add-VMNetworkAdapter	hyper-v
Cmdlet	Add-VMNetworkAdapterAcl	hyper-v
Cmdlet	Add-VMRemoteFX3DVideoAdapter	hyper-v
Cmdlet	Add-VMScsiController	hyper-v
Cmdlet	Add-VMStoragePath	hyper-v
Cmdlet	Add-VMSwitch	hyper-v
Cmdlet	Add-VMSwitchExtensionPortFeature	hyper-v
Cmdlet	Add-VMSwitchExtensionSwitchFeature	hyper-v
Cmdlet	Checkpoint-VM	hyper-v
Cmdlet	Compare-VM	hyper-v
Cmdlet	Complete-VMFailover	hyper-v
Cmdlet	Connect-VMNetworkAdapter	hyper-v
Cmdlet	Connect-VM SAN	hyper-v
Cmdlet	Convert-VMHD	hyper-v
Cmdlet	Disable-VMEventing	hyper-v
Cmdlet	Disable-VMIntegrationService	hyper-v
Cmdlet	Disable-VMIntegration	hyper-v
Cmdlet	Disable-VMRemoteFXPhysicalVideoAdapter	hyper-v
Cmdlet	Disable-VMResourceMetering	hyper-v
Cmdlet	Disable-VMSwitchExtension	hyper-v
Cmdlet	Disconnect-VMNetworkAdapter	hyper-v
Cmdlet	Disconnect-VM SAN	hyper-v
Cmdlet	Disconnect-VMHD	hyper-v
Cmdlet	Enable-VMEventing	hyper-v

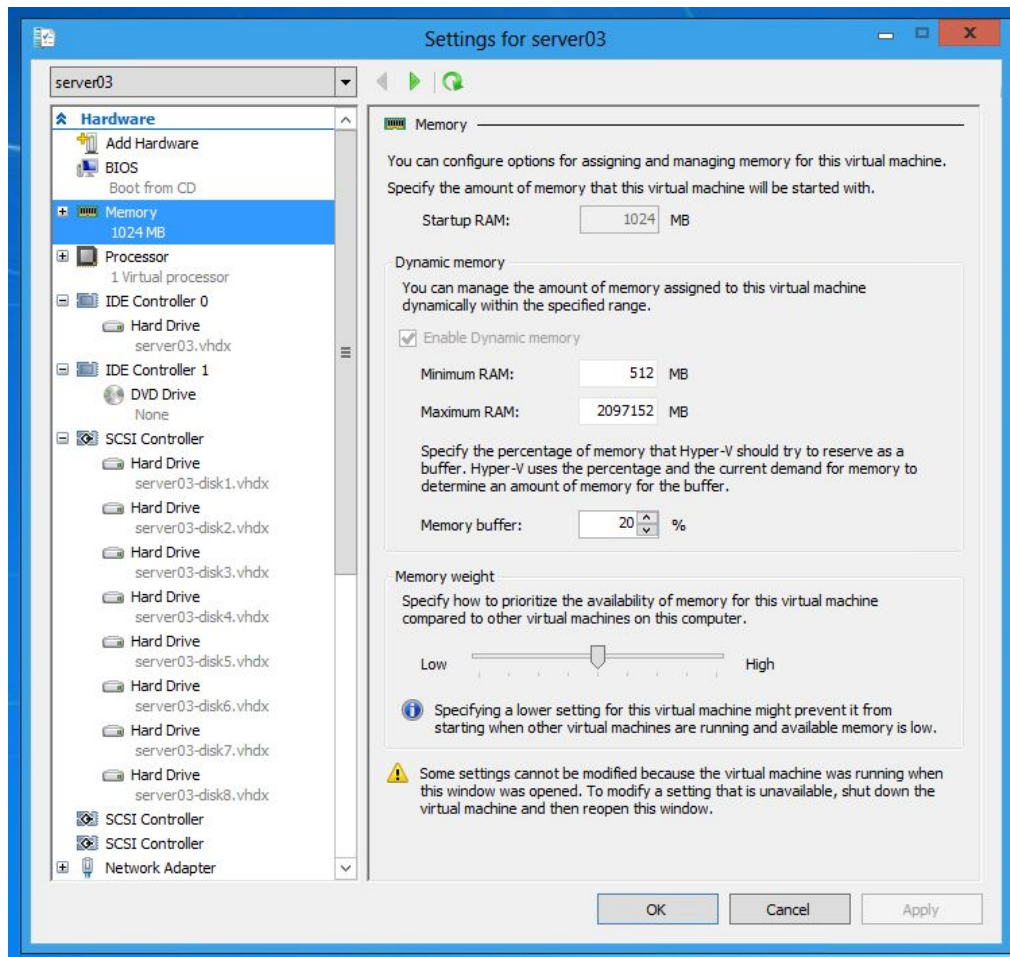
The browser window shows the Microsoft TechNet page for "Hyper-V Cmdlets in Windows PowerShell". The page title is "Hyper-V Cmdlets in Windows PowerShell" and it is rated "2 out of 2 rated this helpful". The page content includes a description of PowerShell as a task-based command-line shell and a table of Hyper-V cmdlets.

cmdlet	Description
Add-VMVDvdDrive	Installs an additional DVD drive in a virtual machine (VM).
Add-VMFibreChannelHba	Installs a virtual Fibre Channel host bus adapter in a virtual machine (VM).
Add-VMHardDiskDrive	Installs an additional hard disk drive in a virtual machine (VM).
Add-VMMigrationNetwork	Adds a network to the list of networks that can be used for virtual machine (VM) migration.
Add-VMNetworkAdapter	Installs an additional network adapter in a virtual machine (VM).
Add-VMNetworkAdapterAcl	Creates an access control list (ACL) to apply to the traffic sent or received by a virtual machine (VM) network.

140+ КОМАНДЛЕТОВ для Hyper-V

- Get-Command -Module Hyper-V
- Get-Command -Module Hyper-V -Noun *host*
- Get-VMHost -?
- Get-Help Get-VMHost -Full

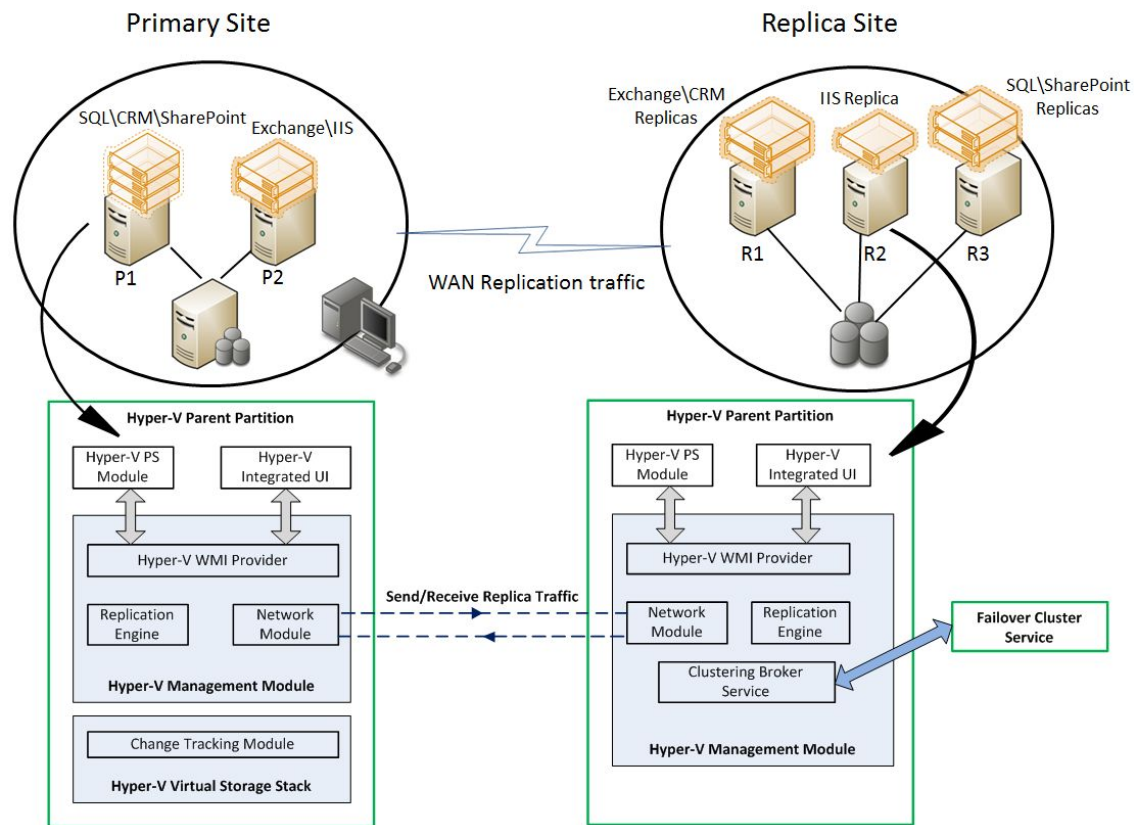
Hyper-V: Dynamic Memory



□ Minimum RAM

□ Smart Paging

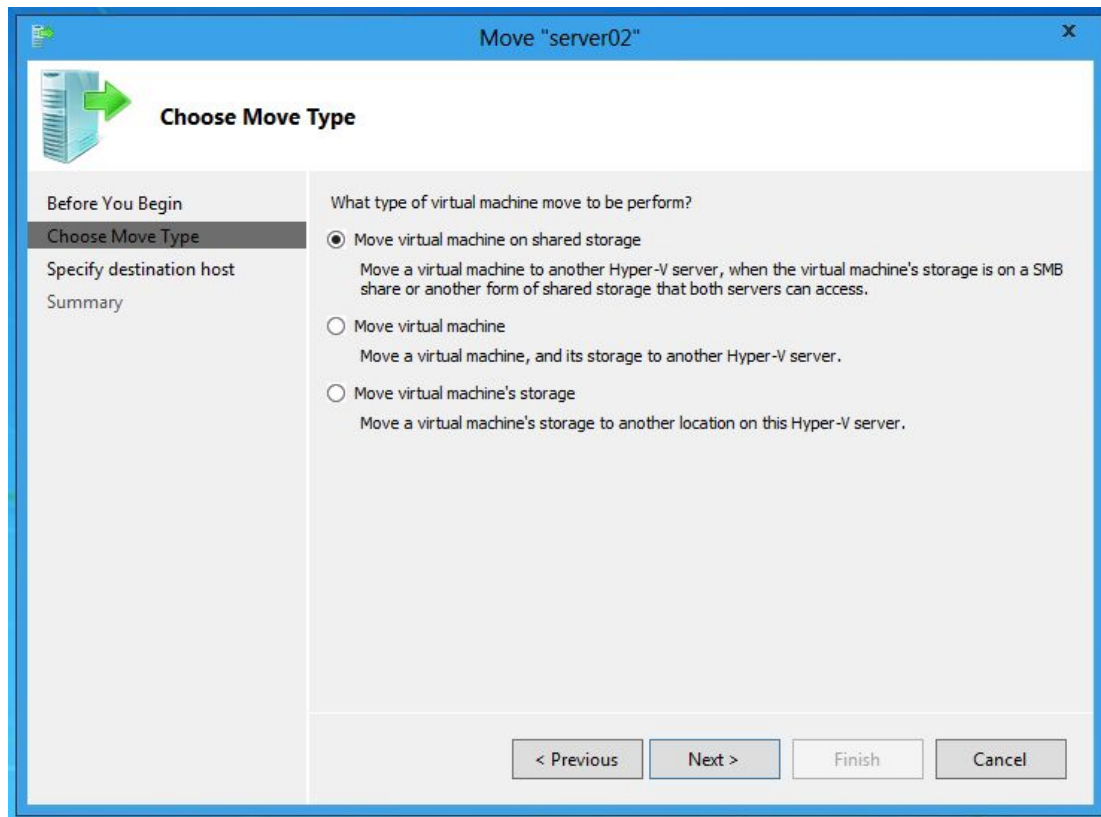
Hyper-V: Hyper-V Replica



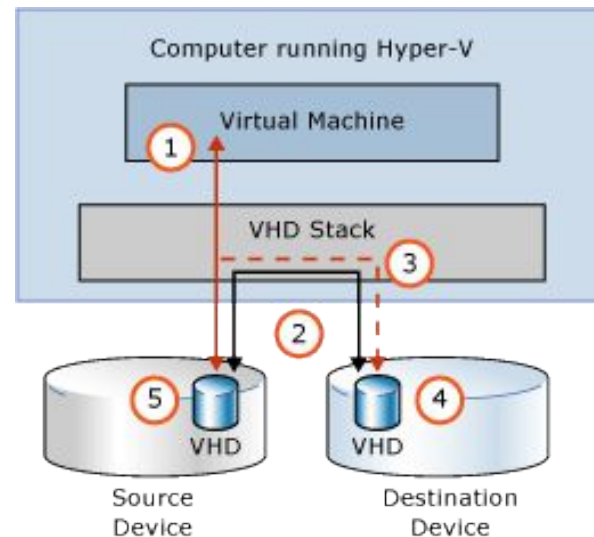
□ Асинхронная репликация

- Kerberos / Cert Auth
- HTTP + шифрация

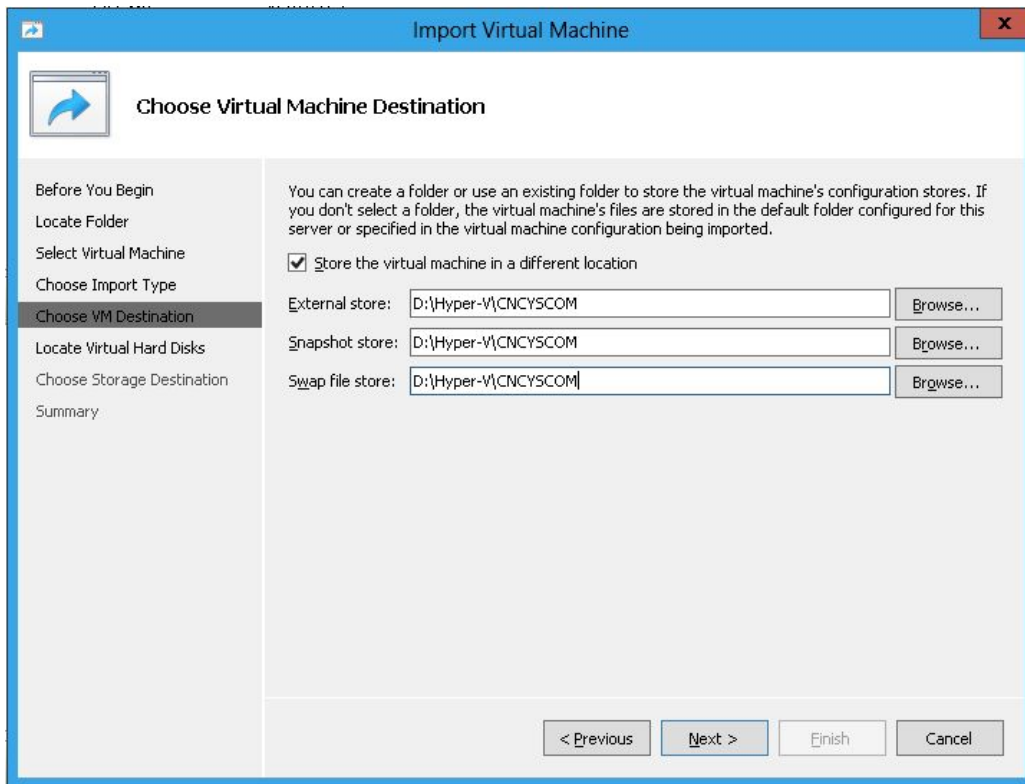
Hyper-V: Virtual Machine Storage Migration



□ SMB2.2 file share



Hyper-V: Virtual Machine Mobility



- Улучшенный визард импорта и экспорта VM

Windows Server “8”: Failover Clustering

- Обзор НОВЫХ ВОЗМОЖНОСТЕЙ
- Cluster-Aware Updating
- File Share Storage

Clustering: Новые возможности

- 4000 VMs per cluster

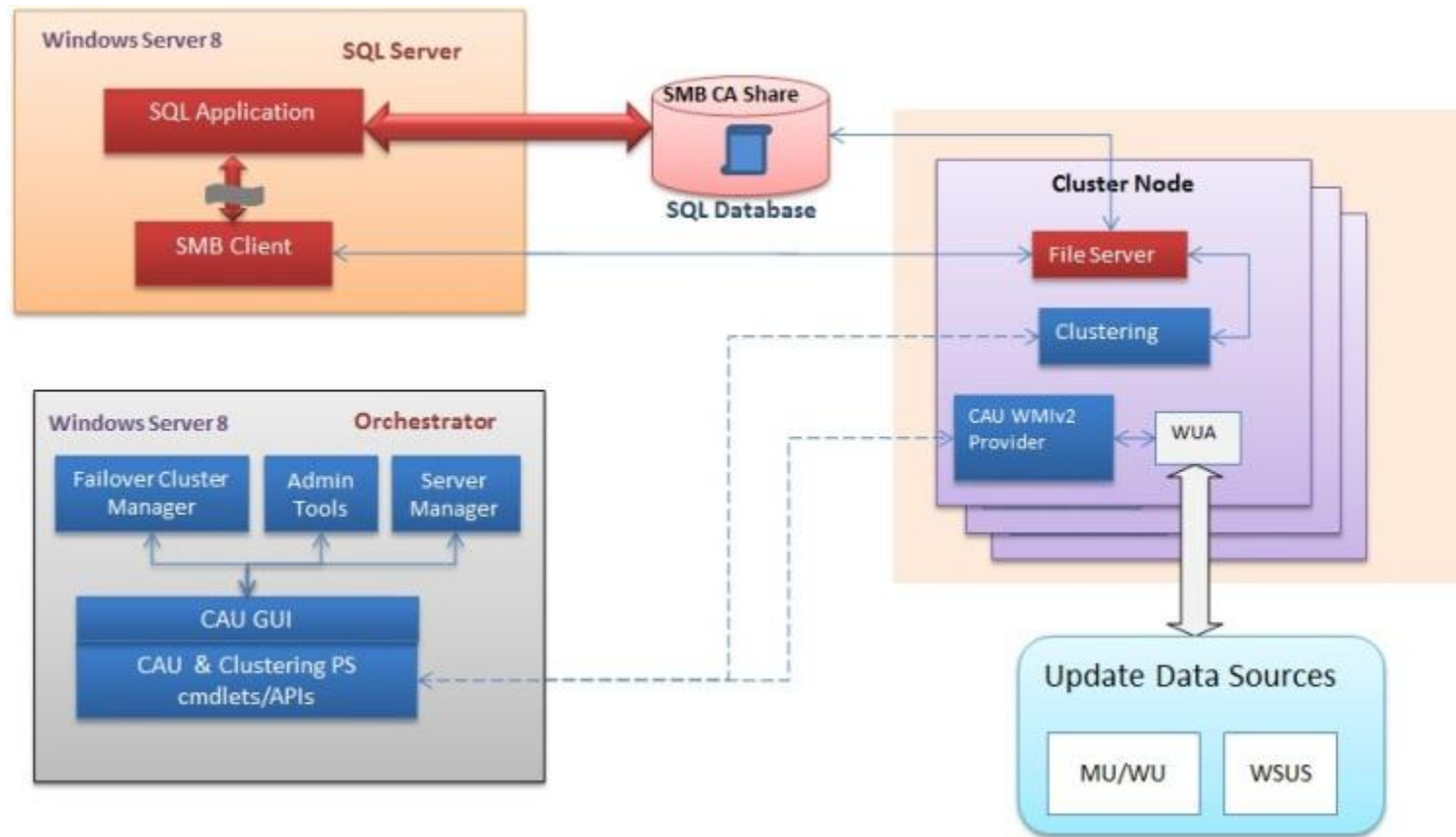
- 64 Cluster nodes

- Cluster Aware Updating

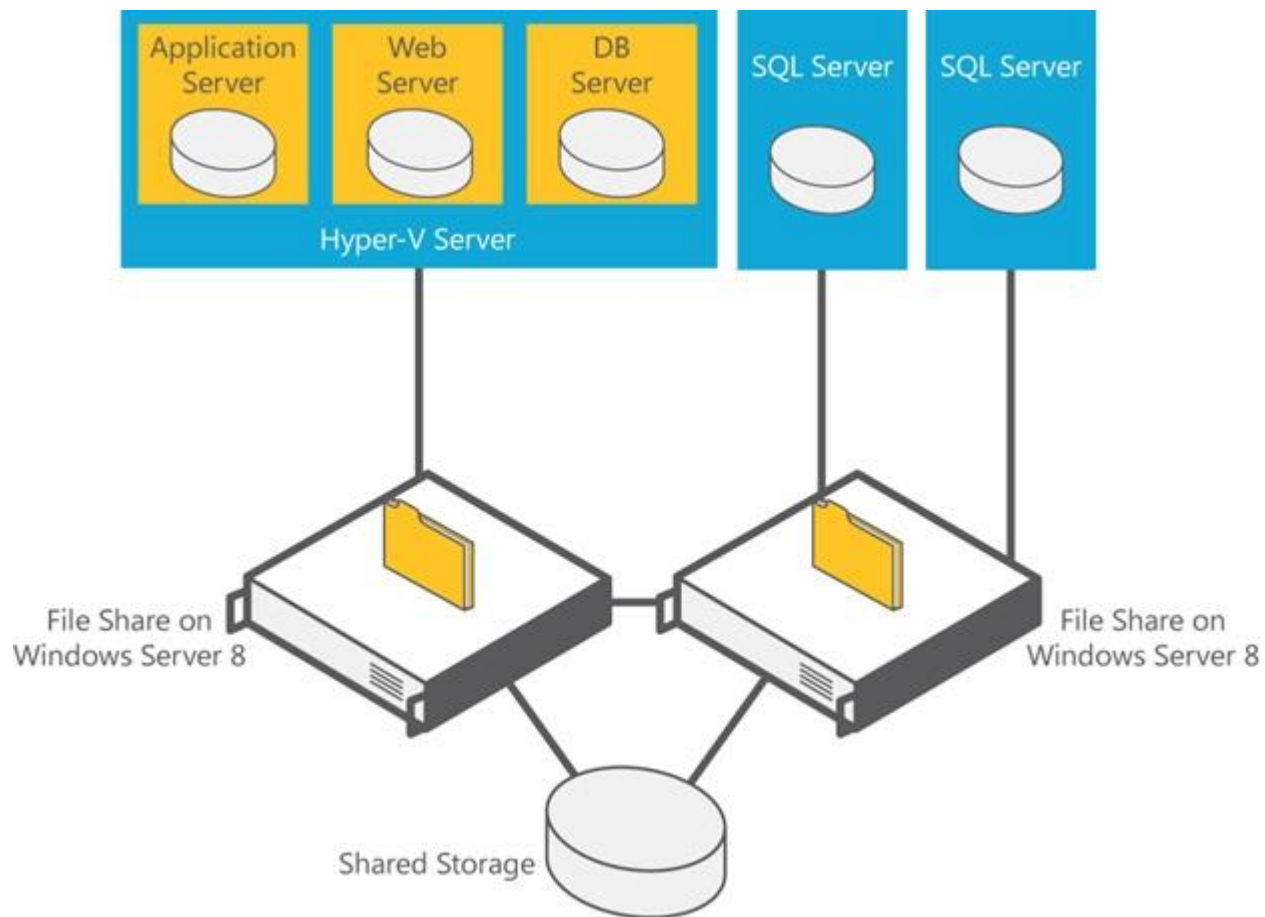
- Queuing Live Migrations

- CSV Bitlocker Support

Failover Clustering: Cluster Aware Updating



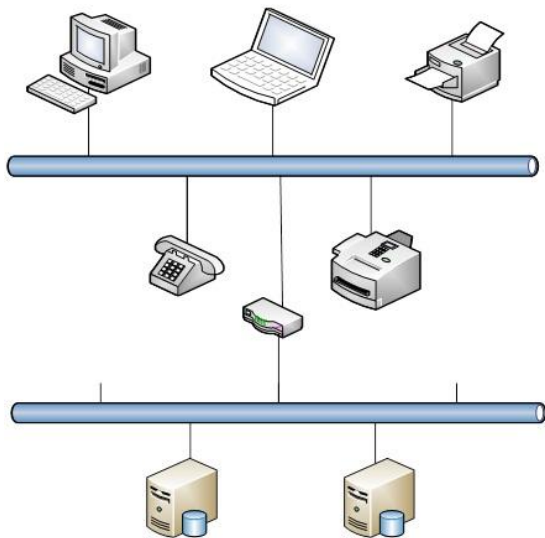
Failover Clustering: File Share Storage



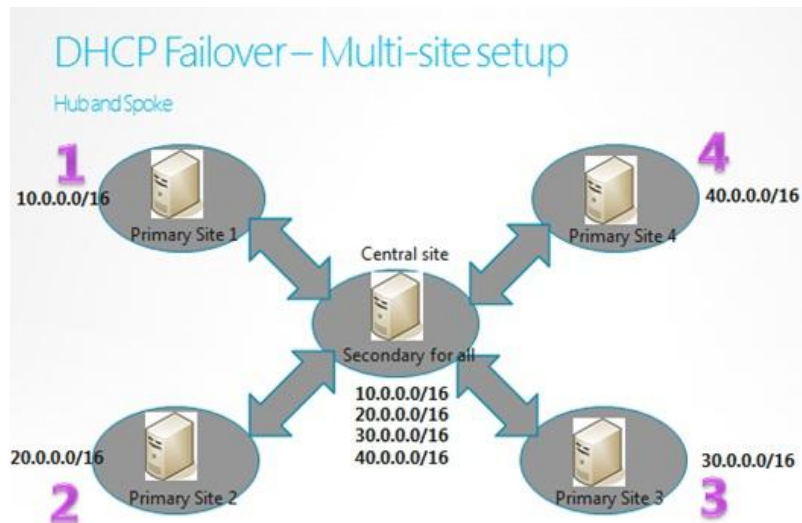
Windows Server “8”: Networking

- DHCP High Availability
- IP Address Management
- Hyper-V Network Virtualization
- Hyper-V Virtual Switch
- Network Adapter Teaming

Networking: DHCP High Availability

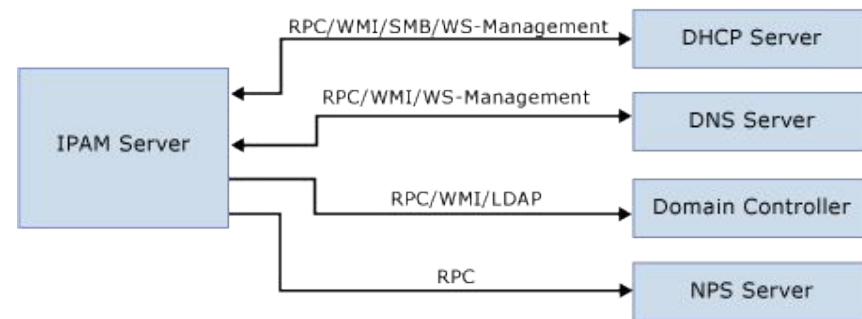
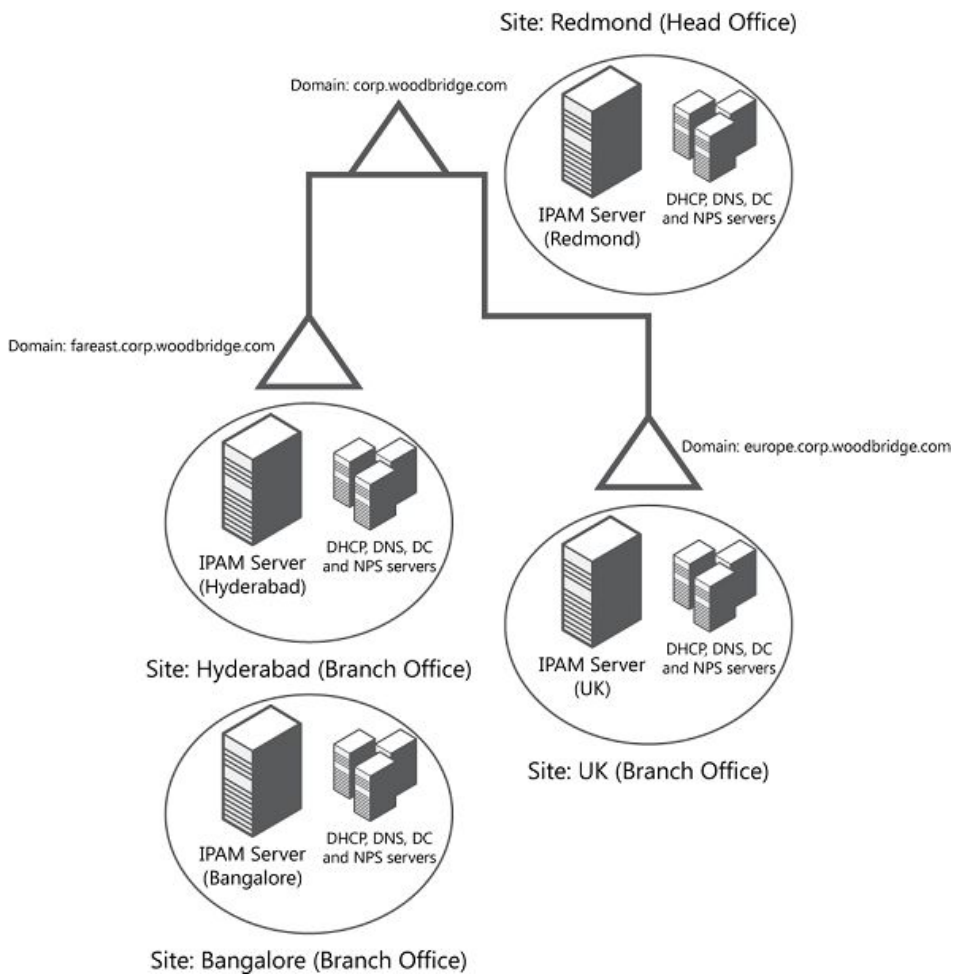


Legend	
DHCP Failover – Single Subnet	
Symbol	Description
	Ethernet
	PC
	DHCP Server
	IP Phone
	Multi-function device
	Laptop computer
	DHCP Relay
	Printer



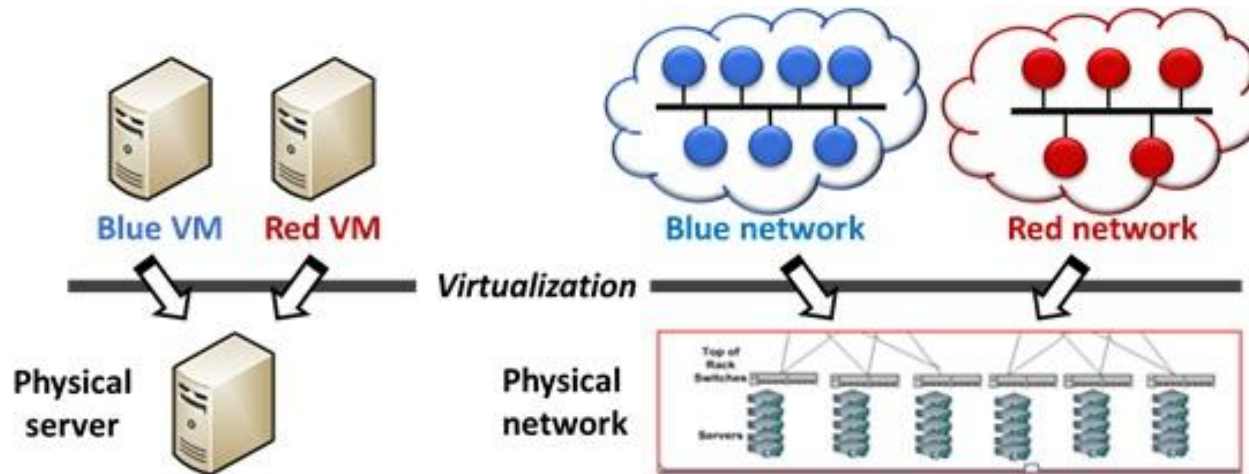
- DHCP Load Sharing Mode
- Hot Standby Mode

Networking: IP Address Management



- Distributed IPAM
- Centralized IPAM

Networking: Hyper-V Network Virtualization



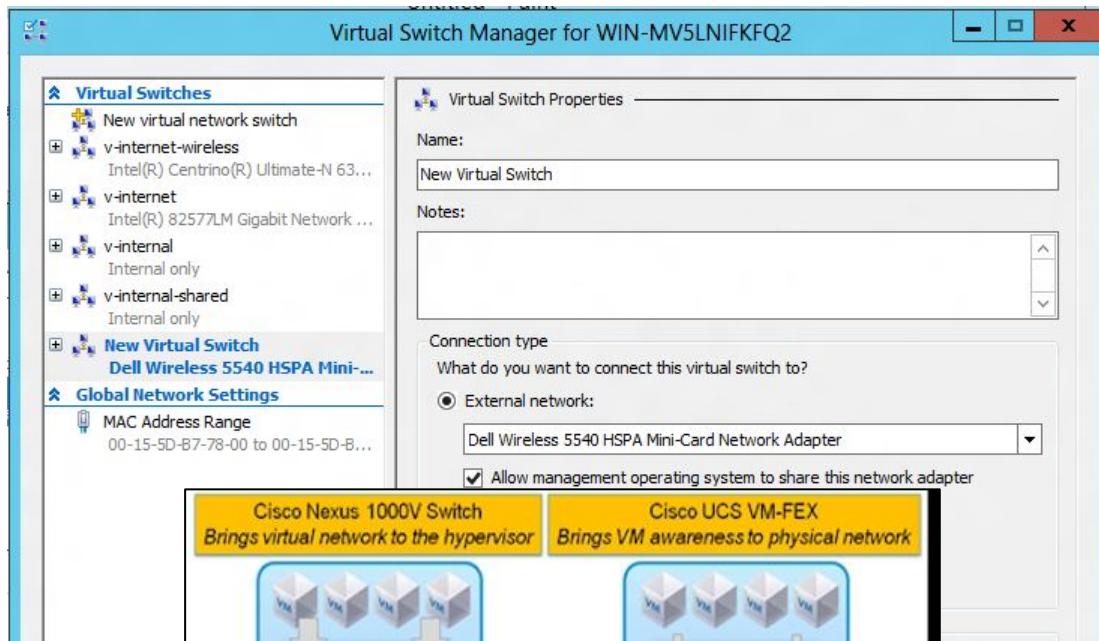
Server virtualization

- Run multiple virtual servers on a physical server
- Each VM has illusion it is running as a physical server

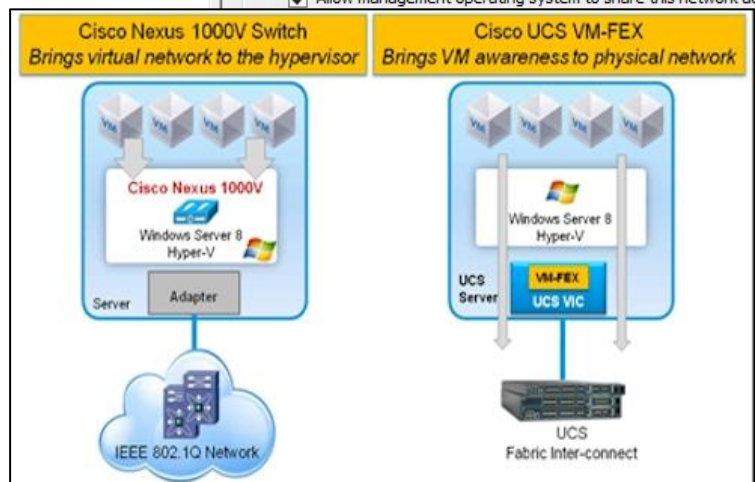
Network virtualization

- Run multiple virtual networks on a physical network
- Each virtual network has illusion it is running as a physical fabric

Networking: Hyper-V Virtual Switch



- Open Platform
- Запись событий в EventLog
- Возможность установки расширений
 - Cisco Nexus 1000V



Networking: Network Adapter Teaming

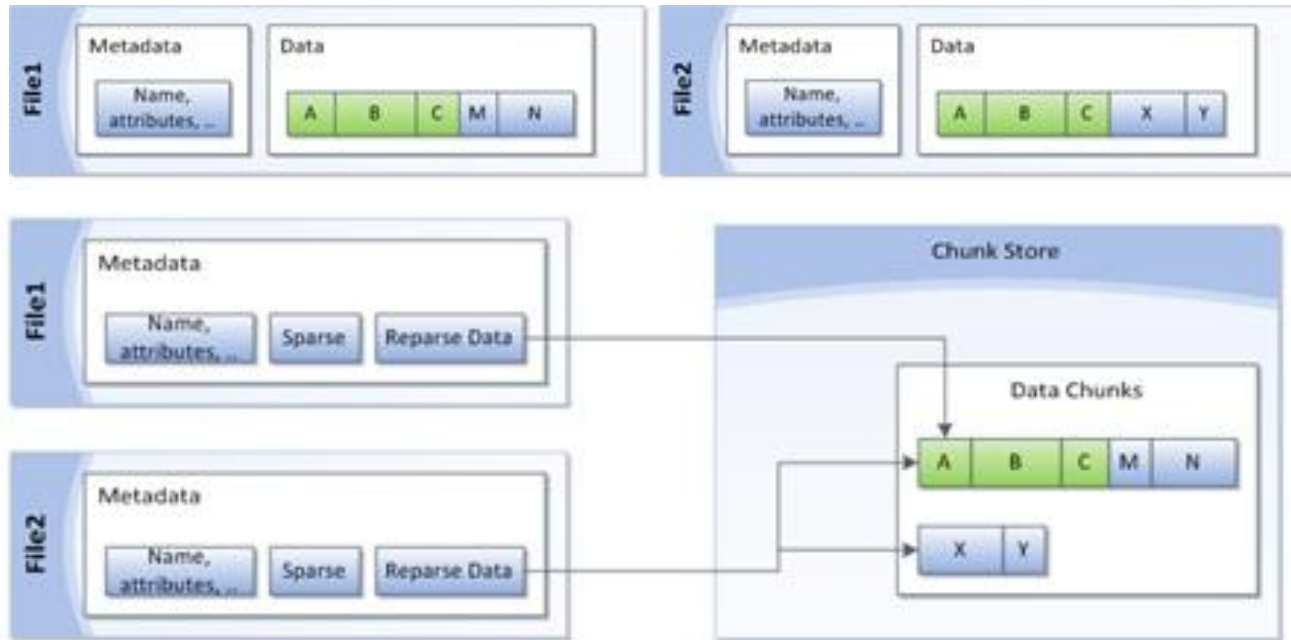
The screenshot shows the Windows Server Manager interface for a local server named 'Server01'. The left-hand navigation pane includes 'Dashboard', 'Local Server', 'All Servers', and 'File and Storage Services'. The main area displays the 'PROPERTIES' for 'Server01'. A table lists various system settings, with 'Network adapter teaming' highlighted by a red rectangular box. The value for this setting is 'Disabled'. Other settings include Windows Firewall (Public: On), Remote Desktop (Enabled), and various Windows Update and error reporting options.

PROPERTIES For Server01			
Computer name	Server01	Last installed updates	Today at 2:
Workgroup	WORKGROUP	Windows Update	Never chec
		Last checked for updates	Today at 2:
Windows Firewall	Public: On	Windows Error Reporting	On
Remote management	Enabled	Customer Experience Improvement Program	Participatin
Remote Desktop	Enabled	IE Enhanced Security Configuration	Off
Network adapter teaming	Disabled	Time zone	(UTC+08:0)
Wired Ethernet Connection	IPv4 address assigned by DHCP, IPv6 enabled	Product ID	00133-300
Wired Ethernet Connection 2	192.168.1.15, IPv6 enabled		
Operating system version	Microsoft Windows NT 6.2.8250.0	Processors	Intel(R) Coi
Hardware information	System manufacturer System Product Name	Installed memory (RAM)	12 GB

Windows Server “8”: File and Storage Services

- Data Deduplication
- Multiterabyte Volume
- User Device Affinity

File and Storage Services: Data Deduplication



- 2:1 для файловых данных
- 20:1 для виртуальных машин

File and Storage Services: Multiterabyte Volume

CHKDSK – Runtime Improvements

HOURS TO SECONDS

Time in minutes for CHKDSK to complete on a volume with one corruption

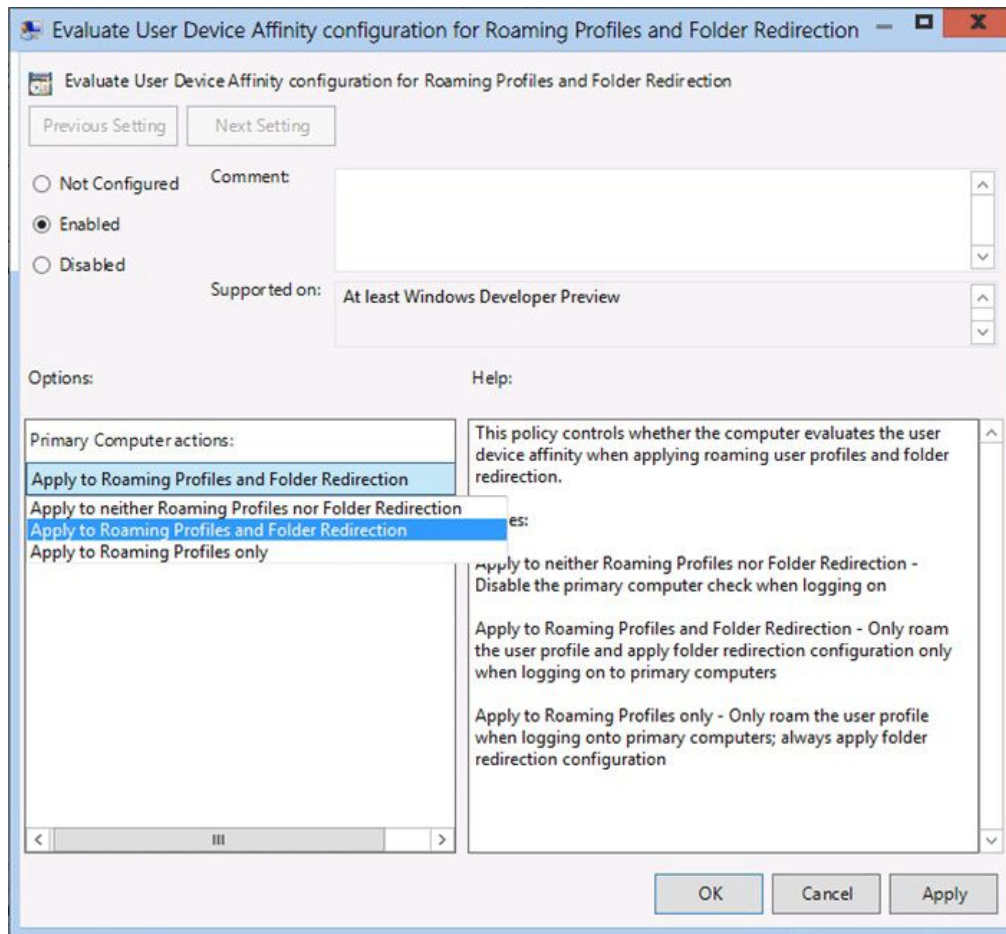


In this benchmark, "Windows Server 8" execution time <8 seconds

MICROSOFT CONFIDENTIAL - NO CONVERSATION DISCLOSURE - THIS IS NOT A PLAN OF RECORD

vNext TAP Summit

File and Storage Services: User Device Affinity



- E-Mail
 - freeman199@mail.ru
- ICQ
 - 369873932
- Skype
 - [mgorinov59](https://www.skype.com/people/mgorinov59)

