

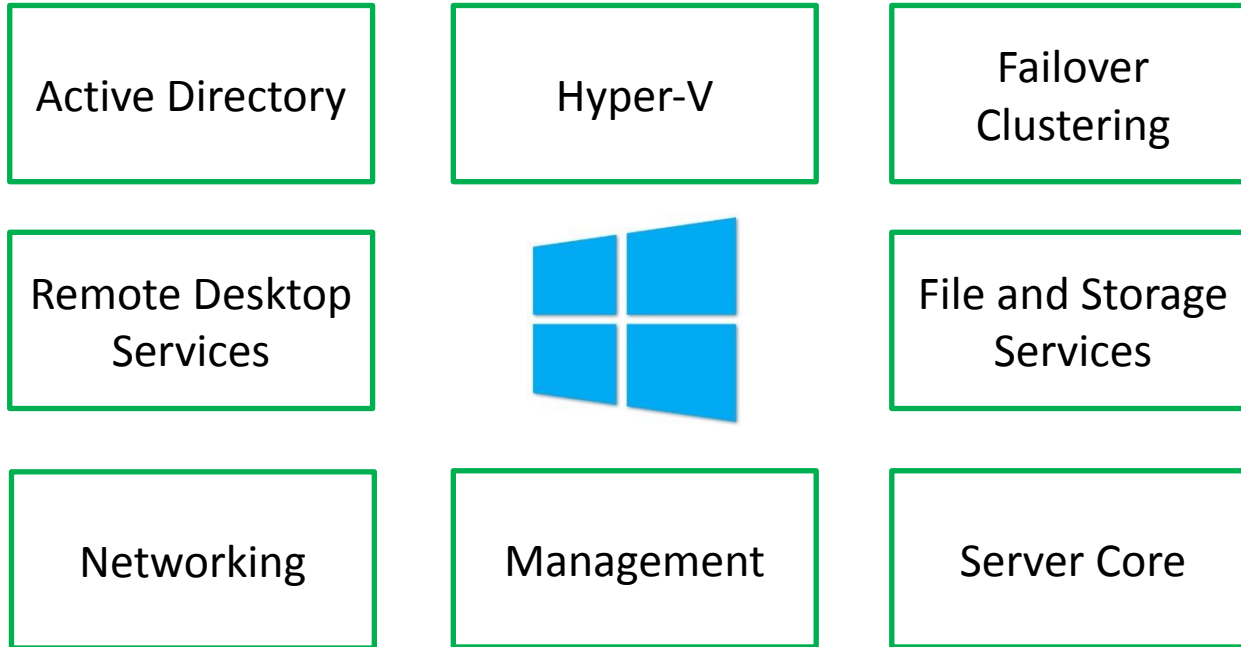


Горинов Максим: МСТ, MCITP:Enterprise Administrator

WINDOWS SERVER “8” BETA ТЕХНИЧЕСКИЙ ОБЗОР

МСР CLUB. ПЕРМЬ. АПРЕЛЬ 2012

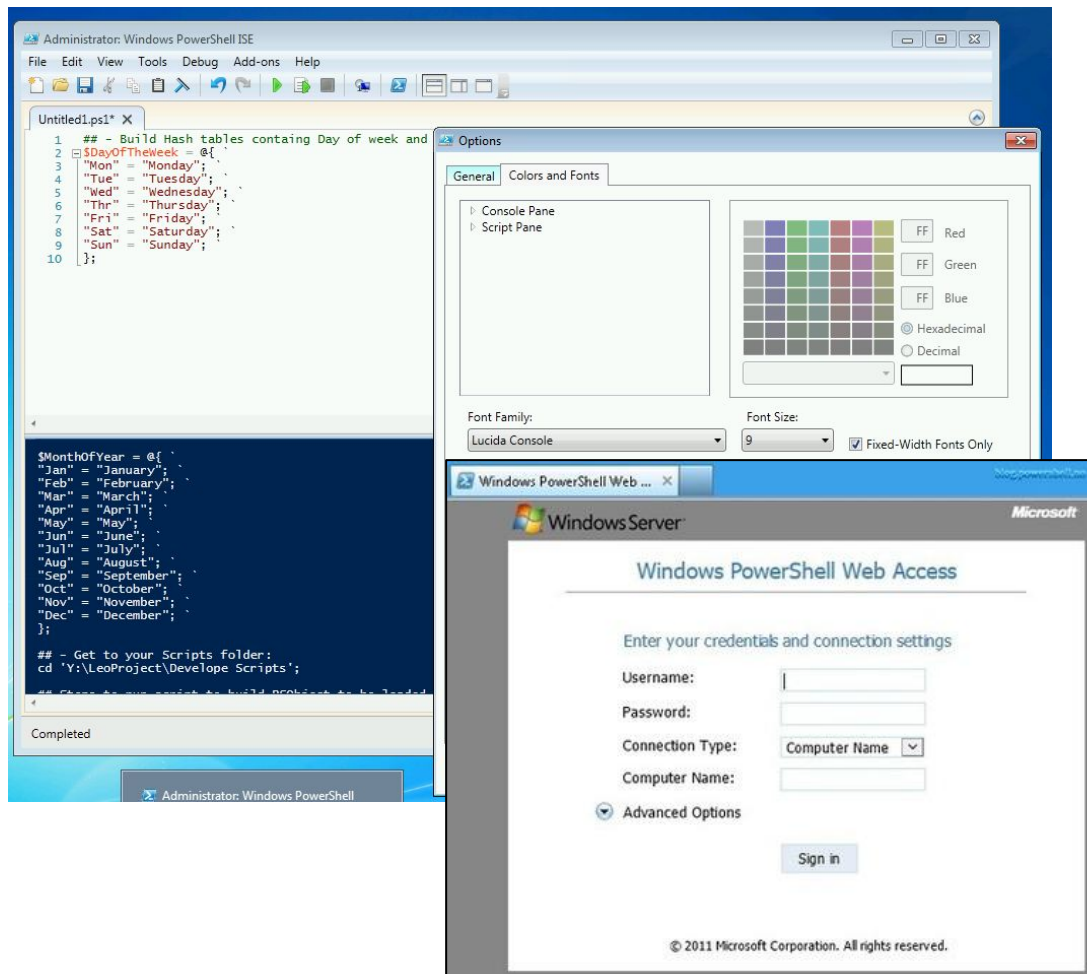
Новые и улучшенные технологии в Windows Server "8"



Windows Server “8”: Management

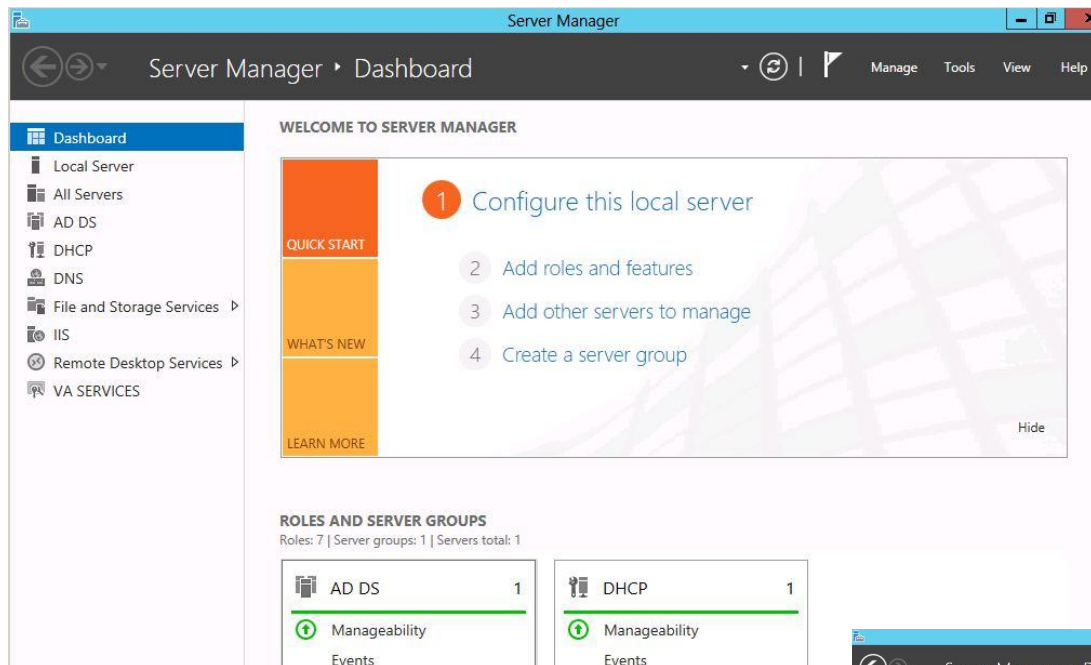
- PowerShell 3.0
- Server Manager
- Offline VHD Deployment

Management: PowerShell 3.0

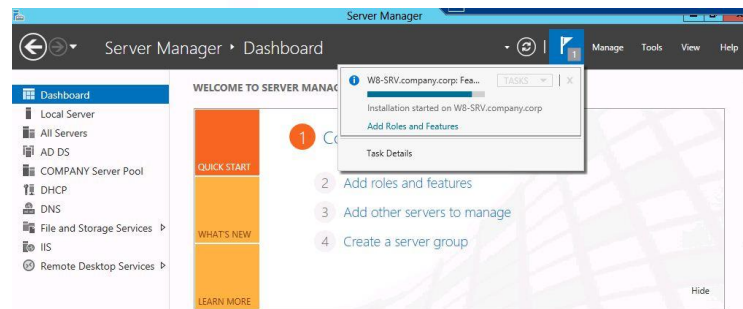


- PowerShell Workflow
- Переподключение к удаленной сессии
- PowerShell Web Access

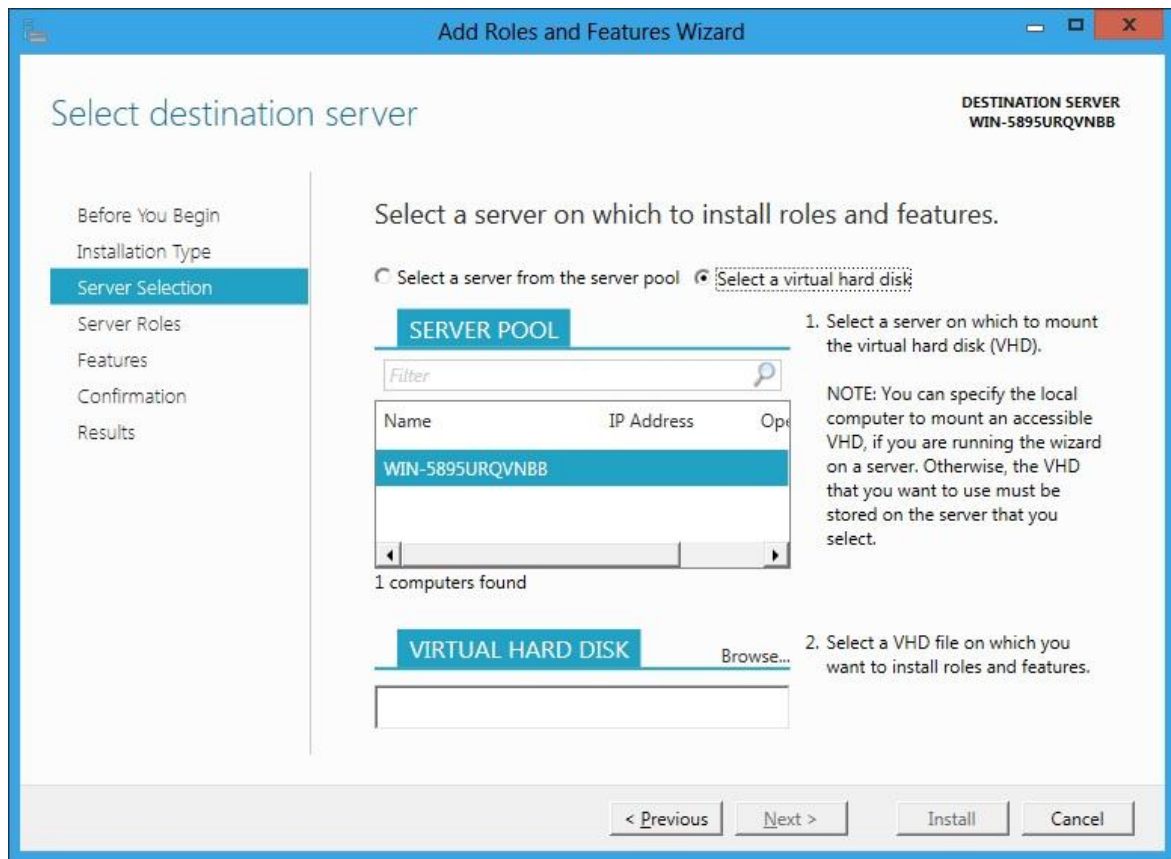
Management: Server Manager



- 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

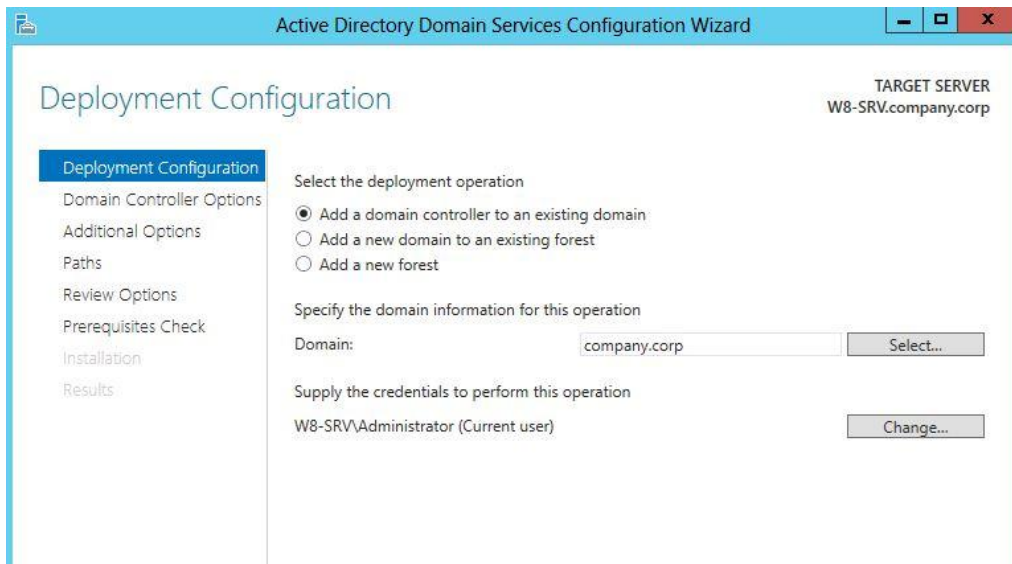


Offline Servicing для выключенных виртуальных машин

Windows Server “8”: Active Directory

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

Active Directory: ADDS Configuration Wizard

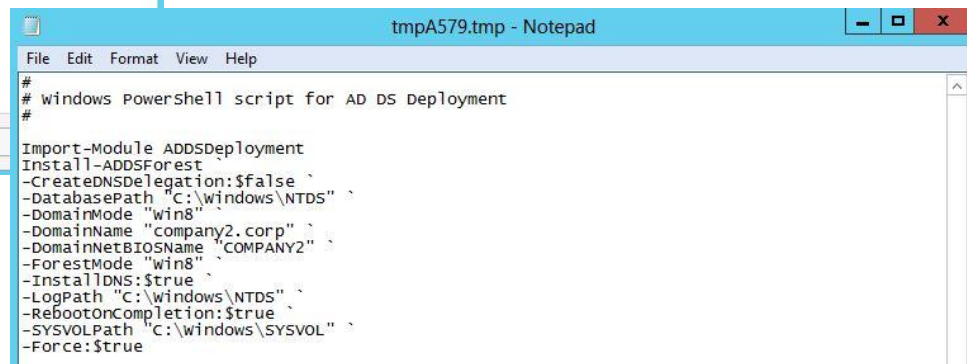


□ Интеграция в Server Manager

- DCPROMO
- ADPREP

□ Возможность запуска на удаленных серверах

□ Визард позволяет экспортировать скрипт развертывания ADDS через PowerShell

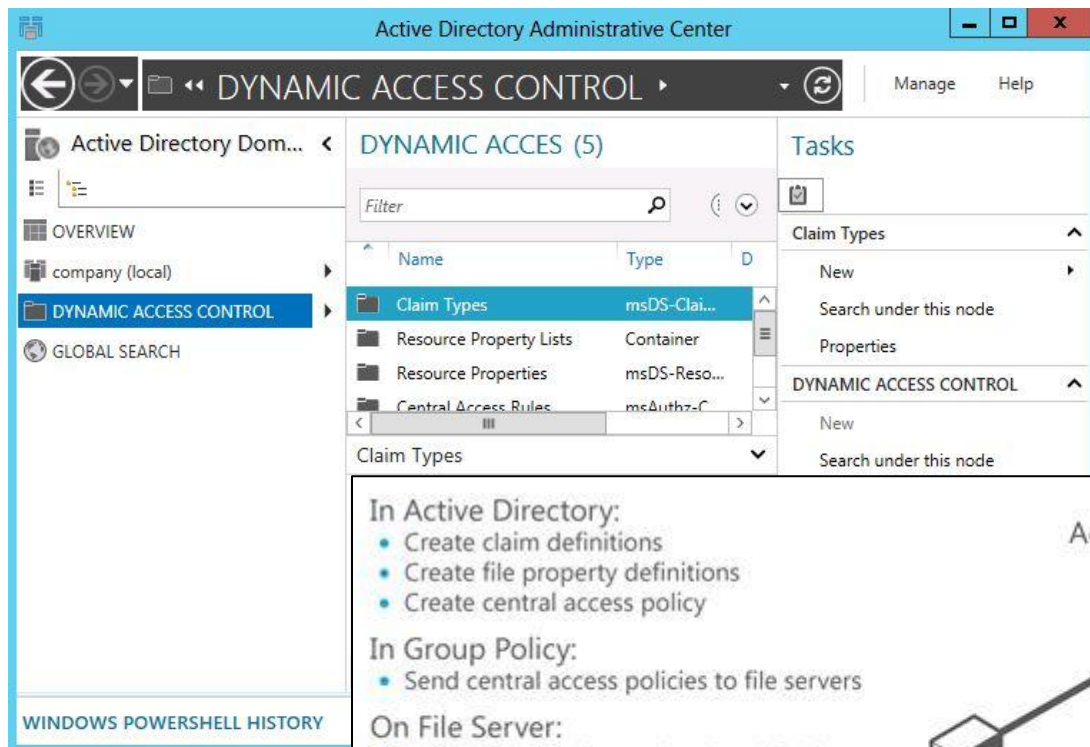


⋮ · Domain Controller cloning is at 2% completion...

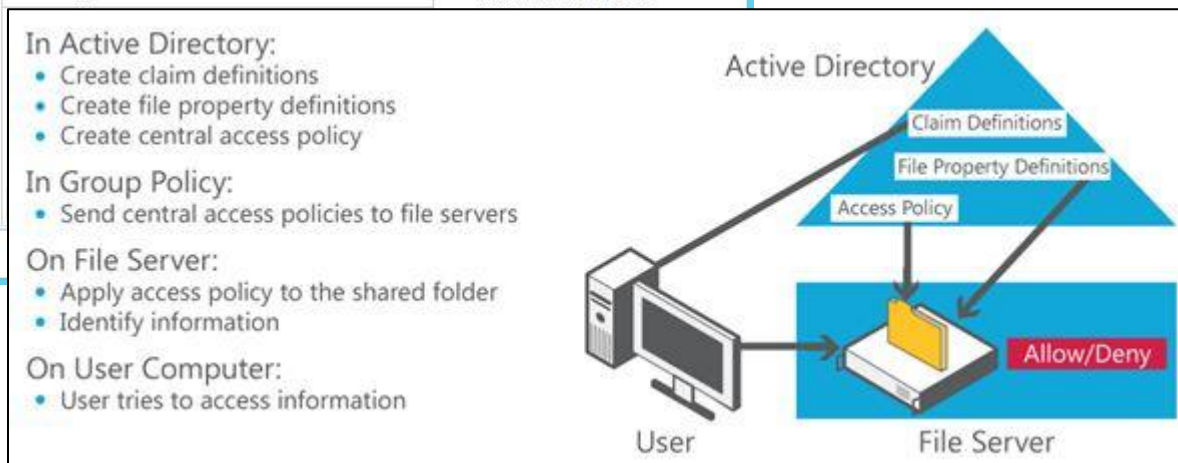
 Windows Server 8 Beta

- Возможность клонирования виртуализованного доменного контроллера
- Virtual machine Generation ID

Active Directory: Dynamic Access Control



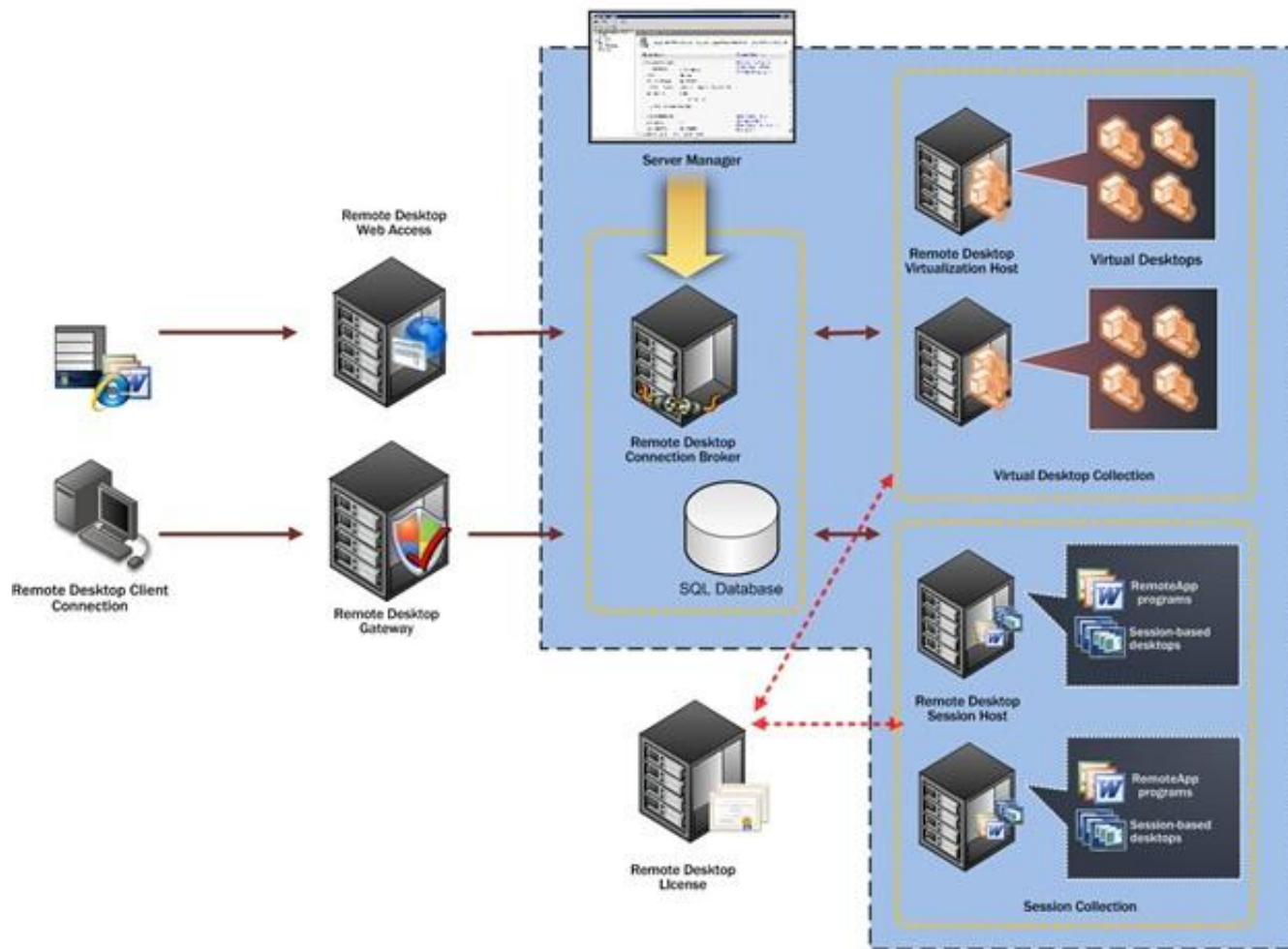
- Новый движок аудита
- Аудит доступа к файлам
- Применение RMS шаблонов к файлам



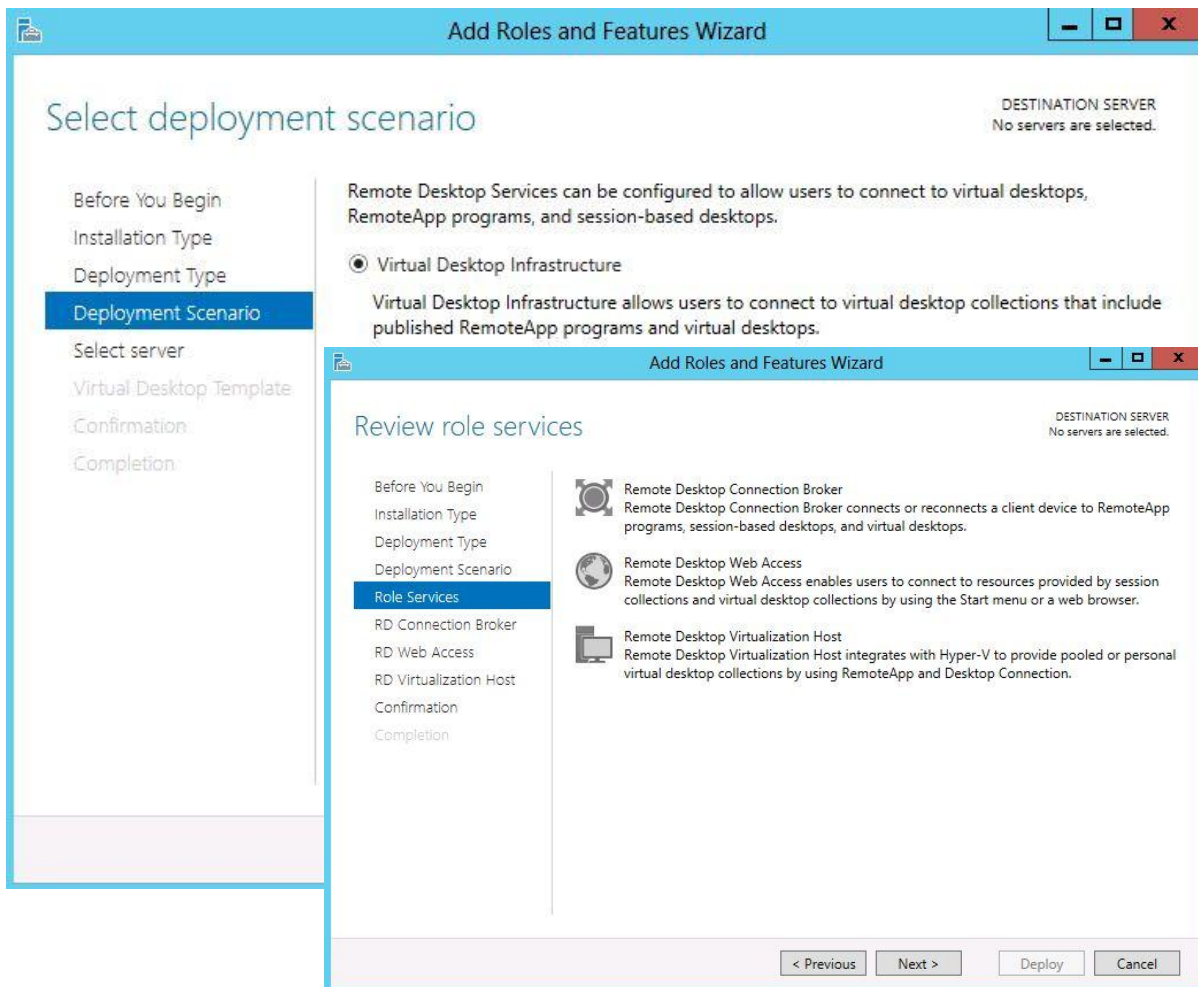
Windows Server “8”: Remote Desktop Services (RDS)

- 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

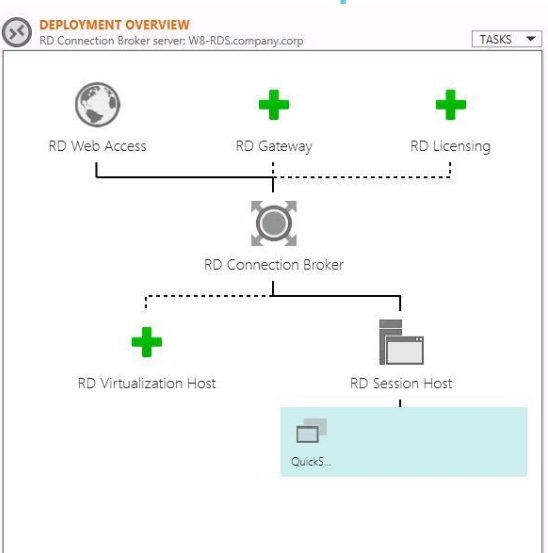
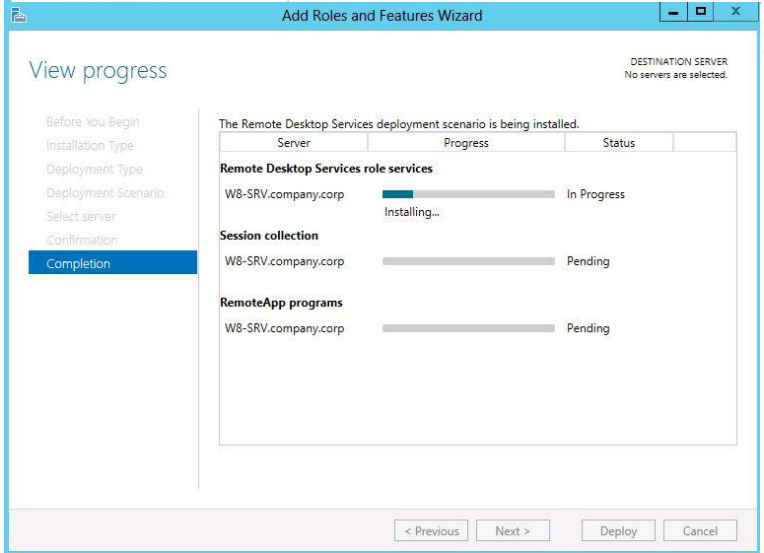
RDS: RDS Scenario-based Installation



□ 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

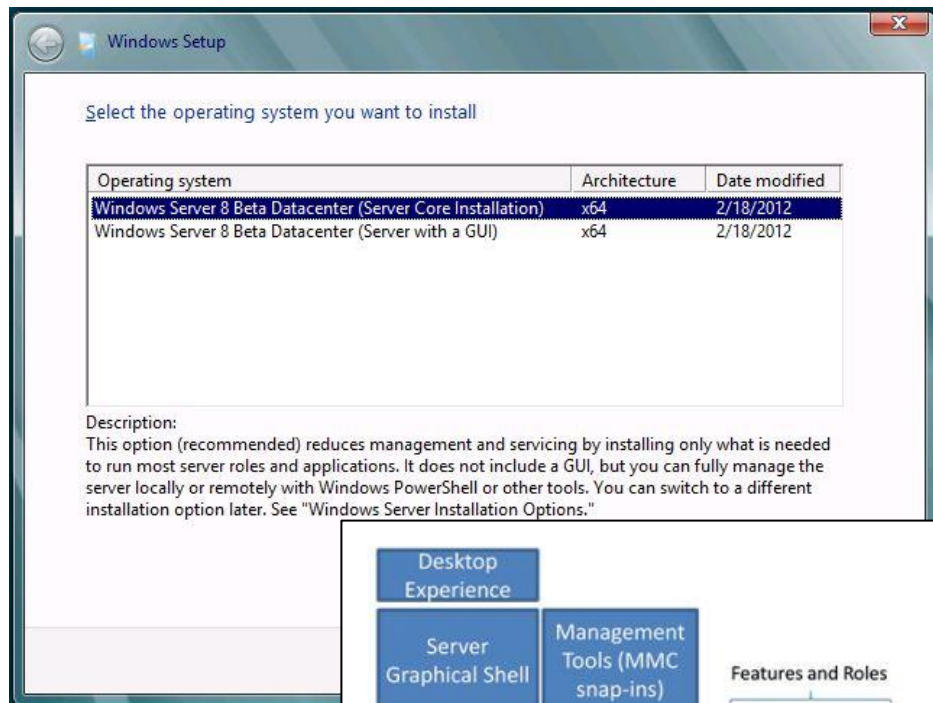
- ❑ Оптимизированная производительность для WAN
 - RemoteFX Autodetect
 - RemoteFX Progressive Download
 - RemoteFX Media Streaming

- ❑ Multitouch Redirection

Windows Server “8”: Server Core

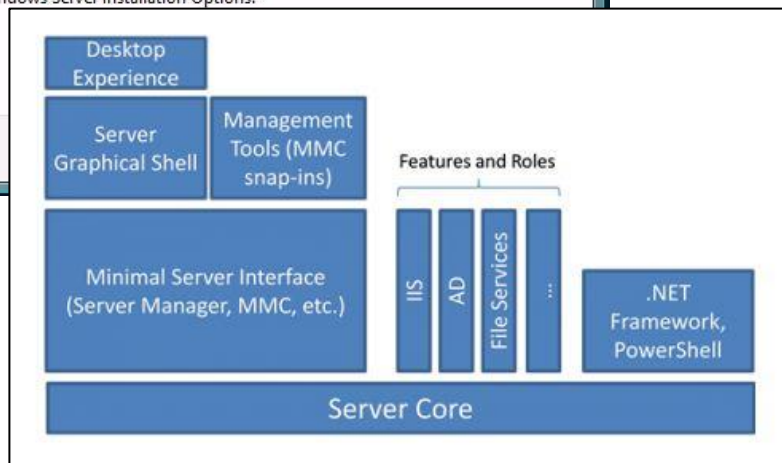
- Архитектура
- Поддерживаемые роли
- Minimal Server Interface
- Переключение между GUI / Core
- Переключение между GUI / Core через PS
- Переключение между Core / GUI

Server Core: Архитектура



□ Server Core:

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

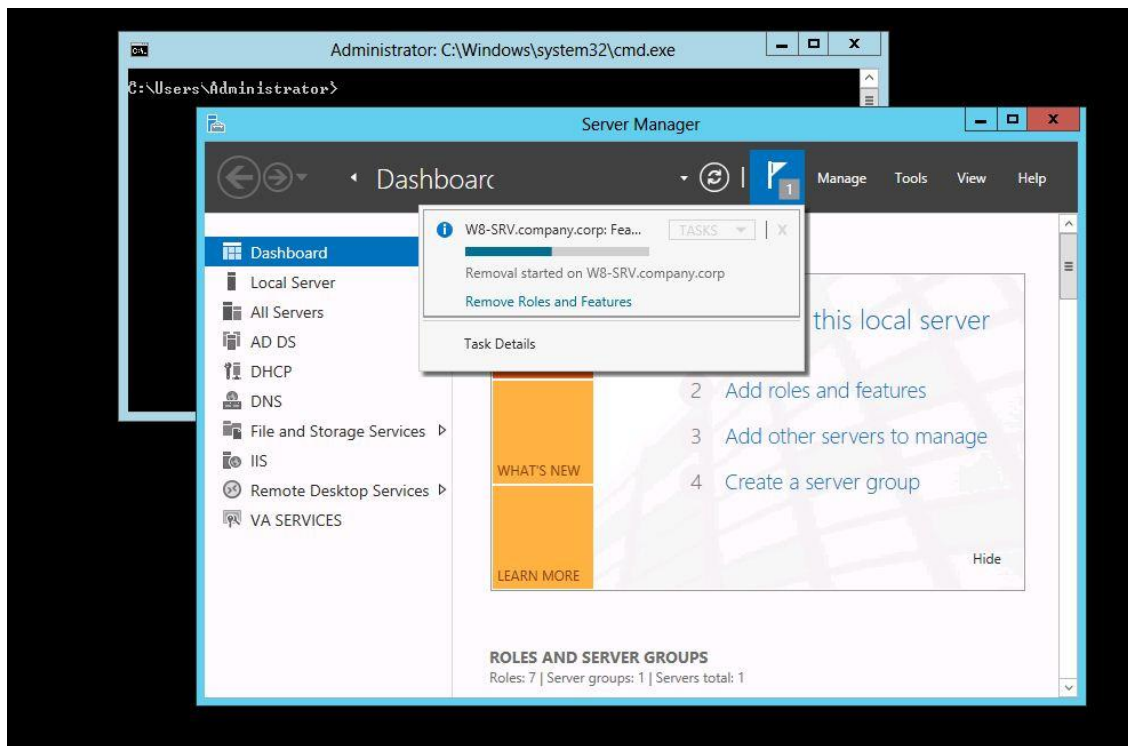


Server Core: Поддерживаемые роли

- ADDS /ADCS / ADLDS / ADRMS
- DHCP
- DNS
- File and Storage Services
- Hyper-V

- RRAS
- Streaming Media Server
- Web Server
- WSUS
- Print and Document Services

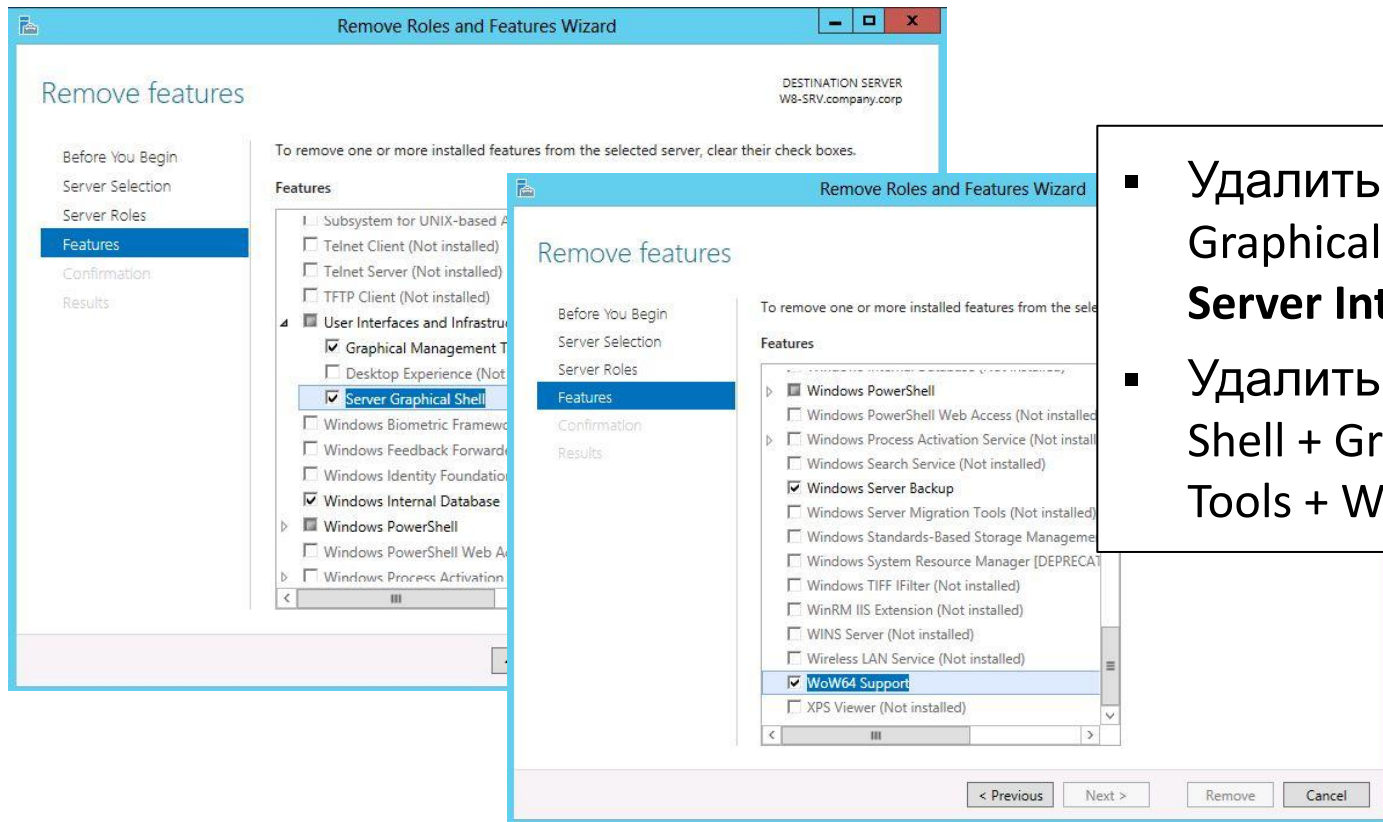
Server Core: Minimal Server Interface



Minimal Server Interface (исключает):

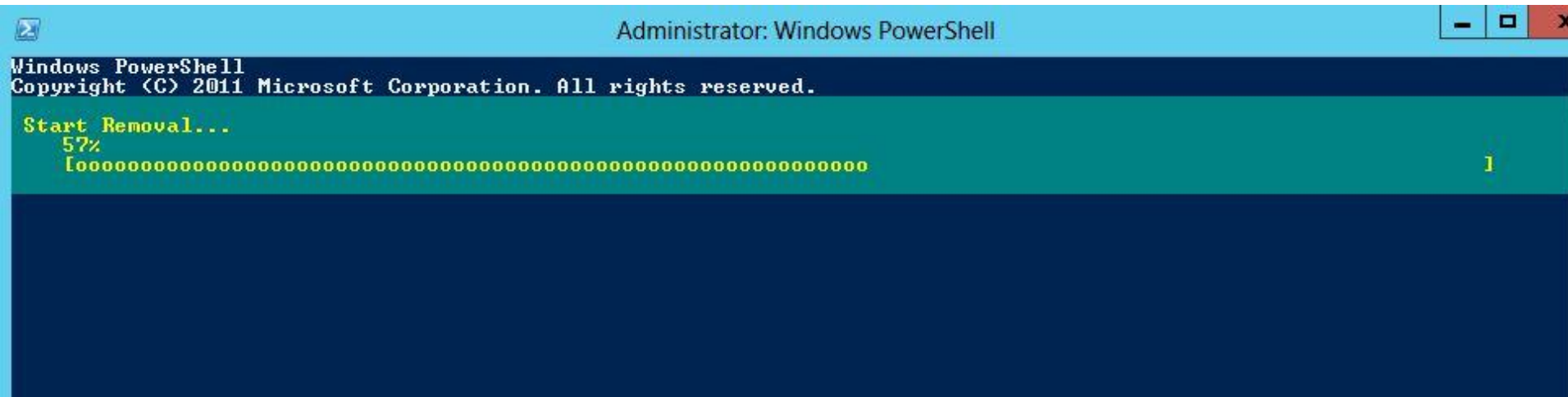
- IE
- Desktop
- Explorer
- Metro Apps support
- Multimedia support
- Desktop Experience

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

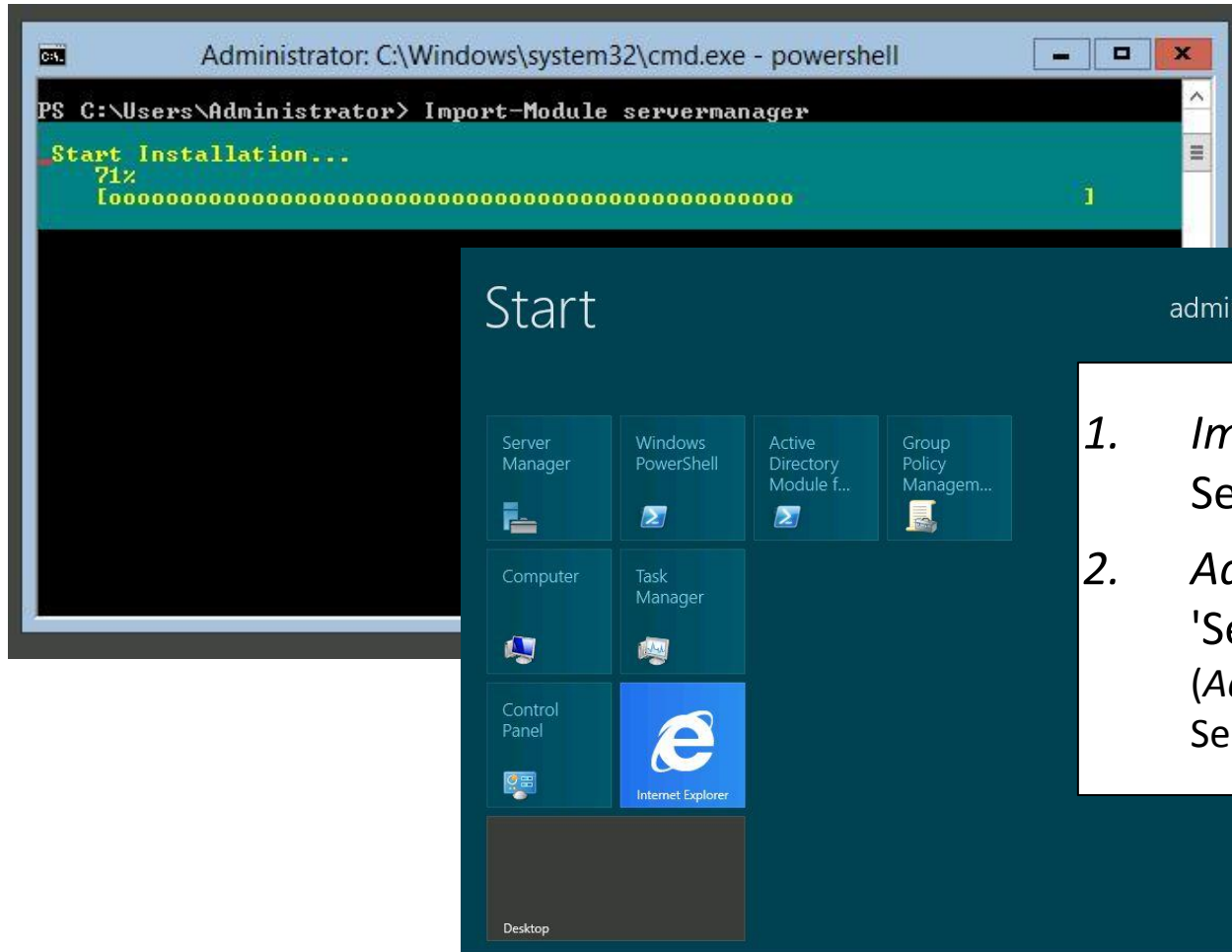


The screenshot shows a Windows PowerShell window titled "Administrator: Windows PowerShell". The console output includes the following text:

```
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

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

Capability	Name	ModuleName
Cmdlet	Add-VMdvdDrive	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-VMMigration	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

□ 140+ КОМАНДЛЕТОВ для Hyper-V

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

Windows Server

Search Windows Server with Bing

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Home Windows Server "8" Beta 2008 2003 Library Forums

Hyper-V Cmdlets

- » TechNet Library
- » Windows Server
- » Windows Server 8 Beta
- » Management and Tools
- » Windows PowerShell Support
- » **Hyper-V Cmdlets**
 - Add-VMdvdDrive
 - Add-VMFibreChannelHba
 - Add-VMHardDiskDrive
 - Add-VMMigrationNetwork
 - Add-VMNetworkAdapter
 - Add-VMNetworkAdapterAcl
 - Add-VMRemoteFX3dVideoAdapter
 - Add-VMScsiController
 - Add-VMStoragePath
 - Add-VMSwitch
 - Add-VMSwitchExtensionPortFeature
 - Add-VMSwitchExtensionSwitchFeature
 - Checkpoint-VM
 - Compare-VM
 - Complete-VMFailover
 - Connect-VMNetworkAdapter
 - Connect-VM SAN
 - Convert-VMHD
 - Disable-VMEventing
 - Disable-VMIntegrationService
 - Disable-VMMigration
 - Disable-VMRemoteFXPhysicalVideoAdi
 - Disable-VMResourceMetering

Hyper-V Cmdlets in Windows PowerShell

2 out of 2 rated this helpful - Rate this topic

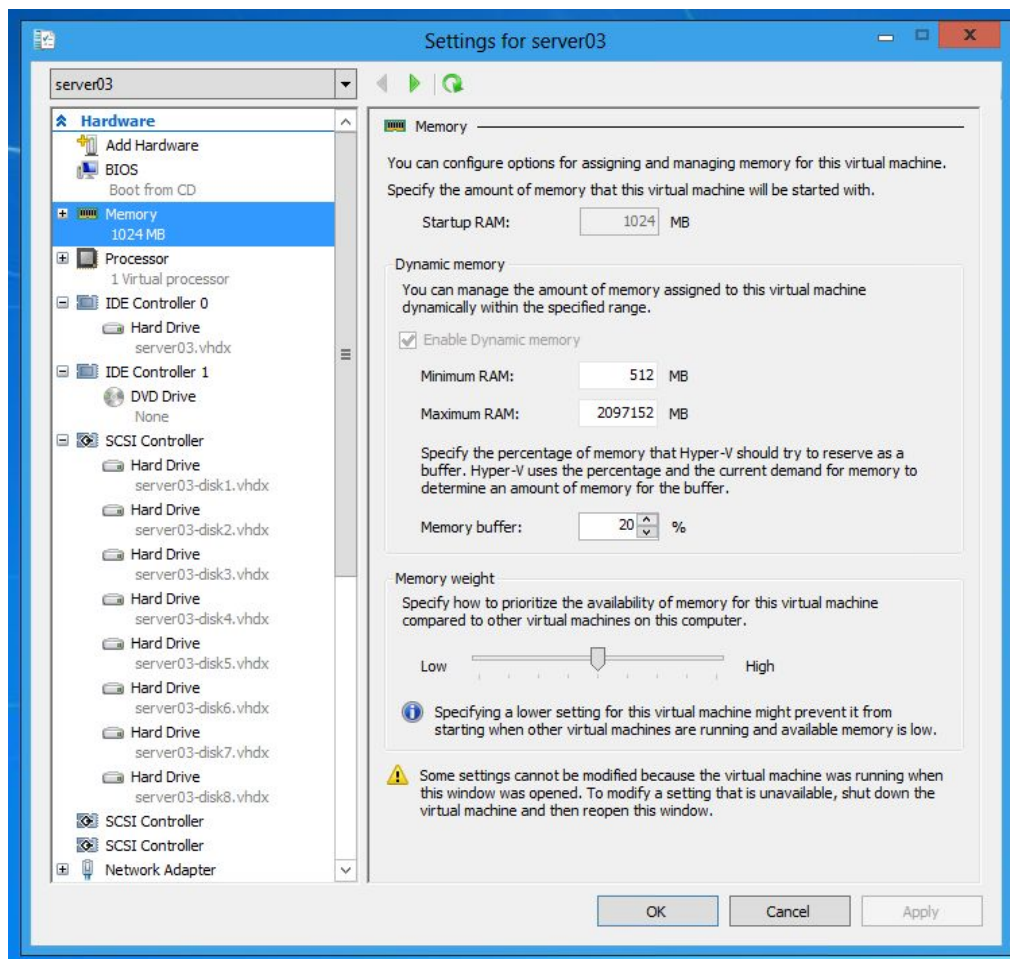
Windows PowerShell® is a task-based command-line shell and scripting language designed especially for system administration. This reference topic for the information technology (IT) professional provides assistance in utilizing the Windows PowerShell cmdlets to script and automate tasks.

Hyper-V

This reference provides cmdlet descriptions and syntax for all Hyper-V-specific cmdlets. It lists the cmdlets in alphabetical order based on the verb at the beginning of the cmdlet.

cmdlet	Description
Add-VMdvdDrive	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.

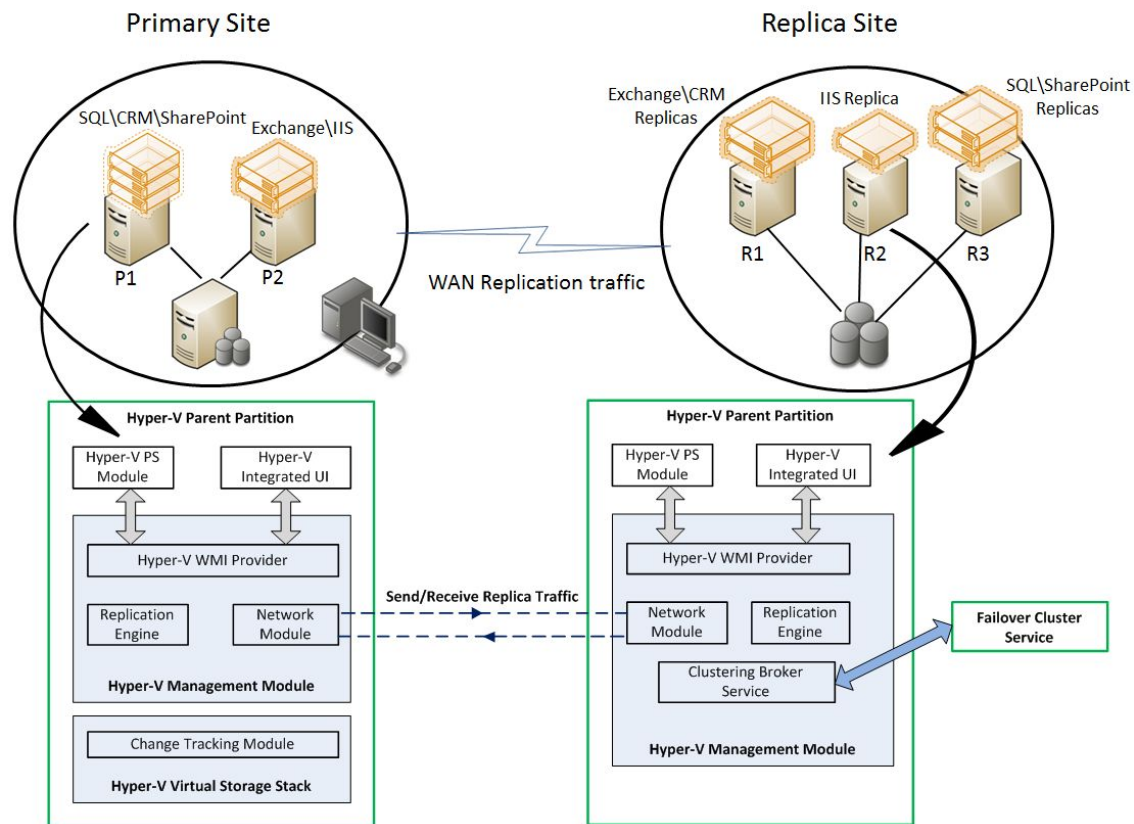
Hyper-V: Dynamic Memory



□ Minimum RAM

□ Smart Paging

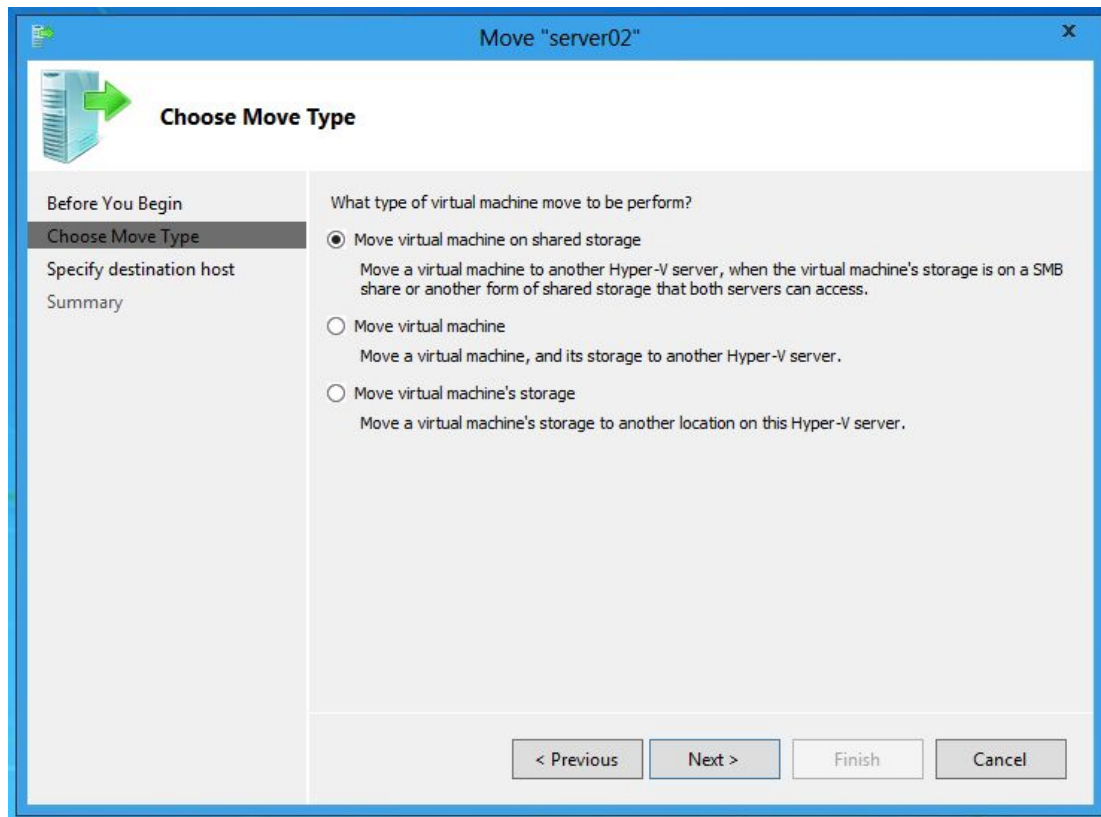
Hyper-V: Hyper-V Replica



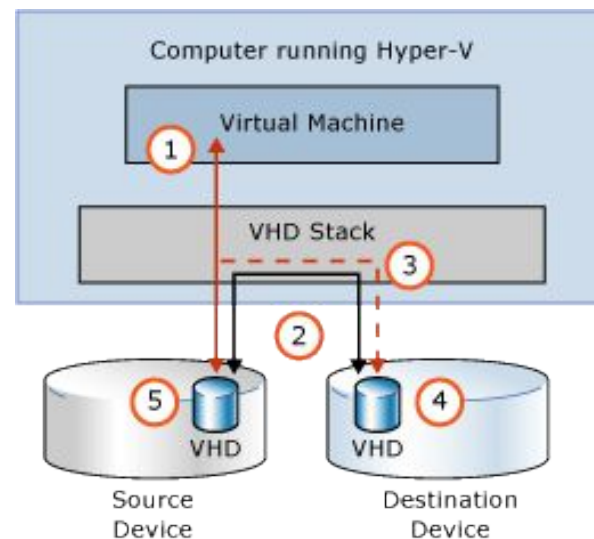
□ Асинхронная репликация

- Kerberos / Cert Auth
- HTTP + шифрация

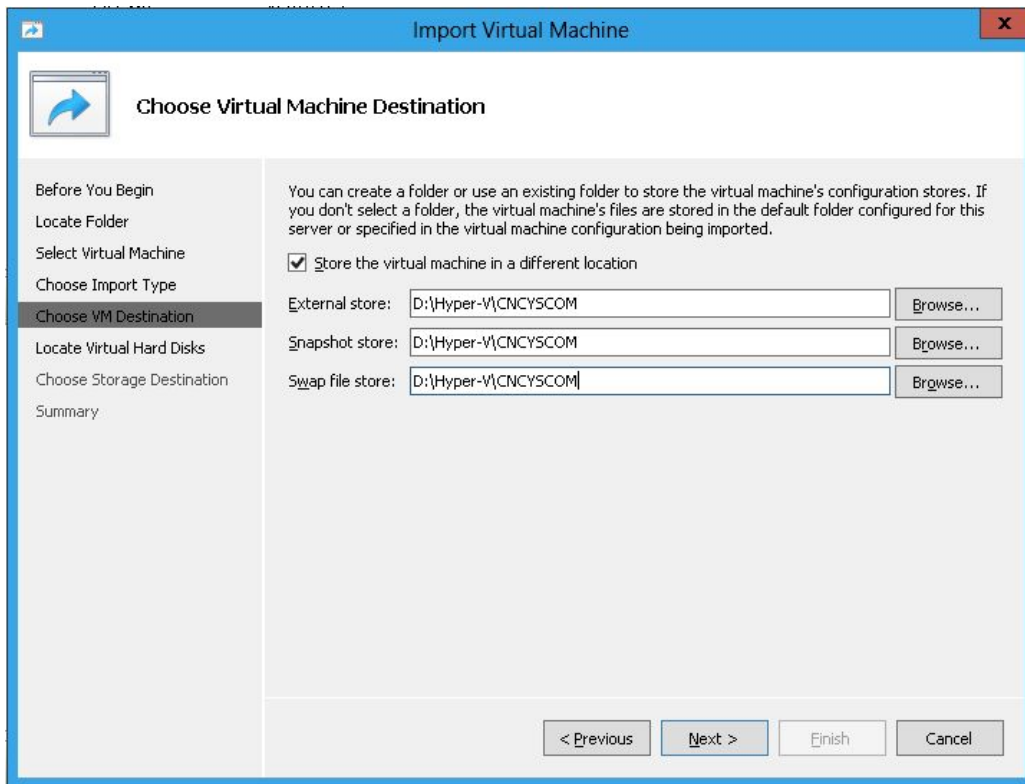
Hyper-V: Virtual Machine Storage Migration



□ 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

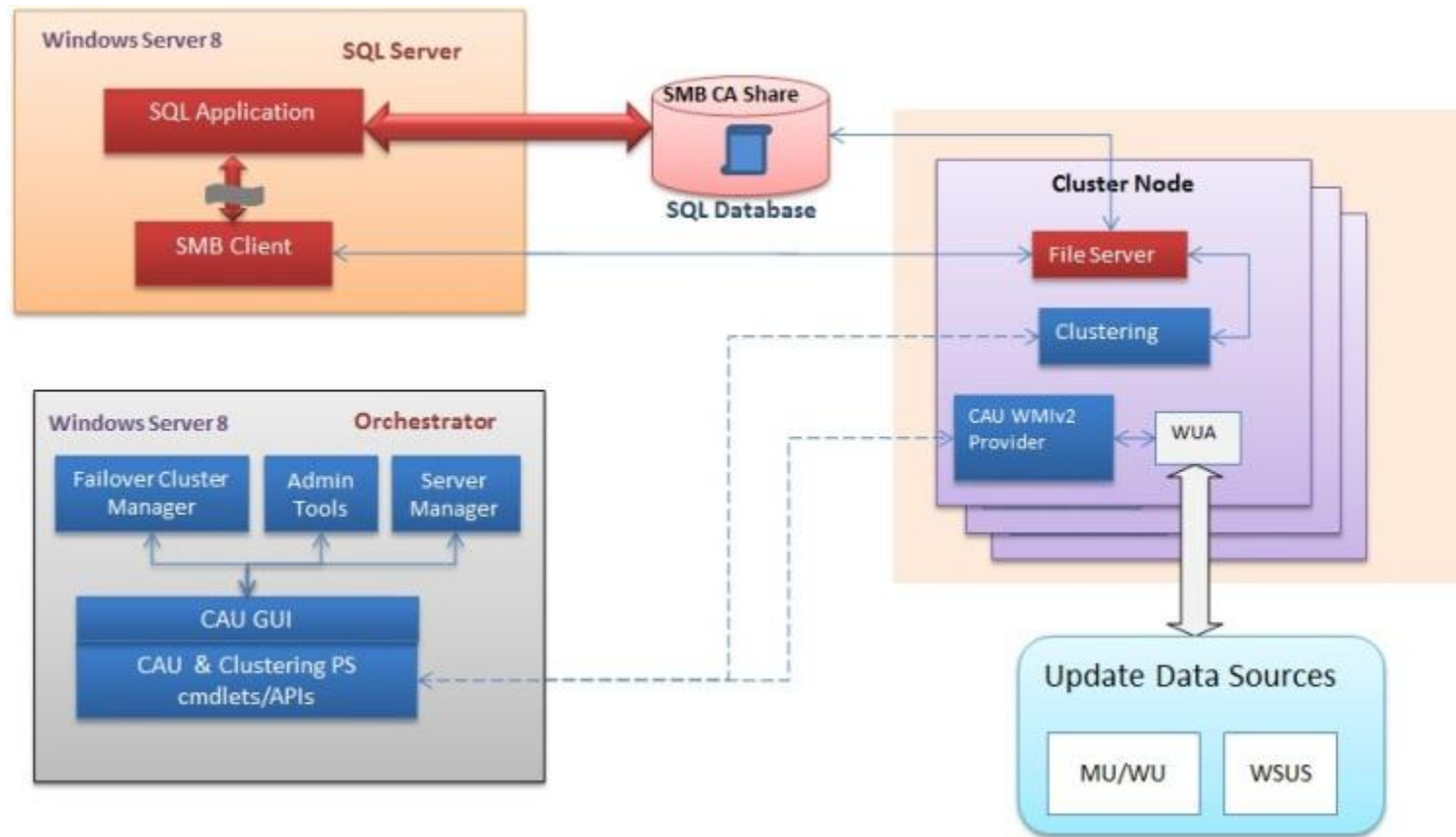
- 64 Cluster nodes

- Cluster Aware Updating

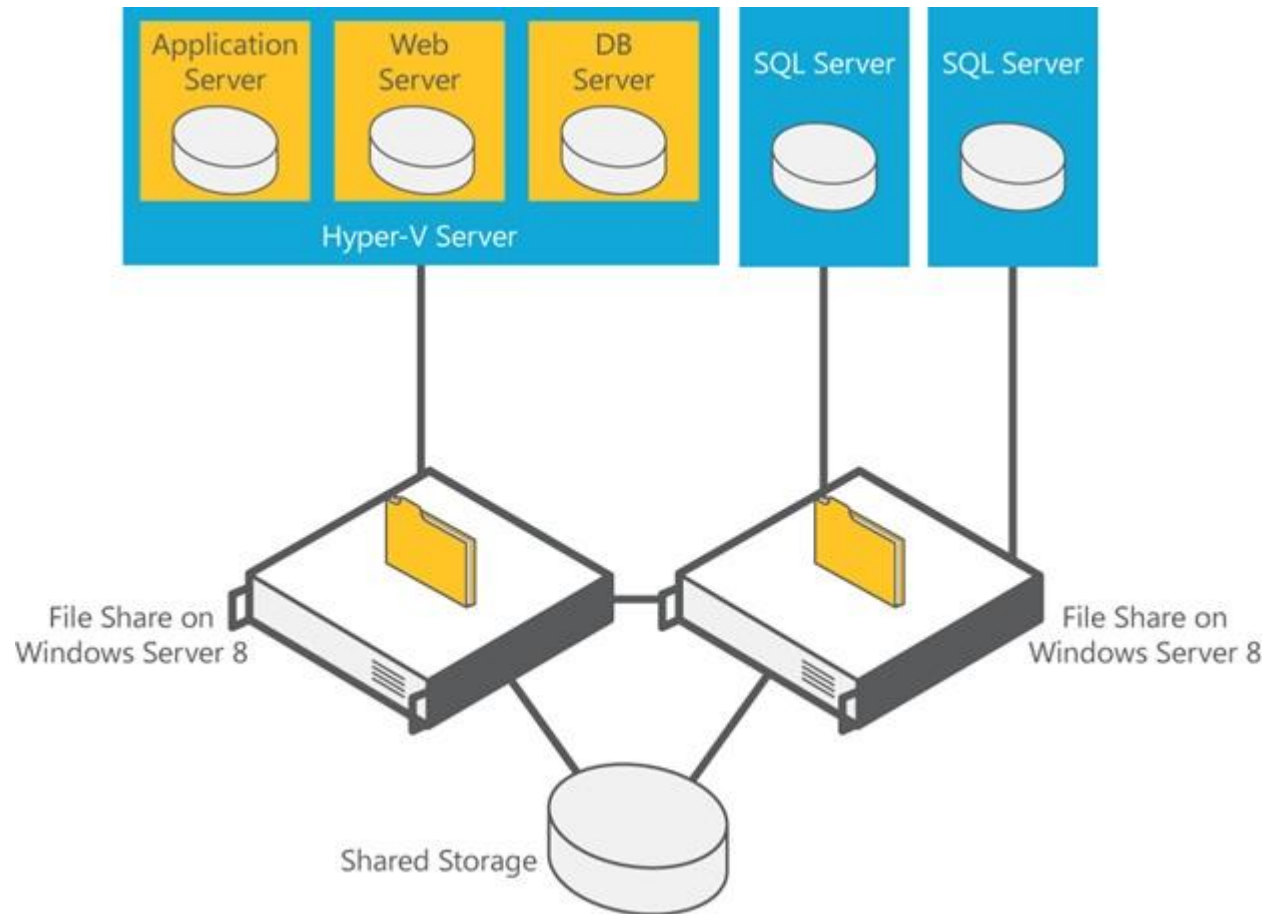
- Queuing Live Migrations

- CSV Bitlocker Support

Failover Clustering: Cluster Aware Updating



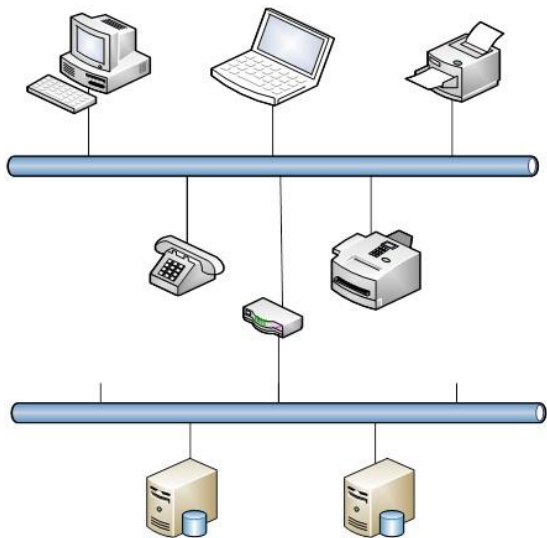
Failover Clustering: File Share Storage



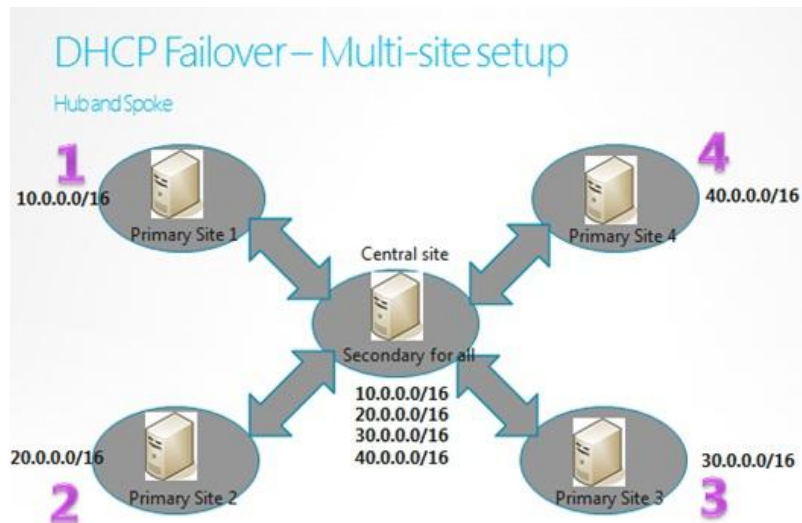
Windows Server “8”: Networking

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

Networking: DHCP High Availability

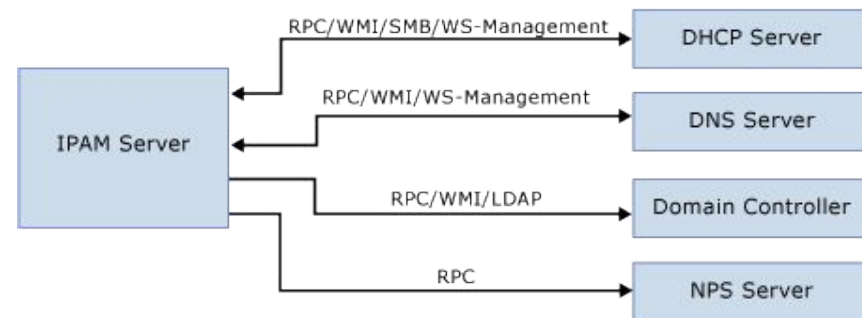
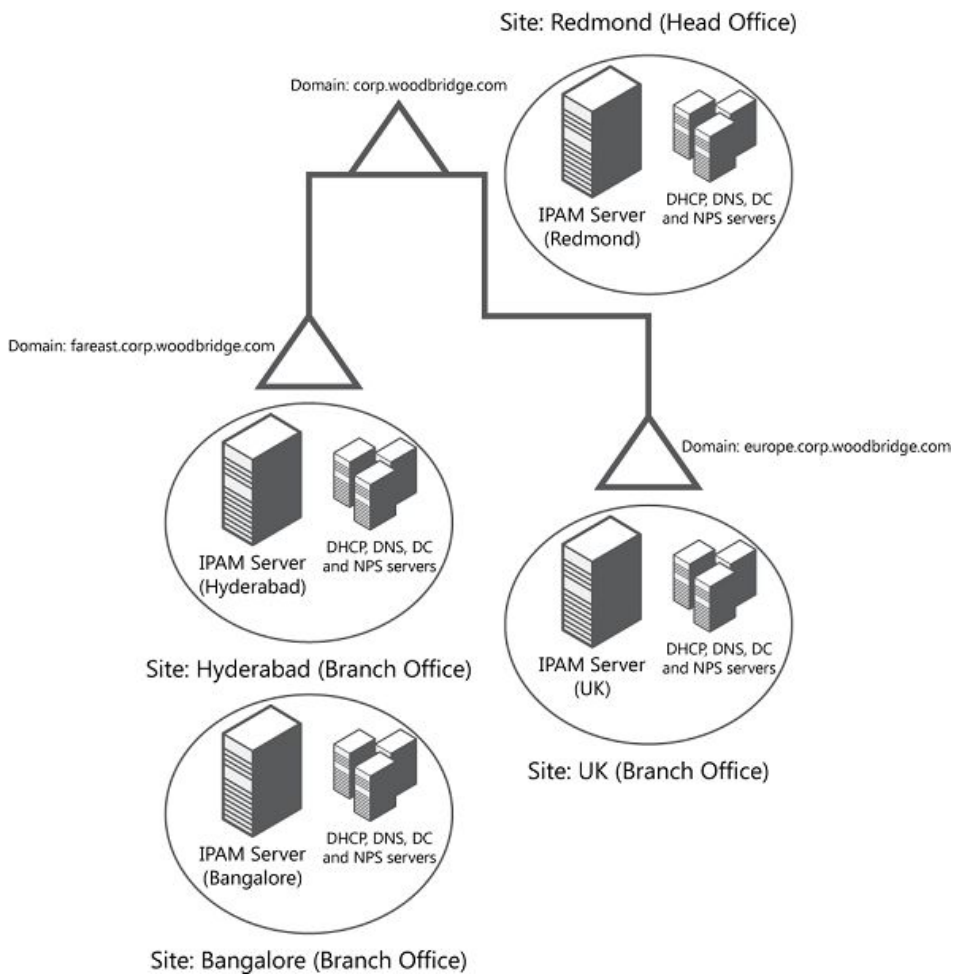


Legend	
DHCP Failover – Single Subnet	
Symbol	Description
	Ethernet
	PC
	DHCP Server
	IP Phone
	Multi-function device
	Laptop computer
	DHCP Relay
	Printer



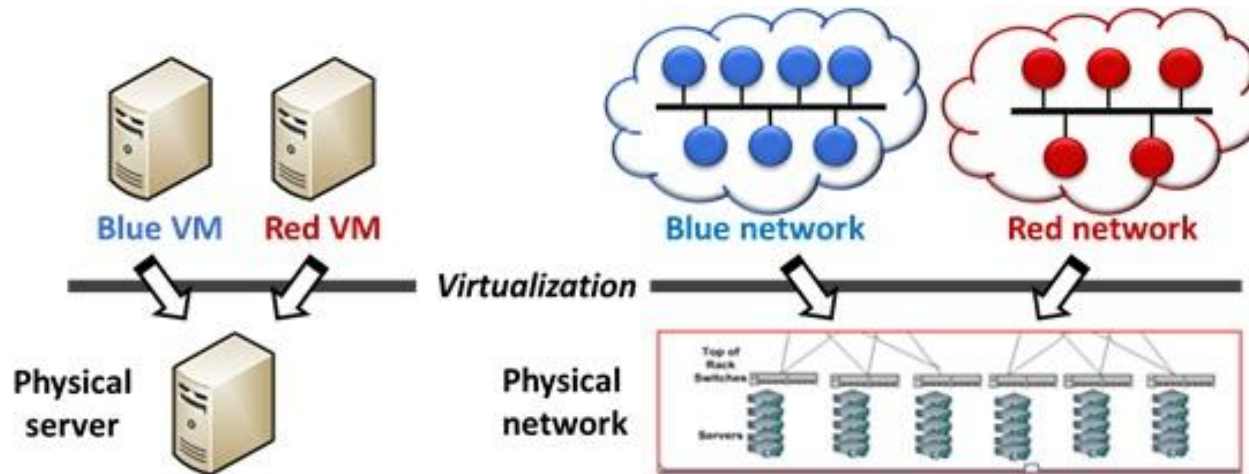
- DHCP Load Sharing Mode
- Hot Standby Mode

Networking: IP Address Management



- Distributed IPAM
- Centralized IPAM

Networking: Hyper-V Network Virtualization



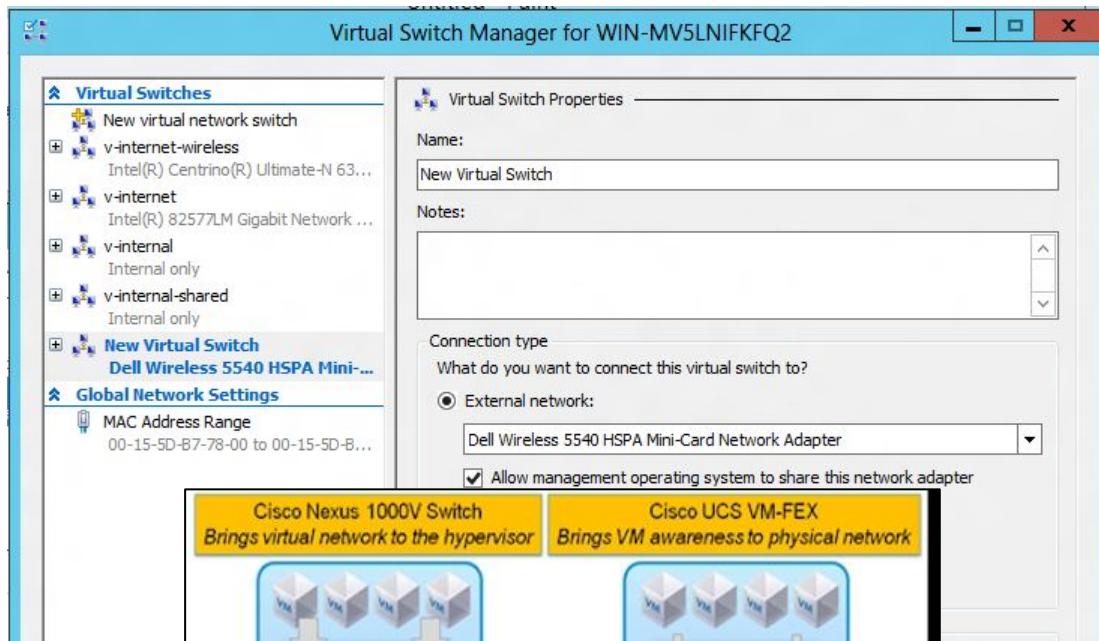
Server virtualization

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

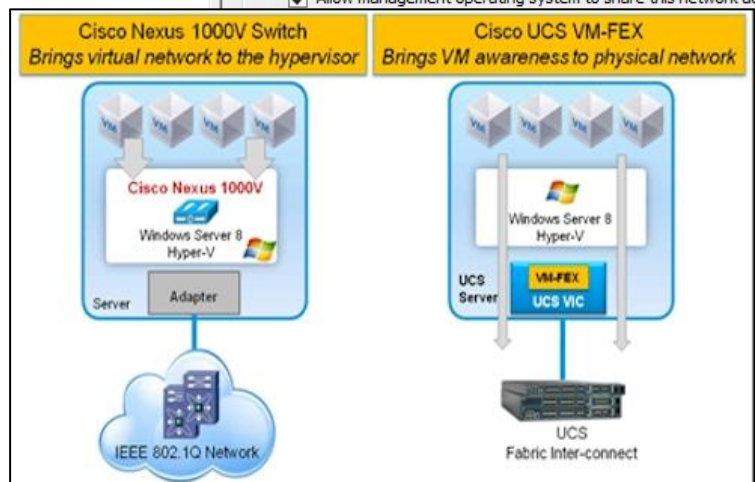
Network virtualization

- 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

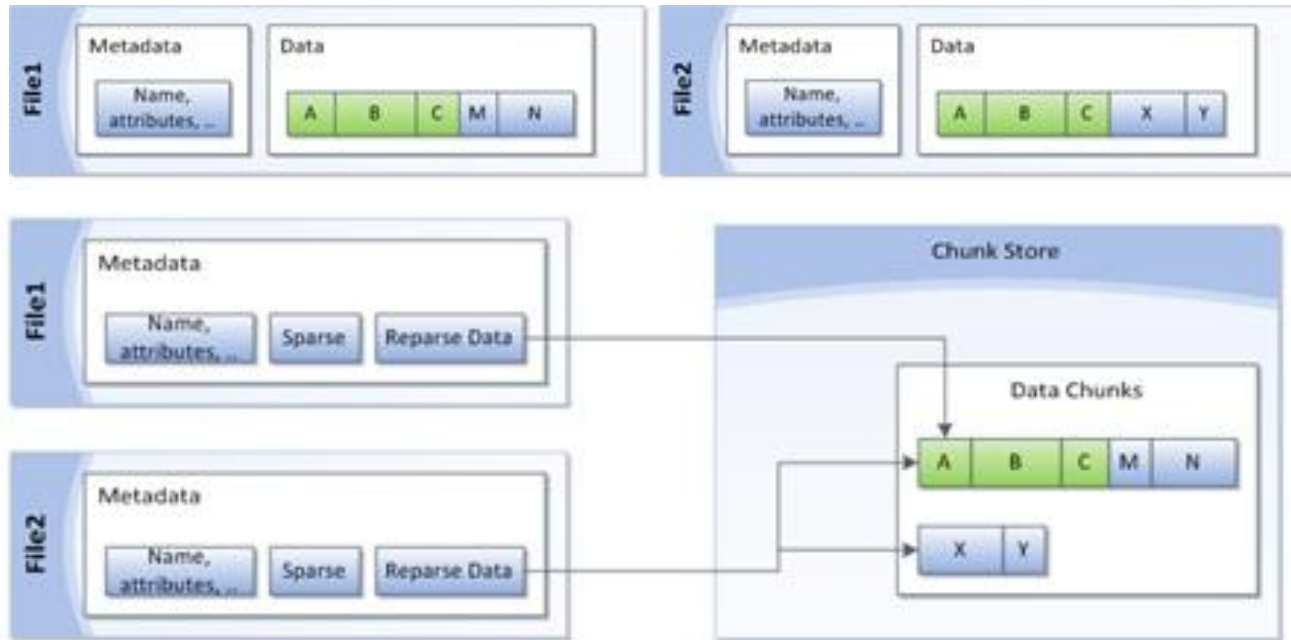
The screenshot shows the Windows Server Manager interface for a local server named 'Server01'. The left-hand navigation pane includes 'Dashboard', 'Local Server', 'All Servers', and 'File and Storage Services'. The main area displays the 'PROPERTIES' for 'Server01'. A table lists various system settings, 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



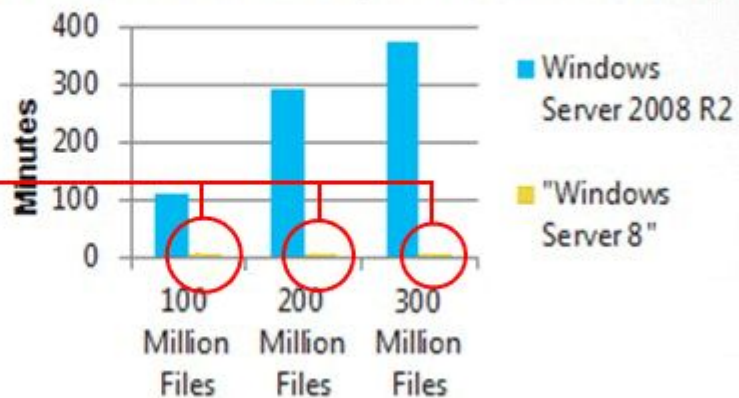
- 2:1 для файловых данных
- 20:1 для виртуальных машин

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

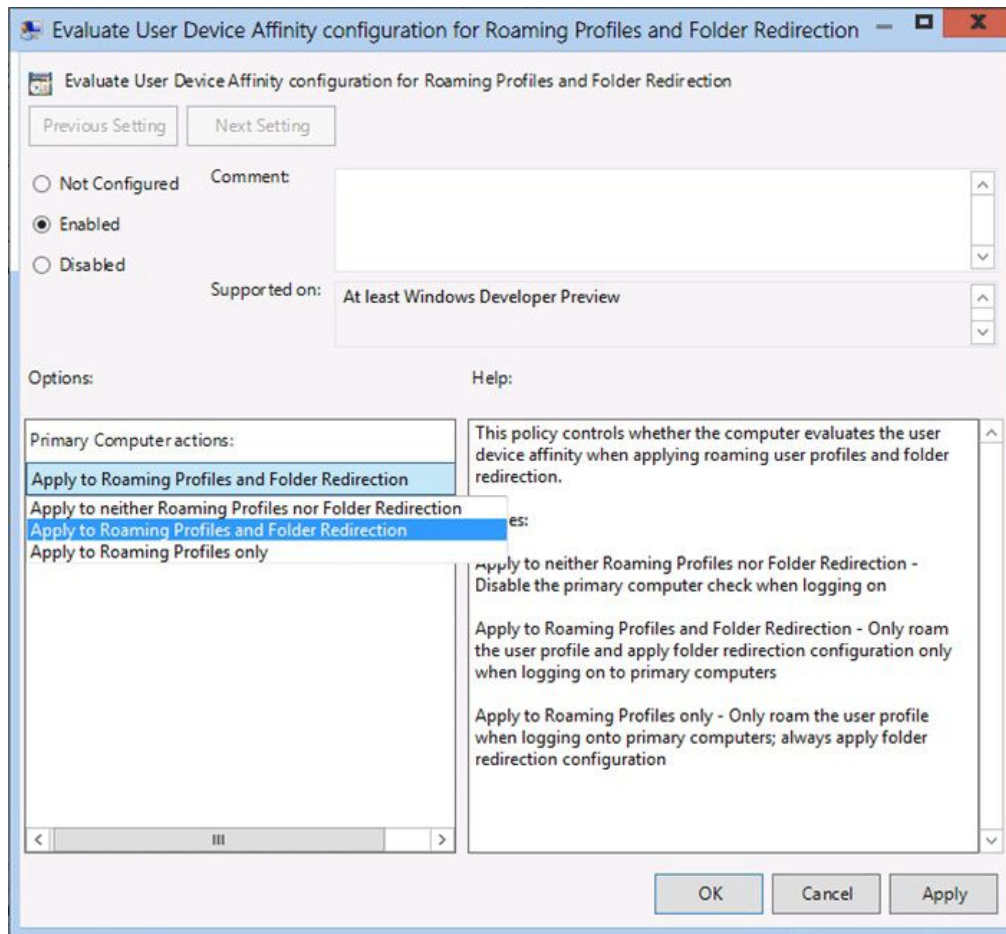


In this benchmark, "Windows Server 8" execution time <8 seconds

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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)

