



Windows Server 2008 R2

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What's HOT in Windows Server 2008 R2

- AD Recycle Bin
- DHCP Failover
- Active Directory Administrative Center
- DirectAccess™
- BranchCache™
- Best Practice Analyzer
- Powershell 2.0
- Group Policy Preferences
- Hyper-V Live Migration
- Power Management Features

Active Directory Updates

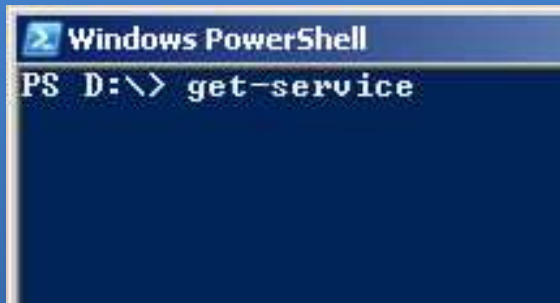


- Nye ting i Active Directory for Windows server 2008 R2?
 - PowerShell Cmdlets
 - Active Directory Administrative center
 - Best Practice Analyzer
 - Recycle Bin for AD
 - Managed Service accounts
 - Offline Domain Join
 - Health Model og Management Packs

PowerShell 2.0



Improved Command-line shell & Scripting Language

A screenshot of a Windows PowerShell terminal window. The title bar reads "Windows PowerShell". The command prompt shows "PS D:\> get-service".

```
Windows PowerShell
PS D:\> get-service
```

- Forbedrer produktiviteten og kontrol
- Gør det nemmere for system administratorer at automatisere opgaver
- Brugervenlig
- Virker med eksisterende scripts

New Features

- Grafisk PowerShell
- Forbedret sikkerhed
- Nye cmdlets

Integration

- Active Directory Administration Center
- IIS
- Power Management
- "One-to-many" remote management med WS-MGMT

Powershell fordele



- Fleksibel output formatering
- Cmdlets kan sammensættes (pipe) til opbygning af komplekse operationer
- End-to-End manageability med Exchange, Group Policy, etc



- Tidligere begrænsninger
 - Ikke opgave-orienteret UI giver administrations “pain”
 - Eksempel: resetting user passwords
 - Muligheden i MMC ikke skalerbar til store datasæt
- Ekstra features
 - Opgaver udført vha PowerShell Cmdlets
 - Opgave orienterede administrationsmodel, med støtte til store datasæt
 - Navigation udviklet til support af multi-domain, multi-forest miljøer

Best Practice Analyzer



Identificere afvigelser fra best practices til bedre styring af Active Directory implementeringer

- Tidligere begrænsninger
 - Ikke nogen nem og automatiseret validering af AD konfiguration mod best practices
- Ekstra features
 - Analyserer AD indstillinger, som forårsager flest uventede problemer i jeres miljøer
 - Udnytter PowerShell cmdlets til indsamling af run-time data
 - Fremsetter anbefalinger i forbindelse med implementeringen
 - Tilgængelig via Server Manager

Server Roles med BPA i WS08 R2 Release



Server Roles	WS08 R2 Release
Active Directory Certificate Services	✓
Active Directory Domain Services	✓
DNS Server	✓
Remote Desktop Services	✓
Web Server (IIS)	✓

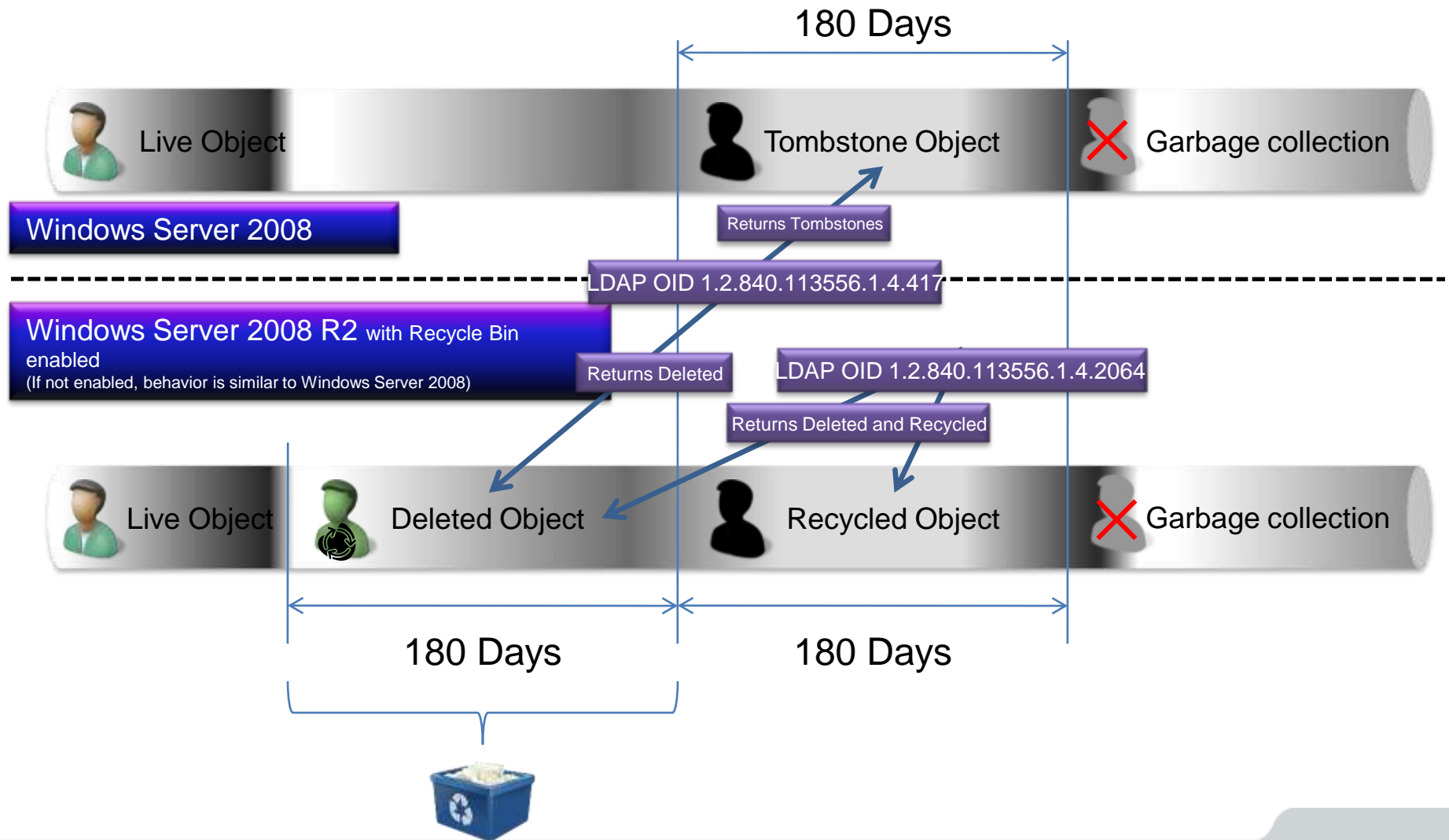
Recycle Bin for AD



Active Directory 'fortrydelses pillen'

- Tidligere begrænsninger
 - Utilsigtet objekt sletning forårsager business nedetid – Slettede bruger kan ikke logge på og få adgang til virksomhedens ressourcer
 - Utilsigtet sletning er nr. 1 på hit listen over årsager til AD Disaster\Recovery scenarier
- Ekstra features
 - Recycle bin for AD DS og AD LDS objekter
 - Funktion kræver Windows Server 2008 R2 forest functional level
 - For AD LDS, skal alle replicas køre med den nye 'application mode'

Recycle Bin for AD Object Life-cycle



Managed Service Accounts

Simpel management af service accounts

- Tidligere begrænsninger
 - Management af individuelle accounts for services er tung
 - Periodisk vedligeholdelse kræver ofte nedetid
 - Eksempel: resetting service account password
- Ekstra features
 - En overkommelig løsning som tilgodeser isolationsbehov for services
 - Bedre SPN management i WS08R2 Domain Functional Mode
 - Lavere TCO via reduceret nedetid for services (manuel skift af password og relaterede problemer)
 - En Managed Service Account pr. Service pr. server
 - Ingen menneskelig indgriben ved password management!

Offline Domain Join



Enable easier provisioning of machines in the data center

- Tidligere begrænsninger
 - Restart efter domain join nødvendigt
 - Ikke muligt at domain join en maskine mens den er offline.
- Ekstra features
 - Muligt at “pre-provision” maskinkonti i domænet ved forberedelse af OS images til udrulning
 - Maskiner er domain joined ved boot
 - Steps og tid ved udrulning i data center reduceres

Active Directory Updates



Demo

Administration Center

PowerShell 2.0

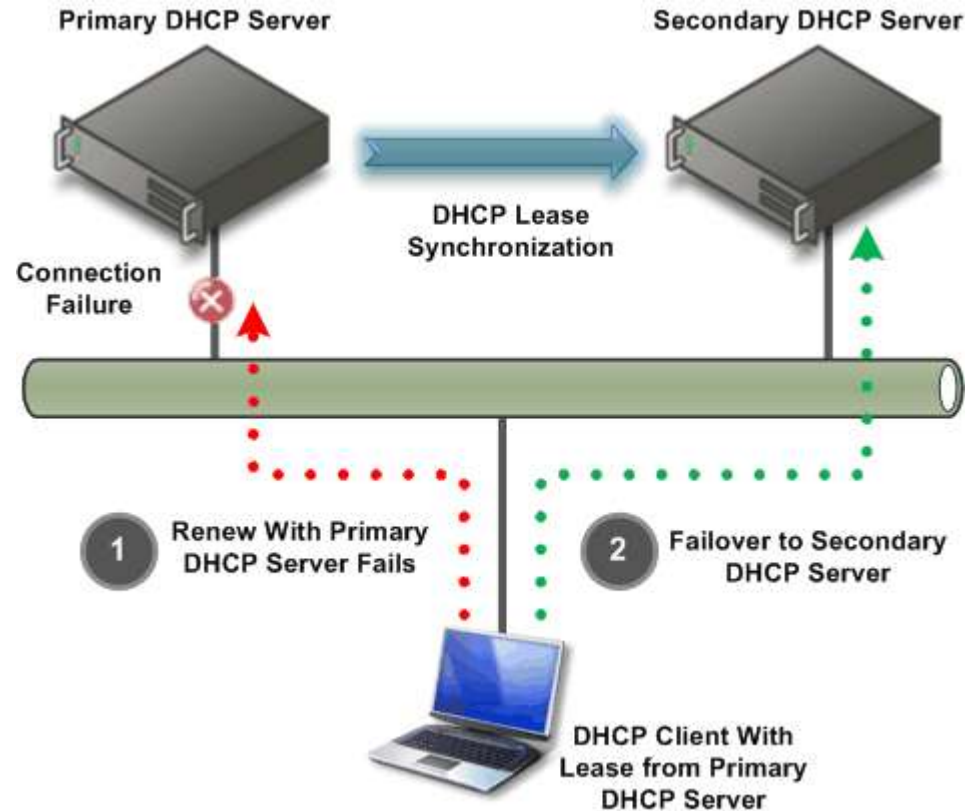
Best Practice Analyzer

Skalerbar og Pålidelig



• DHCP Failover

- Primær/sekundær DHCP servere synkronisere informationer
- Sekundær server håndtere DHCP services indtil primær server er online igen



Group Policy forbedringer



- 800 nye objekter i Windows Server 2008
- Windows Server 2008 R2 introducerer yderligere 300 nye objekter
- Group Policy understøtter nu Powershell v2.0
- ADMX (xml baserede ADM filer)
- ADML (sprog lag for ADMX filer)
- GPMC v2 built-in i Windows server 2008
- GPO effekten på Sysvol er reduceret betydeligt
- "Find" endelig kommet i GPMC
- "Starter GPO" til generering af default GP settings (baseret på Microsoft Security Best Practices)
- Mulighed for tilføjelse af "comments" på GP objekter for bedre dokumentation
- Forbedret logning
- Skift fra ADM til ADMX/L
- PowerShell Cmdlets for Group Policy
- Group Policy Preferences

GPP, kom igang allerede i dag



- Group Policy Preferences, du har dem allerede, også selvom du ikke kører Windows Server 2008/R2 & Windows 7

Operating System	Can Apply Group Policy Preferences	Can Manage Group Policy Preferences through GPME
Windows 2000	Not supported	Not supported
Windows XP (x86 and x64)	Supported with SP2 and CSE installation	Not supported
Windows Vista (x86 and x64)	Supported with SP1 and CSE installation	Supported with SP1 and RSAT installed
Windows Server 2003 (x86 and x64)	Supported with SP1 and CSE installation	Not supported
Windows Server 2008 (x86 and x64)	Integrated	Integrated

Group Policy Preferences funktionalitet



Control Panel includes:



Folder Options



Local Users and Groups



Scheduled Tasks

Windows Settings include:



Drive Mapping



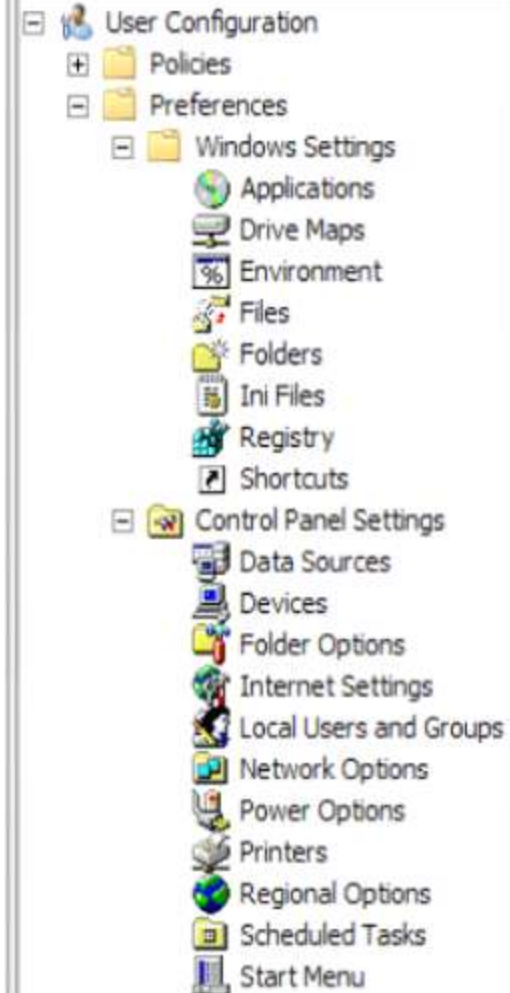
Folders



Registry



Shortcuts





Demo

Group Policy Preferences

Drive mapping

Comments

PowerShell Cmdlets

Hyper-V 2.0



- Bygget ovenpå den solide arkitektur Windows Server 2008 Hyper-V
- Integration med nye teknologier og produkter (RDS, VDI)
- Aktivering af nye dynamiske scenarier:
 - Øget server konsolidering
 - Dynamic Data Center
 - Virtualized Centralized Desktop



Hyper-V 2.0 Feature Overview

- Logical Processor Support

- Support for 32 logical processors on host computer



- Hot Add/Remove Storage

- Add and remove VHD disks to an running VM without requiring a reboot

- Second Level Translation (SLAT)

- Leverage new processor features to improve performance and reduce load on Windows Hypervisor
- Boot from VHD
 - Allows any VHD to work on physical hardware



Microsoft Hyper-V Server 2008 R2



	Microsoft Hyper-V Server 2008	Microsoft Hyper-V Server V2
Processor Support	Up to 4 processors	Up to 8 processors
Physical Memory Support	Up to 32 GB	Up to 1 TB
Virtual Machine Memory Support	Up to 32 GB total (e.g. 31 1 GB VMs or 5 6 GB VMs)	64 GB of memory per VM
Live Migration	No	Yes
High Availability	No	Yes
Management Options	Free Hyper-V Manager MMC SCVMM	Free Hyper-V Manager MMC SCVMM

Live Migration



- Overblik
 - Live-migration af VMs mellem servere uden tab af service
 - Clustered Shared Volumes facilitates LM
- Fordele
 - Ingen “dropped network connections”
 - Udnytter Failover Clustering
 - Muliggør en dynamisk IT miljø
- Hvordan
 - SCVMM anbefales og kan give yderligere Live Migration management muligheder såsom Live Migration via policy
 - Flytning fra Quick til Live Migration:
 - Ændringer til VMs: No
 - Ændringer til Storage infrastruktur: No
 - Ændringer til Network Infrastruktur: No
 - Opdatering til Hyper-V 2.0: Yes



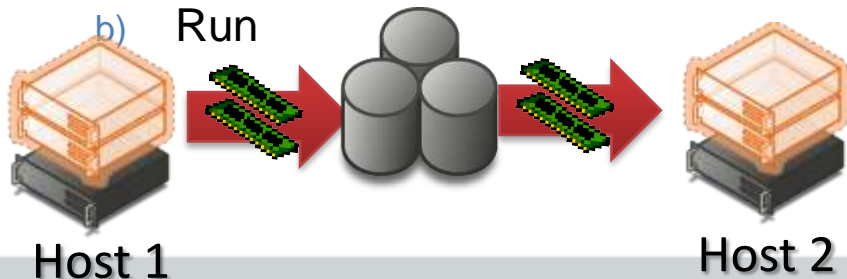
Quick Migration vs. Live Migration



Quick Migration

(Windows Server 2008 Hyper-V)

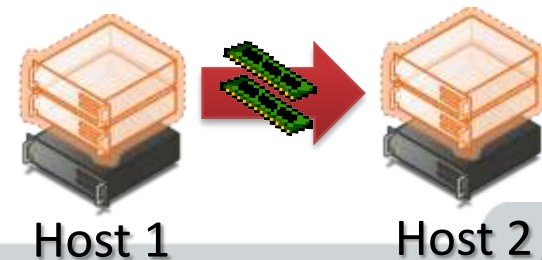
1. Save state
 - a) Create VM on the target
 - b) Write VM memory to shared storage
2. Move virtual machine
 - a) Move storage connectivity from source host to target host via Ethernet
3. Restore state & Run
 - a) Take VM memory from shared storage and restore on Target



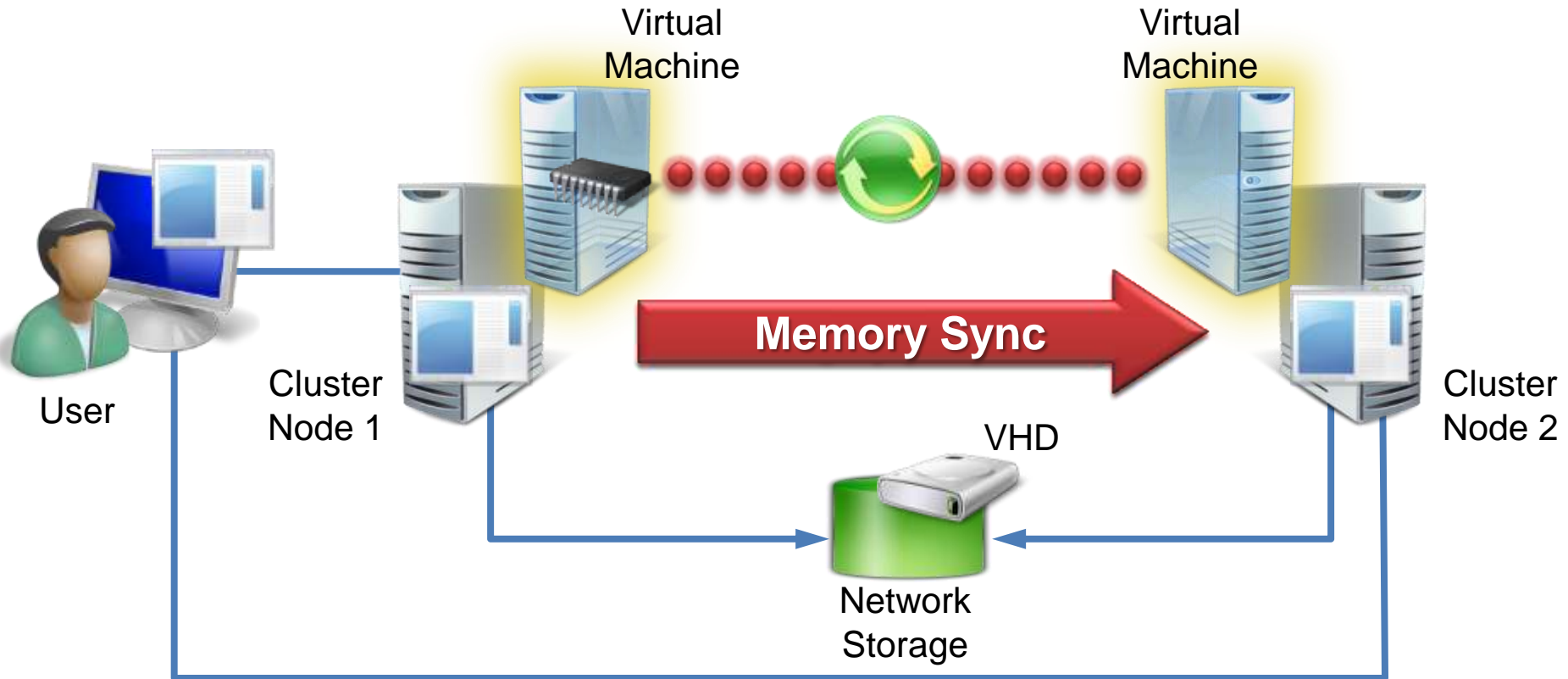
Live Migration

(WS08R2 Hyper-V)

1. VM State/Memory Transfer
 - a) Create VM on the target
 - b) Move memory pages from the source to the target via Ethernet
2. Final state transfer and virtual machine restore
 - a) Pause virtual machine
 - b) Move storage connectivity from source host to target host via Ethernet
3. Un-pause & Run



Hyper-V 2.0 - Live Migration



Den virtuelle maskine er flyttet!

TS får nyt navn i R2



TS RemoteApp™	RemoteApp™
TS Gateway	RD Gateway
TS Session Broker	RD Connection Broker
TS Web Access	RemoteApp and Desktop Web Access / Connections
TS Easy Print	RD Easy Print

Remote Desktop Services



NEW!

TS & VDI – an integrated solution

Hyper-V support for virtual desktops

Single discovery & publishing infrastructure

SCVMM Integration & Support

Improved

Full Fidelity RemoteApp & Desktops

RemoteApp & Desktop Connections

RemoteApp & Desktop & Web Access

RD Gateway Security Improvements

Improved

Improved user experience

True multiple monitor support

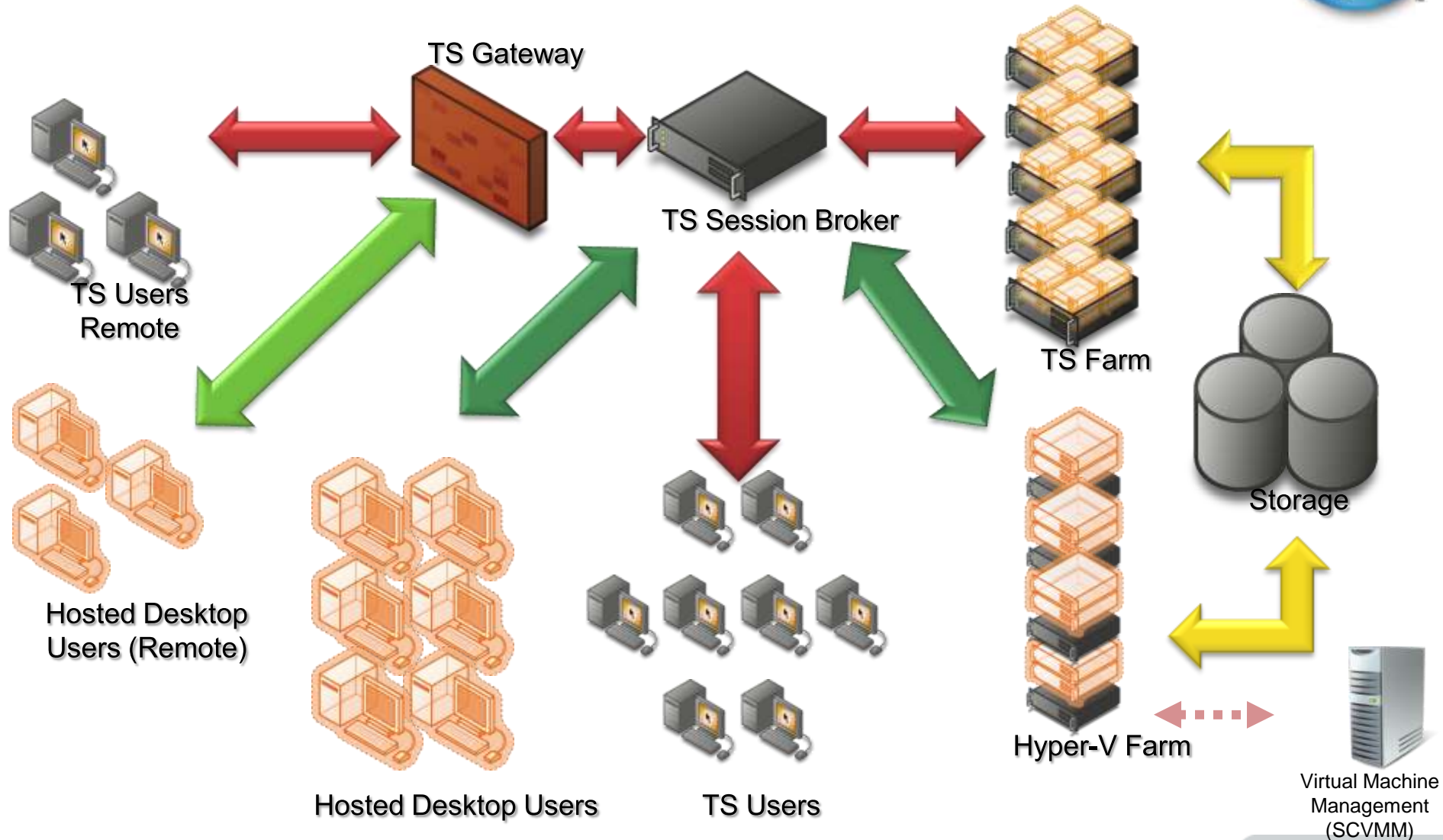
Multimedia Support & Bi direction audio

2D and 3D remoting for DirectX

Platform Improvements

New API, Connection Broker Extensibility, Dynamic CPU Allocation, IP address virtualization, Best Practices Analyzer, Full MSI support

RDS & VDI – Integreret løsning



Remote Desktop Services - Forbedringer



- Forbedret brugeroplevelse
 - WS08R2 + Win7 = Samme som lokale brugere
- Forbedret RemoteApp-Desktop Connections
 - RDS giver mulighed for VDI
 - Multimedia redirection
 - Audio Input & recording
 - Aero Glass support
 - DirectX redirection
 - Improved audio/video synchronization
 - Language Bar Redirection
 - Task Scheduler
- Forbedret RemoteApp – Desktop Management
 - RemoteApp & Desktop connections control panel applet
 - Single administrative infrastructure
 - Designed for domain/standalone computers
 - Always up to date
 - Single sign-on experience within a workspace
 - RemoteApp & Desktop Web Access
- Forbedret RemoteApp – Desktop deployment
 - PowerShell Provider
 - Profile Improvements
 - MSI compatibility
 - Remote Desktop Gateway

Dagens IT udfordringer



- **Stigende krav fra forretningen**
 - Afhængigheden af teknologi til business-kritiske opgaver
 - Altid tilgængelig – hvor som helst
- **Stigende kompleksitet**
 - Tilføjelse af ekstra services ændrer management byrden
 - 80% af IT omkostninger er håndtering af eksisterende systemer
- **Fremtidige udfordringer**
 - Flyt til Datacenters – large scale, virtualization remote management
 - Outsourcing

R2 Power Management



- Reducere elforbruget ved kun at bruge den strøm som er nødvendigt for at håndtere workload.
- Reducere multi-core processor strøm forbruget
 - Core parking
 - P Status
- Centraliseret kontrol af active power policies – Mulighed for server at lukke ned “Off hours” ved hjælp af DMTF-compliant remote management interfaces
- SANs tilsluttet til Windows Server vil være i stand til at gå i “lower power state” når de ikke bliver fuldt udnyttet

Hvad er DirectAccess™

- Fjernadgang til firmaets netværk er nu transparent
 - Ikke længere behov for at installere VPN klient software
 - Intet behov for at bruger aktivt kobler op til virksomheden
 - Udnytter policy-baseret netværksadgang
 - Muliggør også desktop styring uanset hvor klienten er placeret
- Indvendinger: Jamen, jeg har jo allerede en VPN
 - Omkostninger forbundet med VPN infrastruktur
 - Hvad anvender brugere VPN serveren til?
 - Sikkerhed? MS har (også) tænkt på det. Hint: IPv6

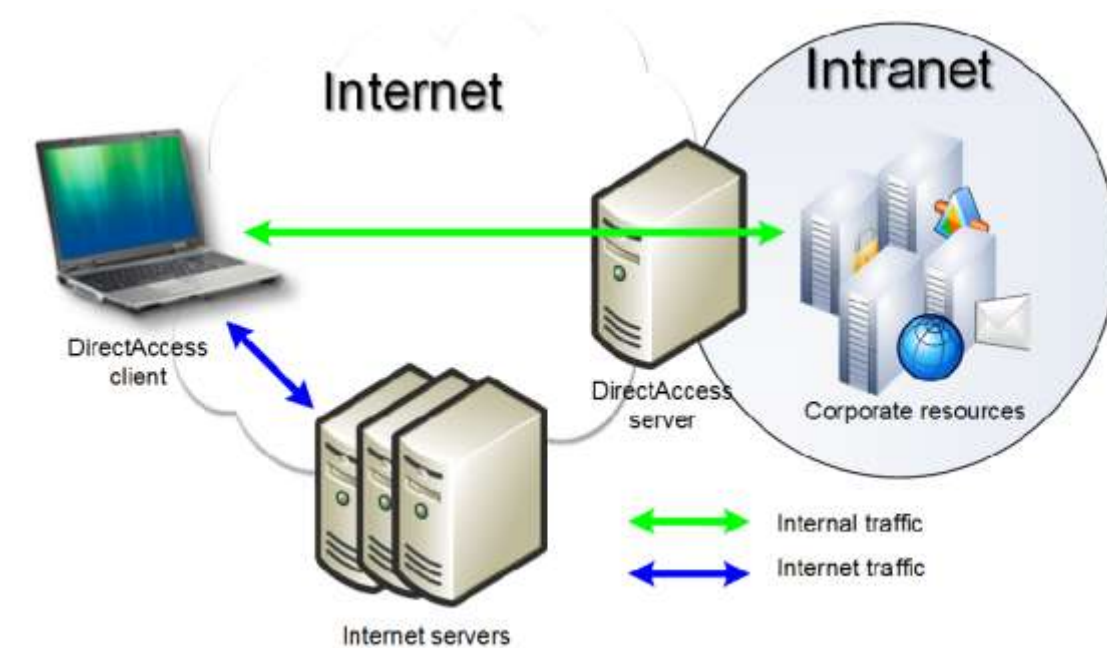


DirectAccess™



• Krav

- DirectAccess™ server skal være Windows Server 2008 R2
- DirectAccess™ client skal være Windows 7
- DirectAccess™ Server kræver to netkort (External-Internal)
- Active Directory
- IPv6 (ISATAP)
- PKI (Public Key Infrastructure)



Hvad er BranchCache™?



- **Hvad får man ud af BranchCache™**
 - Nedbringer anvendelse af WAN linierne
 - Klart bedre brugeroplevelse
 - To udrulningsmetoder: Med og uden server (hosted eller distributed)

- **Indvendinger**
 - Men båndbredde koster jo ikke alverden?

 - Men det er skidt for sikkerheden - filer begynder jo at flyde alle mulige steder!?

 - Er der tale om en ekstra administrativ byrde?

Branch Office Enhancements



Situation Today

- Application and data access over WAN is slow in branch offices
- Slow connections hurt user productivity
- Improving network performance is expensive and difficult to implement



BranchCache™

- Caches content downloaded from file and Web servers
- Users in the branch can quickly open files stored in the cache
- Frees up network bandwidth for other uses

BranchCache Benefits



IT Pro Benefits

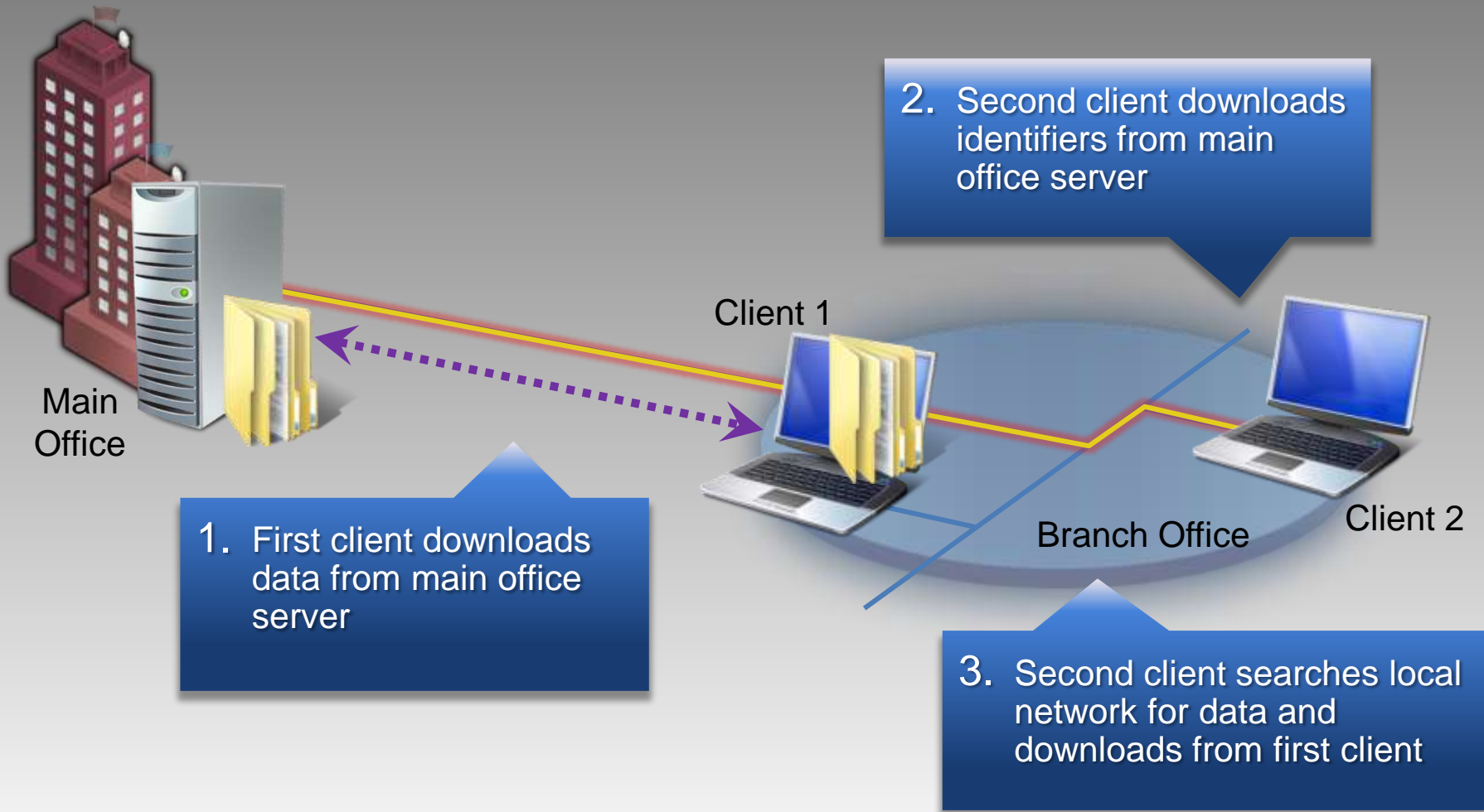
- Helps reduce WAN utilization and cost
- Data encryption is enforced across the network
- Simple to deploy

End User Benefits

- Less waiting for downloads = more productivity
- Combined with other Windows 7 features enhances the end to end IW experience

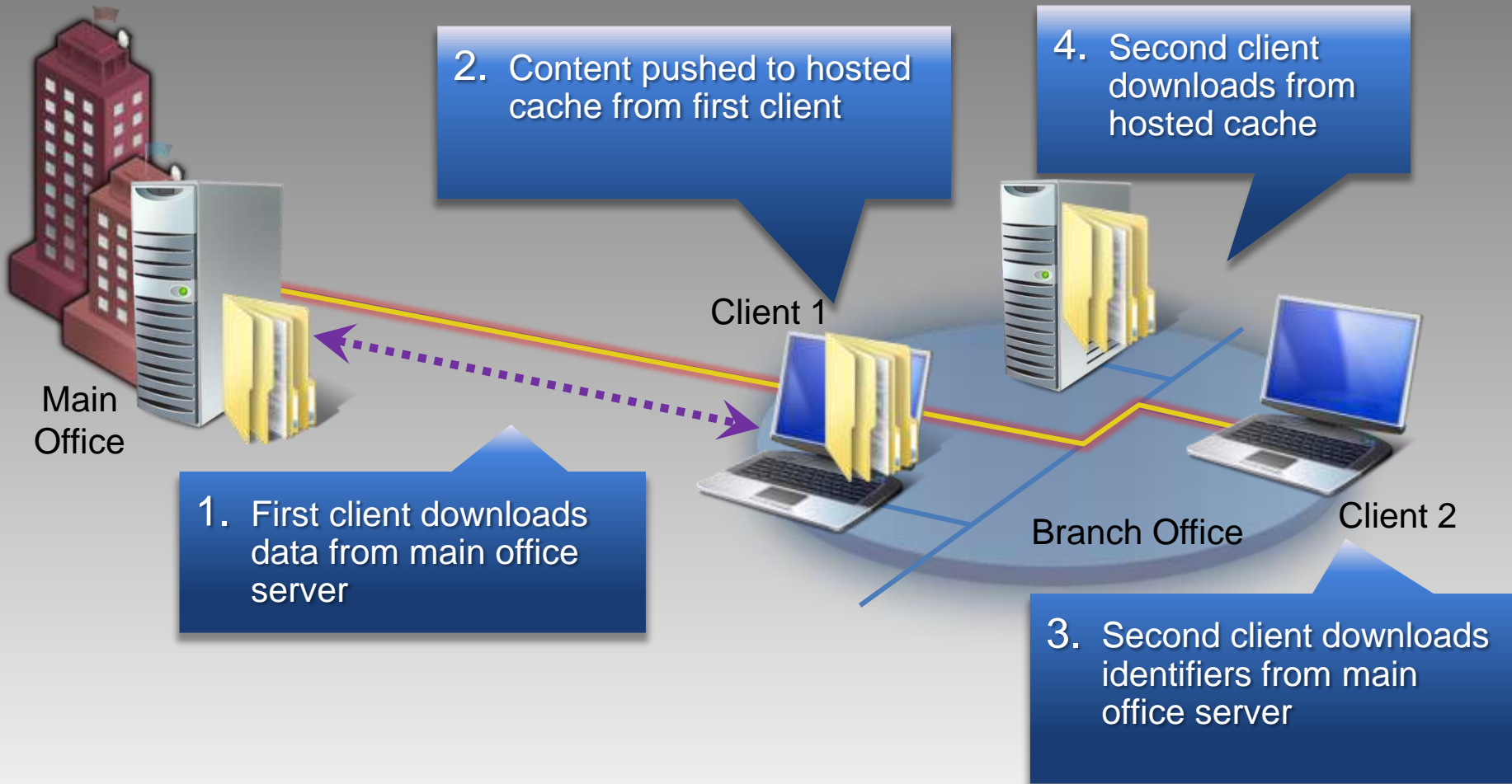
Improving Branch Performance

Distributed mode



Improving Branch Performance

Hosted caching



Key Changes to IIS 7.5 in R2



ASP.NET on Server Core

New IIS Manager Modules

Integrated PowerShell Provider

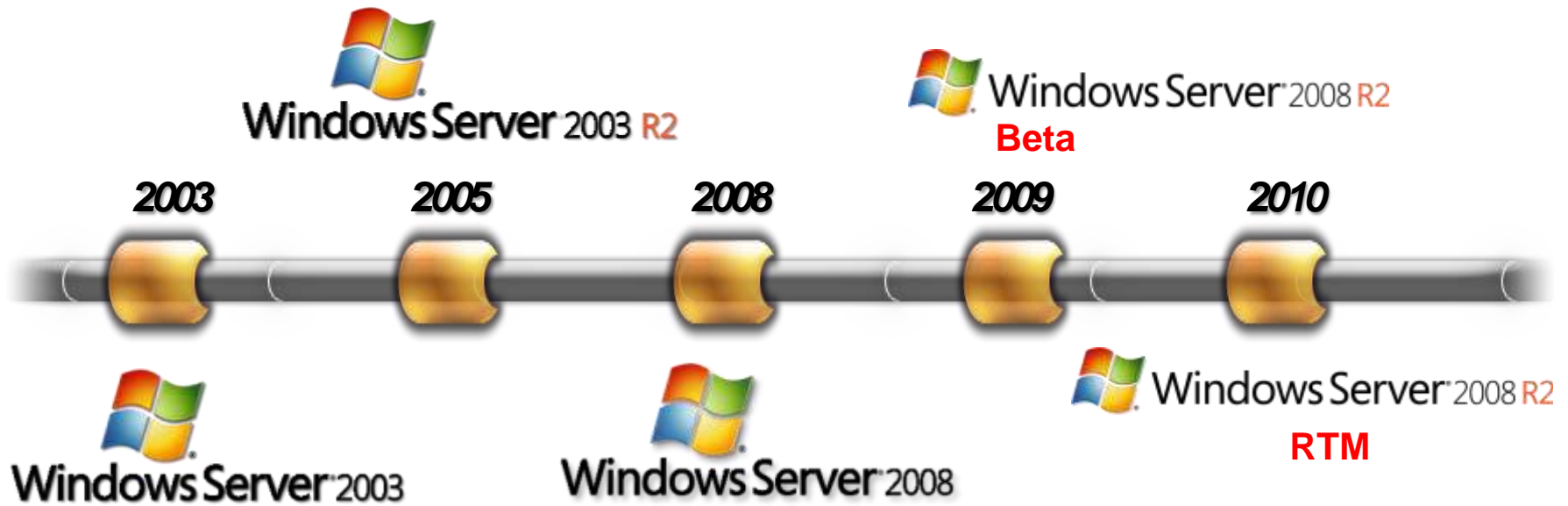
Configuration Logging & Tracing

Integrated FTP and WebDAV

Extended Protection & Security

FTP over SSL

Windows Server Roadmap



Nyttige links



- Paul Thurrot's Supersite for Windows - <http://www.winsupersite.com/>
- Group Policy Team Blog – <http://blogs.technet.com/grouppolicy>
- Windows Server 2008 R2 Home -
<http://www.microsoft.com/windowsserver2008/en/us/R2-resources.aspx>
- ADMX Migration tool -
http://www.microsoft.com/downloads/details.aspx?familyid=0F1EEC3D-10C4-4B5F-9625-97C2F731090C&mg_id=10050&displaylang=en
- Group Policy Preferences -
<http://support.microsoft.com/Default.aspx?kbid=943729>
- Expanded Control with Group Policy Preferences –
<http://technet.microsoft.com/en-us/magazine/dd314380.aspx>

