

Windows Server 2012 kann alles  
besser als Windows Server 2008  
R2?!

# Agenda

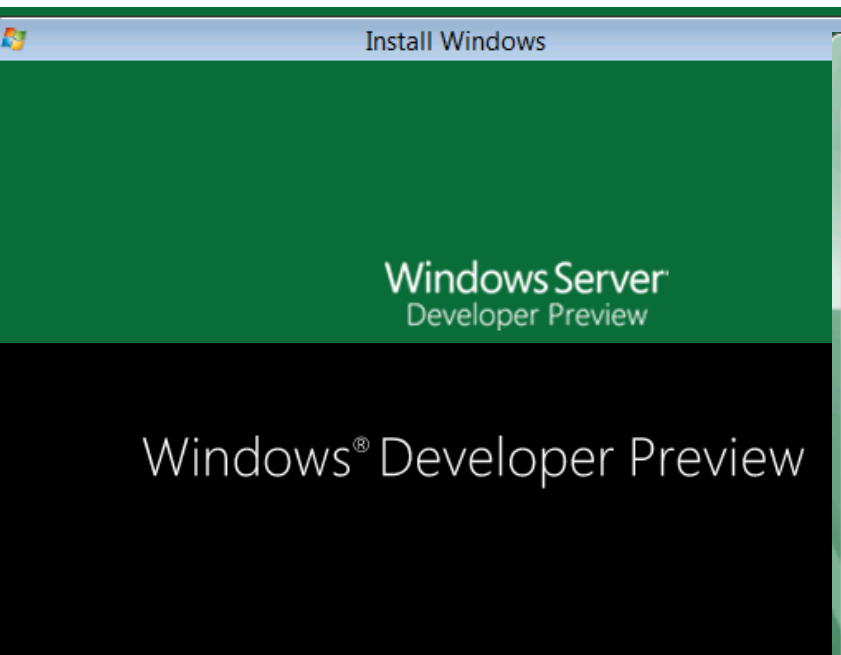
- Weit ueber 300 Neuerungen?
- Verbesserungen im Setup Prozess
- Server Manager reloaded
- Active Directory Neuerungen
- Windows Subsystem Neuerungen
  - DNS
  - DHCP
  - NPS
  - Storage
- Hyper-V 3.0
- Windows Powershell
- Und was hat sich am Client geaendert?

# Weit ueber 300 Neuerungen?

- Ich habe nachgezaehlt ....
  - Es sind 467,5 Neuerungen ....
  - Und 1.247,00 Aenderungen
- Stimmt das wirklich? ....
  - Wir werden sehen

# Verbesserungen im Setup Prozess

- WAIK wird ADK (Assesment and Deployment Kit)
- Volle SCCM 2012 Integration
- Neue Serverinstallationsoption
  - Feature on Demand
- Zwei Setup Moeglichkeiten
  - Advanced Setup
  - Streamlined Setup



Windows® Developer Preview

Install Windows

Select the operating system you want to install

Operating system	Architecture	Date modified
Windows Server Developer Preview (Full Installation)	x64	8/25/2011
Windows Server Developer Preview (Server Core Installation)	x64	8/25/2011
Windows Server Developer Preview (Features On Demand)	x64	8/25/2011

Description:  
This option installs the complete installation of Windows Server. This installation includes the entire user interface, and it supports all of the server roles.

Install Windows

Please read the license terms

**MICROSOFT PRE-RELEASE SOFTWARE LICENSE TERMS**

**MICROSOFT WINDOWS SERVER DEVELOPER PREVIEW**

These license terms are an agreement between Microsoft Corporation (or based on where you live, one of its affiliates) and you. Please read them. They apply to the pre-release software named above, which includes the media on which you received it, if any. The terms also apply to any Microsoft


- updates,
- supplements,
- Internet-based services, and
- support services


I accept the license terms

Next

Install Windows

Which type of installation do you want?

 **Upgrade**  
Upgrade to a newer version of Windows and keep your files, settings, and programs. The option to upgrade is only available when an existing supported version of Windows is running. We recommend backing up your files before you proceed.

 **Custom (advanced)**  
Install a new copy of Windows. This option does not keep your files, settings, and programs. The option to make changes to disks and partitions is available when you start your computer using the installation disc. We recommend backing up your files before you proceed.

[Help me decide](#)

ServerManager reloaded

Demo

# Active Directory Neuerungen

- Support for DC virtualization
- Snapshot Support
- Neue Powershell CMDlets
- DC-Cloning
- GPRESULT zeigt jetzt die richtige Windows Version an 😊
- DCPROMO in Server Manager integriert
- AD based Product Activation (DSSITE – SPP Objects)
- ADAC
  - Recycle Bin
  - FGPP
  - Powershell History
- Certification Authority
  - Compatibility View in CA Templates
  - Authorize additional service accounts to access the private key
  - Renew with the same key

# Hyper-V – Neuerungen 1

- 32 vCPU per VM
- 512 GB VM RAM
- New 16TB VHDX format
- Hyper-V Replica
- Hyper-V Virtual FC
- Live storage migration
- More Concurrent live migration
- Support for up to 63 nodes per Cluster
- Support for 4.000 VMs per Cluster
- Hyper-V support for up to 2 TB RAM
- Hyper-V intelligent second level paging

# Hyper-V – Neuerungen 2

- Live VHD Merge
- CSV v2
- SMB 2 Support
- 150 Hyper-V PowerShell commands
- Hyper-V Extensible Switch
- VM Hardware Error Isolation
- VM Failover Prioritization
- Virtual NUMA
- Dynamic Virtual machine queue
- RSS (Receive Side Scaling)
- RSC (Receive Segment Coalescing)

# Hyper-V Scalability

Category	Windows 2008 R2	Windows Server 8	Factor
Max Logical Processors	64	160	2.5x
Max Active VMs	384	1024	~2.6x
Max Virtual Processors per VM	4	32	8x
Max Virtual Processors per Host	512	1024	2x
Max Memory per VM	64GB	512GB	8x
Max Memory (Host)	1TB	2TB	2x

Source: Buildwindows.com

# Performance

- Bis zu 640 Logical CPU pro Server
  - Kernel Groups
  - NUMA
- 4 TB RAM

# Weitere Neuerungen

- SMB 2.2
- Storage improvements
  - SMB 2.2, SMB transparent Failover
  - Data deduplication
  - Storage Spaces
  - online filesystem repairs
  - 64TB NTFS volume etc.
- NIC Teaming
- Powershell v3
  - Mehr als 2.300 PowerShell cmdlets
- Server Dashboard
  - Multi Server Management mit einem ServerManager
- Performance Counters
  - Neu und erweitert

# Networking

- QoS and flexible bandwidth allocation
- Support for SR-IOV (Direct Access to the physical Network adapter)
- Network Virtualization
- PVLAN support
- Dynamic Virtual Machine Queue (D-VMQ)
- Receive Side Coalescing (RSC)
- DHCP Guard
- Port ACLs
- Extensible virtual switch
- IPsec Task offload

# Noch mehr Abkuerzungen

- Datacenter bridging (DCB)
- Remote direct memory access (RDMA)
- Datacenter TCP (DCTCP)
- Consistent Device Naming (CDN)
- NIC Teaming (LBFO)
- Generic Routing Encapsulation (GRE)
- IPsec Task Offload v2 (IPsecTOv2) for VMs
- Receive Side Scaling (RSS) extensions
- Receive Segment Coalescing (RSC)
- Dynamic Virtual Memory Queues (VMQ)
- Single-Root I/O Virtualization (SR-IOV)

# RDP enhancements

- Improved graphics remoting
- Metro style Remote Desktop app
- Support for a wide range of networks
- RD Gateway Transport Settings

# DHCP enhancements

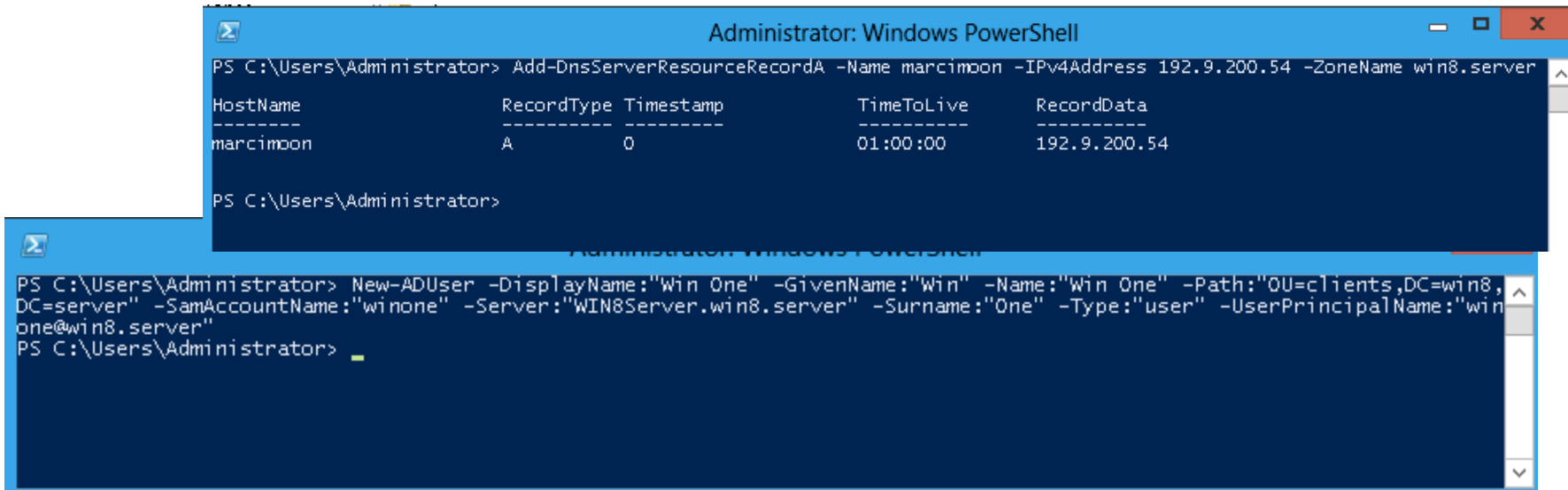
- Policy based Assignment
  - Zuweisung von Policies fuer DHCP Scopes und -Konfigurationen
- DHCP Failover ohne Cluster
  - Load Balancing
  - Hot Standby
  - Zwei DHCP Server teilen sich die gleiche DHCP Konfiguration

# Hyper-V Cluster

- Supporting up to 4000 VMs per cluster
- Supporting up to 63 Cluster nodes
- Improved Cluster Manager Console
- CSV Integration
- VM Monitoring – Application health detection inside the virtual machine
- New Placement policies – Virtual Machine Priority and enhanced placement
- Storage Live Migration
- Hyper-V Replica supporting clustering
- No need for Block Storage – you can use SMB Shares
- Support for Storage Spaces
- Automated Node Draining – like Maintenance mode in SCVMM
- Cluster Aware Updating
- Cluster Shared Volume Improvements – BitLocker support
- Live Migration Queuing
- Migrate multiple Virtual Machine at the same time

# Windows Powershell

- Power(Shell) ohne Ende
- Neue Module verfuegbar (werden dynamisch geladen)
  - Import-Module DNSServer
  - Import-Module DHCPServer



```
Administrator: Windows PowerShell
PS C:\Users\Administrator> Add-DnsServerResourceRecordA -Name marcimoon -IPv4Address 192.9.200.54 -ZoneName win8.server
HostName           RecordType  Timestamp           TimeToLive           RecordData
-----
marcimoon           A           0                   01:00:00             192.9.200.54

PS C:\Users\Administrator>

Administrator: Windows PowerShell
PS C:\Users\Administrator> New-ADUser -DisplayName:"Win One" -GivenName:"Win" -Name:"Win One" -Path:"OU=clients,DC=win8,DC=server" -SamAccountName:"winone" -Server:"WIN8Server.win8.server" -Surname:"One" -Type:"user" -UserPrincipalName:"winone@win8.server"
PS C:\Users\Administrator>
```

# Und am Client?

- Windows to Go
- DirectAccess
- Flexible organization based policies
- Always on encryption
- AppLocker for MetroStyle Applications
- Faster Bitlocker
- Measured Boot (SecureBoot) - ELAM
- Client Hyper-V
- AD based Product Activation

# Das Ende

- Vielen Dank fuer Ihre Aufmerksamkeit

