



INFORMATION

TECHNOLOGY

Windows Server 2008

April 22, 2008

GROUNDFORCE™ IT

www.GroundForceIT.com ■ tel: 804.553.2456

- 7:30 AM – 8:30 AM - Breakfast & Networking with your peers
- 8:30 AM – 10:30 AM - Server 2008 Overview
- 10:30 AM – 11:00 AM - Break – Microsoft Truck Tour!
- 11:00 AM – 12:00 PM - Server 2008 Demo
- 12:00 PM – 2:00 PM - More Microsoft Truck!


GroundForce IT Services Include:

- Infrastructure design, implementation, and support
- Server Virtualization and Consolidation
- Virtual Private Networking/Remote Access
- Security Audits and Assessments
- Desktop hardware and peripheral support
- Hardware and Software Procurement



- NAP/ NAC – Network Access Protection/Control
- IIS – Internet Information Services
- PHP – Scripting language used for dynamic web pages
- RIS/WDS – Remote Installation Service (2000, 2003, XP) / Windows Deployment Service (2008, Vista)
- Hypervisor – Software that enables virtualization, the hypervisor is what virtualizes, and manages access to, the hardware
- 802.1x – Standard for authenticating devices before network access is given
- Powershell – Microsoft's new command line interface based on .NET. Powershell executes regular CMD.exe, WSH, and new Powershell cmdlets
- Cmdlets – Small Powershell scripts compiled to automate common tasks
- PXE – Preboot eXecution Environment. Used to boot a computer from the network prior to the OS loading
- WinPE – Windows Preinstallation Environment

Server 2008 comes in 9 editions

- **Web**
 - Up to 4 Processor Sockets
 - Max of 4GB Ram (32-bit) & 32GB Ram (64-bit)
 - **Standard**
 - Up to 4 Processor Sockets
 - Max of 4GB Ram (32-bit) & 32GB Ram (64-bit)
 - 1 additional virtual license
 - **Enterprise**
 - Up to 8 Processor Sockets
 - Max of 64GB Ram (32-bit) & 2TB Ram (64-bit)
 - Up to 16 node clusters
 - 4 additional virtual licenses
 - **Datacenter**
 - Up to 32 Processor Sockets (32-bit) & 64 Processor Sockets (64-bit)
 - Max of 64GB Ram (32-bit) & 2TB Ram (64-bit)
 - Up to 16 node clusters
 - Unlimited additional virtual licenses
 - **Itanium**
 - Up to 64 IA-64 Processor Sockets
 - Max of 2TB Ram
 - Unlimited additional virtual licenses
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- **Standard without Hyper-V**
 - Same as Standard Edition without Hyper-V
 - **Enterprise without Hyper-V**
 - Same as Enterprise Edition without Hyper-V
 - **Datacenter without Hyper-V**
 - Same as Datacenter Edition without Hyper-V

Windows Server 2008 Core

- Minimal install of Server 2008
 - No Windows Explorer interface
 - Management through CMD.exe or remotely with Server Manager
 - Does not support Powershell
- Supports 7 roles
 - Web Services (IIS)
 - File Services
 - Print Services
 - Hyper-V
 - Active Directory Domain Services
 - Active Directory Lightweight Directory Services
 - DHCP Server
 - DNS Server
- Uses half the memory of a standard install

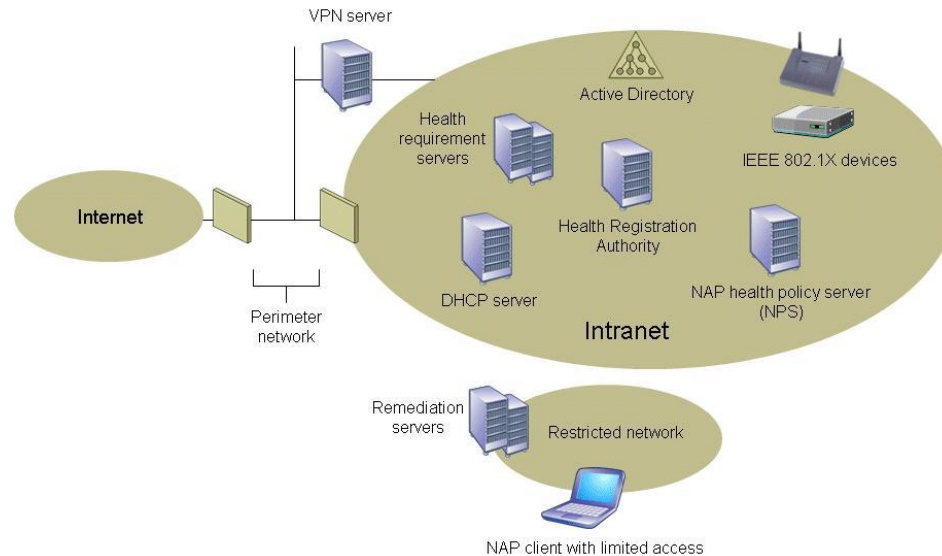
Windows Server 2008 Roles

- Pre-Configured defined roles for a server
 - Ease deployment & configuration
 - Install only the required components
 - Wizard driven installation and configuration
 - Roles broken down into features for more modular installation and configuration options
- Roles
 - Web Services (IIS) *
 - Application Server
 - File Services *
 - Print Services *
 - Hyper-V *
 - Active Directory Domain Services *
 - Active Directory Lightweight Directory Services *
 - Active Directory Rights Management Services
 - DHCP Server *
 - DNS Server *
 - Fax Server
 - UDDI Services
 - Windows Deployment Services
 - Active Directory Certificate Services
 - Network Policy and Access Services
 - Terminal Services
 - Active Directory Federation Services

* Supported in Server Core

NAP – Network Access Protection

- Integrates with Vista Enterprise, Business, and Ultimate as well as Server 2008 and Windows XP SP 3
- Allows the network to verify membership and system health before a computer is allowed to access the corporate network
- Verifies patch level, virus protection, and domain membership, as well as any other defined variable
- Uses VLANs to isolate systems not deemed acceptable to allow for updating
- Can check VPN clients also (MS RRAS only)



- **New Wireless Group Policies**
 - Greater control of what networks and types of networks your mobile clients can access
- **New RADIUS Service**
 - New RADIUS server that supports the full spectrum of the standard
 - Can be used for a robust 802.1x network authentication and dynamic VLAN assignment
 - Central management. Manage settings on all RADIUS servers in the enterprise from one location
- **Server Firewall**
 - More effective firewall for isolating non-essential services on 2008 servers
 - Works on both inbound and outbound traffic



New Interface for managing your servers from one location

- One stop shop for:
 - Adding or removing roles and features
 - Management of event logs and services
 - Troubleshooting failures and errors
 - Managing Installed roles and features
 - Managing server configuration and identity
 - Securing the server
- Replaces Computer Management & the Security Configuration wizard
- Also has a powerful command line interface
 - Great for remote management via telnet/SSH
 - The only option for Server Core Installations

The screenshot displays the Windows Server Manager interface for a server named 'WS08-DC2'. The left-hand navigation pane shows a tree view of server roles and features, with 'File Services' selected. The main pane is titled 'File Services' and provides a description: 'Provides technologies that help you manage storage, enable file replication, manage shared folders, ensure fast file searching, and enable access for UNIX client computers'. Below this, there are three sections: 'Summary', 'System Services', and 'Role Services'. The 'Summary' section shows 12 informational events in the last 24 hours, with a table listing event details. The 'System Services' section shows the 'Server' service is running. The 'Role Services' section shows the 'File Server' role is installed, while 'Distributed File System' is not.

File Services
Provides technologies that help you manage storage, enable file replication, manage shared folders, ensure fast file searching, and enable access for UNIX client computers

Summary
Events: 12 informational in the last 24 hours

Level	Event ID	Date and Time	Source
Information	6102	12/14/2007 8:26:05 AM	DFSR
Information	14531	12/14/2007 8:26:01 AM	DfsSvc
Information	14533	12/14/2007 8:26:01 AM	DfsSvc
Information	1314	12/14/2007 8:25:59 AM	DFSR
Information	1004	12/14/2007 8:25:58 AM	DFSR
Information	1002	12/14/2007 8:25:57 AM	DFSR
Information	1008	12/14/2007 8:24:42 AM	DFSR
Information	1006	12/14/2007 8:24:41 AM	DFSR
Information	6102	12/14/2007 7:39:13 AM	DFSR

Filtering Enabled

System Services: All Running

Display Name	Service Name	Status	Startup Type	Monitor
Server	LanmanServer	Running	Auto	Yes

Description:
Supports file, print, and named-pipe sharing over the network for this computer. If this service is stopped, these functions will be unavailable. If this service is disabled, any services that explicitly depend on it will fail to start.

Role Services: 1 installed

Role Service	Status
File Server	Installed
Distributed File System	Not installed

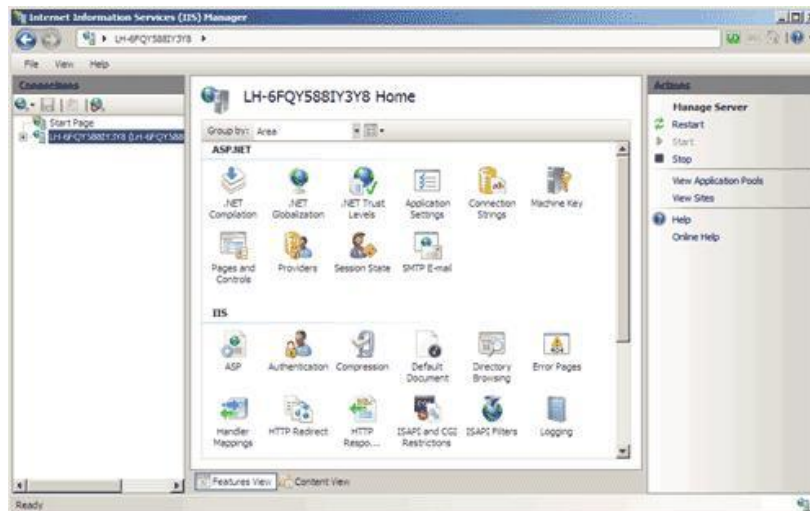
Last Refresh: 12/14/2007 8:27:46 AM [Configure refresh](#)

A more powerful and productive command line tool

- Works on XP SP3, Vista, and Server 2008
 - Does not work on Server Core
- Built on .NET
- Uses both commands and cmdlets, pre-built applets for common management tasks
- Can be used to manage both the server and the roles on the server
- Effectively replaces CMD.exe, WSH, and Cscript
- Powershell is the engine behind the new Exchange 2007 and SQL 2008 management tools

Internet Information Services 7

- More modular than previous editions
 - More customizable
 - More secure
- New GUI & CLI Administration tools
 - Allows for remote administration
 - Delegation of privileges
- Includes Windows Media Services 2008
 - Stream Music and Video over the Intranet and Internet
- Supports .NET, ASP, PHP, and C++ natively
- All configuration is stored in XML files rather than the old Metabase

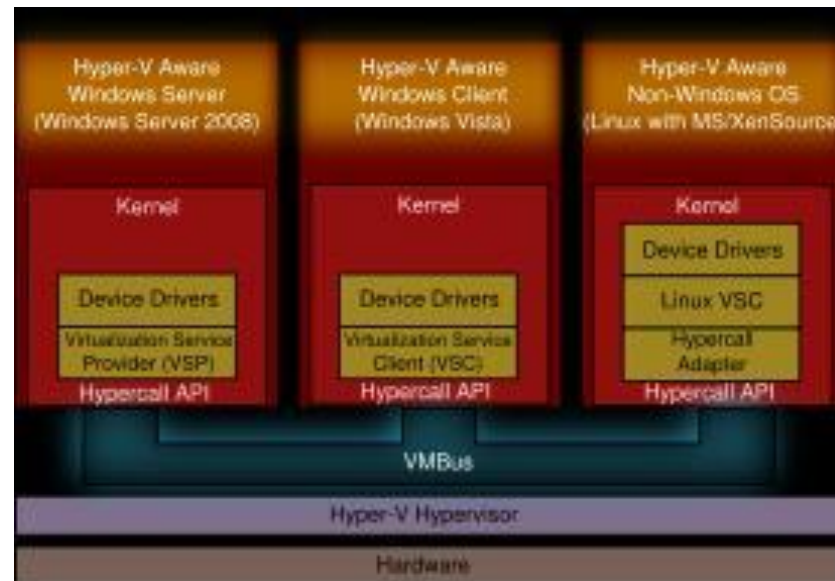


Windows Deployment Services

- Replaces RIS
- Can utilize Multicast to deploy the images
 - Deploy 1 or 100 with the same resources
- Uses WinPE as the PXE OS
 - GUI Option screens, No more blue screens!
- Supports x64 OS's
- Uses new .wim images in place of RISETUP and i386 folders
- Can deploy Vista, XP, and Server 2008
 - Vista and Server 2008 are HAL independent, One image can be deployed to almost any computer
 - XP is HAL dependant, Images must be deployed to like hardware

Hyper-V

- Microsoft's Hypervisor for OS virtualization
- Currently in Beta, release is expected in late Q2 or Q3 2008
- Can be added to Standard, Enterprise, and Datacenter editions of Server 2008 for \$28
- Supports Windows OS's, Hyper-V aware Linux will also work
 - Currently SUSE Enterprise Linux 10SP1 is the only Linux OS supported



Presentation Virtualization – AKA. Terminal Services

- 3 types of Terminal Servers
 - Terminal Server – User session server, like the former TS but with huge changes in presentation options
 - Session Broker – Distributes user sessions amongst a farm of two or more servers
 - Automatically get users to the least busy server
 - Provides Fault tolerance, if a server is unavailable the session Broker will direct all clients away from the failed server automatically
 - Gateway – Acts as an internet gateway to connect users to ANY RDP enabled device via HTTPS
 - No more need for a VPN to connect to a TS securely
 - Can interact with a NAP server to ensure the connecting client's PC is secure enough to access the network

Presentation Virtualization – AKA. Terminal Services

- 3 ways to present applications to the users
 - RemoteApp – Add a shortcut to the users desktop or start menu
 - Presents a single application, NOT the whole desktop
 - Application appears to run on the user's PC not the remote server
 - Multiple applications behave independently but share the session on the remote server
 - Remote Desktop – Like traditional terminal services, presents the whole desktop to a user
 - Can use the Vista Aero interface if you so desire
 - Web Access – Enables presentation of both RemoteApp and Remote Desktop securely via HTTPS
 - A VPN is no longer required to present an application or desktop to the users
- Updated features
 - Easy Print – TS can print to the local printer without the need to install the drivers on the server
 - Administrators can limit the number of printers redirected from the remote users

Active Directory

- Service Based – AD now runs as a service
 - Changes, maintenance, and restores to AD no longer require a server reboot
- Mountable Database
 - A snapshot of the AD database can be mounted offline for recovery or forensics
- Fine-Grained Passwords
 - Password policies can be assigned to OU's, no more one password policy per domain
- Read-Only Domain Controllers
 - Designed for remote offices and locations where physical security cannot be guaranteed
 - Read-Only copy of AD prevents malicious users from introducing bad information or corruption into the Enterprise Active Directory
- More detailed auditing
 - More detailed & accessible auditing for tracing changes to all objects in the directory

- **File Sharing**
 - New SMB and TCP/IP stacks allow for faster transfers to Vista and XP SP3 clients
- **Printing Services**
 - New Print Services MMC snap-in allows for managing all printers across the organization from one location
- **DNS**
 - IPv6 is now supported
 - Allows for read only copies of Active Directory integrated zones on Read-Only DCs
 - A new GlobalNames zone allows for DNS resolution of WINS requests
- **DHCP**
 - Supports IPv6
 - Integrates with Microsoft NAP to force a security review everytime an IP address is requested or renewed
- **Windows Backup**
 - Updated for faster Backups and restores
 - Can manage backups on remote servers
- **Bitlocker Drive Encryption**
 - Bitlocker is available on all editions for data encryption

Windows Small Business Server 2008 – The next edition Small Business Server

- Now includes licenses for 2 physical servers with the premium edition
- 64-bit only
- Includes: Windows Server 2008 (x2), Exchange Server 2007, SharePoint Services v3, SQL Server 2008, and A new Remote Workplace based on the new TS gateway.

Windows Essentials Business Server 2008 – Mid Size server package

- Now a single server but a system of 4 servers designed for businesses of up to 250 users
- Includes; Windows Server 2008 Standard (x4), Exchange Server 2007 Standard(x2), System Center Essentials 2007, Forefront Security for Exchange, ISA Server 2008 Standard, SQL Server 2008 Standard

Questions?

All materials, and reference links will be available on the GroundForce IT Events site

<http://Events.GroundForceIT.com>