

# CNT 4603: System Administration Fall 2012

## Managing And Maintaining Windows Server 2008 Part 1

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# Managing And Maintaining Windows Server 2008

- With an operating system as large and complex, and functionally rich as Windows Server 2008, the OS is only as good as the tools available to expose this functionality, configure it, and manage it on a day to day basis.
- By now you are somewhat familiar with the process necessary to install Server 2008 since you should have done this in your virtual environment. Soon you will become familiar with installing and configuring server roles as well.
- This set of notes will examine in some detail the Server Manager and the functionality it provides a system administrator for managing and maintaining a Server 2008 environment.



# Server Manager In Windows Server 2008

- The Server Manager is the biggest factor in effectively managing a Windows Server 2008 environment.
- The Server Manager brings together into one management tool the entire process of managing a server operating system.
- The Server Manager interface is designed around the functionality the server provides, instead of being designed around the individual components.



# Server Manager In Windows Server 2008

- The guiding principle in the design of Server Manager was how system administrators think about their servers.
- If you ask a system administrator to show you their server room, they don't point to "my Windows Server 2008 box, my Windows Server 2003 box, and my Ubuntu box." Instead, they say "that's my domain controller, that's my file server, and that's my print server."
- System administrators think of servers by their role, or what they do, and not by the server operating system.
- Windows Server Manager is designed to work the same way.



# Server Manager In Windows Server 2008

- Windows Server Manager works by having the server running both **roles**, which are the major services the server offers along with **features** that help the server perform its main role purpose.
- For example, Windows Backup is a feature, as it helps keep a server maintained by providing backup and recovery capabilities.
- During your previous installs of Windows Server 2008 you utilized the ICT (Initial Configuration Tasks) interface and this causes the Server Manager to automatically run and launch at each Administrator logon. To refresh your memory, a screen shot of the Server Manager screen you see at logon is shown on the next page.



Mark - Server 1 - VMware Player (Non-commercial use only)

Player | [Icons]

**Server Manager**

File Action View Help

Server Manager (MARK-SERVER1)

Server Manager (MARK-SERVER1)

Get an overview of the status of this server, perform top management tasks, and add or remove server roles and features.

**Server Summary** [Server Summary Help](#)

**Computer Information**

Full Computer Name:	Mark-Server1.savn.local
Domain:	savn.local
Local Area Connection:	192.168.0.101
Remote Desktop:	Disabled
Product ID:	92577-082-2500446-76135

Do not show me this console at logon

**Security Information**

Windows Firewall:	On
Windows Updates:	Install updates automatically using

[Change System Properties](#)  
[View Network Connections](#)  
[Configure Remote Desktop](#)

[Go to Windows Firewall](#)  
[Configure Updates](#)  
[Check for New Roles](#)

Last Refresh: 9/26/2012 12:48:07 PM [Configure refresh](#)

Start | Server Manager | [Taskbar Icons] | 12:48 PM



# Server Manager In Windows Server 2008

- Let's take a closer look at some of the main features of the Server Manager.
- When the Server Manager is launched, initially it runs as a two-pane Microsoft Management Console (MMC) environment with the Console/Navigation tree pane (left pane) and the Details pane (right main pane) as shown on the previous page.
- The Console tree pane breaks the functionality of the Server Manager into five main areas:



The screenshot displays the Windows Server Manager interface. On the left is the **Console/Navigation pane**, which contains a tree view of server components such as Roles, Features, Diagnostics, Configuration, and Storage. On the right is the **Details pane**, which provides an overview of the server's status and offers management tasks. The details pane includes a **Server Summary** section with the following information:

Full Computer Name:	Mark-Server1.savn.local
Domain:	savn.local
Local Area Connection:	192.168.0.101
Remote Desktop:	Disabled
Product ID:	92577-082-2500446-76135

Additional options in the details pane include [Change System Properties](#), [View Network Connections](#), [Configure Remote Desktop](#), [Go to Windows Firewall](#), [Configure Updates](#), and [Check for New Roles](#). A status bar at the bottom of the details pane shows the last refresh time as 9/26/2012 12:49:11 PM with a [Configure refresh](#) link.

Console/Navigation pane

Details pane





# Server Manager In Windows Server 2008

- **Roles.** Enables the administrator to install, remove, and manage roles for the server. Contained within roles is a child node for each role; this in turn has child links to the MMC snap-ins used to manage the role functionality.
- **Features.** Enables the admin to install, remove, and manage features for the server. As with roles, there is a child node for each installed feature, which in turn has child links to the MMC snap-ins used to manage the feature functionality.
- **Diagnostics.** Links to the snap-ins used to troubleshoot and diagnose problems, such as performance issues.
- **Configurations.** A consolidated interface to the snap-ins used for granular control of the server, which consists of the Tasks Configuration, Windows Firewall, Services, and Windows Management Instrumentation (WMI) Control.
- **Storage.** Links to the Disk Management and Windows Server Backup (WSB\_ snap-ins.



# Server Manager In Windows Server 2008

- Aside from all the functionality provided in the Console tree, the main page of the Server Manager, when the Console tree root is selected, is a powerful area for system administrators.
- The Server Summary section of the main page resembles the ICT (Initial Configuration Task) window because it is the same content.
- Once the server is initially configured, any subsequent configuration modification is done via the Server Manager and not ICT.
- The Server Summary is divided into two main areas: Computer Information and Security Information (see page 6).



# Server Manager In Windows Server 2008

- The Computer Information area provides details on the fully qualified domain name of the computer if it is part of a domain, or just the NetBIOS name if it is only in a workgroup.
- The domain or workgroup that the server is joined to is displayed , along with the network adapters in the server and the IP address information for both IPv4 and IPv6.
- The ability to change any of this information is provided by the links to the right of the displayed information. These links are to control panel applets that enable the configuration of the displayed attributes.



# Server Manager In Windows Server 2008

- The second area of the Server Summary is the Security Information, which gives critical information relating to the security of the server.
- For the Server Manager, this means whether the Firewall is turned on or off, how the server is being updated, when the updates were last checked for and when they were last installed.
- Finally, the status of Internet Explorer Enhanced Security Configuration is shown. This prompts you to indicate if you want to mark a web site as safe or ignore it for now.
- Notice on the next page, that the server shown has had recent updates to Windows Server 2008 recently installed.



- Server Manager (TESTBEDSERVER)
- Roles
- Features
- Diagnostics
- Configuration
- Storage

Server Manager (TESTBEDSERVER)



Get an overview of the status of this server, perform top management tasks, and add o

Local Area Connection:	IPv4 address assigned by DHCP, IPv6 enabled
Remote Desktop:	Disabled
Product ID:	55041-363-7898201-76928
<input type="checkbox"/> Do not show me this console at logon	

Security Information

Windows Firewall:	On
Windows Updates:	Install updates automatically using Windows Update
Last checked for updates:	9/26/2012 1:07 PM
Last installed updates:	9/26/2012 1:14 PM
IE Enhanced Security Configuration (ESC):	On for Administrators On for Users

- Go to Windows Firewall
- Configure Updates
- Check for New Roles
- Run Security Configuration Wizard
- Configure IE ESC

Roles Summary

Roles Summary Help

Collecting Data...

Today is September 26, 2012 – Notice that Windows updates were last done earlier this afternoon.



View update history

Control Panel > Windows Update > View update history

File Edit View Tools Help

Review your update history

Check the Status column to ensure all important updates were successful. To remove an update, see [Installed Updates](#).

[Troubleshoot problems with installing updates](#)

Name	Status	Importance	Date Installed
Windows Internet Explorer 9 for Windows Server 2008	Successful	Important	9/26/2012
Windows Malicious Software Removal Tool - September 2012 (KB890830)	Successful	Important	9/12/2012
Update Rollup for ActiveX Killbits for Windows Server 2008 (KB2736233)	Successful	Important	9/12/2012
Security Update for Windows Server 2008 (KB2712808)	Successful	Important	8/15/2012
Cumulative Security Update for Internet Explorer 8 for Windows Server 2008 (KB2722913)	Successful	Important	8/15/2012
Windows Malicious Software Removal Tool - August 2012 (KB890830)	Successful	Important	8/15/2012
Security Update for Windows Server 2008 (KB2731847)	Successful	Important	8/15/2012
Security Update for Windows Server 2008 (KB2705219)	Successful	Important	8/15/2012
Security Update for Windows Server 2008 (KB2655992)	Successful	Important	7/11/2012
Security Update for Windows Server 2008 (KB2691442)	Successful	Important	7/11/2012
Windows Malicious Software Removal Tool - July 2012 (KB890830)	Successful	Important	7/11/2012
Security Update for Windows Server 2008 (KB2698365)	Successful	Important	7/11/2012
Security Update for Windows Server 2008 (KB2718523)	Successful	Important	7/11/2012
Security Update for Windows Server 2008 (KB2719985)	Successful	Important	7/11/2012
Windows Update Agent 7.6.7600.256	Successful	Important	6/19/2012
Update for Windows Server 2008 (KB2677070)	Successful	Recommended	6/13/2012
Cumulative Security Update for Internet Explorer 8 for Windows Server 2008 (KB2699988)	Successful	Important	6/13/2012
Security Update for Microsoft .NET Framework 2.0 SP2 on Windows Vista SP2 and Windows Server 2008 SP2 x	Successful	Important	6/13/2012

OK

Update history on this server.



# Server Manager In Windows Server 2008

- The next section of the main section of the Server Manager is a summary of the roles, which displays each role installed on the server and a summary of its status for the past 24 hours.
- The status summary illustrates the worst events in the log for the services related to that role in the past 24 hours.
- Notice in the screen shot on the next page that the server in question currently has one role installed.



The screenshot displays the Windows Server Manager console for a server named TESTBEDSERVER. The interface includes a navigation pane on the left with categories like Roles, Features, Diagnostics, Configuration, and Storage. The main area shows a 'Roles Summary' section, which is highlighted with a red rounded rectangle. This section indicates that 1 of 17 roles are installed, with 'File Services' being the only one listed. Below this is a 'Features Summary' section showing 2 of 35 features installed, including .NET Framework 3.0 Features, XPS Viewer, and Windows PowerShell. The bottom of the console shows a 'Last Refresh' timestamp and a 'Configure refresh' link. The Windows taskbar at the bottom includes the Start button, several application icons, and the system tray with the time 1:38 PM.





**Server Manager**

File Action View Help

Server Manager (TESTBEDSERVER)

- Roles
  - File Services
    - Share and Storage Management
  - Features
  - Diagnostics
  - Configuration
  - Storage

**Roles**

View the health of the roles installed on your server and add or remove roles and features.

**File Services** [File Services Help](#)

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

**Role Status** [Go to File Services](#)

Messages: None  
 System Services: All Running  
 Events: 2 informational in the last 24 hours

**Role Services: 1 installed** [Add Role Services](#) [Remove Role Services](#)

Role Service	Status
File Server	Installed
Distributed File System	Not installed
DFS Namespaces	Not installed
DFS Replication	Not installed
File Server Resource Manager	Not installed
Services for Network File System	Not installed
Windows Search Service	Not installed

Last Refresh: 9/26/2012 1:44:03 PM [Configure refresh](#)

Start | [Icons] | Server Manager | [System Tray Icons] | 1:44 PM



Server Manager

File Action View Help



- Server Manager (TESTBEDSERVER)
  - Roles
    - File Services
      - Share and Storage Mar
  - Features
  - Diagnostics
  - Configuration
  - Storage

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: 2 informational in the last 24 hours

2 Events

Level	Event ID	Date and Time	Source
Information	8224	9/26/2012 1:32:18 PM	VSS
Information	8224	9/26/2012 1:03:36 PM	VSS

- Go to Event Viewer
- Filter Events
- Properties
- Hide All Events

System Services: All Running

Display Name	Service Name	Status	Startup
Server	LanmanServer	Running	Auto

- Go to Services
- Preferences
- Stop

Last Refresh: 9/26/2012 1:42:03 PM [Configure refresh](#)



# Server Manager In Windows Server 2008

- The next section of the main section of Server Manager is the Features Summary which lists the features that are installed and has links to Add or Remove Features.
- No status is provided for any of the installed features because typically they help facilitate a role's duties and do not, or their own, provide a service. There are exceptions to this. Windows Internet Name Service (WINS), for example, provides a direct service. However, the experience for features is not as integrated as with roles, and no summary information is provided, you simply see which features are provided.



Player ▾ | [Icons] | < | [Icon]

**Server Manager** [Close]

File Action View Help

[Icons]

Server Manager (TESTBEDSERVER)

Roles  
Features  
Diagnostics  
Configuration  
Storage

**Server Manager (TESTBEDSERVER)**

Get an overview of the status of this server, perform top management tasks, and add or remove server roles and features.

Roles: 1 of 17 installed

File Services

Go to Roles  
Add Roles  
Remove Roles

Features Summary

Features Summary Help

Features: 2 of 35 installed

.NET Framework 3.0 Features  
.NET Framework 3.0  
XPS Viewer  
Windows PowerShell

Add Features  
Remove Features

Resources and Support

Resources and Support Help

Help make Windows Server better by participating in the Customer Experience Improvement Program (CEIP)

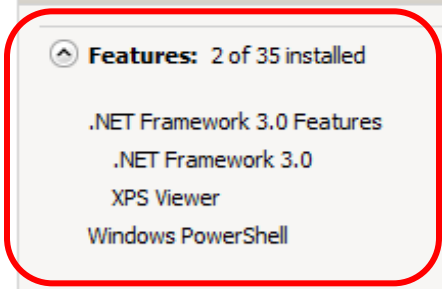
Participate in CEIP

Report issues to Microsoft and get solutions to common problems by turning on Windows Error Reporting.

Turn on Windows Error Reporting

Last Refresh: 9/26/2012 1:46:13 PM [Configure refresh](#)

Start | [Icons] | Server Manager | [Icons] | 1:46 PM



# Server Manager In Windows Server 2008

- The final section of the main the Server Manager is the Resources and Support section and this illustrates a common theme throughout Server Manager. As you walk through the roles in the Server Manager, each role has its own resources section.
- Most of this area deals with sending feedback to Microsoft, but there are some useful areas of technical assistance available through the Windows Server TechCenter.
- 



### Server Manager

File Action View Help

Server Manager (TESTBEDSERVER)

- Roles
- Features
- Diagnostics
- Configuration
- Storage

**Server Manager (TESTBEDSERVER)**

Get an overview of the status of this server, perform top management tasks, and add or remove server roles and features.

**Features:** 2 of 35 installed

- .NET Framework 3.0 Features
- .NET Framework 3.0
- XPS Viewer
- Windows PowerShell

**Resources and Support**

- Resources and Support Help
- Participate in CEIP
- Turn on Windows Error Reporting
- Windows Server TechCenter
- Windows Server Community Center
- Send Feedback to Microsoft

Last Refresh: 9/26/2012 1:47:10 PM [Configure refresh](#)



# Server Manager - Managing Roles

- The main function of the Server Manager is to provide an interface that manages what the server does.
- What the server does is controlled by what roles the server has, e.g., “that’s my domain controller, that’s my DNS server, that’s my file server.”
- On the Server Manager main page, the Roles Summary displays the list of roles that are installed and their health state based on event logs and monitored services for the role.
- Before we look more closely at a role, let’s look at the main Roles page in the Server Manager.



# Server Manager - Managing Roles

- Like the Server Manager main page, the Roles main page has the same Roles Summary section, plus the option to add and remove roles. (Click on the Roles link in the configuration tree in the right pane of the main Server Manager window to go to the main Roles page.)
- After the Summary section is a section for each installed role, which will include an icon to set the Role information being shown or hidden (arrow pointing up shows role information, arrow pointing down hides role information).
- As we will see later, the role for ADDS is handled somewhat differently from most other roles to primarily to its complexity.





# Server Manager - Managing Roles

- The next page illustrates the information shown for the File Services role as it is installed on a server.
- The real power of the Server Manager begins to be understood when you select a specific role. By selecting a specific role you are given a great deal of information about the health of the role and guidance on how to manage it.
- On the Roles main page you'll see the actual event logs, which relate to all services that the role owns or utilizes that have been generated in the last 24 hours. Each event log can be double-clicked to see the full event information.



- Server Manager (TESTBEDSERVER)
  - Roles
  - Features
  - Diagnostics
  - Configuration
  - Storage

### Roles



View the health of the roles installed on your server and add or remove roles and features.

#### Roles Summary [Roles Summary Help](#)

**Roles:** 1 of 17 installed

[File Services](#)

[Add Roles](#) [Remove Roles](#)

#### File Services [File Services Help](#)

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

#### Role Status [Go to File Services](#)

Messages: None  
System Services: All Running  
[Events: 2 informational in the last 24 hours](#)

**Role Services:** 1 installed

[Add Role Services](#) [Remove Role Services](#)

Last Refresh: 9/26/2012 1:49:10 PM [Configure...](#)

**Your devices are ready to use**  
Device driver software installed successfully.



# Server Manager - Managing Roles

- The next page illustrates the information shown for the File Services role as it is installed on a server.
- The real power of the Server Manager begins to be understood when you select a specific role. By selecting a specific role you are given a great deal of information about the health of the role and guidance on how to manage it.
- On the Roles main page you'll see the actual event logs, which relate to all services that the role owns or utilizes that have been generated in the last 24 hours. Each event log can be double-clicked to see the full event information.
- The next page illustrates the detail available for a role managed from within Roles.



### Server Manager

File Action View Help



- Server Manager (TESTBEDSERVER)
  - Roles
  - File Services
  - Features
  - Diagnostics
  - Configuration
  - Storage

### 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:** 2 informational in the last 24 hours

2 Events

Level	Event ID	Date and Time	Source
Information	8224	9/26/2012 1:32:18 PM	VSS
Information	8224	9/26/2012 1:03:36 PM	VSS

- Go to Event Viewer
- Filter Events
- Properties
- Hide All Events

**System Services:** All Running

Display Name	Service Name	Status	Startup
Server	LanmanServer	Running	Auto

- Go to Services
- Preferences
- Stop

Last Refresh: 9/26/2012 1:50:17 PM [Configure refresh](#)



# Server Manager - Managing Roles

- The Roles page for a specific installed role provides information on three critical areas surrounding a role:
  - Events: logged in the last 24 hours relating to this role.
  - System Services: provides a listing of the system services that provide functionality to this role. This does not mean all the services that were installed as part of the role; some might be used by multiple roles. It just means that the service is important to the functionality of the role, so its status is shown. For example the ADDS role lists 10 separate services.
  - Role Services: enables the addition and removal of role services for installed roles. The particular role services depend on the role. The picture on the next page illustrates the role services for the File Service role.



### Server Manager

- Server Manager (TESTBEDSERVER)
  - Roles
    - File Services**
  - Features
  - Diagnostics
  - Configuration
  - Storage

#### 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

#### Role Services: 1 installed

Role Service	Status
File Server	Installed
Distributed File System	Not installed
DFS Namespaces	Not installed
DFS Replication	Not installed
File Server Resource Manager	Not installed
Services for Network File System	Not installed
Windows Search Service	Not installed
Windows Server 2003 File Services	Not installed
File Replication Service	Not installed
Indexing Service	Not installed

- Add Role Services
- Remove Role Services

#### Description:

[File Server](#) manages shared folders and enables users to access files on this computer from the network.

#### Resources and Support

Recommended configurations, tasks, best practices, and online resources

[File Services Help](#)

Last Refresh: 9/26/2012 1:50:17 PM [Configure refresh](#)

