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.

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

**Server Summary**

**Computer Information**
- Full Computer Name: Mark-Server1.savn.local
- Domain: savn.local
- Local Area Connection: 192.168.0.101
- Remote Desktop: Disabled
- Product ID: 92577-082-2500446-75135

**Security Information**

Last Refresh: 2/19/2014 2:46:49 PM  Configure refresh
The server manager in Windows Server 2012 looks a bit different but has essentially the same functionality as the server manager in Server 2008.
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:
View the health of the roles installed on your server and add or remove roles and features.

Roles Summary

Roles: 2 of 16 installed

- Active Directory Domain Services
- DNS Server

Active Directory Domain Services

Stores directory data and manages communication between users and domains, including user logon processes, authentication, and directory searches.

Role Status

Messages: None
System Services: 8 Running, 2 Stopped
Last Refresh: 2/19/2014 2:47:55 PM  Configure refresh
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.
Today is February 19, 2014 – Notice that Windows updates were last done about 1 month ago on this server.
Update history on this server.

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

<table>
<thead>
<tr>
<th>Name</th>
<th>Status</th>
<th>Importance</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Security Update for Windows Server 2008 (KB2901674)</td>
<td>Pending</td>
<td>Important</td>
<td>2/19/2014</td>
</tr>
<tr>
<td>Security Update for Windows Server 2008 (KB2887069)</td>
<td>Pending</td>
<td>Important</td>
<td>2/19/2014</td>
</tr>
<tr>
<td>Security Update for Windows Server 2008 (KB967723)</td>
<td>Failed</td>
<td>Important</td>
<td>1/13/2014</td>
</tr>
<tr>
<td>Security Update for Windows Server 2008 (KB967723)</td>
<td>Failed</td>
<td>Important</td>
<td>11/18/2013</td>
</tr>
<tr>
<td>Security Update for Windows Server 2008 (KB967723)</td>
<td>Failed</td>
<td>Important</td>
<td>11/16/2013</td>
</tr>
<tr>
<td>Security Update for Windows Server 2008 (KB967723)</td>
<td>Failed</td>
<td>Important</td>
<td>11/14/2013</td>
</tr>
<tr>
<td>Cumulative Security Update for Internet Explorer 9 for Windows Server</td>
<td>Successful</td>
<td>Important</td>
<td>11/13/2013</td>
</tr>
<tr>
<td>Security Update for Windows Server 2008 (KB2862152)</td>
<td>Successful</td>
<td>Important</td>
<td>11/13/2013</td>
</tr>
</tbody>
</table>
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.
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:** 1 informational in the last 24 hours

<table>
<thead>
<tr>
<th>Level</th>
<th>Event ID</th>
<th>Date and Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information</td>
<td>8224</td>
<td>2/19/2014 2:55:40 PM</td>
</tr>
</tbody>
</table>

**System Services:** All Running

- **Display Name:** Server
- **Service Name:** LanmanServer
- **Status:** Running

[Restart]
Select server roles

Before You Begin
Installation Type
Server Selection
Server Roles
Features
Confirmation
Results

Select one or more roles to install on the selected server.

Roles

- Active Directory Certificate Services
- Active Directory Domain Services
- Active Directory Federation Services
- Active Directory Lightweight Directory Services
- Active Directory Rights Management Services
- Application Server
- DHCP Server
- DNS Server
- Fax Server
- File and Storage Services (1 of 12 installed)
- Hyper-V
- Network Policy and Access Services
- Print and Document Services
- Remote Access
- Remote Desktop Services

Description
Active Directory Certificate Services (AD CS) is used to create certification authorities and related role services that allow you to issue and manage certificates used in a variety of applications.
### ROLES AND FEATURES

**Server Name**  | **Name**  | **Type**  | **Path**
--- | --- | --- | ---
WIN-EPBK5AGBB5C | Storage Services | Role Service | File and Storage Services\Storage Services
WIN-EPBK5AGBB5C | File and Storage Services | Role | File and Storage Services
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.
Server Manager

Features

View the status of features installed on this server and add or remove features.

Features Summary

- Features: 3 of 35 installed
  - .NET Framework 3.0 Features
  - .NET Framework 3.0
  - XPS Viewer
  - Windows PowerShell
  - Windows Server Backup Features
  - Windows Server Backup

Console cannot refresh until computer is restarted
Restart

Start | Server Manager | Windows Update
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 In Windows Server 2008

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

Resources and Support

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

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

Browse technical resources for Windows Server, including how-to help, guides, web casts, and tools.

Get connected with other Microsoft customers through online community resources.

Send us your feedback, such as bug reports and feature suggestions, to help make Windows better.

Console cannot refresh until computer is restarted Restart

Resources and Support Help
- Participate in CEIP
- Turn on Windows Error Reporting
- Windows Server TechCenter
- Windows Server Community Center
- Send Feedback to Microsoft
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. Be 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.
View the health of the roles installed on your server and add or remove roles and features.

Roles: 1 of 17 installed

- File Services

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 Status

- Messages: None
- System Services: All Running
- Events: 1 informational in the last 24 hours

Role Services: 1 installed

<table>
<thead>
<tr>
<th>Role Service</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>File Server</td>
<td>Installed</td>
</tr>
</tbody>
</table>

Console cannot refresh until computer is restarted

Restart

Add Role Services
Remove Role Services

Go to File Services
Server Manager - Managing Roles

• The next page illustrates the information shown for the File Services role as it is installed on a server.

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• The next page illustrates the detail available for a role managed from within Roles.
Server Manager - Managing Roles

Event Properties - Event 8224, VSS

```
<Event
  xmlns="http://schemas.microsoft.com/win/2004/08/events/event">
  <System>
    <Provider Name="VSS" />
    <EventID Qualifiers="0">8224</EventID>
    <Level>4</Level>
    <Task>0</Task>
    <Keywords>0x8000000000000000</Keywords>
    <TimeCreated SystemTime="2014-02-19T19:55:40.000Z"/>
    <EventRecordID>8678</EventRecordID>
    <Channel>Application</Channel>
    <Computer>TestBedServer</Computer>
    <Security />
</System>
```

Copy

Console cannot refresh until computer is restarted Restart
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.
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.

System Services: All Running

Role Services: 1 installed

<table>
<thead>
<tr>
<th>Role Service</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>File Server</td>
<td>Installed</td>
</tr>
<tr>
<td>Distributed File System</td>
<td>Not installed</td>
</tr>
<tr>
<td>DFS Namespaces</td>
<td>Not installed</td>
</tr>
<tr>
<td>DFS Replication</td>
<td>Not installed</td>
</tr>
<tr>
<td>File Server Resource Manager</td>
<td>Not installed</td>
</tr>
<tr>
<td>Services for Network File System</td>
<td>Not installed</td>
</tr>
<tr>
<td>Windows Search Service</td>
<td>Not installed</td>
</tr>
<tr>
<td>Windows Server 2003 File Services</td>
<td>Not installed</td>
</tr>
<tr>
<td>File Replication Service</td>
<td>Not installed</td>
</tr>
<tr>
<td>Indexing Service</td>
<td>Not installed</td>
</tr>
</tbody>
</table>

Description:

File Server manages shared folders and enables users to access files on this computer from the network.

Console cannot refresh until computer is restarted. Restart