CNT 4603: System Administration
Spring 2013

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

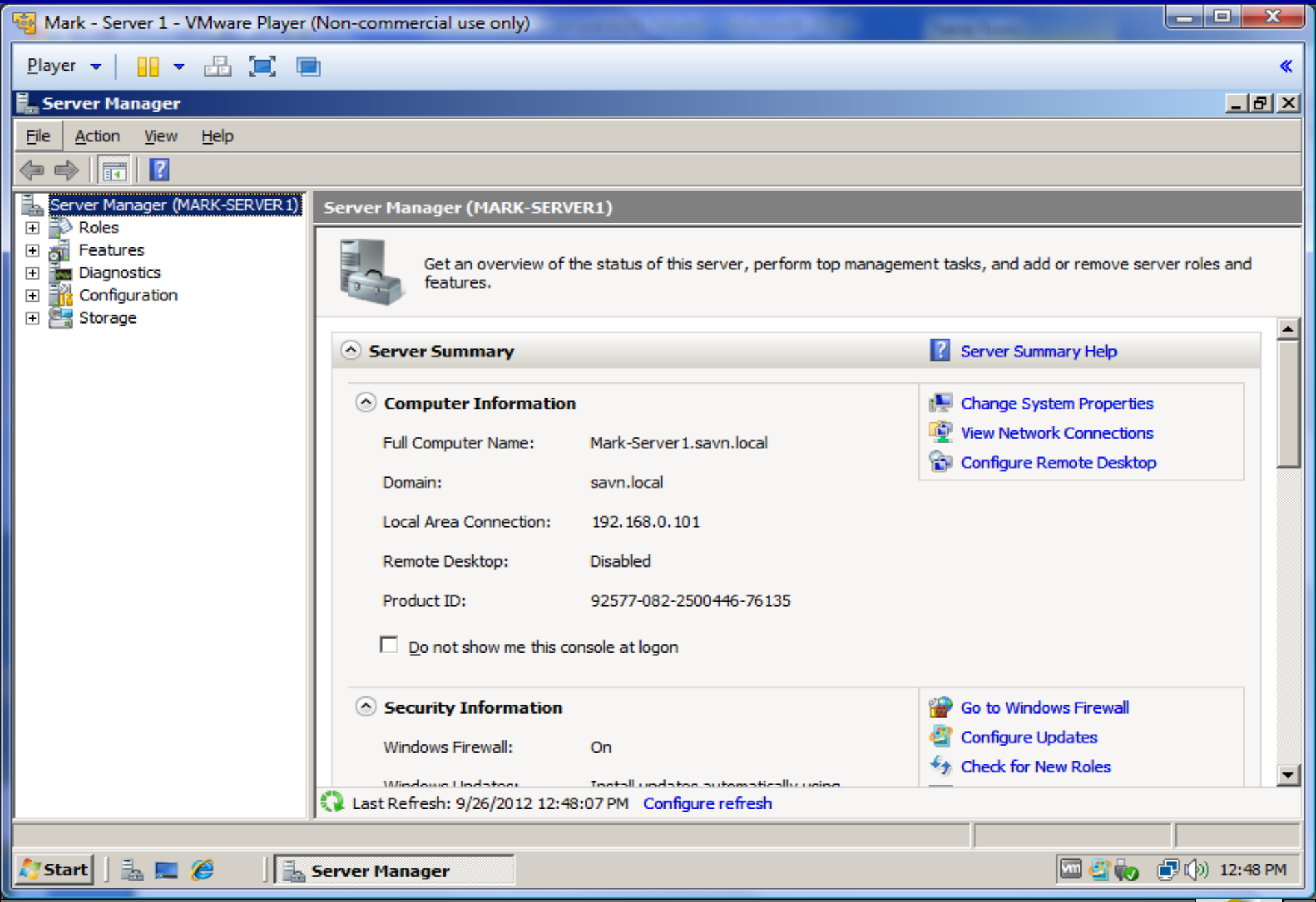
- The Server Manager is the biggest factor in effectively managing a Windows Server 2008 environment.
- The Server Manager brings together into one management tool the entire process of managing a server operating system.
- The Server Manager interface is designed around the functionality the server 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.
- Window Server Manager is designed to work the same way.

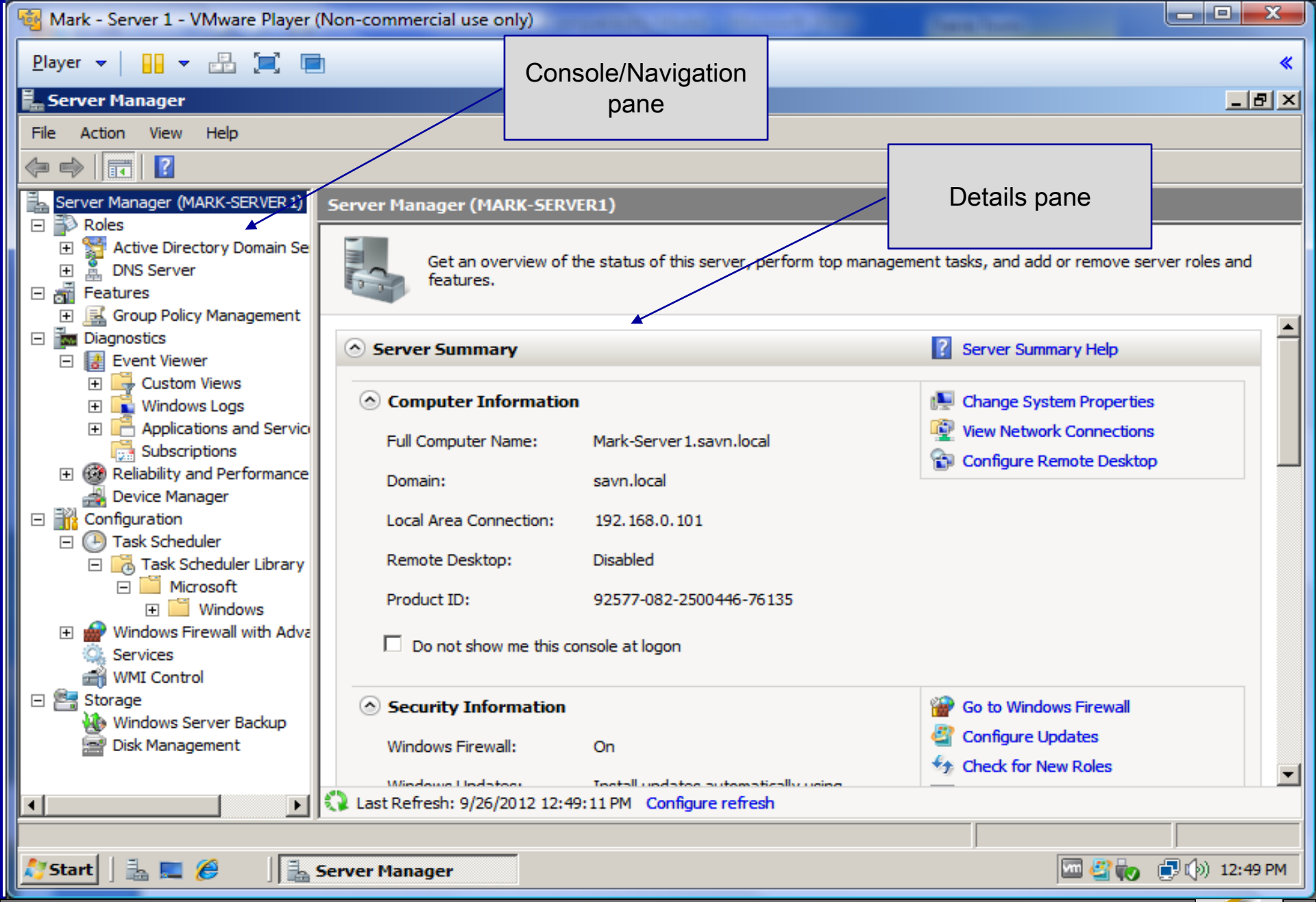
Server Manager In Windows Server 2008

- 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.


Mark - Server 1 - VMware Player (Non-commercial use only)
Player
Server Manager
File Action View Help
Server Manager (MARK-SERVER1)
Roles
Features
Diagnostics
Configuration
Storage
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
Change System Properties
View Network Connections
Configure Remote Desktop
Security Information
Windows Firewall: On
Go to Windows Firewall
Configure Updates
Check for New Roles
Last Refresh: 9/26/2012 12:48:07 PM Configure refresh
Start
Server Manager
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:


Mark - Server 1 - VMware Player (Non-commercial use only)
Player
Console/Navigation pane
Details pane
Server Manager
File Action View Help
Server Manager (MARK-SERVER1)
Roles
Active Directory Domain Se
DNS Server
Features
Group Policy Management
Diagnostics
Event Viewer
Custom Views
Windows Logs
Applications and Servic
Subscriptions
Reliability and Performance
Device Manager
Configuration
Task Scheduler
Task Scheduler Library
Microsoft
Windows
Windows Firewall with Adva
Services
WMI Control
Storage
Windows Server Backup
Disk Management
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
Change System Properties
View Network Connections
Configure Remote Desktop
Security Information
Windows Firewall: On
Go to Windows Firewall
Configure Updates
Check for New Roles
Last Refresh: 9/26/2012 12:49:11 PM Configure refresh
Start
Server Manager
12:49 PM

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

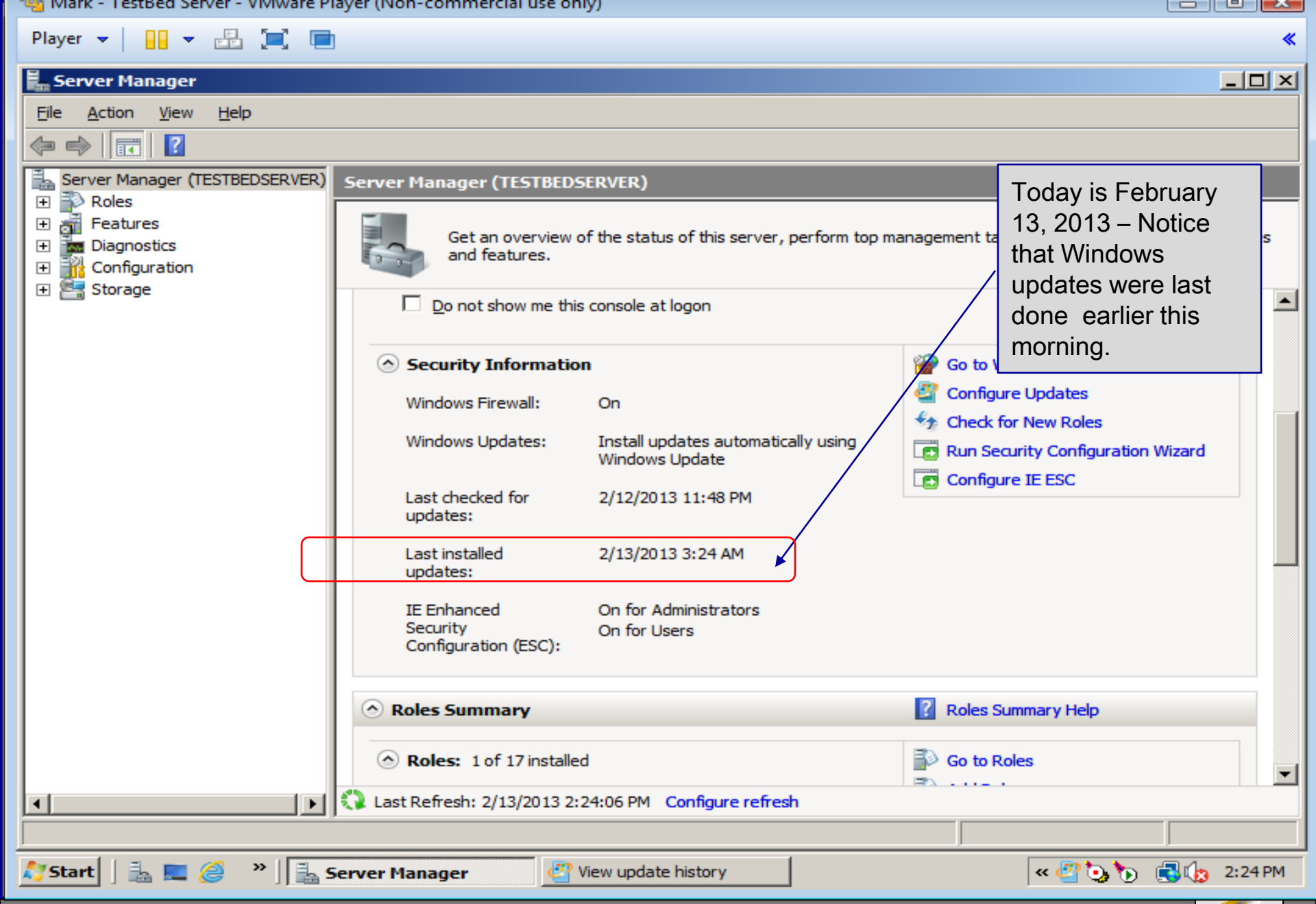
- Aside from all the functionality provided in the Console tree, the main page of the Server Manager, when the Console tree root is selected, is a powerful area for system administrators.
- The Server Summary section of the main page resembles the ICT (Initial Configuration Task) window because it is 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

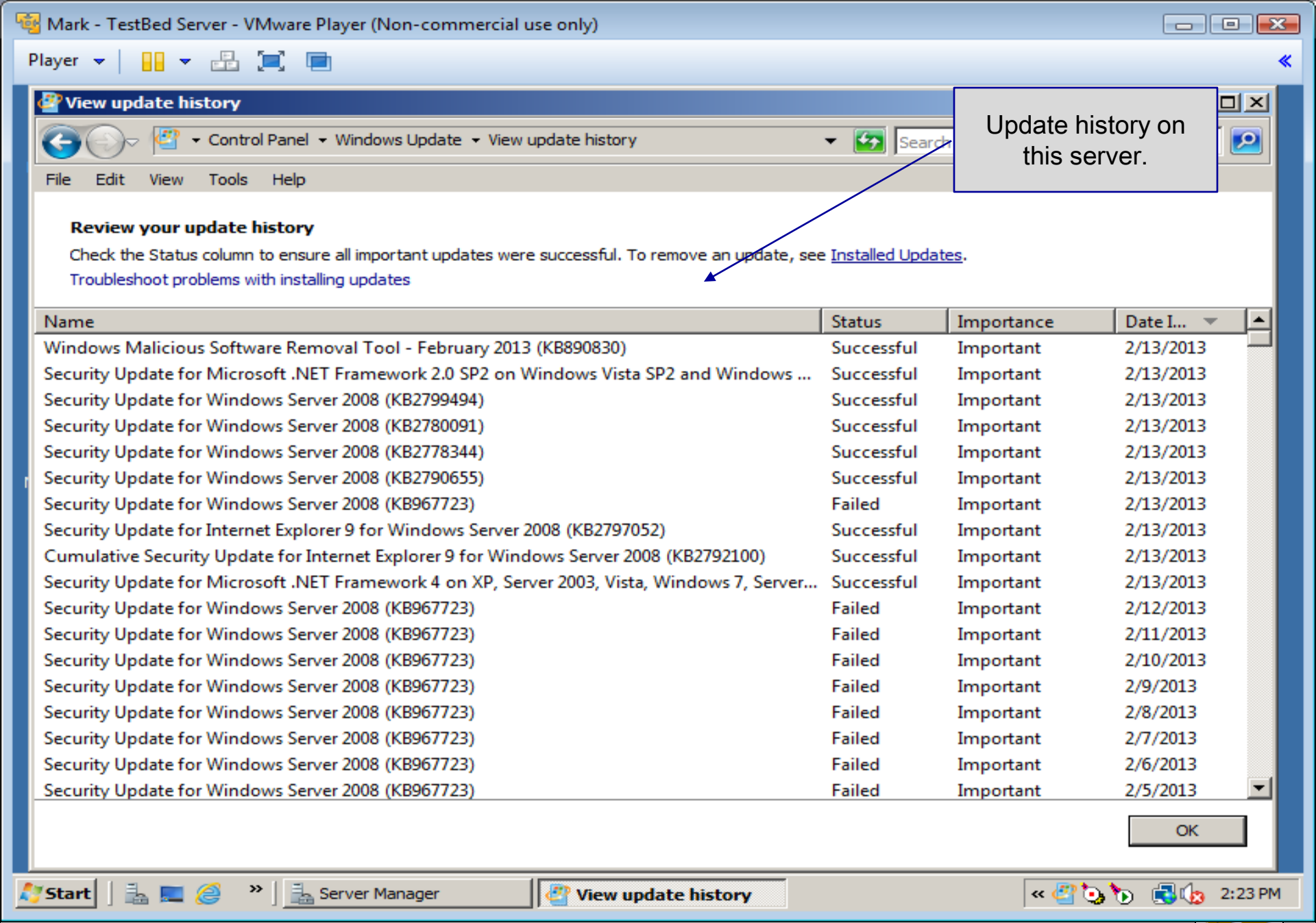
- The Computer Information area provides details on the fully qualified domain name of the computer if it is part of a domain, or just the NetBIOS name if it is only in a workgroup.
- The domain or workgroup that the server is joined to is displayed , along with the network adapters in the server and 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.

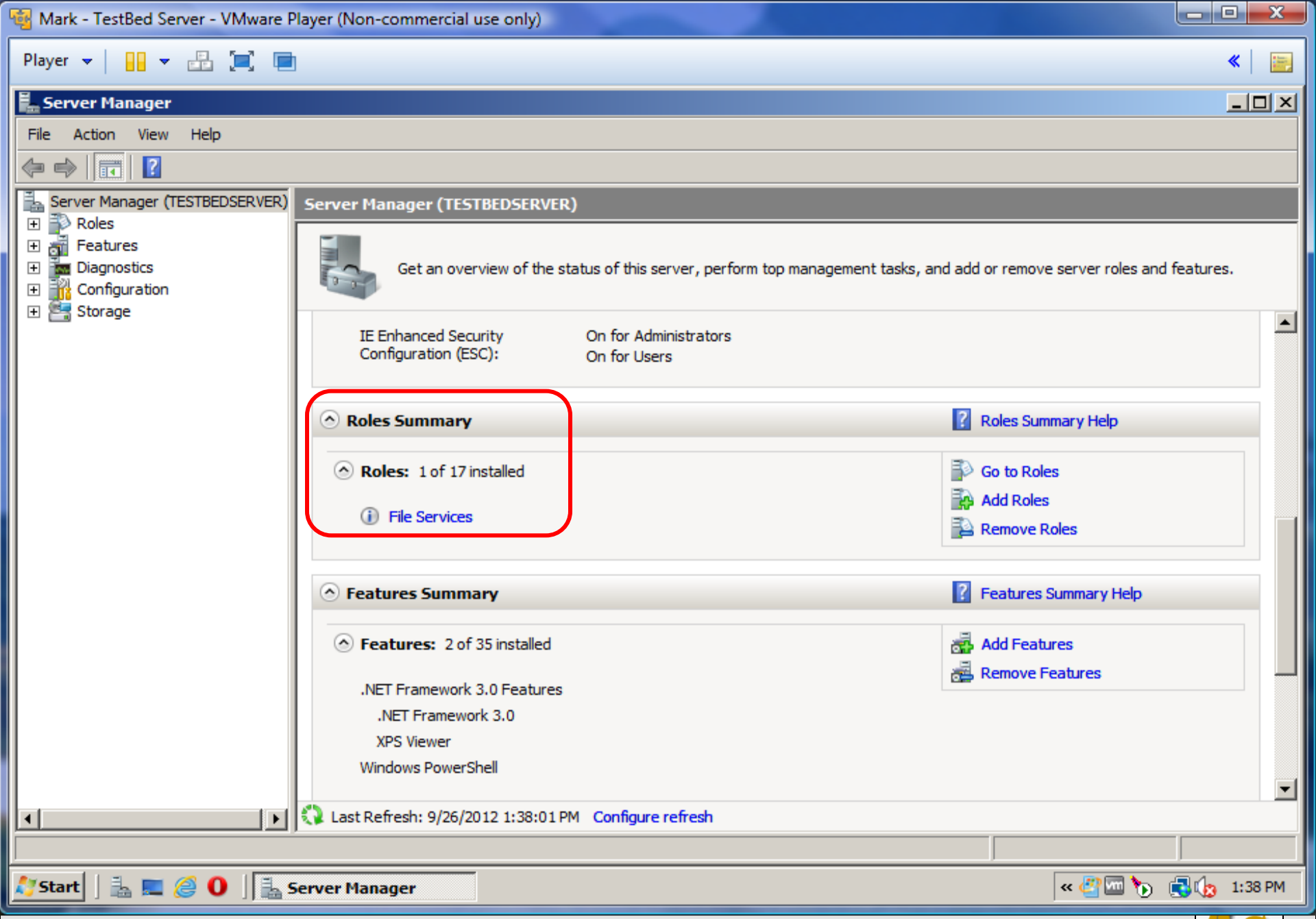


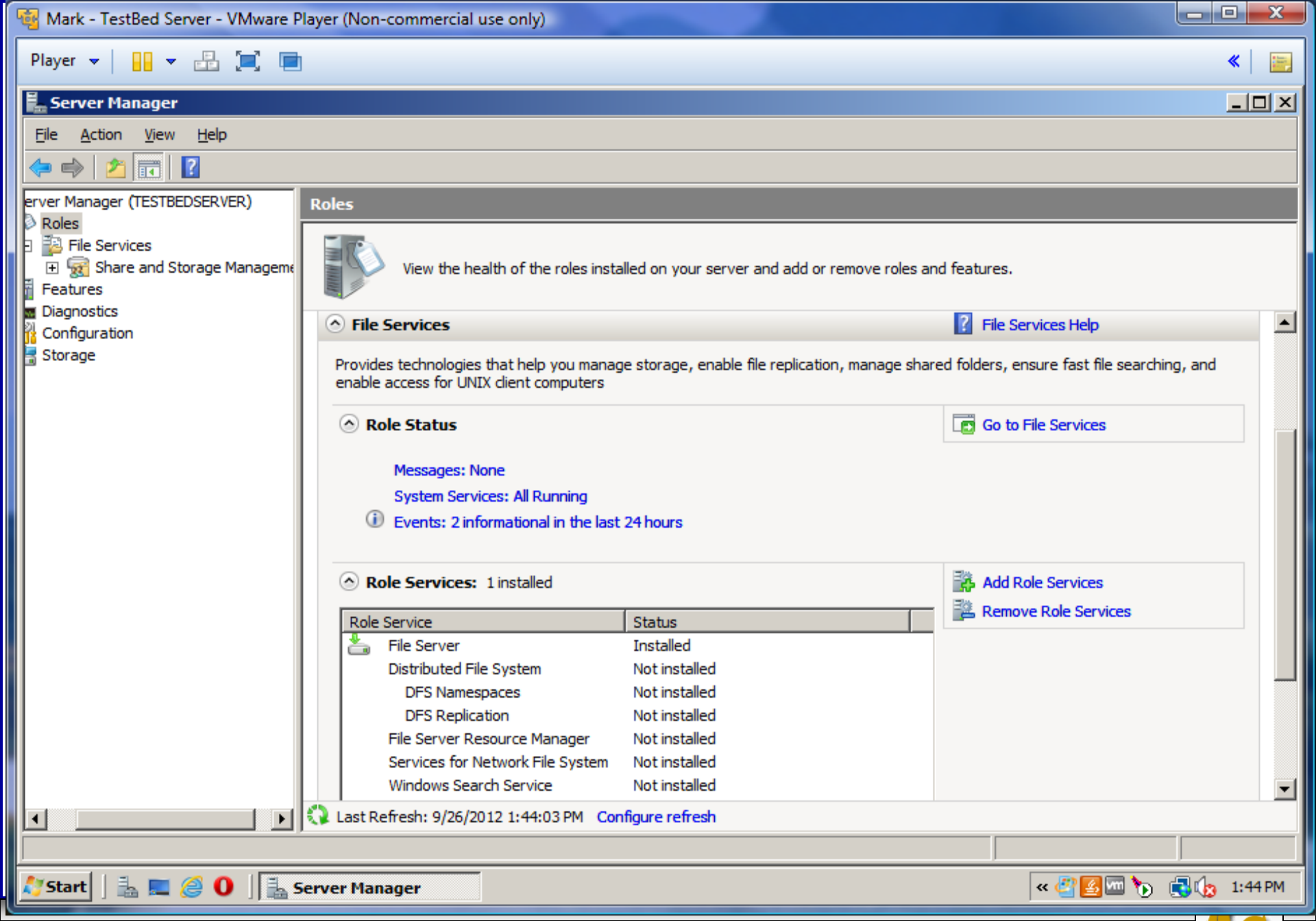
Today is February 13, 2013 – Notice that Windows updates were last done earlier this morning.

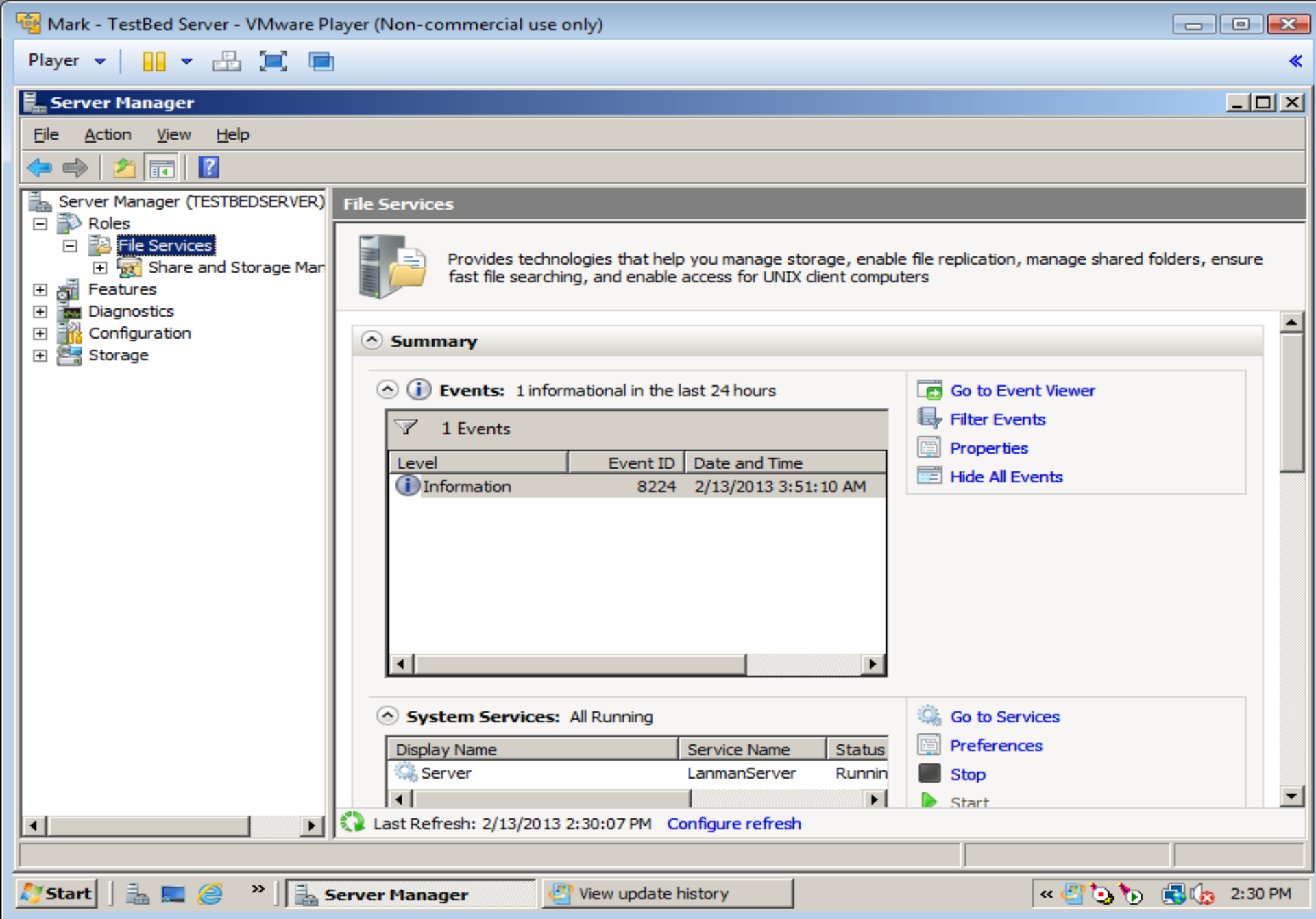

Mark - TestBed Server - VMware Player (Non-commercial use only)
Player
View update history
Control Panel ▸ Windows Update ▸ View update history
Search
File Edit View Tools Help
Update history on this server.
Review your update history
Check the Status column to ensure all important updates were successful. To remove an update, see Installed Updates.
Troubleshoot problems with installing updates
Name | Status | Importance | Date I...
Windows Malicious Software Removal Tool - February 2013 (KB890830) | Successful | Important | 2/13/2013
Security Update for Microsoft .NET Framework 2.0 SP2 on Windows Vista SP2 and Windows ... | Successful | Important | 2/13/2013
Security Update for Windows Server 2008 (KB2799494) | Successful | Important | 2/13/2013
Security Update for Windows Server 2008 (KB2780091) | Successful | Important | 2/13/2013
Security Update for Windows Server 2008 (KB2778344) | Successful | Important | 2/13/2013
Security Update for Windows Server 2008 (KB2790655) | Successful | Important | 2/13/2013
Security Update for Windows Server 2008 (KB967723) | Failed | Important | 2/13/2013
Security Update for Internet Explorer 9 for Windows Server 2008 (KB2797052) | Successful | Important | 2/13/2013
Cumulative Security Update for Internet Explorer 9 for Windows Server 2008 (KB2792100) | Successful | Important | 2/13/2013
Security Update for Microsoft .NET Framework 4 on XP, Server 2003, Vista, Windows 7, Server... | Successful | Important | 2/13/2013
Security Update for Windows Server 2008 (KB967723) | Failed | Important | 2/12/2013
Security Update for Windows Server 2008 (KB967723) | Failed | Important | 2/11/2013
Security Update for Windows Server 2008 (KB967723) | Failed | Important | 2/10/2013
Security Update for Windows Server 2008 (KB967723) | Failed | Important | 2/9/2013
Security Update for Windows Server 2008 (KB967723) | Failed | Important | 2/8/2013
Security Update for Windows Server 2008 (KB967723) | Failed | Important | 2/7/2013
Security Update for Windows Server 2008 (KB967723) | Failed | Important | 2/6/2013
Security Update for Windows Server 2008 (KB967723) | Failed | Important | 2/5/2013
OK
Start
Server Manager
View update history
2:23 PM

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.


Mark - TestBed Server - VMware Player (Non-commercial use only)
Player
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.
IE Enhanced Security Configuration (ESC):
On for Administrators
On for Users
Roles Summary
Roles Summary Help
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
Last Refresh: 9/26/2012 1:38:01 PM
Configure refresh
Start
Server Manager
1:38 PM


Mark - TestBed Server - VMware Player (Non-commercial use only)
Player
Server Manager
File Action View Help
erver Manager (TESTBEDSERVER)
Roles
File Services
Share and Storage Manageme
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
Server Manager
1:44 PM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Player
Server Manager
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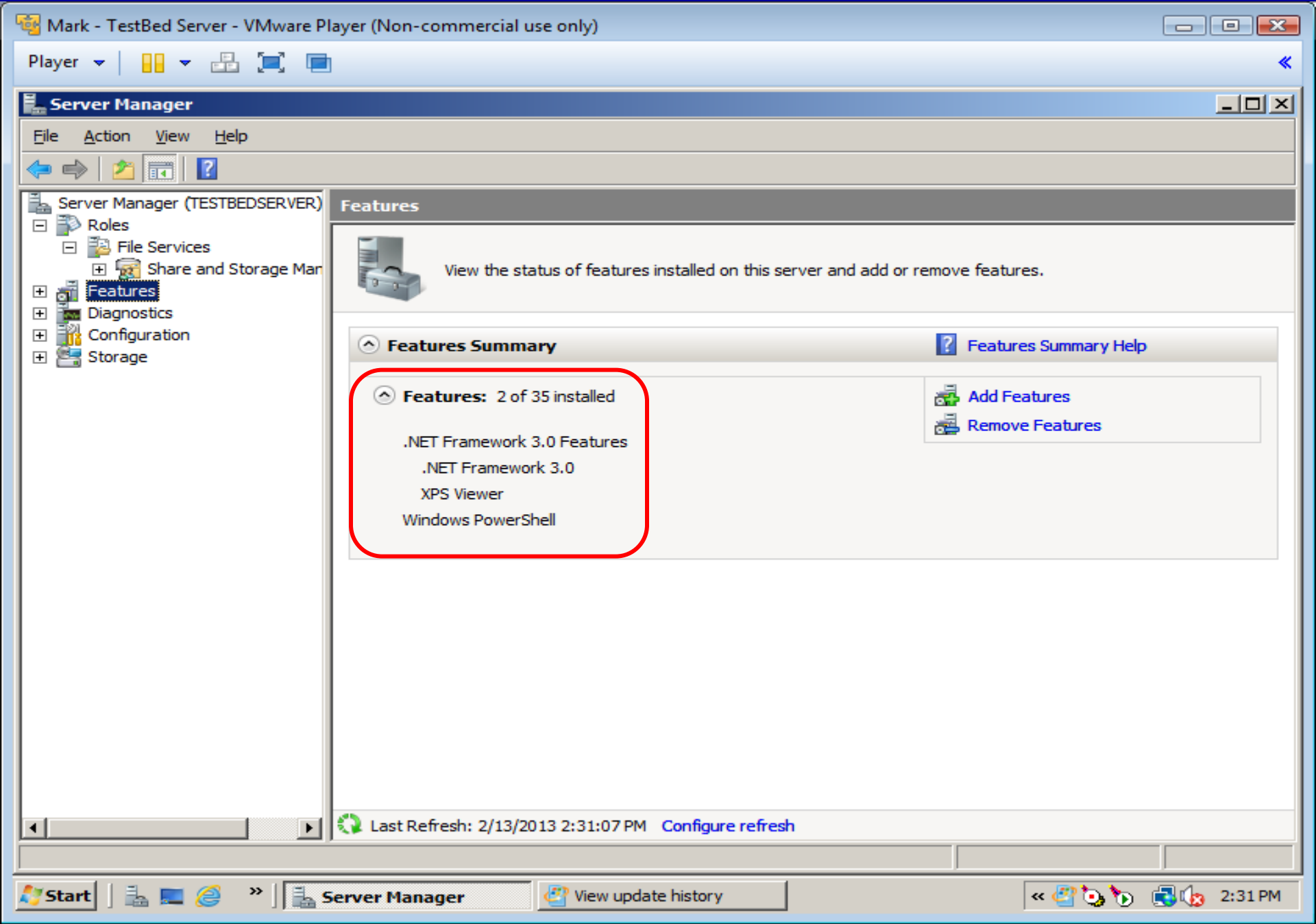
Server Manager (TESTBEDSERVER)
Roles
File Services
Share and Storage Mar
Features
Diagnostics
Configuration
Storage
File Services
Provides technologies that help you manage storage, enable file replication, manage shared folders, ensure fast file searching, and enable access for UNIX client computers
Summary
Events: 1 informational in the last 24 hours
1 Events
Level
Event ID
Date and Time
Information
8224
2/13/2013 3:51:10 AM
Go to Event Viewer
Filter Events
Properties
Hide All Events
System Services: All Running
Display Name
Service Name
Status
Server
LanmanServer
Runnin
Go to Services
Preferences
Stop
Start
Last Refresh: 2/13/2013 2:30:07 PM
Configure refresh
Start
Server Manager
View update history
2:30 PM

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.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Player
Server Manager
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Server Manager (TESTBEDSERVER)
Roles
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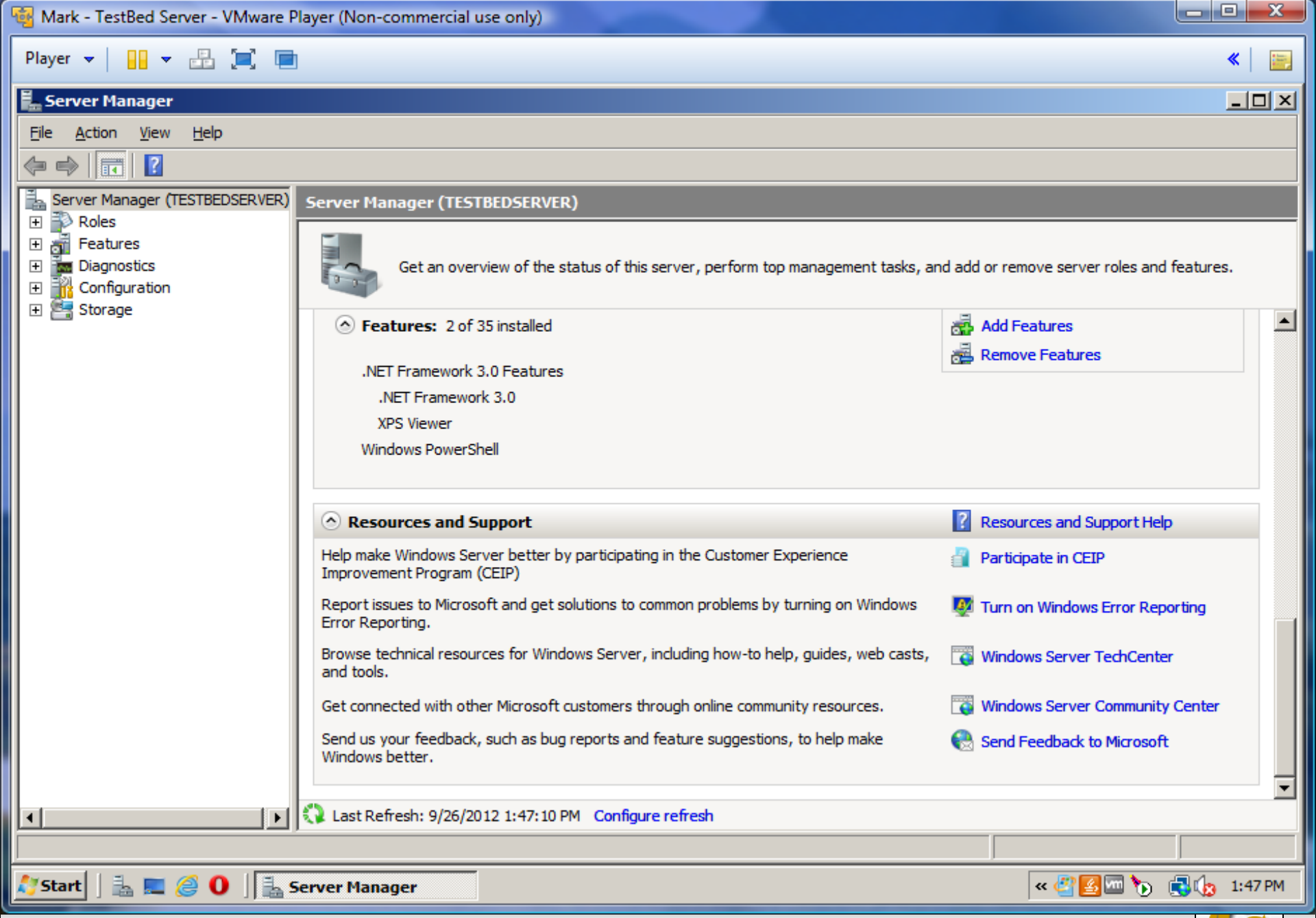
Share and Storage Mar
Features
Diagnostics
Configuration
Storage
Features
View the status of features installed on this server and add or remove features.
Features Summary
Features Summary Help
Features: 2 of 35 installed
.NET Framework 3.0 Features
.NET Framework 3.0
XPS Viewer
Windows PowerShell
Add Features
Remove Features
Last Refresh: 2/13/2013 2:31:07 PM
Configure refresh
Start
Server Manager
View update history
2:31 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.
-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Diagnostics
Configuration
Storage
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Features: 2 of 35 installed
Add Features
Remove Features
.NET Framework 3.0 Features
.NET Framework 3.0
XPS Viewer
Windows PowerShell
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
Browse technical resources for Windows Server, including how-to help, guides, web casts, and tools.
Windows Server TechCenter
Get connected with other Microsoft customers through online community resources.
Windows Server Community Center
Send us your feedback, such as bug reports and feature suggestions, to help make Windows better.
Send Feedback to Microsoft
Last Refresh: 9/26/2012 1:47:10 PM
Configure refresh
Start
Server Manager
1:47 PM

Server Manager - Managing Roles

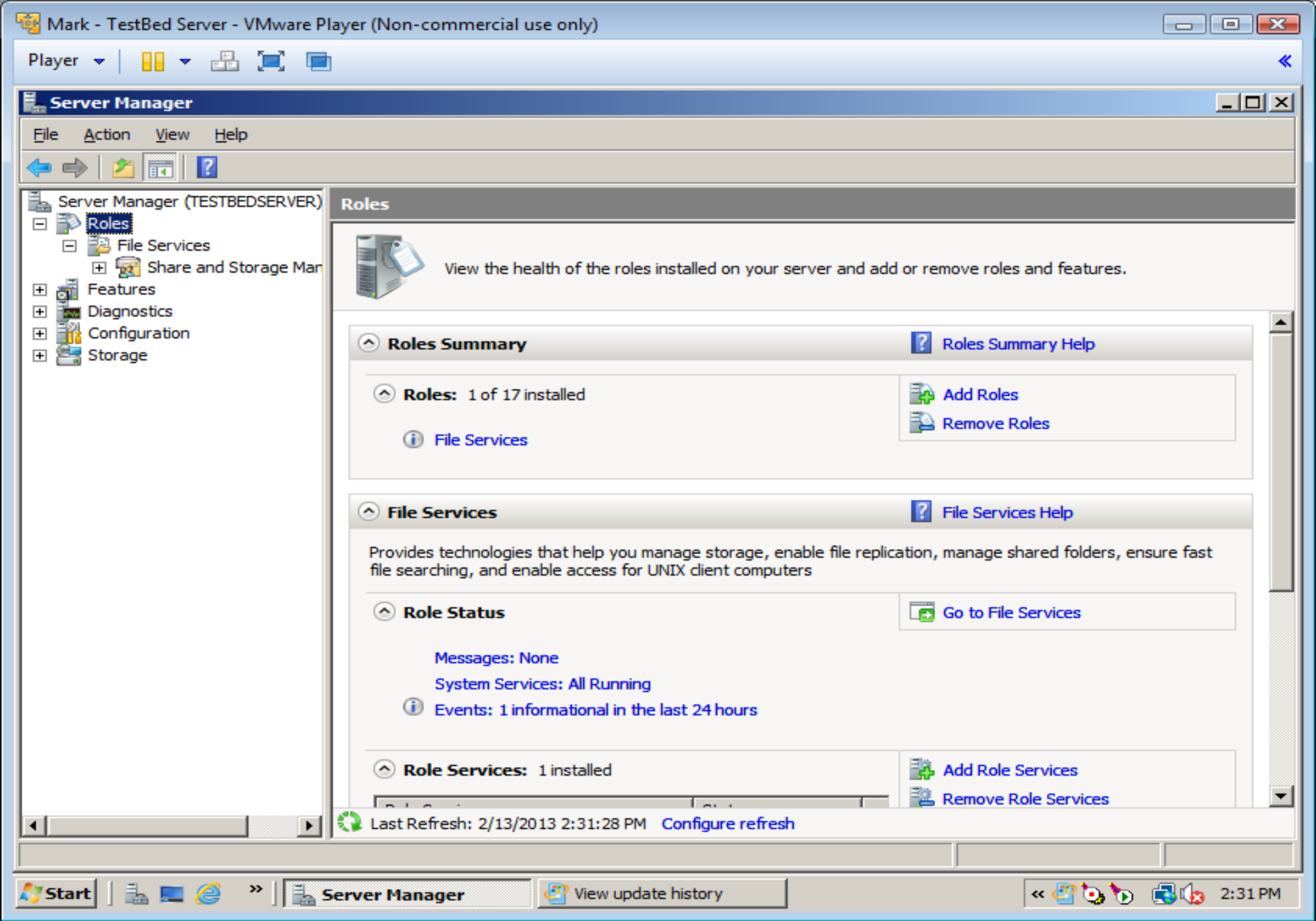
- The main function of the Server Manager is to provide an interface that manages what the server does.
- What the server does is controlled by what roles the server has, e.g., "that's my domain controller, that's my DNS server, that's my file server."
- On the Server Manager main page, the Roles Summary 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.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Server Manager
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Roles
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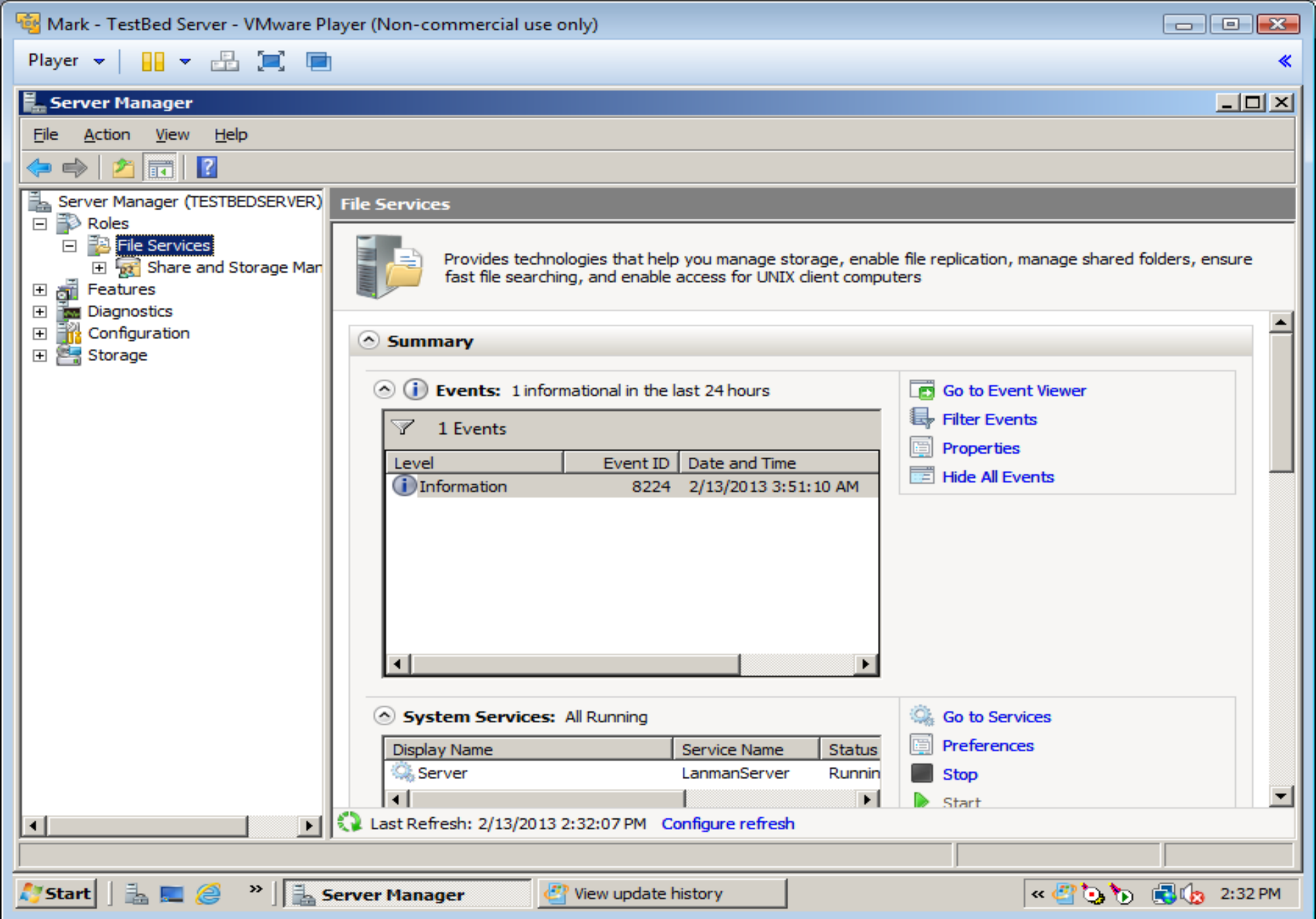
Roles Summary Help
Roles: 1 of 17 installed
Add Roles
Remove Roles
File Services
File Services
File Services Help
Provides technologies that help you manage storage, enable file replication, manage shared folders, ensure fast file searching, and enable access for UNIX client computers
Role Status
Go to File Services
Messages: None
System Services: All Running
Events: 1 informational in the last 24 hours
Role Services: 1 installed
Add Role Services
Remove Role Services
Last Refresh: 2/13/2013 2:31:28 PM
Configure refresh
Start
Server Manager
View update history
2:31 PM

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.
- The next page illustrates the detail available for a role managed from within Roles.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Server Manager
File Action View Help
Server Manager (TESTBEDSERVER)
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Share and Storage Mar
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Diagnostics
Configuration
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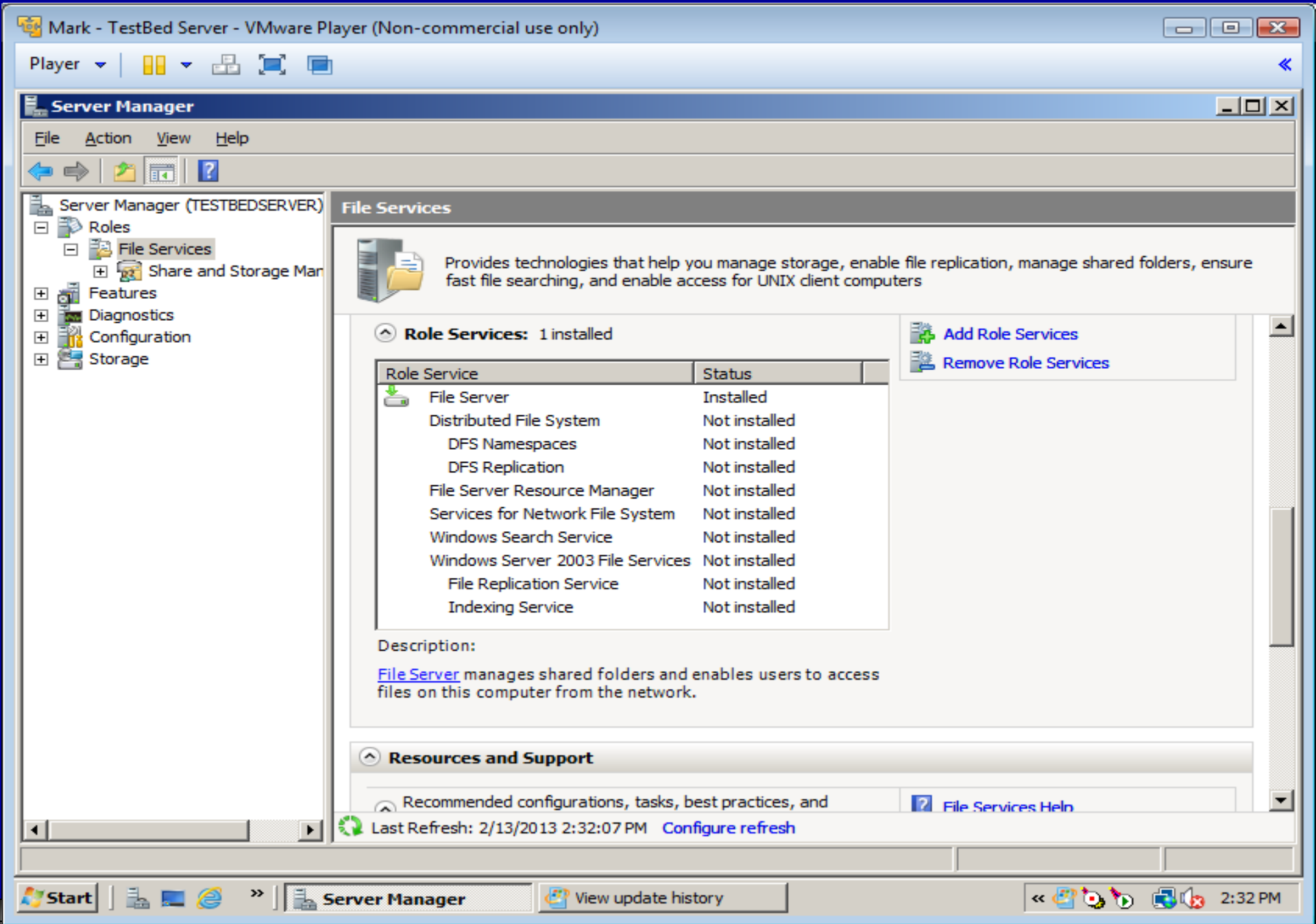
Provides technologies that help you manage storage, enable file replication, manage shared folders, ensure fast file searching, and enable access for UNIX client computers
Summary
Events: 1 informational in the last 24 hours
1 Events
Level
Event ID
Date and Time
Information
8224
2/13/2013 3:51:10 AM
Go to Event Viewer
Filter Events
Properties
Hide All Events
System Services: All Running
Display Name
Service Name
Status
Server
LanmanServer
Runnin
Go to Services
Preferences
Stop
Start
Last Refresh: 2/13/2013 2:32:07 PM
Configure refresh
Start
Server Manager
View update history
2:32 PM

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.


Mark - TestBed Server - VMware Player (Non-commercial use only)
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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
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
Windows Server 2003 File Services
Not installed
File Replication Service
Not installed
Indexing Service
Not installed
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
File Services Help
Last Refresh: 2/13/2013 2:32:07 PM
Configure refresh
Start
Server Manager
View update history
2:32 PM