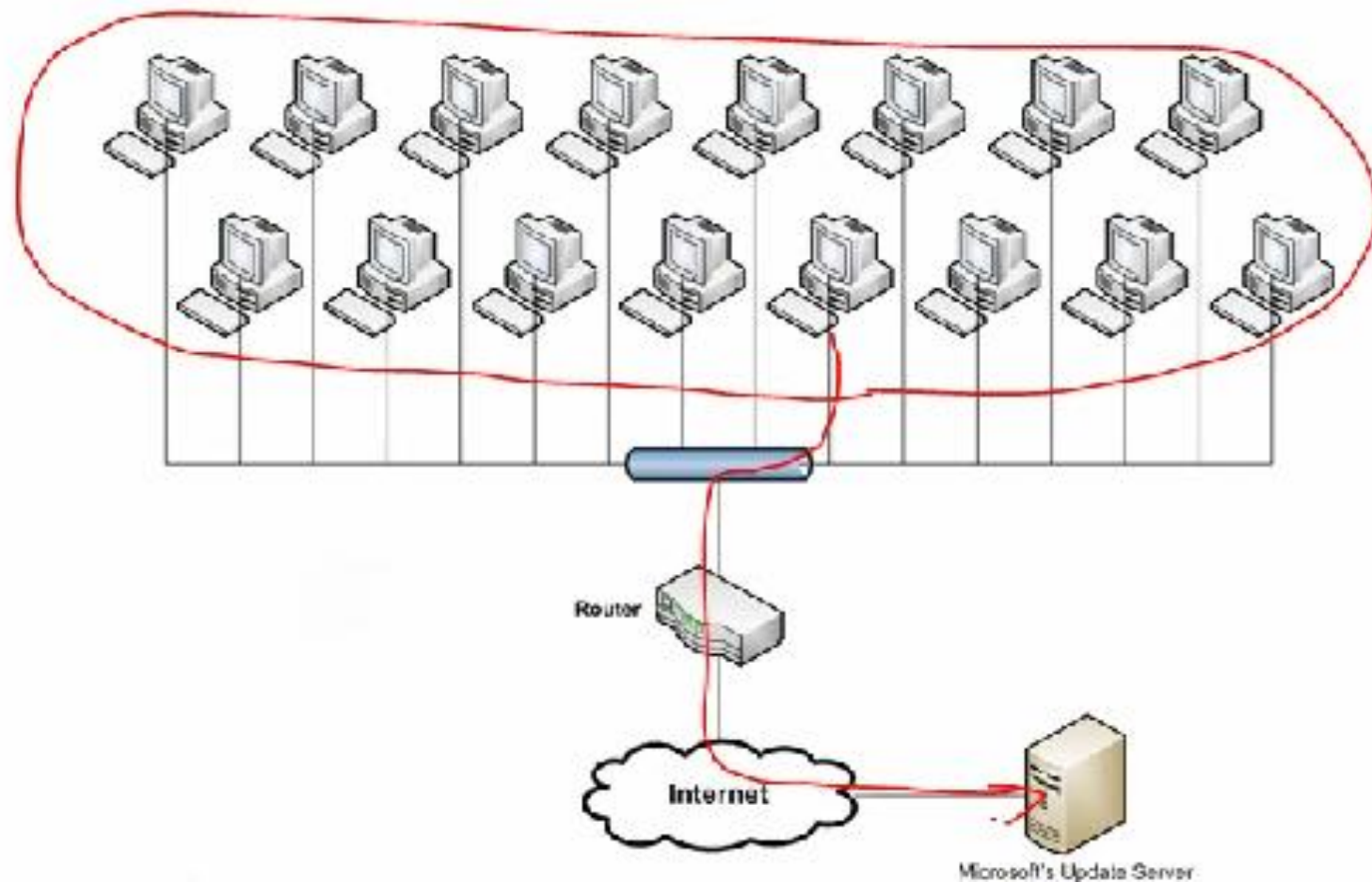


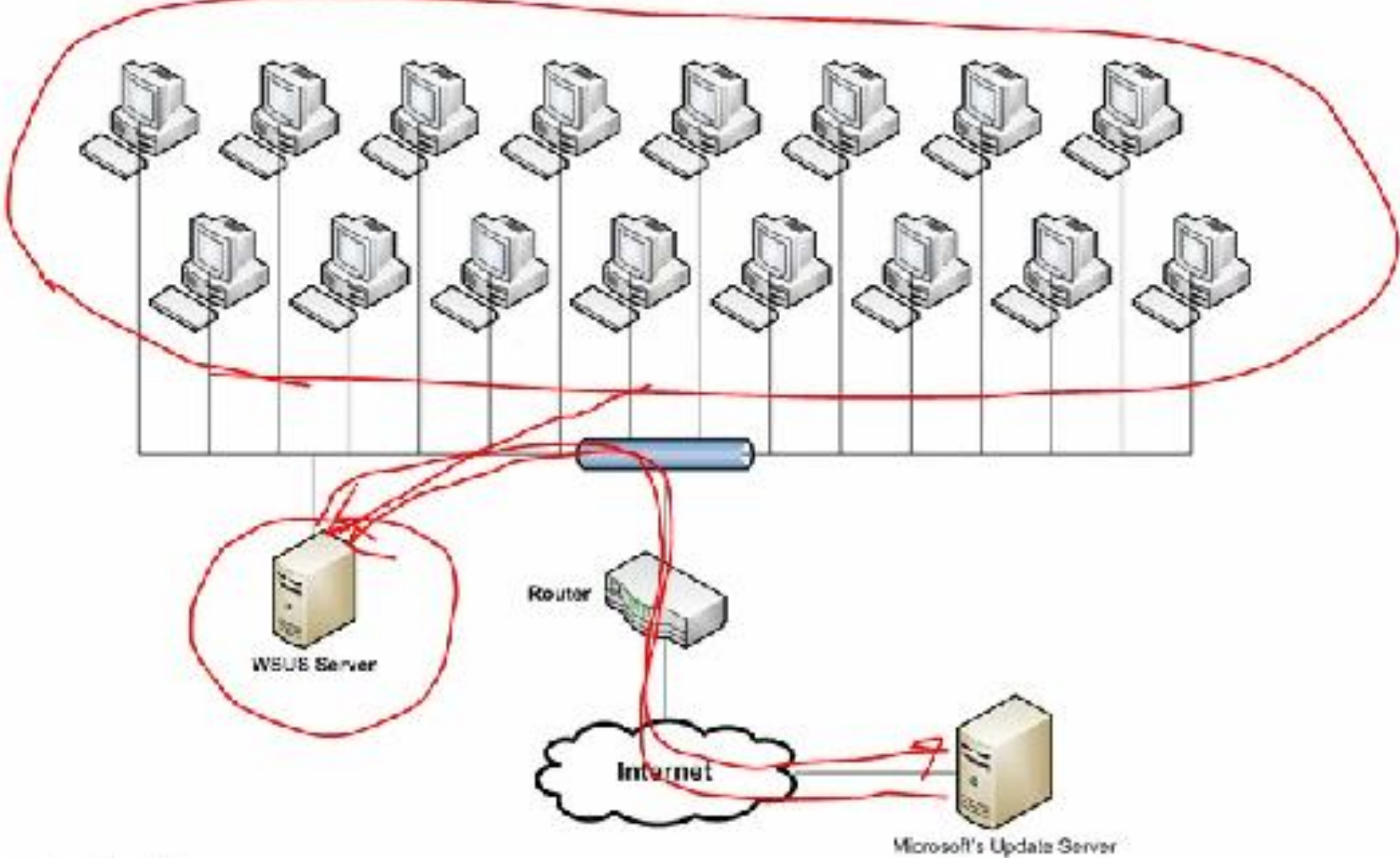
# **Windows Server Update Services (WSUS)**

- **What is WSUS?**
- **WSUS Scenarios**
  - **Single Server**
  - **Independent**
  - **Autonomous Mode**
  - **Replica Mode**
  - **Disconnected**
  
- **Downloading and Installing WSUS**
- **How to Configure Computer Groups**
  - **Server-side Targeting**
  - **Client-side Targeting**
- **Configuring Clients Using Group Policy**

# What is WSUS?



# What is WSUS?



## Why use WSUS?

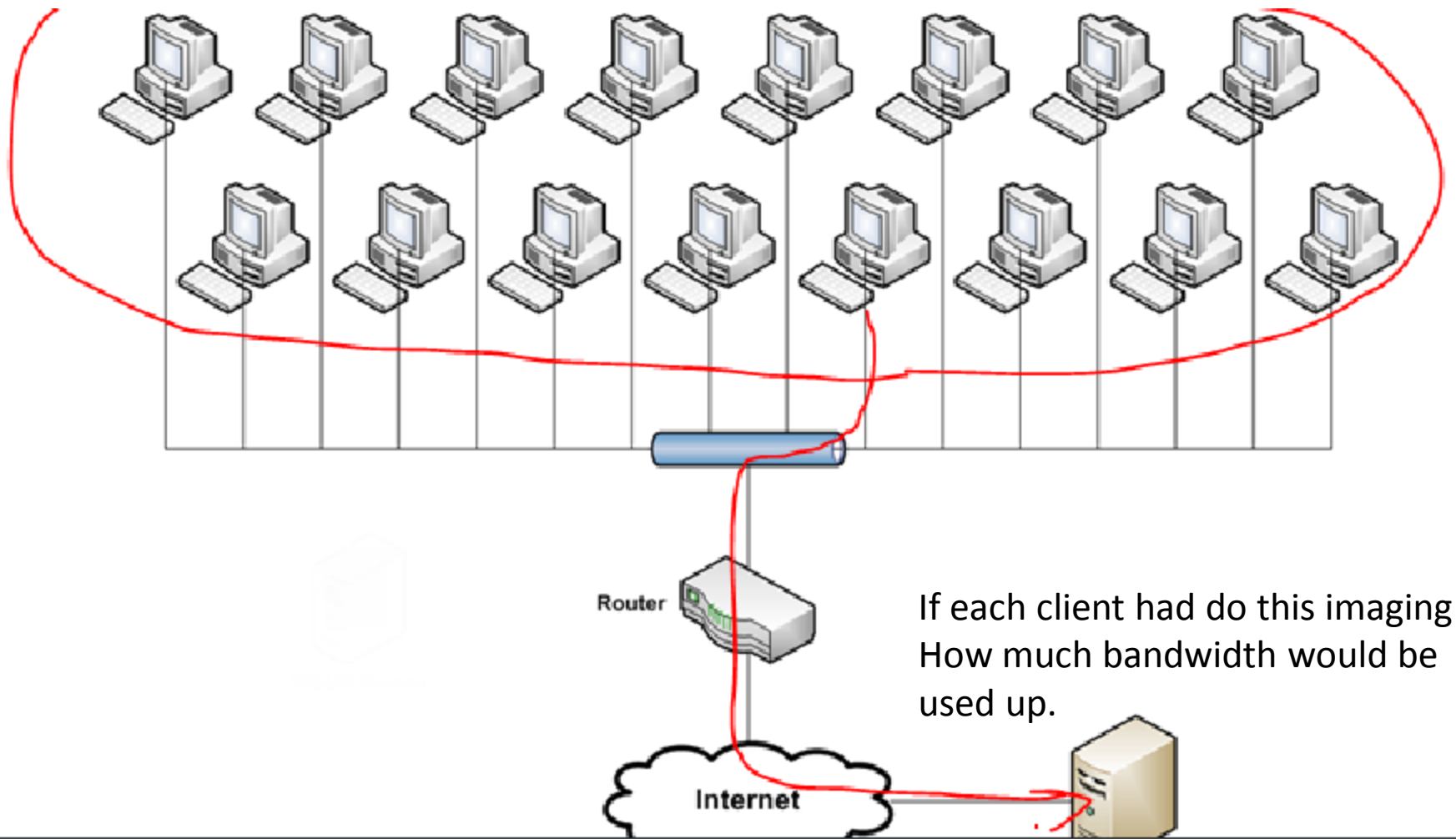
- **WSUS helps save Internet bandwidth and makes more efficient use of the Microsoft Update Servers.**
- **WSUS gives administrators control over what updates are sent to the clients by allowing them to test and approve updates first.**

## Where can I get WSUS?

- **WSUS is not included with Windows Server 2008**
- **WSUS is a free download from Microsoft**
- **WSUS 3.0 SP1 can be downloaded from the following links:**

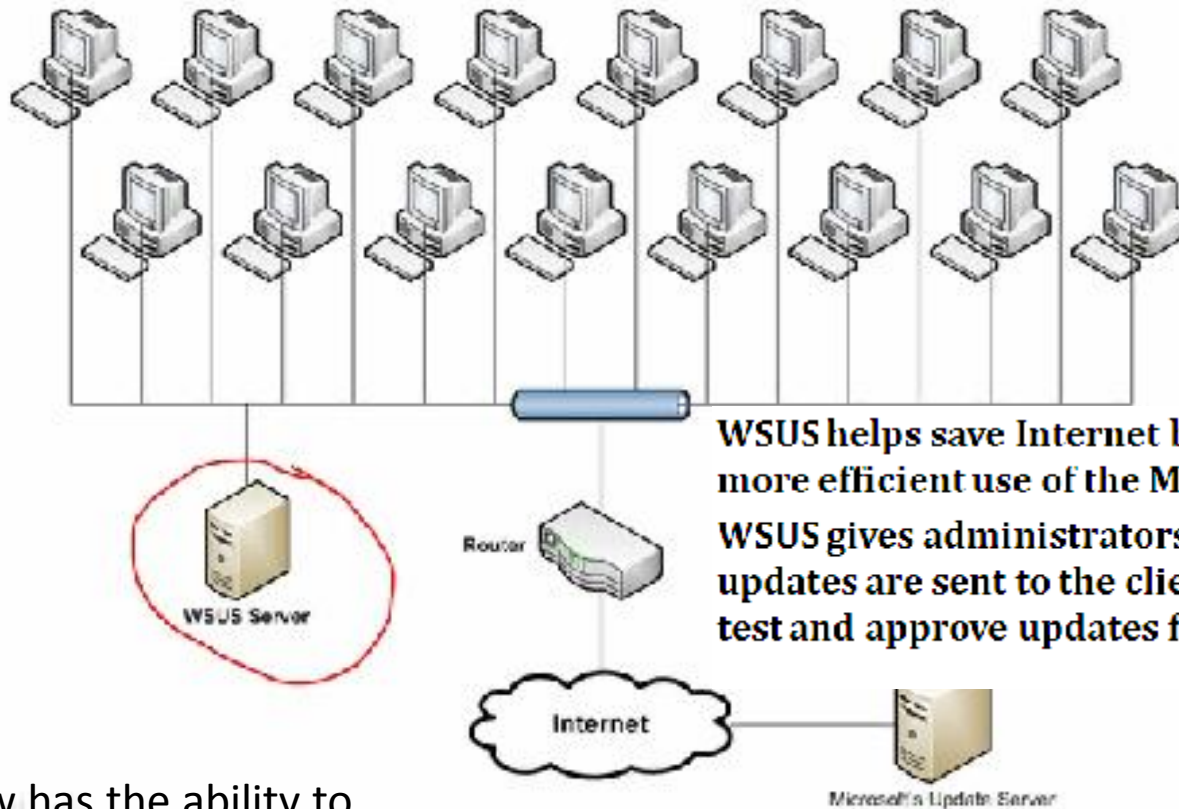
<http://www.microsoft.com/wsus>

<http://technet.microsoft.com/en-us/wsus/default.aspx>



In the scenario above each client would have to connect directly to the Microsoft update Server to query if they were any updates available. If updates were available the Microsoft Server had to download those updates to the individual machine.

## WSUS Scenarios – Single Server



**WSUS helps save Internet bandwidth and makes more efficient use of the Microsoft Update Servers. WSUS gives administrators control over what updates are sent to the clients by allowing them to test and approve updates first.**

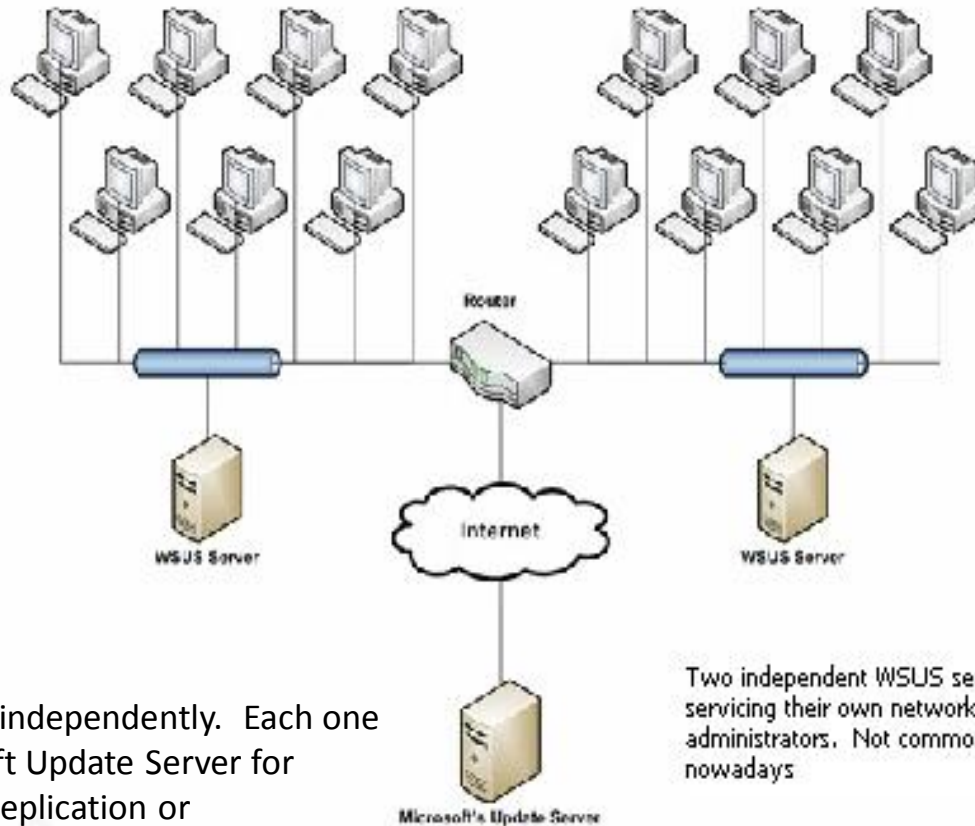
WSUS now has the ability to have all the clients communicate with the WSUS Server for its updates. WSUS will go to the Microsoft update site for all its updates and the updates will be downloaded to the WSUS Server. All the clients will now communicate with the WSUS Server for updates.

## Where can I get WSUS?

- **WSUS is not included with Windows Server 2008**
- **WSUS is a free download from Microsoft**



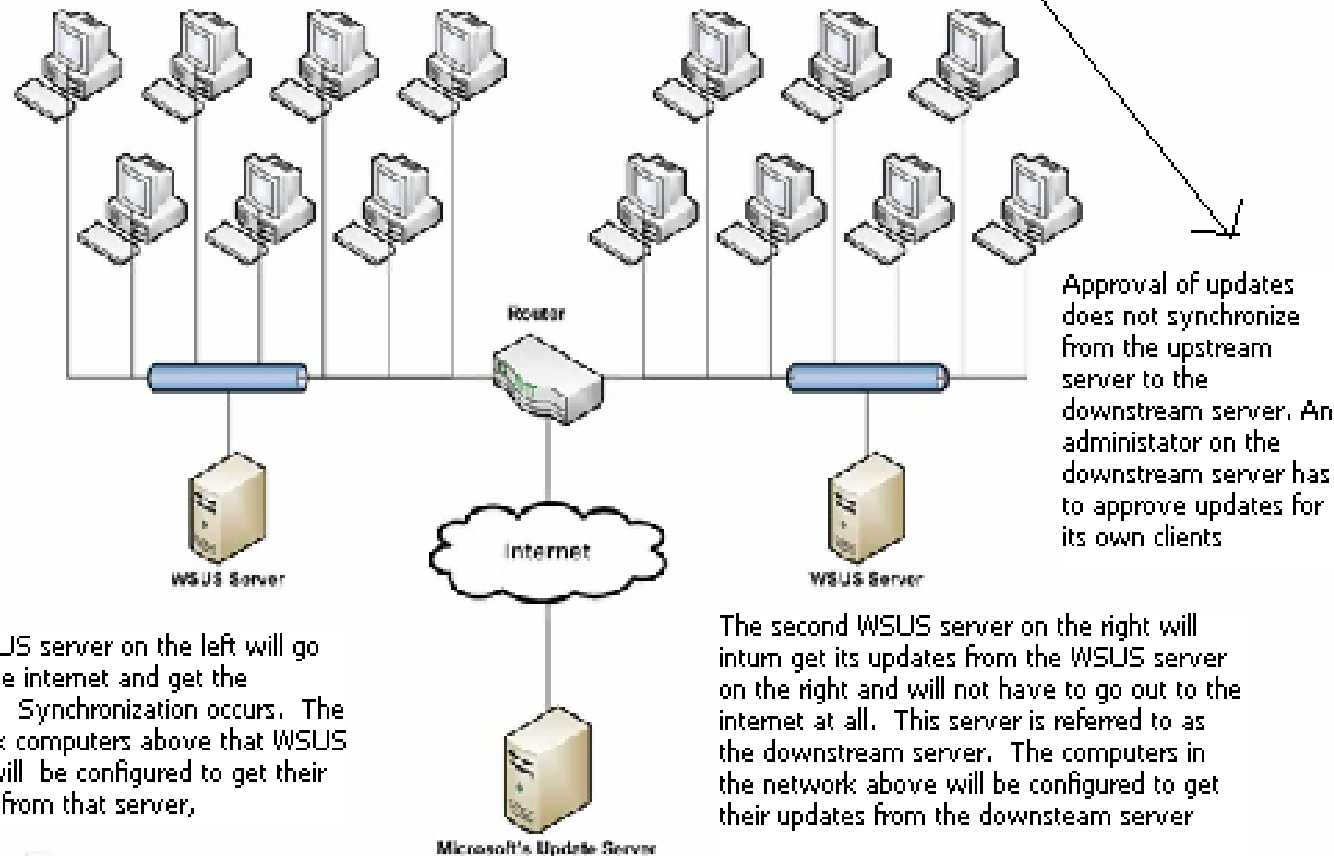
# WSUS Scenarios – Independent



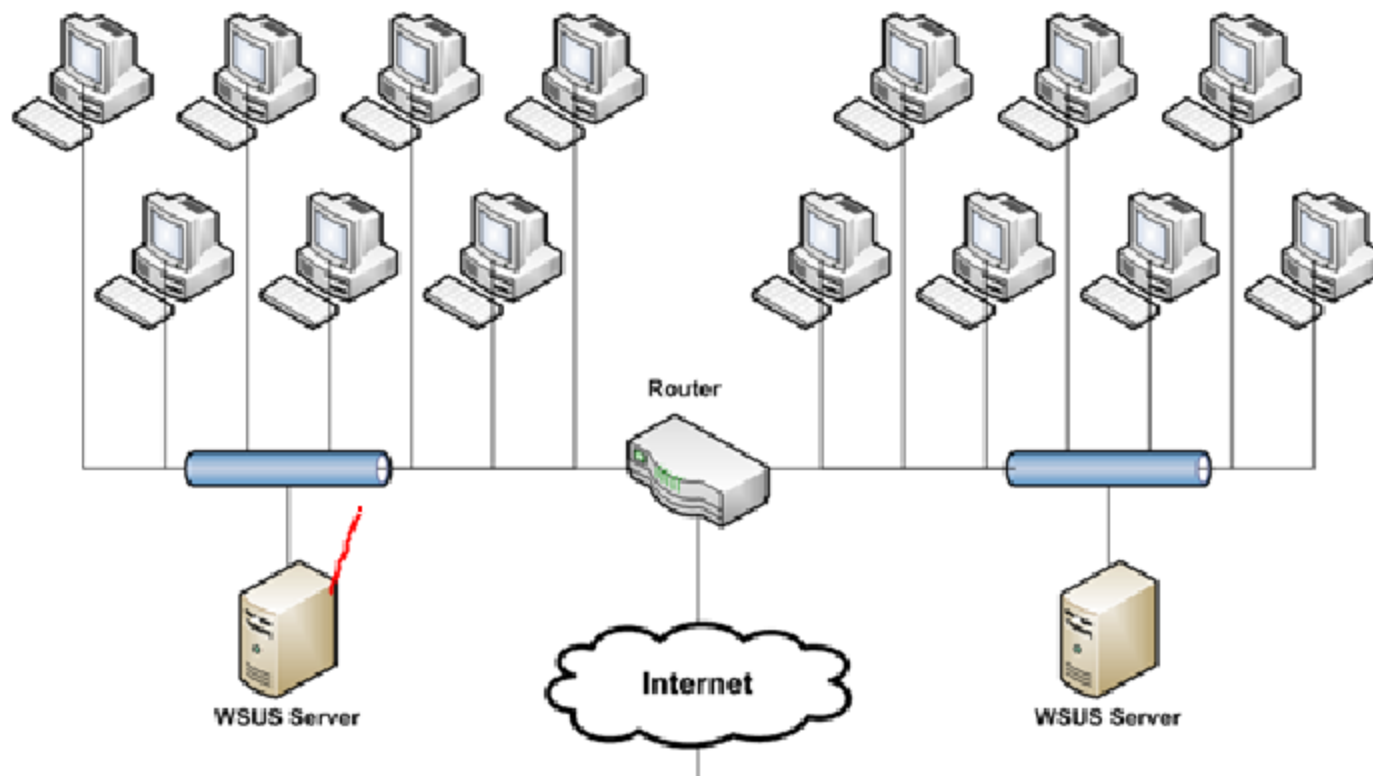
Each of them operate independently. Each one will go to the Microsoft Update Server for updates. There is no replication or synchronization of any kind between the Servers. Therefore you will need two administrator, one for each WSUS Server

Two independent WSUS servers each servicing their own network. Need two administrators. Not common scenario nowadays

# WSUS Scenarios – Autonomous Mode

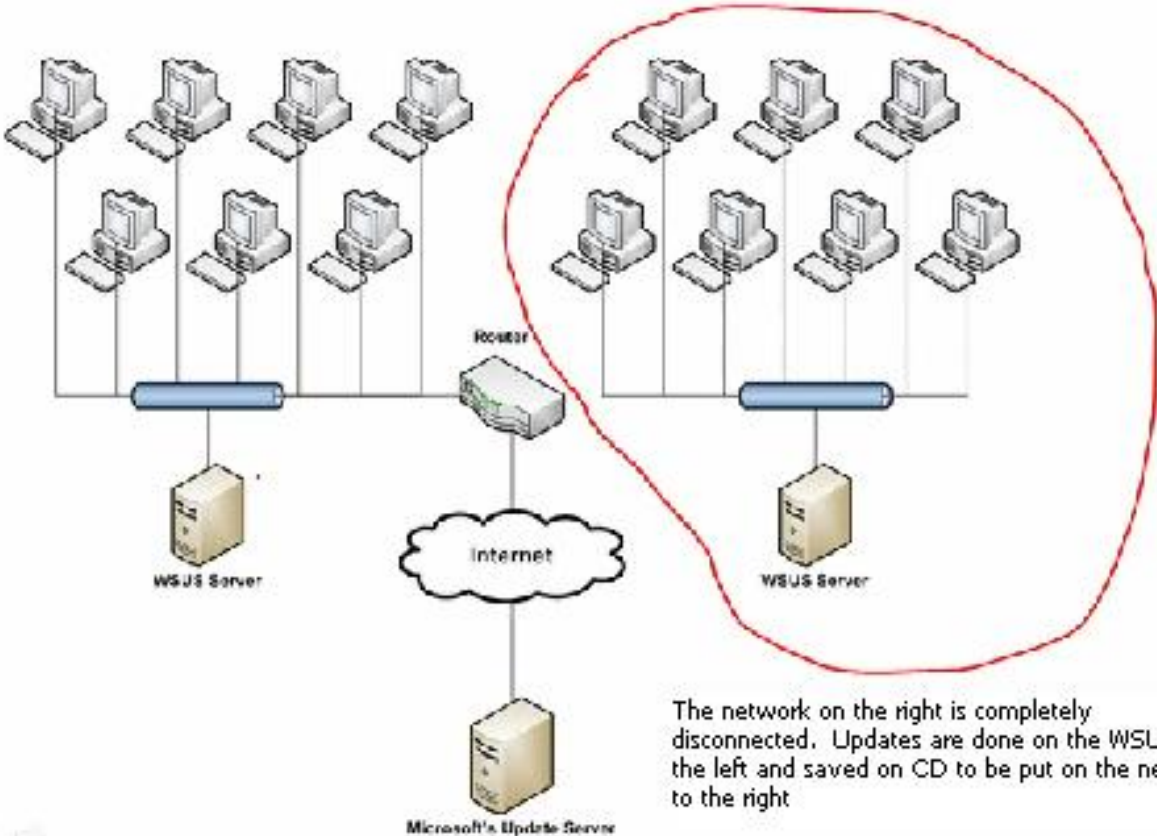


# WSUS Scenarios – Replica Mode



This mode is exactly the same as the autonomous mode with one exception. Approvals are not done by the second WSUS server as in the Autonomous mode but are replicated over. So you really need only one Administrator.

# WSUS Scenarios – Disconnected



The network on the right is completely disconnected. Updates are done on the WSUS to the left and saved on CD to be put on the network to the right

**Download WSUS 3.0 SP1**

**Install WSUS**

**Configure WSUS**

Software

**Configure Computer Groups**

**Configure Clients**

## **WSUS server software requirements**

The server must also be running all of the following application software:

At least Internet Information Services (IIS) 6.0 (WSUS IS ALL WEB BASED)

At least Microsoft® .NET Framework 2.0

At least Microsoft Management Console 3.0

At least Microsoft Report Viewer Redistributable 2008

Windows Server 2008 R2 requires WSUS 3.0 SP2. If you install Windows Server 2008 R2 you should install WSUS 3.0 SP2. Do not install any version of WSUS earlier than WSUS 3.0 SP2 on Windows Server 2008 R2

Windows Server Update Services 3.0 Setup Wizard



Installation Mode Selection



What kind of installation would you like to perform for Windows Server Update Services?

- Full server installation including Administration Console
- Administration Console only

Windows Server Update Services 3.0 Setup Wizard

License Agreement

To install Windows Server Update Services 3.0, you must accept the terms of the end user license agreement.



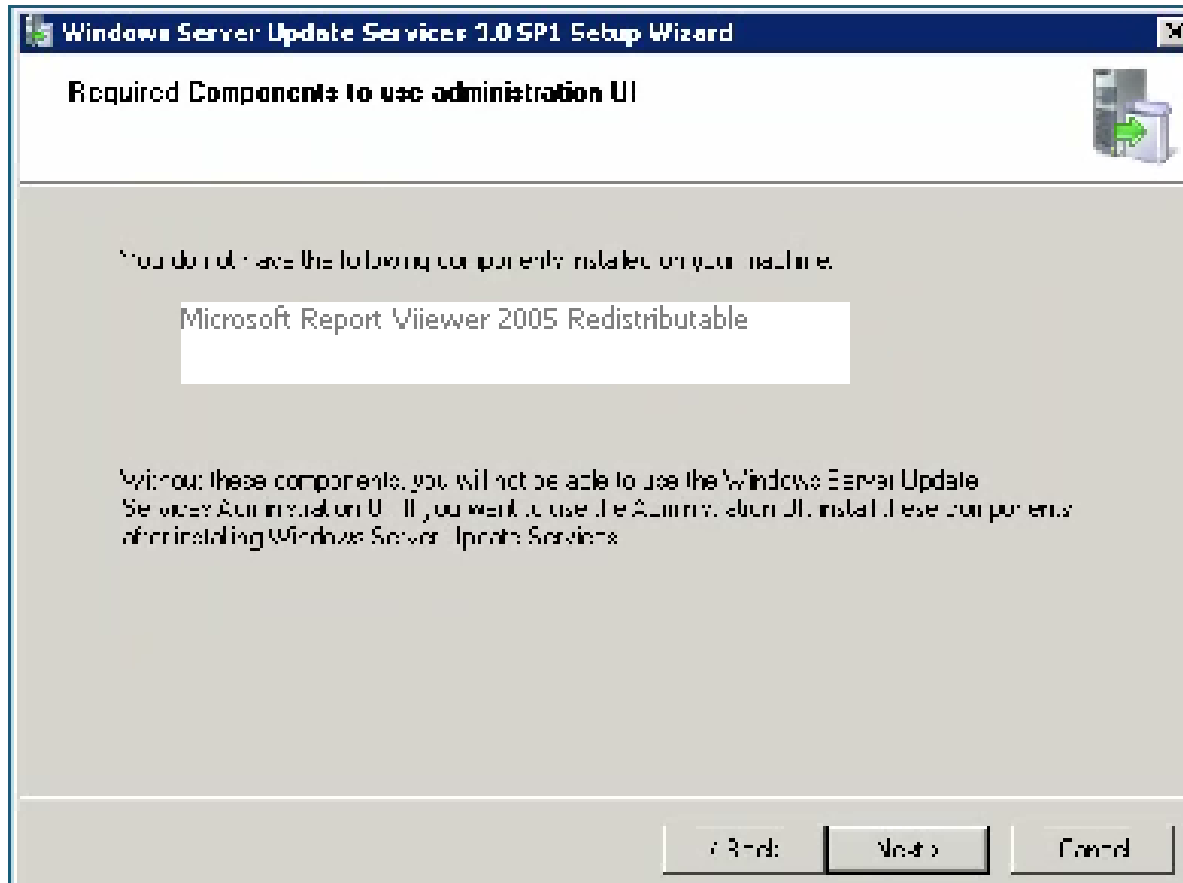
Please read the following agreement carefully. Use the scroll bar or press the PAGE DOWN key to view the rest of the text. To print the text, click Print.

**WINDOWS SERVER UPDATE SERVICES 3.0**  
**PLEASE NOTE:** Microsoft Corporation (or based on where you live, one of its affiliates) licenses this supplement to you. You may use it with each validly licensed copy of Microsoft Windows Server software (for which this supplement is applicable) (the "software"). You may not use the supplement if you do not have a license for

- I accept the terms of the License agreement
- I do not accept the terms of the License agreement

Print...





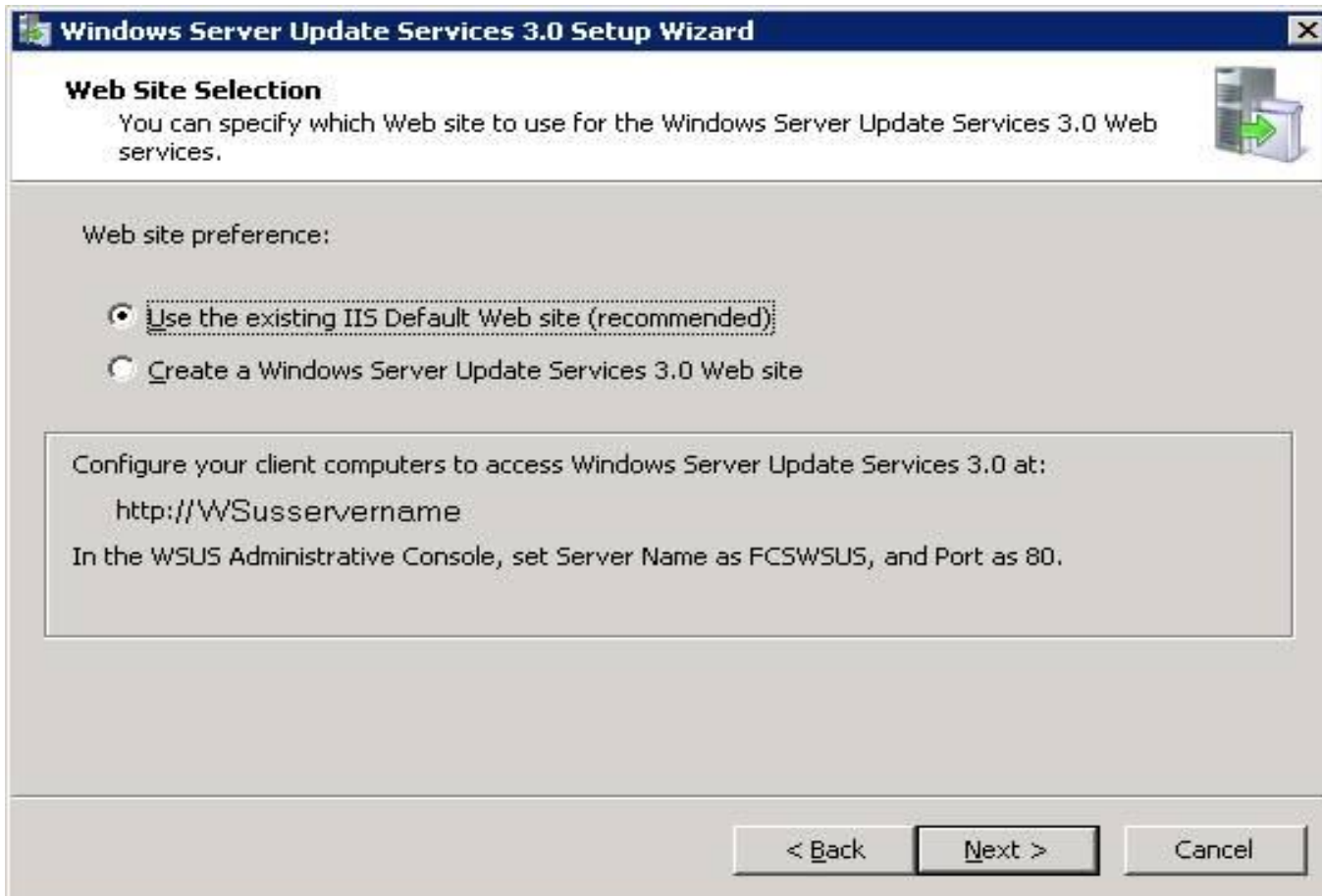
Microsoft viewer 2005 Redistributable – only required if you are going to do reporting. Please note that 2008 Redistributable is required to Server 2008R2



You need to select an update source. The checked box allows you to store updates locally. You can have a separate drive or a separate partition based upon your scenario. If you do not want to store updates locally you can uncheck the box. Maybe you don't have enough space or you don't want to tie up the space. If you uncheck the box then the updates are going to be stored on Microsoft's Update Server.



Here you can use Microsoft's internal Database or Sequel Server to keep Track of all this information. You don't have to have a database installed you Can use Microsoft's internal database



WSUS is web based so you will need to use a website. The default Website is recommended unless you are using a web server which already Has a website in use. In this case you should click the second option to create a Windows Update services website

Windows Server Update Services 3.0 Setup Wizard

**Web Site Selection** Windows Server Update Services 3.0

You can specify which Web site to use for the Windows Server Update Services 3.0 Web services.



Windows Server Update Services 3.0 is ready to be installed with the following configuration:

- Content folder: D:\WSUS\WsusContent
- Database files: D:\WSUS
- Client self update site: http://WSUS/selfupdate

The following components will be installed along with Windows Server Update Services 3.0:

- Windows Internal Database

To install, click Next. To review or change settings, click Back.

< Back    Next >    Cancel

Windows Server Update Services 3.0



## Installing...



Please wait while the Setup Wizard installs. This may take several minutes.

Status:     Configuring ASP.NET



Setup is working. Please wait...

Cancel

Windows Server Update Services 3.0



Windows Server Update Services 3.0 Setup Wizard



## Completing the Windows Server Update Services 3.0 Setup Wizard

You have successfully completed the Windows Server Update Services 3.0 Setup Wizard.

To close this wizard, click Finish.

Back

Finish

Cancel



## Before You Begin

Things you should do before starting this wizard

### Before You Begin

Microsoft Update Improvement Program

Choose Upstream Server

Specify Proxy Server

Choose Languages

Choose Products

Choose Classifications

Configure Sync Schedule

Finished

What's Next



Before you begin:

1. Is the server firewall configured to allow clients to access the server?
2. Can this computer connect to the upstream server (such as Microsoft Update)?
3. Do you have user credentials for the proxy server, if needed?

To run this wizard again, launch the WSUS Administration Snap-in and go to Options

< Back

Next >

Finish

Cancel





## Join the Microsoft Update Improvement Program

You have the option of joining the Microsoft Update Improvement Program

Before You Begin

**Microsoft Update Improvement Program**

Choose Upstream Server

Specify Proxy Server

Choose Languages

Choose Products

Choose Classifications

Configure Sync Schedule

Finished

What's Next



Help us design the next version of Windows Server Update Services. Improve the quality, reliability, and performance of Microsoft Software.

When you opt into the Microsoft Update Improvement Program, your WSUS server will send information to Microsoft about the quality of updates. This information includes:

- How many computers are in the organization.
- How many computers successfully installed each update.
- How many computers failed to install each update.

This information is used to improve the quality and reliability of the updates Microsoft provides.

None of the information collected is used to identify or contact you or your organization.

[Privacy Statement](#)

**Yes, I would like to join the Microsoft Update Improvement Program**

< Back

Next >

Finish

Cancel



## Choose Upstream Server

Provide the upstream server from which you want to synchronize content

Before You Begin  
Microsoft Update Improvement Program  
**Choose Upstream Server**  
Specify Proxy Server  
Choose Languages  
Choose Products  
Choose Classifications  
Configure Sync Schedule  
Finished  
What's Next



You can choose the upstream server from which your server synchronizes updates.

- Synchronize from Microsoft Update
- Synchronize from another Windows Server Udate Services server

Server name:

Port number:

Use SSL when synchronizing update information

If using SSL, ensure that the upstream WSUS server is also configured to support SSL.

This is a replica of the upstream server

A replica server mirrors update approvals, settings, computers and groups from its parent. Updates can be approved only on the upstream server.

< Back

Next >

Finish

Cancel

The main server will synchronize from Microsoft update server, but when we are configuring the downstream server we will use the second option. The name of the server will then be this server.



## Specify Proxy Server

Provide proxy server settings for synchronizing updates with Microsoft Update

Before You Begin

Microsoft Update Improvement Program

Choose Upstream Server

**Specify Proxy Server**

Choose Languages

Choose Products

Choose Classifications

Configure Sync Schedule

Finished

What's Next



If this server requires a proxy server to access the upstream server, you can configure the proxy server settings here.

Use a proxy server when synchronizing

Proxy server name:

Port number:

Use user credentials to connect to the proxy server

User name:

Domain:

Password:

Allow basic authentication (password is sent in cleartext)

< Back

Next >

Finish

Cancel



## Connect to Upstream Server

Download update information from Microsoft Update

Before You Begin

Microsoft Update Improvement Program

Choose Upstream Server

**Specify Proxy Server**

Choose Languages

Choose Products

Choose Classifications

Configure Sync Schedule

Finished

What's Next



To configure Windows Server Update Services on the following screens, we need to apply your upstream server and proxy server settings and synchronize information about available updates.

Information to be downloaded includes:

Types of updates available  
Products that can be updated  
Available languages

Click Start Connecting to save and download upstream server and proxy server information. This process might take several minutes or longer, depending on your connection speed.

Start Connecting

Stop Connecting

< Back

Next >

Finish

Cancel



## Select the languages for which this server will download updates

- Before You Begin
- Microsoft Update Improvement Program
- Choose Upstream Server
- Specify Proxy Server
- Choose Languages**
- Choose Products
- Choose Classifications
- Configure Sync Schedule
- Finished
- What's Next



If you are storing update files locally, you can filter the updates downloaded to your server by language. Choosing individual languages will affect which computers can be updated on this server and any downstream servers. For more information see [Specify the update languages you want to synchronize.](#)

- Download updates in all languages, including new languages
- Download updates only in these languages:

<input type="checkbox"/> Arabic	<input type="checkbox"/> Hindi	<input type="checkbox"/> Slo
<input type="checkbox"/> Bulgarian	<input type="checkbox"/> Hungarian	<input type="checkbox"/> Sp.
<input type="checkbox"/> Chinese (Hong Kong S.A.R.)	<input type="checkbox"/> Italian	<input type="checkbox"/> Sw
<input type="checkbox"/> Chinese (Simplified)	<input type="checkbox"/> Japanese	<input type="checkbox"/> Th.
<input type="checkbox"/> Chinese (Traditional)	<input type="checkbox"/> Japanese (NEC)	<input type="checkbox"/> Tu
<input type="checkbox"/> Croatian	<input type="checkbox"/> Korean	<input type="checkbox"/> Uk
<input type="checkbox"/> Czech	<input type="checkbox"/> Latvian	
<input type="checkbox"/> Danish	<input type="checkbox"/> Lithuanian	
<input type="checkbox"/> Dutch	<input type="checkbox"/> Norwegian	
<input checked="" type="checkbox"/> English	<input type="checkbox"/> Polish	
<input type="checkbox"/> Estonian	<input type="checkbox"/> Portuguese	
<input type="checkbox"/> Finnish	<input type="checkbox"/> Portuguese (Brazil)	
<input type="checkbox"/> French	<input type="checkbox"/> Romanian	
<input type="checkbox"/> German	<input type="checkbox"/> Russian	
<input type="checkbox"/> Greek	<input type="checkbox"/> Serbian (Latin)	
<input checked="" type="checkbox"/> Hebrew	<input type="checkbox"/> Slovak	

< Back

Next >

Finish

Cancel



### Choose Products

Select the Microsoft products to be updated

- Before You Begin
- Microsoft Update Improvement Program
- Choose Upstream Server
- Specify Proxy Server
- Choose Languages
- Choose Products**
- Choose Classifications
- Configure Sync Schedule
- Finished
- What's Next



You can specify the products for which you want updates.

Products:

- All Products
  - Microsoft
    - Compute Cluster Pack
      - Compute Cluster Pack
    - Exchange
      - Exchange 2000 Server
      - Exchange Server 2003
      - Exchange Server 2007 Anti-spam
      - Exchange Server 2007
    - Forefront
      - Forefront Client Security
    - Internet Security and Acceleration Server
      - Firewall Client for ISA Server
      - Internet Security and Acceleration Server 2004
      - Internet Security and Acceleration Server 2006
    - Microsoft Codename Max
      - Max
    - Microsoft Core XML Services

All classifications, including classifications that are added in the future.



## Choose Classifications

Select the update classifications you want to download

- Before You Begin
- Microsoft Update Improvement Program
- Choose Upstream Server
- Specify Proxy Server
- Choose Languages
- Choose Products
- Choose Classifications**
- Configure Sync Schedule
- Finished
- What's Next



You can specify what classification of updates you want to synchronize.

Classifications:

- All Classifications ←
- Critical Updates ←
- Definition Updates
- Drivers
- Feature Packs
- Security Updates ←
- Service Packs
- Tools
- Update Rollups
- Updates

All classifications, including classifications that are added in the future.

< Back

Next >

Finish

Cancel



## Set Sync Schedule

Configure when this server synchronizes with Microsoft Update

Before You Begin

Microsoft Update Improvement Program

Choose Upstream Server

Specify Proxy Server

Choose Languages

Choose Products

Choose Classifications

**Configure Sync Schedule**

Finished

What's Next



You can synchronize updates manually or set a schedule for daily automatic synchronization.

- Synchronize manually
- Synchronize automatically

First synchronization: 12:00:00 AM

Synchronizations per day: 24

Note that when scheduling a daily synchronization from Microsoft Update, the synchronization start time will have a random offset up to 30 minutes after the specified time.

< Back

Next >

Finish

Cancel





### Finished

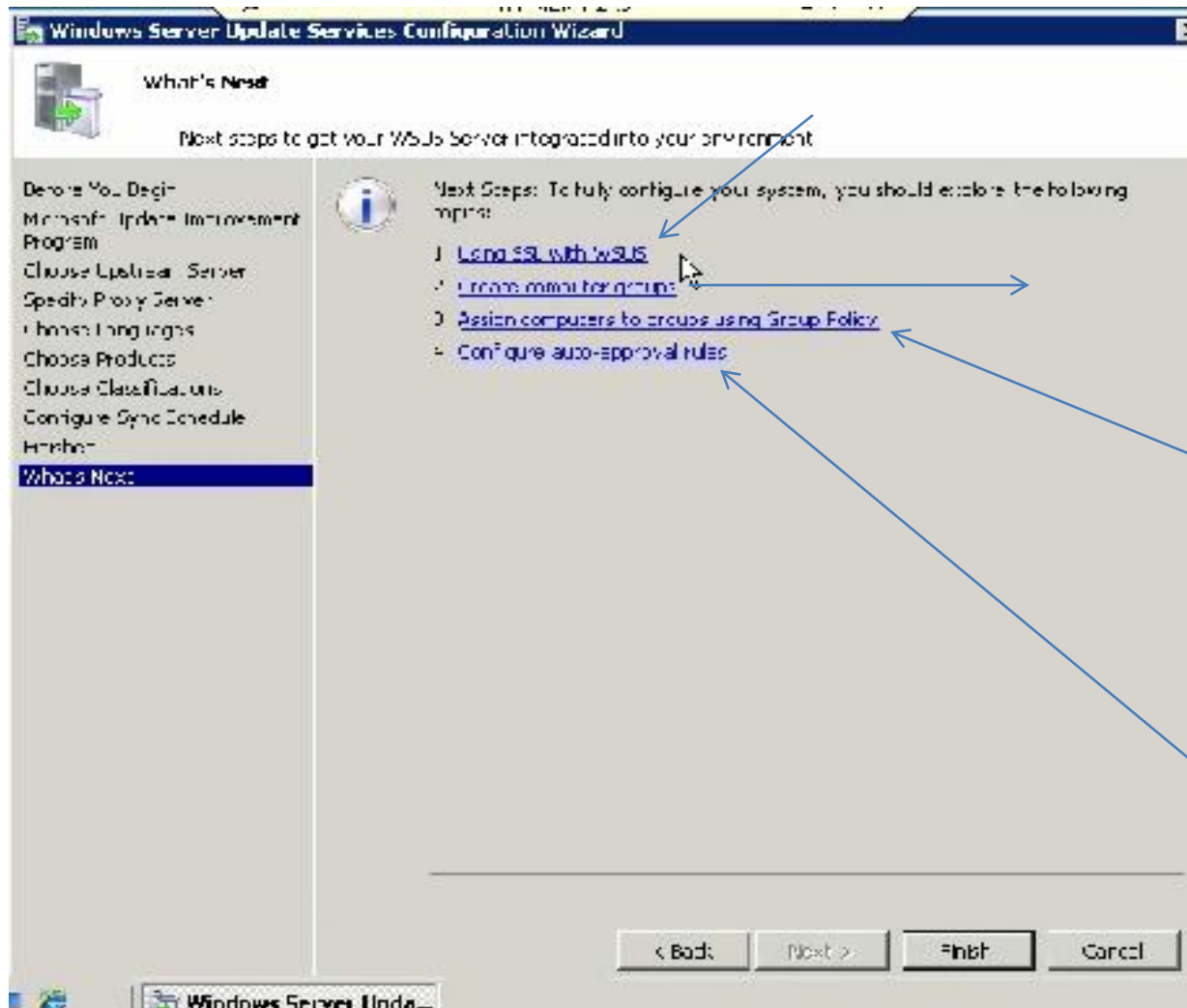
Finished initial configuration of your server

- Before You Begin
- Microsoft Update Improvement Program
- Choose Upstream Server
- Specify Proxy Server
- Choose Languages
- Choose Products
- Choose Classifications
- Configure Sync Schedule
- Finished**
- What's Next



You have now finished configuring your WSUS server. You can go on to launch the WSUS Administration Console or start the initial synchronization.

- Launch the Windows Server Update Services Administration Console**  
Get started administering your organization by starting the Windows Server Update Services Administration Console.
- Begin initial synchronization**  
The initial synchronization with Microsoft Update or your upstream server can take some time. The length of the initial synchronization depends on the number of products, update classifications, and languages you have selected, as well as the speed of your Internet connection.



1. Use SSL because wsus is be in done on a web page

2. Create computer groups

3. Assign computers to groups

4. Set up rules For auto approval

Update Services

File Action View Window Help

Update Services

- FCSWSUS
  - Updates
  - Computers
  - Downstream Servers
  - Synchronizations
  - Reports
  - Options

Options

This view allows you to configure settings on your server.

Options

- Update Source and Proxy Server**  
You can choose whether this Windows Server Update Services server synchronizes from Microsoft Update or from an upstream Windows Server Update Services server on your network.
- Products and Classifications**  
You can specify the products for which you want updates and the types of updates you want.
- Update Files and Languages**  
You can choose whether to download update files, where to store downloaded files, and which update languages you want to download.
- Synchronization Schedule**  
You can choose to synchronize manually or set a schedule for daily automatic synchronization.
- Automatic Approvals**  
You can specify how to automatically approve installation of updates for selected groups and how to approve revisions to existing updates.
- Computers**  
You can specify how to assign computers to groups.
- Server Cleanup Wizard**  
You can use server cleanup to free up old computers, updates and update files from your server.
- Reporting Rollup**  
You can choose to have replica downstream servers roll up update and computer status.
- E-Mail Notifications**  
You can have Windows Server Update Services send e-mail notifications of new updates and status reports.

Actions

Options

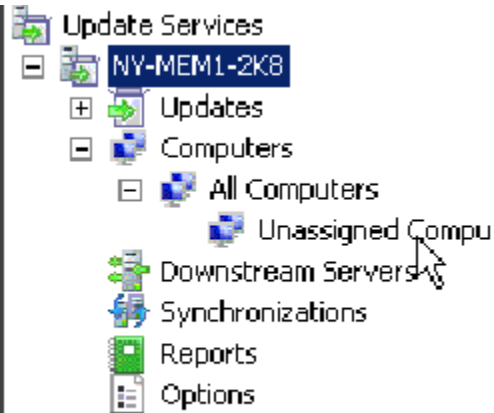
Search...

View

New Window from Here

Refresh

Help

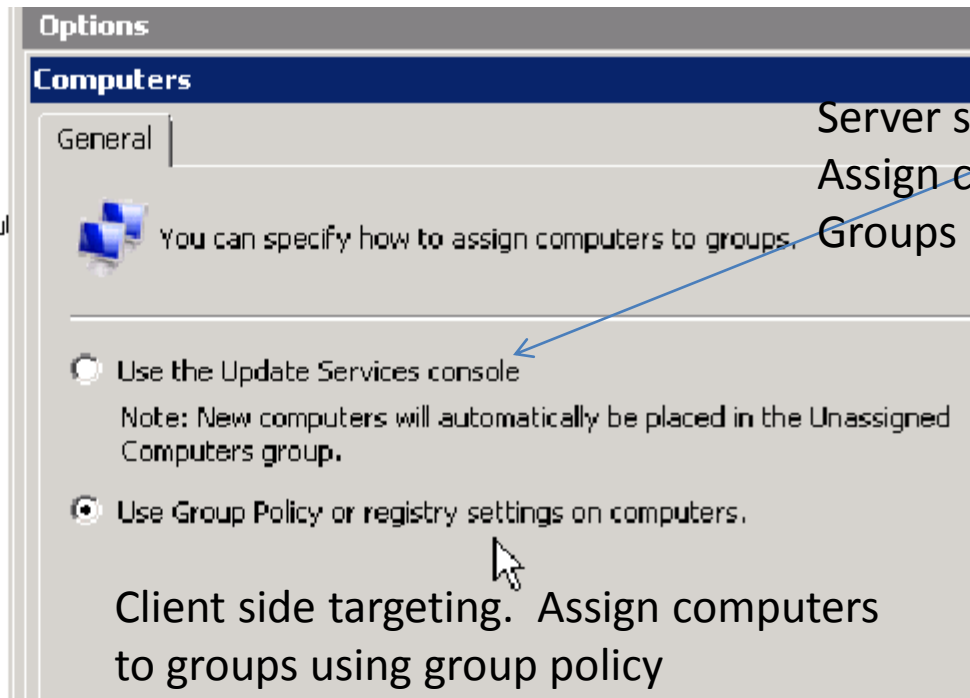
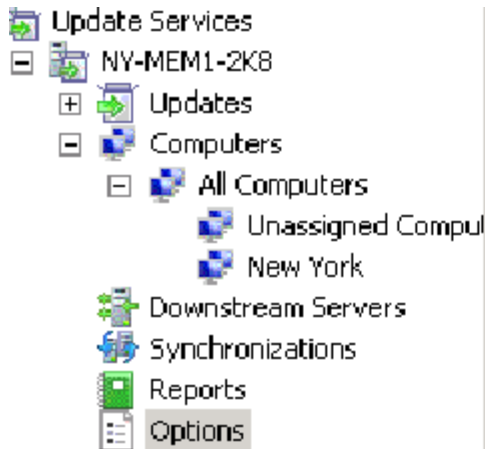


The Unassigned computer group will hold all computers pointing to The WSUS server for updates that do not belong to a computer group.

To create a computer group:

1. Right click on All computers
2. Click on Add computer group
3. Specify a name for the computer group
4. (computer groups allow us the ability to approve different updates for different computer within our organization)

There are two ways to decide how a computer will get updates. One way is called Server-side targeting and the second way is called Client-side targeting. You can select the any of the Two ways through **options**



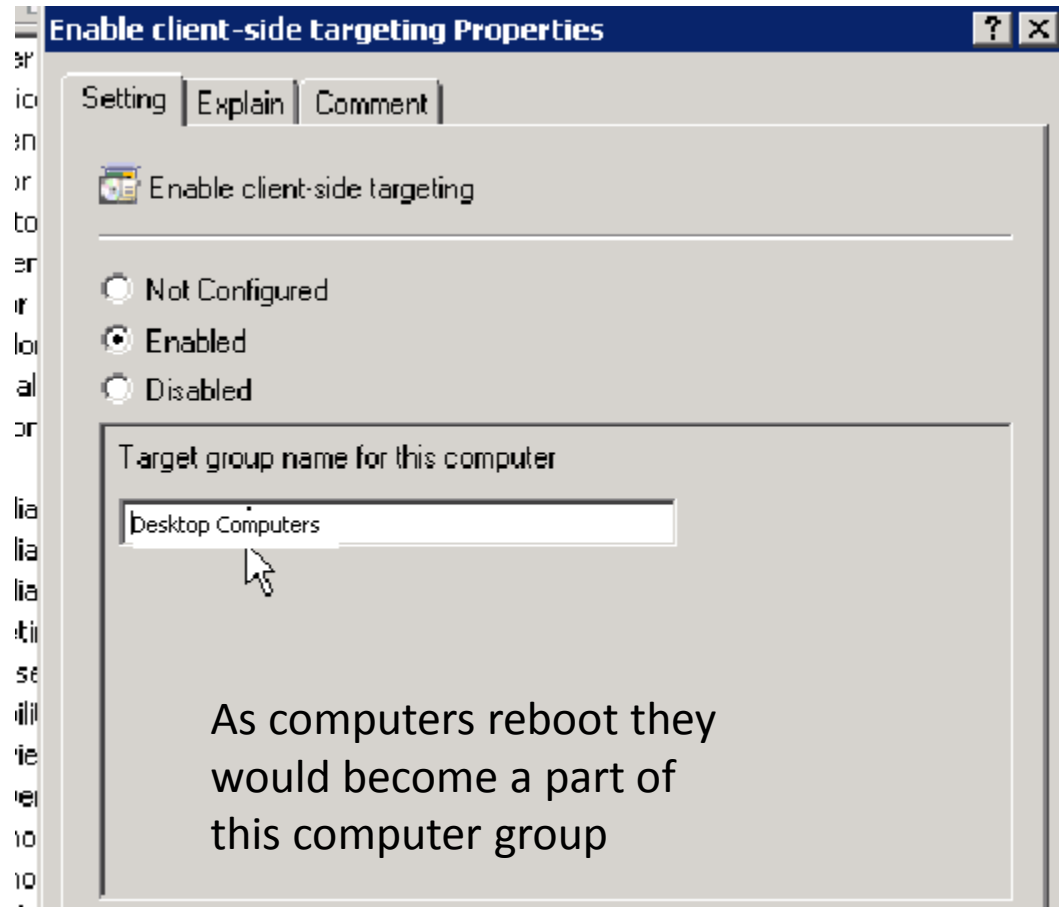
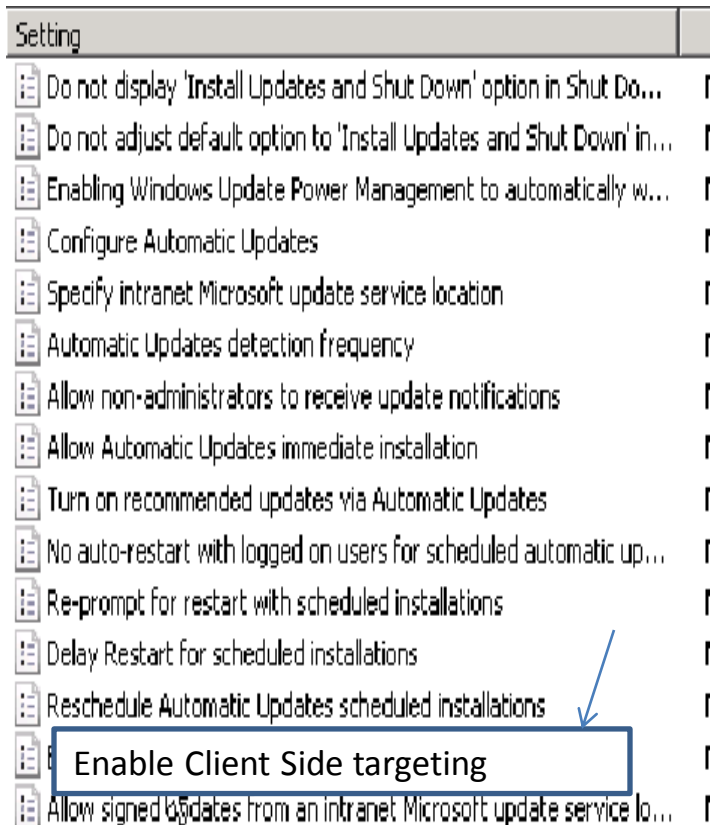
Server side targeting .  
Assign computers to  
Groups manually

Client side targeting. Assign computers  
to groups using group policy

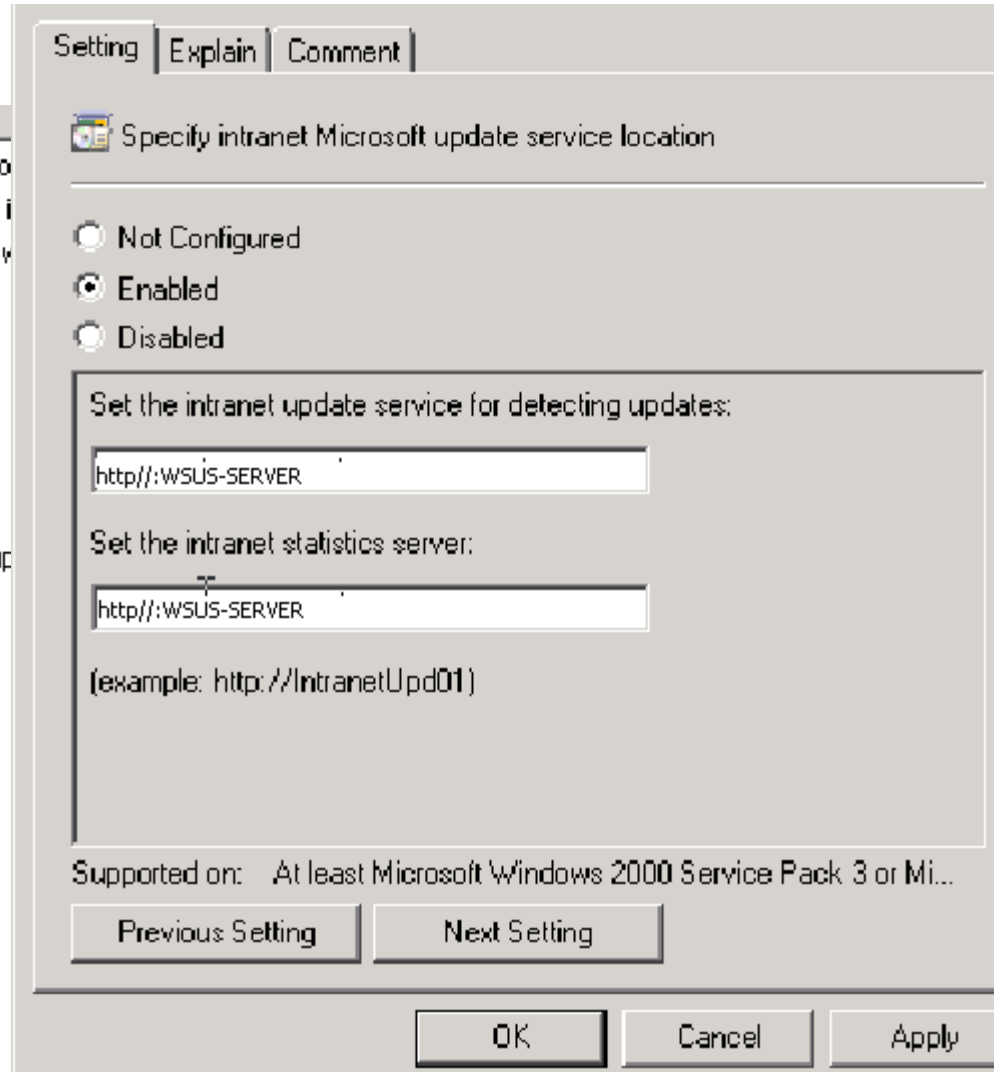
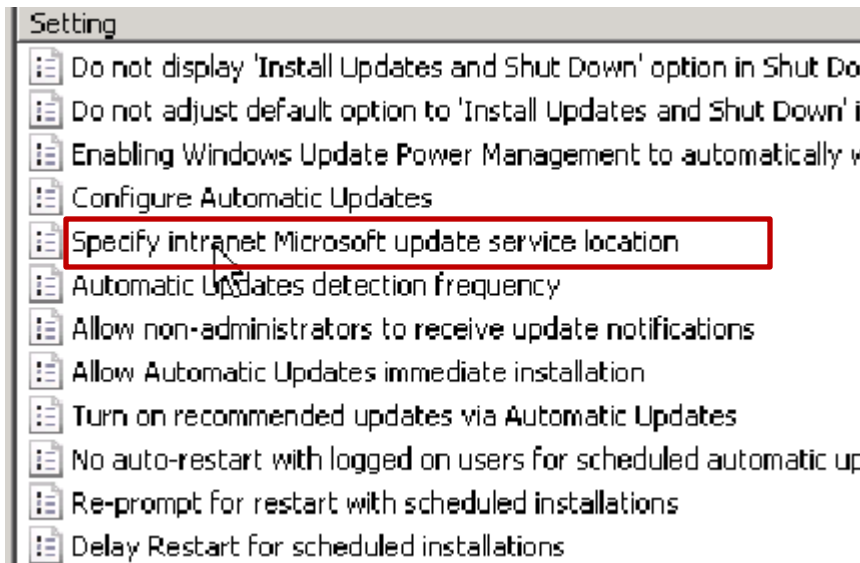
Regardless of the method used to assign client computers to groups, you must first create the groups using the WSUS console.

# Client side targeting – Group policy settings

Computer Configuration: Policies: Administrative Templates: Windows Component:  
Windows Update

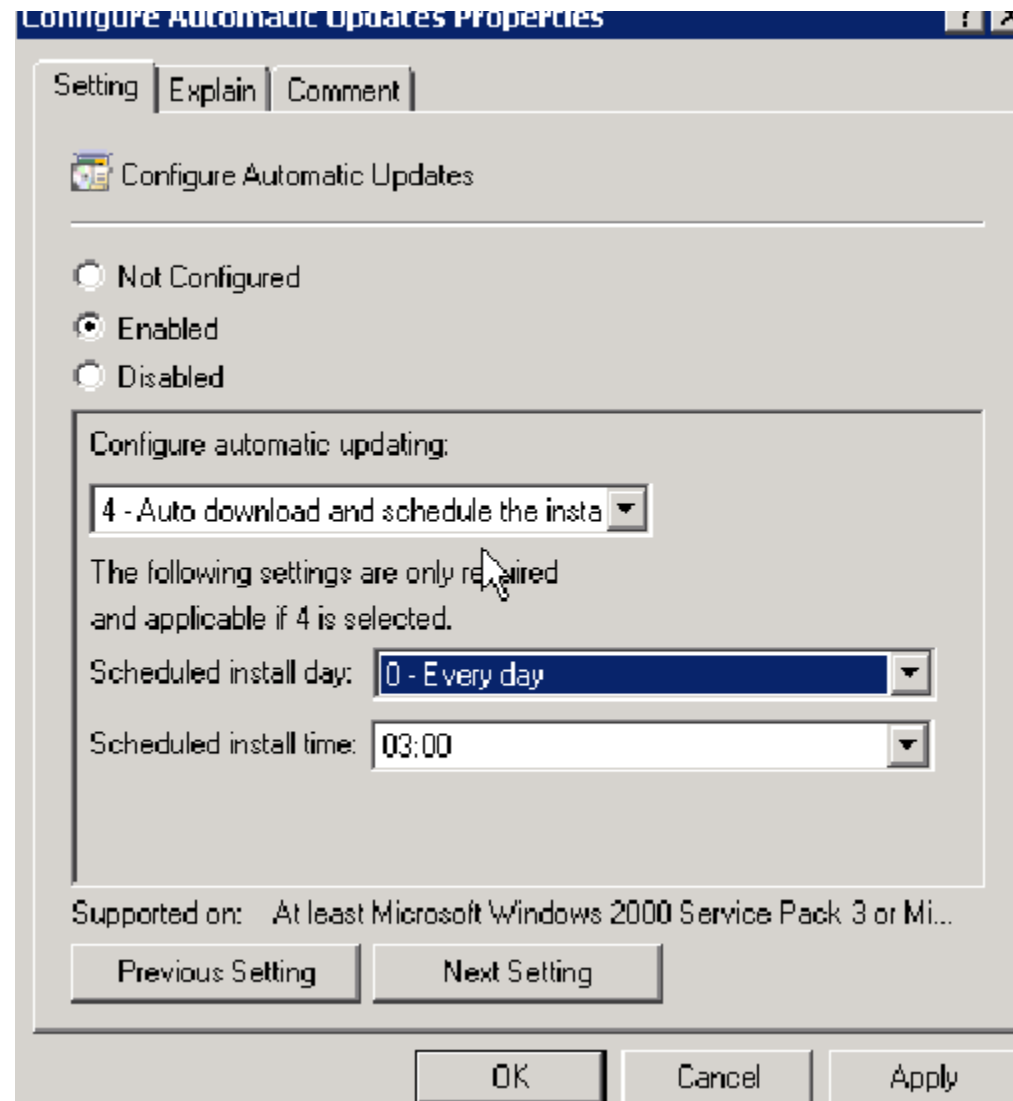


# How to have the clients use WSUS for updates



# HOW TO CONFIGURE UPDATES

- Do not display 'Install Updates and Shut Down' option in Shut Do...
- Do not adjust default option to 'Install Updates and Shut Down' in...
- Enabling Windows Update Power Management to automatically w...
- Configure Automatic Updates**
- Specify intranet Microsoft update service location
- Automatic Updates detection frequency
- Allow non-administrators to receive update notifications
- Allow Automatic Updates immediate installation
- Turn on recommended updates via Automatic Updates
- No auto-restart with logged on users for scheduled automatic up...
- Re-prompt for restart with scheduled installations
- Delay Restart for scheduled installations
- Reschedule Automatic Updates scheduled installations
- Enable client-side targeting
- Allow signed updates from an intranet Microsoft update service lo...



Every day at 3:00 a.m. I want these computers to download any updates that are available and install them.



## A few more Settings that are fairly common 57.09

Do not display 'Install Updates and Shut Down' option in Shut Do...	Not configured
Do not adjust default option to 'Install Updates and Shut Down' in...	Not configured
Enabling Windows Update Power Management to automatically w...	Not configured
<b>Configure Automatic Updates</b>	<b>Enabled</b>
Specify intranet Microsoft update service location	Enabled
Automatic Updates detection frequency	Not configured
Allow non-administrators to receive update notifications	Not configured
Allow Automatic Updates immediate installation	Not configured
Turn on recommended updates via Automatic Updates	Not configured
<b>No auto-restart with logged on users for scheduled automatic updates installations</b>	<b>Enabled</b>
Re-prompt for restart with scheduled installations	Not configured
Delay Restart for scheduled installations	Not configured
Reschedule Automatic Updates scheduled installations	Not configured
Enable client-side targeting	Enabled
Allow signed updates from an intranet Microsoft update service lo...	Not configured

If a user is logged on the update will not do a reboot because the user might be in the middle of something and you don't want to kill that.

If some postponed the reboot, how long  
Do we want to wait to prompt them again  
to say you still need to reboot

- Do not display 'Install Updates and Shut Down' option in Shut Do...
- Do not adjust default option to 'Install Updates and Shut Down' in...
- Enabling Windows Update Power Management to automatically w...
- Configure Automatic Updates
- Specify intranet Microsoft update service location
- Automatic Updates detection frequency
- Allow non-administrators to receive update notifications
- Allow Automatic Updates immediate installation
- Turn on recommended updates via Automatic Updates
- No auto-restart with logged on users for scheduled automatic up...
- Re-prompt for restart with scheduled installations
- Delay Restart for scheduled installations
- Reschedule Automatic Updates scheduled installations
- Enable client-side targeting
- Allow signed updates from an intranet Microsoft update service lo...

Setting | Explain | Comment

Re-prompt for restart with scheduled installations

Not Configured  
 Enabled  
 Disabled

Wait the following period before prompting again with a scheduled restart (minutes):

Supported on: At least Microsoft Windows 2000 Service Pack 3 or Mi...

Previous Setting | Next Setting

OK | Cancel | Apply

- Do not display 'Install Updates and Shut Down' option in Shut Do...
- Do not adjust default option to 'Install Updates and Shut Down' in...
- Enabling Windows Update Power Management to automatically w...
- Configure Automatic Updates
- Specify intranet Microsoft update service location
- Automatic Updates detection frequency
- Allow non-administrators to receive update notifications
- Allow Automatic Updates immediate installation
- Turn on recommended updates via Automatic Updates
- No auto-restart with logged on users for scheduled automatic up...
- Re-prompt for restart with scheduled installations
- Delay Restart for scheduled installations
- Reschedule Automatic Updates scheduled installations
- Enable client-side targeting
- Allow signed updates from an intranet Microsoft update service lo...

Set the amount of minutes before the scheduled restart begins to allow the user to complete something he may be working on before the reboot begins.

This has to do with how long automatic updates are going to wait following a system startup. In other words if the system was off, when the user comes turns on the computer in the morning lots of updates will attempt to come down and you may not want that to occur the minute they turn on the computer so you may want to set the setting to wait maybe 30 minutes. That way the updates do not occur immediately when the computer is turned on.

# HOW TO APPROVE UPDATES

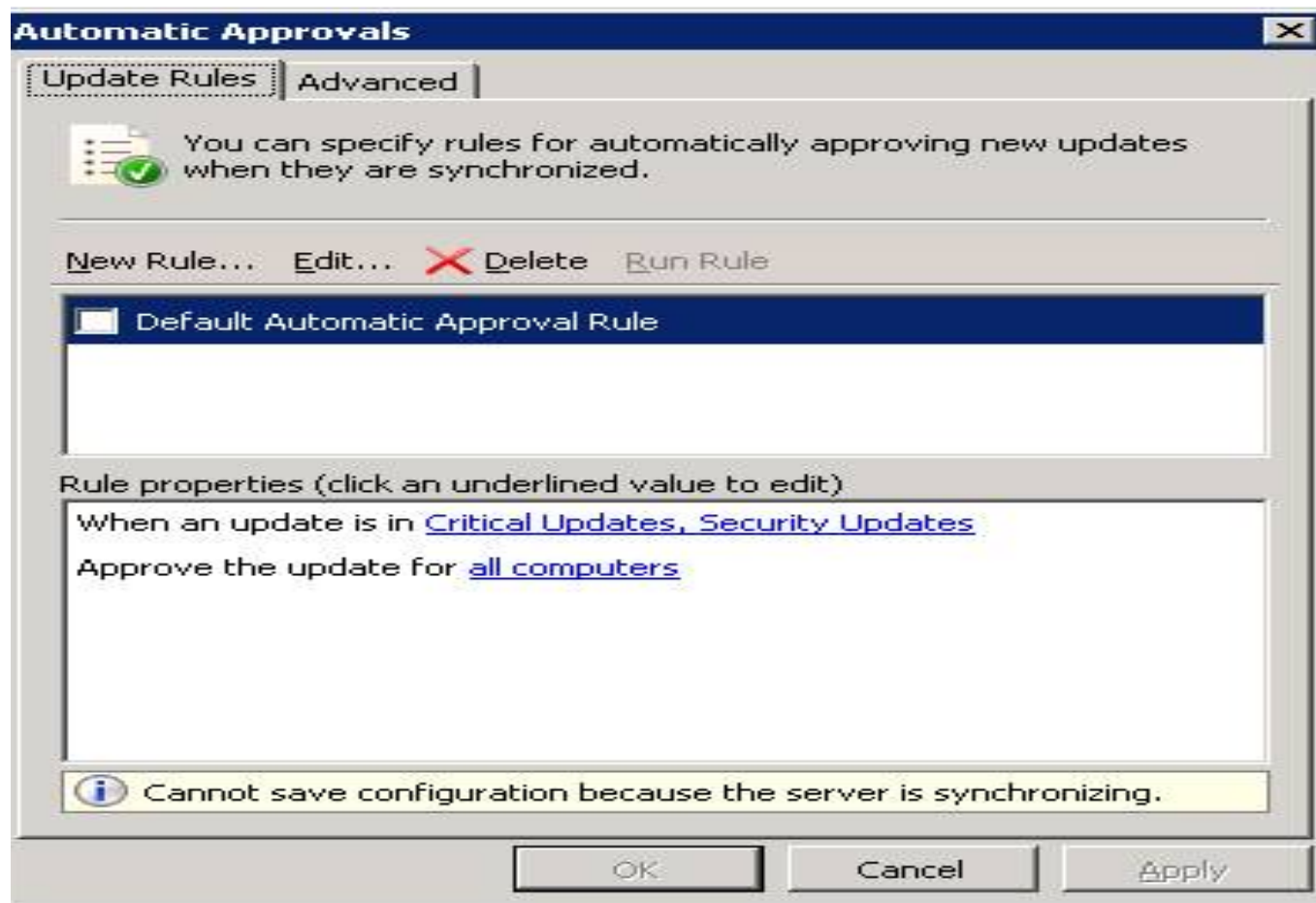
**Update Services**

- NY-MEM1-2K8
  - Updates
  - Computers
    - All Computers
      - Unassigned Comput
      - New York
  - Downstream Servers
  - Synchronizations
  - Reports
  - Options

**Options**

Synchronizes from Microsoft Update or from an update.com windows Server Update Services server on your network.

- Products and Classifications**  
You can specify the products for which you want updates and the types of updates you want.
- Update Files and Languages**  
You can choose whether to download update files, where to store downloaded files, and which update languages you want to download.
- Synchronization Schedule**  
You can choose to synchronize manually or set a schedule for daily automatic synchronization.
- Automatic Approvals**  
You can specify how to automatically approve installation of updates for selected groups and how to approve revisions to existing updates.
- Computers**  
You can specify how to assign computers to groups.
- Server Cleanup Wizard**  
You can use server cleanup to free up old computers, updates and update files from your server.
- Reporting Rollup**  
You can choose to have replica downstream servers roll up update



On the automatic approval window, check the default automatic approval rule (automatically approves critical and security updates) and click new rule if you wish to add additional auto-approve rules for specific products or classifications

# UPDATES

**Add Rule**

Select which updates to approve and the groups for which to approve them.

Step 1: Select properties

- When an update is in a specific classification
- When an update is in a specific product

Step 2: Edit the properties (click an underlined value)

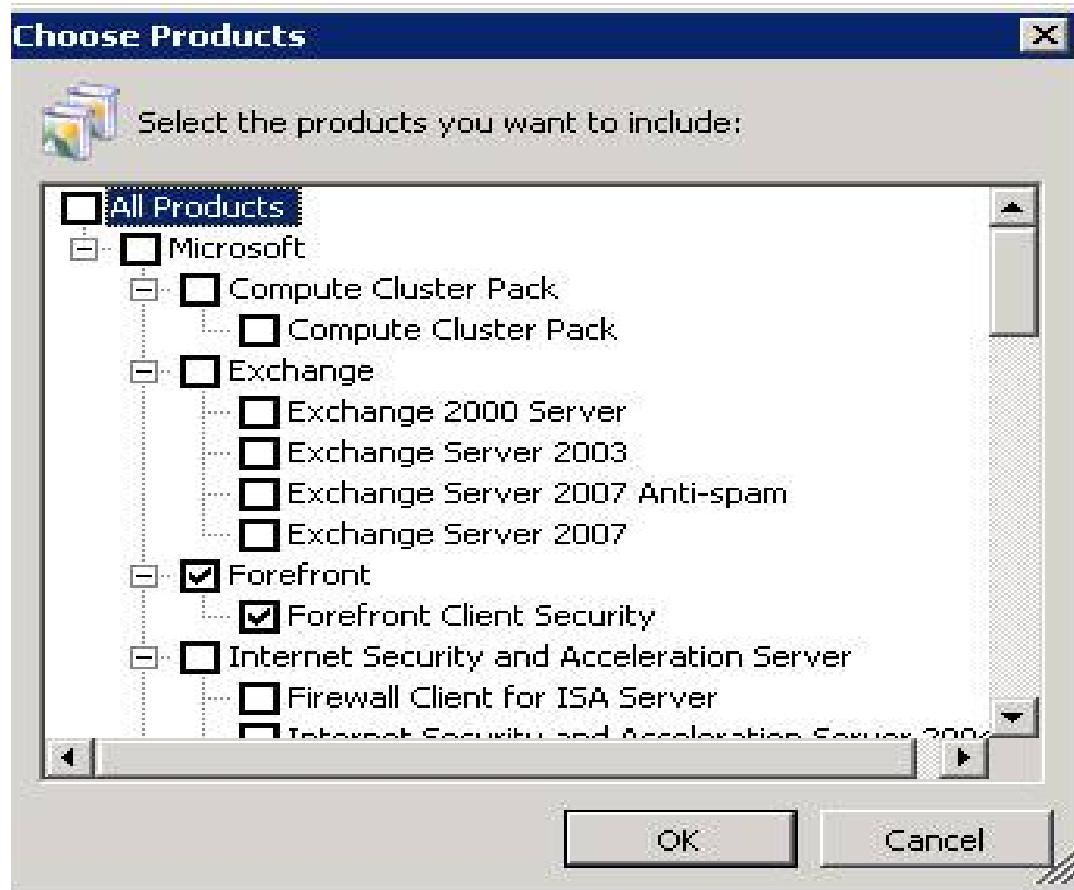
When an update is in any product

Approve the update for all computers

Step 3: Specify a name

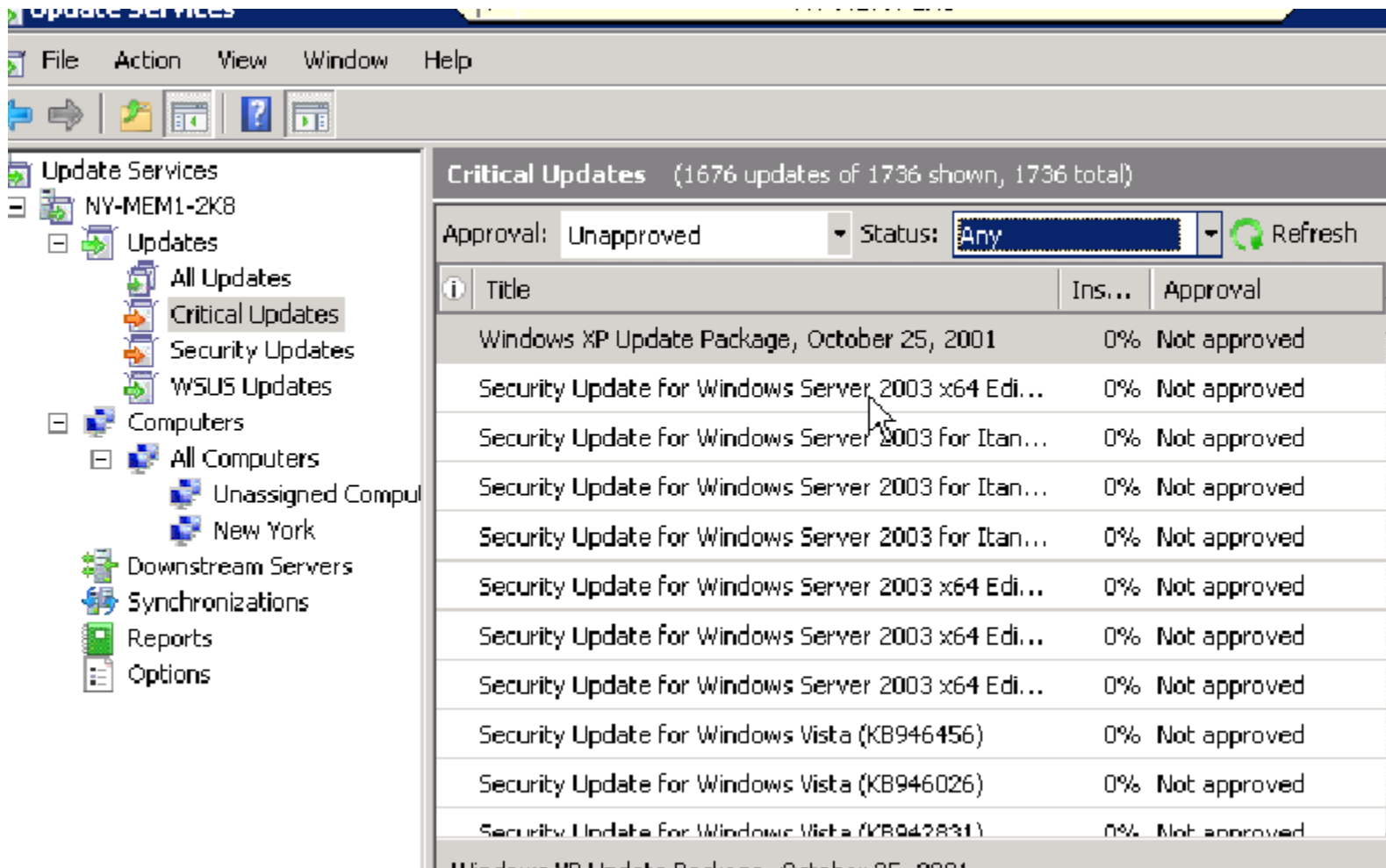
OK Cancel

.On the add rule wizard specify any other auto approve rules that you wish by product or classification



.On the choose product window, check only forefront-forefront client security and click ok

## APPROVE UPDATES MANUALLY



The screenshot shows the WSUS console interface. The left pane displays the tree view with 'Update Services' expanded to 'NY-MEM1-2K8' and 'Updates' selected. The right pane shows 'Critical Updates' (1676 updates of 1736 shown, 1736 total). The 'Approval' dropdown is set to 'Unapproved' and the 'Status' dropdown is set to 'Any'. A table lists updates with columns for Title, Installation percentage, and Approval status.

Title	Ins...	Approval
Windows XP Update Package, October 25, 2001	0%	Not approved
Security Update for Windows Server 2003 x64 Edi...	0%	Not approved
Security Update for Windows Server 2003 for Itan...	0%	Not approved
Security Update for Windows Server 2003 for Itan...	0%	Not approved
Security Update for Windows Server 2003 for Itan...	0%	Not approved
Security Update for Windows Server 2003 x64 Edi...	0%	Not approved
Security Update for Windows Server 2003 x64 Edi...	0%	Not approved
Security Update for Windows Server 2003 x64 Edi...	0%	Not approved
Security Update for Windows Vista (KB946456)	0%	Not approved
Security Update for Windows Vista (KB946026)	0%	Not approved
Security Update for Windows Vista (KB942831)	0%	Not approved

You can right click on one of the updates and select Approve or you can shift select All of the computers and select Approve a specific group and select Approved for Install.



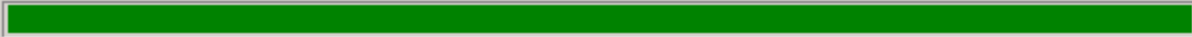
- 2010 .dot files
- NY-MEM1-2K8
- Updates
- All Updates
- Critical L
- Security
- WSUS U
- Computers
- All Comp
- Unas
- New
- Downstream
- Synchronizal
- Reports
- Options

Critical Updates (1676 updates of 1736 shown, 1736 total)

Approval: Unapproved    Status: Any    Refresh

### Approval Progress

Approval completed without errors. See below for details.



Action	Result
✓ Removing approval of Windows XP Update Package, October 25, 2001 from ...	Success
✓ Approving Windows XP Update Package, October 25, 2001 for installation to ...	Success

Pause    Cancel    Close