

# Windows 2000/Server 2003 MEGA LAB SERIES www.trainsignal.com



Network Lockdown - Configuring Windows 2000 and Server 2003 Network Security for the Springfield Storks Baseball Club

# Mega Lab 11

Part 2 of 3 in the Windows 2000/Server 2003 Network Security Series



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## Introduction

Welcome to Train Signal!

This series of labs on Windows 2000 & Server 2003 is designed to give you detailed, handson experience working with both Windows 2000 and Server 2003. Train Signal's Audio-Visual Mega Labs are targeted towards the serious learner, those who want to know more than just the answers to the test questions. We have gone to great lengths to make this series appealing to both those who are seeking Microsoft certification and to those who want an excellent overall knowledge of Windows 2000 & Server 2003.

Each of our Mega Labs puts you in the driver's seat, working for different fictitious companies, deploying complex configurations and then modifying them as your company grows. Mega Labs are not designed to be a "cookbook lab," where you follow the steps of the "recipe" until you have completed the lab and have learned nothing. Instead, we recommend that you perform each step and then analyze the results of your actions in detail.

To complete these labs yourself, you will need at least three computers equipped as described in the Lab Setup section. You also need to have a basic foundation in Windows 2000 and TCP/IP concepts. You should be comfortable with installing Windows 2000 Professional or Server and getting the basic operating system up and running. Each of the labs in this series will start from a default installation of Windows 2000 and will then run you through the basic configurations and settings that you must use for the labs to be successful. It is very important that you follow these guidelines **exactly**, in order to get the best results from this course.

The course also includes a CD-ROM that features an audio-visual walk-through of all of the labs in the course. In the walk-through, you will be shown all of the details from start to finish on each step, for every lab in the course. During the instruction, you will also benefit from live training that discusses the current topic in great detail, making you aware of many of the associated fine points.

Thanks for choosing Train Signal!

Scott Skinger Owner Train Signal, Inc.





# Lab Setup



## Setting up the Lab

1. Computer Equipment Needed

Item	Minimum	Recommended
Computers	(3) Pentium I 133 MHz	(3) Pentium II 300MHz or greater
Memory	128 MB	256 MB
Hard Drive	4 GB	6 GB or larger
NIC	1/machine (3 computers)	1/machine (3 computers)
Hub/Switch	1	1
Network Cable	(3) Category 5 cables	(3) Category 5 cables

You are strongly urged to acquire all of the recommended equipment in the list above. It can all be easily purchased from eBay or another source, for around \$400 (less if you already have some of the equipment). This same equipment is used over and over again in all of Train Signal's labs and will also work great in all sorts of other network configurations that you may want to set up in the future. It will be an excellent investment in your education. Call or email us at: <a href="mailto:support@trainsignal.com">support@trainsignal.com</a>, if you need help locating networking equipment. Two other products that you may also want to look into are a KVM (Keyboard-Video-Mouse) switch and a disk-imaging product, such as Norton Ghost. The KVM switch will allow you to run all of your computers using a single keyboard/monitor/mouse set. A button allows you to quickly control which PC you are managing. Disk imaging software will save you a tremendous amount of time when it comes to reinstalling Windows 2000 for future labs. Many vendors offer trial versions or personal versions of their products that are very inexpensive.



#### 2. Computer Configuration Overview

Computer Number	1	2	3
Computer Name	SA-1 (Member Server)	DC-1 (Domain Controller)	Pro-1 (Client)
IP Address	192.168.1.201/24	192.168.1.200/24	192.168.1.1/24
Default Gateway	ТВА	ТВА	ТВА
OS	W2K Server	W2K Server	W2K Pro
Additional Configurations	SP2 or higher	SP2 or higher	SP2 or higher

#### \*\*\*Important Note\*\*\*

This lab should NOT be performed on a live production network. You should only use computer equipment that is not part of a business network AND is not connected to a business network. Train Signal Inc. is not responsible for any damages. Refer to the full disclaimer and limitation of liability, which appears at the beginning of this document and on our Website at: <a href="http://www.trainsignal.com/legalinfo.html">http://www.trainsignal.com/legalinfo.html</a>



#### 3. Detailed Lab Configuration

#### Computer 1

Computer 1 will be named SA-1 and the operating system on this computer will be Windows 2000 Server or Advanced Server. Service Pack 2 or higher should be installed on this machine in order to perform some of the steps in this lab.

SA-1 needs only one network card, which should be configured with a static IP address of 192.168.1.201 and a subnet mask of 255.255.255.0. Set the preferred DNS Server to **192.168.1.200** and leave the alternate DNS setting **blank**. There will be no default gateway at this time. You will need to make this computer a member server of the storksbaseball.com domain (see note below), by simply right clicking on the **My Computer** icon on the desktop and selecting **Properties**. Select the **Network identification** tab, **Properties, domain** and type in the domain name of the domain it will join, which is **storksbaseball.com** or its NetBIOS name, **storksbaseball**. Note: NetBIOS names are a single label (no periods) up to 15 characters in length. Then click **OK**. Windows 2000 will then ask for a username and password. Use a domain administrator account name and password from the storksbaseball.com domain. When it has joined successfully, it will "welcome you to the domain" and then tell you that it needs to restart in order for the changes to take effect. After restarting the computer, make sure you change the "Log on to" dialog box to the domain rather than this computer". See figure 1, page 14.

#### \*\*\*Important Note\*\*\*

This last step (joining SA-1 to the domain) cannot be performed until you have created the storksbaseball.com domain by running dcpromo on DC-1 in the Computer 2 setup below.

#### Computer 2

Computer 2 will be named DC-1 and Windows 2000 Server or Advanced Server will be installed on this computer along with Service Pack 2 or higher. DC-1 will have a static IP address of 192.168.1.200 with a 255.255.255.0 subnet mask. The Preferred DNS server setting should be configured with DC-1's own IP address, **192.168.1.200** and no default gateway is necessary at this time. See figure 1, page 14.

DC-1 will be setup as the domain controller for the Springfield Storks Baseball Club, called storksbaseball.com by using the dcpromo.exe program. In order to make this machine a domain controller, Active Directory and DNS will need to be installed. There are 2 ways to install DNS – automatically when you run dcpromo.exe or manually when you install it through Add/Remove Programs in Control Panel. For the purposes of this lab, we are going to install DNS automatically. To run dcpromo.exe on this machine go to the desktop, click on Start  $\rightarrow$  Run, then type in DCPROMO in the run command and click OK.



Make the following selections as you are prompted: **Domain controller for a new domain; Create a new domain tree; Create a new forest of domain trees.** The DNS domain name for the scenario is storksbaseball.com. The NetBIOS name will be storksbaseball. Leave all the other settings at their defaults. When the wizard asks if you would like to install and configure DNS on this computer, select Yes, install and configure DNS on this computer. Also choose permissions compatible with pre-Windows 2000 servers. In the next step, you will be asked for an AD password – for our purposes, we will leave this blank. Active Directory installation should then take place and you can restart the computer when you are prompted. **MAKE SURE** that the network card is plugged into a hub or into another computer with a crossover cable before you run dcpromo. Otherwise, Active Directory installation will fail, without giving you a clear cause. See figure 1, next page.

#### Computer 3

Computer 3 will be named Pro-1 and will have Windows 2000 Professional installed as the operating system. It is not necessary to install any Service Packs or hot fixes on this machine because it will be updated within the lab. If you have already installed service packs, or if your operating system came with a service pack, this is also ok. At this time don't install any further updates.

Pro-1 will have a static IP address of 192.168.1.1 with a 255.255.255.0 subnet mask. Set the preferred DNS Server to **192.168.1.200** and leave the alternate DNS setting blank. There will be no default gateway. You will need to make this computer a member of the storksbaseball.com domain, by right clicking on the **My Computer** icon on the desktop and selecting **Properties**. Select the **Network identification** tab, **Properties, domain** and type in the domain name of the domain it will join, which is **storksbaseball.com** or its NetBIOS name, **storksbaseball**. Note: NetBIOS names are a single label (no periods) up to 15 characters in length. Then click **OK**. Windows 2000 will then ask for a username and password. Use the administrator account name and password from the storksbaseball.com domain. When it has joined successfully, it will "welcome you to the domain" and then tell you that it needs to restart in order for the changes to take effect. After restarting the computer". See figure 1, next page.

**Important** - You should test the network connections (using the PING command) between each of these machines to ensure that your network is set up properly. Testing before you get started will save you major time and effort later.





(figure 1)



# Lab 1

# Analyzing and Applying Security Settings to Computers on the Springfield Storks' Network

# You will learn how to:

- Use the Security Configuration and Analysis tool
- Configure security with the Security Configuration and Analysis tool
  - Create a custom security template
  - Import a custom security template into Active Directory



## <u>Scenario</u>

The Springfield Storks are a minor league baseball team that plays their home baseball in Springfield, NY. Over the past three years the Storks have been one of the most successful minor league franchises both on and off the field. Their great marketing success off the field has given them the financial resources necessary to develop a state-of-the-art IT infrastructure within their stadium. The Storks have their entire stadium networked. Ticket sales, concession sales and souvenir sales are all automatically tracked and recorded. Fans in the club section have Internet access and can order food and drinks using the Storks automated ordering systems. The executive offices, broadcast booths and clubhouses are all networked using a combination of wired and wireless access. Even members of the press can bring their laptops and hook into the Storks' network for up to the minute news from the team's management.

So far this season the Storks are in 1<sup>st</sup> place and are posting record sales figures, but they now face a serious problem. During a recent home stand, parts of the network have started to perform unacceptably slow or have failed completely. Within a couple of days, the problems have spread and the entire network is now down. The Storks' management is extremely concerned because they have been forced to manually track sales and inventory, tasks for which they are both unprepared and understaffed. Furthermore, the Storks' network administrator isn't sure, but his gut tells him that the network has been hacked into. The network administrator, Joe, does not have much experience with security and he really isn't sure how to solve the problem.

Joe has called upon you, an independent consultant, to help solve their network woes. After you assess the situation, you have determined that a hacker(s) has indeed penetrated the network and has left it in shambles. Viruses and worms are also running rampant across the network, hence the network performance problems. Because of the wide-spread damage and the fact that this is a fairly small network, you have made the recommendation to the Storks' management that the network be completely rebuilt, reinstalling all of the operating systems and then carefully reinstating the data, after a thorough virus scan. The management reluctantly agrees and vows to never put security on the back burner again.

In this lab, you will learn how to secure a Windows 2000 Network using powerful tools that make managing a network more efficient and effective. You will start by learning how security templates can be used to establish common security settings on all of your systems. Next, you will use Group Policy to take security to the next level by assigning specific policies to different Active Directory containers. Finally, you will learn about Software Update Services (SUS), a free tool from Microsoft that will help you automate the process of patching servers and workstations on your network.









## Security Templates

Security templates are a set of security settings stored within a text file. Windows 2000 and Server 2003 come with many predefined security templates that can be applied to your clients or servers. These templates range from basic (default) security to high security. You can compare your current computer security settings against any of the security templates, by using the Security Configuration and Analysis tool. This tool can then be used to apply the template security settings to your current configuration all at once. To assist Joe and the Storks in the future, you are going to show him how these tools work.

1. To open the Security Configuration and Analysis and the Security Templates snap-ins, log on to **SA-1** and go to **Start→Run**. Type in **mmc** and click **OK** to open the Microsoft Management Console (MMC).

Run	<u>? ×</u>
Type the name of a program, folder, document, or Internet resource, and Windows will open it for you.	•
OK Cancel Browse	

2. This will bring you to the Console 1 window. Select **Console→Add/Remove Snap-in** from the menu.





3. In this Add/Remove Snap-in screen, just click **Add** and you will see that there are many snaps-ins available for you to add. Select **Security Configuration and Analysis** and click **Add**.

Add/Remove Snap-in	<u>? ×</u>	Ade	l Standalone Snap-in		? X
Standalone Extensions	1	A	vailable Standalone Snap-ins:		
Use this page to add or remove a standalone Snap-in from the console.			Snap-in	Vendor	
Snap-ins added to: 🔄 Console Root			Link to Web Address		
		8	🕼 Local Users and Groups	Microsoft Corporation	
		4	🗿 Performance Logs and Alerts	Microsoft Corporation	
		1	💐 QoS Admission Control	Microsoft Corporation	
		5	PRemovable Storage Management	HighGround Systems, In	ic.
		1	Bouting and Remote Access	Microsoft Corporation	
		$\square$	Security Configuration and Analysis	Corporation	
		6	Security Templates	Microsoft Corporation	
		6	🖏 Services	Microsoft Corporation	
			🜏 Shared Folders	Microsoft Corporation	<b>+</b>
		-	Description		
Description			Description		
			Security Configuration and Analysis is a security configuration and analysis for V security template files.	in MMC snap-in that provid /indows computers using	es
Add Remove About					
OK Car	ncel			Add Clo	se

4. Additionally, select **Security Templates** as a second snap-in. Click **Add** and **Close**.





5. Next, verify that the Security Configuration and Analysis and Security Templates Snapins are added and click **OK** to close this Add/Remove Snap-in window.

Add/Remove Snap-in	<u>? ×</u>
Standalone Extensions	
Use this page to add or remove a standalone Snap-in from the console.	
Snap-ins added to: 🦳 Console Root	
Security Configuration and Analysis Security Templates	
Description	
Add Remove About	
	ncel

6. Click on **Security Templates** and then select **C:\WINNT\Security\Templates** under the Console Root in the left pane. This will bring you to all of the available security templates located within SA-1.

Tree Favorites	Name	Description
Console Root	/basicdc	V Default Security Settings. Requires environment vars DSDIT DSLOG and SYSVOL be set. Must be joined to a domain in order to o
🗄 🔯 Security Configuration and Analysis	basicsv	Default Security Settings. User Rights Restricted Groups not included. (Windows 2000 Server)
🖻 🔂 Security Templates 🛛 🖌	basicwk	Default Security Settings. User Rights Restricted Groups not included. (Windows 2000 Professional)
C:\WINNT\Security\Templates	Compatws	Assumes clean-install NTFS file\reg acls. Relaxes ACL's for Users. Empties Power Users group.
	hisecdc	Assumes clean-install NTFS file\reg ACLs. Includes SecureDC settings with Windows 2000-only enhancements. Empties Power Us
	hisecws	Increases SecureWS Settings. Restricts Power User and Terminal Server ACLs.
	Dotssid	Removes the Terminal Server User SID from Windows 2000 Server
	Gocfiless	Optional Component File Security. Many of the files may not be installed. (Windows 2000 Server)
\	ocfilesw	Optional Component File Security. Many of the files may not be installed. (Windows 2000 Workstation)
۱ ۱	securedc	Assumes clean-install NTFS file\reg ACLs. Secures remaining areas.
\	securews	Assumes clean-install NTFS file\reg ACLs. Secures remaining areas. Empties Power Users group.
	Setup security	Out of box default security settings
	$\sim$	
		lis l
	•	[*]



#### Windows 2000 & Server 2003 Templates

By default, Windows 2000 and Server 2003 include an assortment of security templates located in the %systemroot%\Security\Templates folder. For the most part, the names of these templates describe their purpose and correspond to their level of security. However, keep the following points in mind:

- Template names that end with sv are for standalone or member servers
- Template names that end with dc are for Domain Controllers
- Template names that end with wk are for workstations
- Template names that end with ws are for workstations *and* member/stand-alone servers

**basic\*.inf** - Used to set the initial configuration of a computer back to the installation default settings. There are 3 different basic templates: basicwk.inf, basicsv.inf and basicdc.inf.

**compatws.inf** – Lowers security allowing users to run legacy applications without being a power user. It reduces security levels on folders, files, and registry keys that applications typically access.

**secure\*.inf** - These templates provide an intermediate level of security, securing the registry, account policies and auditing. There are 2 different secure templates: securews.inf and securedc.inf.

**hisec\*.inf** - These templates are used to provide the highest level of pre-configured security. They increase the security of network communications by requiring IPSec. They can cause network communication problems, especially with legacy operating systems. There are 2 different high security templates: hisecws.inf and hisecdc.inf.

**notssid.inf** – When this template is applied it removes the terminal server SID from all registry and file system objects, which have an ACE for the terminal server SID.



7. Right click on one of the templates. Select **Set Description**. Notice that you can change the default description name if you desire. Click **OK** to close.



### Analyze and configure SA-1 security settings

In this section, you will analyze the security on SA-1, by comparing it to one of the default templates described above. First though, you must create a baseline security configuration database, SDB file.

1. Right click on **Security Configuration and Analysis** under the Console Root in the left pane. Next, select **Open database** to create a new database.





2. This will bring up the Open database dialog box. Type in **secdb** (you can use any name) as the Security Database File name and click **Open.**.

Open databa	ase	? ×
Look in: 🔁	🖸 Database 📃 🗲 🖻 👩	* 🎟 <del>-</del>
File name:	secdb	Open
Files of type:	Security Database Files (*.sdb)	Cancel
Files of type:	Security Database Files (*.sdb)	Cancel

3. Next, in the Import Template dialog box, select **securews.inf** and click **Open**. This security template will be used to compare the current security settings on SA-1 with the settings in this template.

Import Temp	late		<u>? ×</u>
Look in: 🔂	templates	<b>•</b> + (	È 💣 🎟 -
👼 basicdc	📓 notssid		
👼 basicsv	📓 ocfiless		
👼 basicwk	📓 ocfilesw		
🐻 compatws	👼 securedc		
👼 hisecdc	📓 securews		
🐻 hisecws	選 setup security		
File name:	securews		Open
Files of type:	Security Template (.inf)	-	Cancel
🔲 Clear this (	database before importing		



4. In order to analyze the security settings on SA-1, right click on **Security Configuration and Analysis** under the Console Root and select **Analyze Computer Now**.

Open
Open database
Analyze Computer Now
Configure Computer Now が
Save
Import Template
Export Template
View Log File
View 🕨
New Window from Here
New Taskpad View
Help

5. This will bring up a dialog box that allows you to specify a location for the Error log. Click **OK** to accept the default log file path for the analysis results.

Perform Analysis	<u>? ×</u>
Error log file path:	
ettings\Administrator\Local Settings\Temp\secdb.log	Browse
ОК	Cancel
3	

6. The analysis will then begin and you will see the progress in the Analyzing System Security dialog box.





7. After the analysis is completed, you can view the results by clicking on any of the nodes in which you're interested. The right pane of the console displays the actual computer settings and the database settings. If the computer's current settings do not meet the minimum requirements of the security template's settings, then the specific policy is marked with a red X as you can see below.

Tree	Favorites	Policy	Database Setting	Computer Setting
<u> </u>	nsole Root	Enforce password history	24 passwords remembere	d 0 passwords remembered
÷	Security Configuration and Analysis	Maximum pascword age	42 days	42 days
Tē	🕼 Account Policies	Minimum password age	2 days	0 days
	Password Policy	Minimum password length	8 characters	0 characters
	🗄 🛃 Account Lockout Policy	Passwords must meet complexity requirements	Enabled	Disabled
÷	- 🛃 Local Policies	Store paceword using reversible encryption for all user	. Disabled	Disabled
+	🛃 Event Log			
Ŧ	Restricted Groups			
+	System Services			
E E	Registry			
. 🖽	File System			
±	Security reliplates			
	Treader			
	Tree Favorites		Database Setting Co	mputer Setting
	🚞 Console Root	Audit account logon events :	Success, Failure No	auditing
	🚊 😳 Security Configuration and Analysis	Audit account management	Success, Failure No	auditing
	🔃 🛃 Account Policies	Audit directory service access	Not defined No	auditing
	🖻 👼 Local Policies	Audit logon events	Failure No	auditing
	🕀 🦳 🔁 Audit Policy	Audit object access	No auditing No	auditing
	🕀 🛃 User Rights Assignment	Audit policy change	Success, Failure No	auditing
	🗄 🚽 🛃 Security Options	Audit privilege use 🦯 🛛 🛛 🛛	ailure No	auditing
	🗄 - 🛃 Event Log	Audit process tracking	No auditing No	auditing
	🕀 🧰 Restricted Groups	Audit system events	No auditing No	auditing
	🕀 🧰 System Services		io dodining - Tio	o o o o o o o o o o o o o o o o o o o
	🕀 📴 Registry			
	🗄 💼 📴 File System			
	🗄 😳 Security Templates			
	_			

8. After you and Joe have compared SA-1's current security settings with the securews security template settings, you decide to use all of the settings within the security template on SA-1. To accomplish this, right click on **Security Configuration and Analysis** and select **Configure Computer Now**. Keep in mind that this action will change *all* of the configured security settings in the template and can lead to severe network problems. In a production environment, **TEST** these settings thoroughly before applying them blindly to a server.

Open
Open database
Analyze Computer Now
Configure Computer Now
Save
Import Template
Export Template
View Log File
New Window from Here
Help



9. Next, you will see the same type of dialog box you saw previously, allowing you to specify a location for the error log. Accept the default by clicking on **OK**.

Configure System	? ×
Error log file path:	
C:\Documents and Settings\Administrator\Local Settir	Browse
OK	Cancel

10. The configuration will then begin and you will see the progress in this Configuring Computer Security dialog box.

Configuring Computer Security		
Configuring:		
User Rights Assignment	System Services	
Restricted Groups	Security Policy	
➡ Registry		
File System		

11. After the configuration is completed, right click on Security Configuration and Analysis and select Analyze Computer Now.

Tree Favorites Console Root Figuration and Analysis	C:\Documents a Documents\Sec	nd Settings\Administrator\My urity\Database\secdb.sdb
🗄 🔀 Security Templates	Open Open database Analyze Computer Now Configure Computer Now	re or analyze your computer by using the security settings
	Save Import Template Export Template View Log File	• Ur Computer
	View New Window from Here	ype the name of the log file you wish to view, and then click
	New Taskpad View Help	ation is complete, you must perform an analysis to view the atabase



12. When the analysis is completed, you can view the results by clicking on any of the nodes. After applying the securews.inf security template, you'll find that the local computer settings and the database settings are now the same. All of the settings should be the same throughout the different types of policies.



## Custom Templates

In addition to the default templates that come with Windows 2000 and Server 2003, you can also create your own custom security templates.

 To create a custom template, click on Security Templates and right click on C:\WINNT\Security\Templates under the Console Root in the left pane. Select New Template.

🧰 Console Root	
- 📴 Security Configuration and Analysis	5
🖻 📴 Security Templates	
C:\WINNT\Security\Templates	
🗄 🔂 basicdc	Open
🗄 🕞 basicsv	New Template
🗄 🕞 basicwk	Refresh K
🗄 🕞 compatws	Set Description
🗄 🕞 🔂 hisecdc	
🗄 🕞 🔂 hisecws	View 🕨
🗄 🖓 🔂 notssid	New Window from Here
🗄 🔂 ocfiless	New Tackpad View
🗄 📲 🔂 ocfilesw	
🗄 🔂 securedc	Delete
🕂 🔂 securews	Export List
🗄 📑 setup security	
	Help



2. This brings up a dialog box allowing you to name and describe your new template. Type in **Custom Template** as the Template name and **Custom** as the Description. Click **OK** to create this new custom template.

	Console Root
C:\WINNT\Security\Templates	🔁 🔀 🗄 😳 Security Configuration and Analysis
	🚊 🔂 Security Templates
Template name:	🖃 🧰 C:\WINNT\Security\Templates
Custom Template	🗄 🔂 basicdc
	💼 🔂 basicsv
	🗄 🔂 basicwk
Description:	🗄 🔂 compatws
Custom	Custom Template
	🕀 🔂 🔒 🕀 🔁
	🗄 🔂 hisecws
	🕀 🔂 🔁 🔁 🔁 🔁
	主 🔂 ocfiless
1	🕂 🔂 ocfilesw
	🖅 🔂 securedc
OK N	Cancel 🛛 👘 🔂 securews
	🗄 🔂 setup security

3. The template that you have created is brand new and has not been configured. Therefore, none of the settings have being defined. This will require you to go through and configure every setting or risk leaving your computer and/or network unsecured.

Tree Favorites	Policy 🔺	computer etting
Custom Template	Enforce password history	/ Not defined
🖻 🛃 Account Policies	👪 Maximum password age	Not defined
Password Policy	👪 Minimum password age	Not defined
🗄 🤯 Account Lockout Policy 🔜	🕮 Minimum password length	Not defined
🗄 🥶 Kerberos Policy	Beasswords must meet complexity requirements	Not defined 🖌
🕀 🚽 🛃 Local Policies	🕮 Store password using reversible encryption for all users in the domai	Not defined /
🕀 🚽 🛃 Event Log		$\setminus$ /
🕀 🤷 Restricted Groups		$\sim$
🕀 🤷 System Services		
🕀 🤷 Registry		
🗄 🔂 File System 📃		



4. In most cases, the settings that you want to configure on your computer and/or network may vary only slightly from one of the default templates. In this case, you can modify one of the default templates and save it with a different name, thereby creating a custom template. The Storks have decided to try this, using the securews.inf security template for their baseline security settings. Once they have modified the necessary settings, the template will be saved with a custom name and they will apply it to the Servers OU in the storksbaseball.com domain.

The first setting that you will modify is the minimum password length. To accomplish this, double-click **Account Policies** under **securews** in the left pane and click on **Password Policy**.



5. Double-click the **Minimum password length** policy in the right pane. This will bring up the Template Security Policy Setting dialog box. Place a check mark in the box **define this policy setting in the template** and configure the Password must be at least **box** to **12** characters. Click **OK** to continue.

**Note:** Account Policies must be set at the domain level. You can set account policies at the OU level but they will not work. The Minimum password length setting is being created for demonstration purposes only.

Template Security Policy Setting	? ×
Minimum password length	
Define this policy setting in the template	
Password must be at least: 12 characters	
OK Can	zel



6. The next setting that the Storks want to modify is to enable a logon message text and title, which is not part of the securews security template. Double-click **Local Policies** under securews in the left pane and click on **Security Options**.



7. In the right pane, select and double click the **Message text for users attempting to log** on, which will open up the **Template Security Policy Setting** dialog box. In this dialog box, make sure Define this policy setting in the template is **checked**. Type in **Warning! Unauthorized Users Prohibited** and click **OK**.

Template	e Security Policy Setting	? ×			
<u> </u>	Message text for users attempting to log on				
🔽 Defir	ne this policy setting in the template:				
War	Warning ! Unauthorized Users Prohibited				
	OK Cance				



8. Again, from the right pane, select and double click the **Message title for users** attempting to log on, which will open up the **Template Security Policy Setting** dialog box. In this dialog box, make sure Define this policy setting in the template is checked. Type in **Warning!** and click **OK**. This setting (message title) controls the title that appears at the top of the logon dialog box, while the previous setting (message text) controls the main body of text that will appear during logon.

Template	e Security Policy Setting	<u>?</u> ×
Ŀ	Message title for users attempting to log on	
🔽 Defir	ne this policy setting in the template:	
	OK Canc	el

9. The next setting that the Storks want to modify is the Messenger service. The Storks have decided to disable this service to eliminate broadcast messages including SPAM. To access this, double-click System Services and from the right task pane, right click on Messenger. Select Properties and click Security.





10. Check **Define this policy setting in the template** and then click **OK** to accept the default security permissions for now.

Semplate Security Policy Setting	Security for Messenger	<u>?</u> ×
Messenger  Messenger  Define this policy setting in the template  Select service startup mode:	Security Name Add Everyone Remove	
Select service startup mode.	J Permissions: Allow Denu	
C <u>A</u> utomatic	Full Control	- 11
C <u>M</u> anual	Read 🖸 🗖	
Digabled	Start, stop and pause     Image: Constraint of the stop of the s	
<u>E</u> dit Security	Advanced	
OK Cancel	OK Cancel App	dy

11. Make sure that the Messenger service is marked as **Disabled** and click **OK**.

Template Security Policy Setting	? ×
Messenger	
Define this policy setting in the template	
Select service startup mode:	
C Automatic	
O Manual	
• Disabled	
Edit Security	
OK Car	icel



12. For now, the last setting the Storks will modify is to set the default NTFS permissions on the C drive. This can be configured by right clicking on **File System** under securews in the left pane and selecting **Add File**.



13. This will bring up the Add a file or folder dialog box. Add C: by highlighting it and clicking **OK**. The Storks want to set the default NTFS permissions on the C: drive so that only the Domain Admins group and the System group have access.




14. Clicking OK will bring up the Database Security for %SystemDrive%\ dialog box. By default, the Everyone group has full control permissions to the root of C:, which is not very secure. Highlight the **Everyone** group and click **Remove** to remove it.

Database Security for %SystemDrive%\		<u>? ×</u>
Security Name		Add
Permissions:	Allow	Deny
Full Control Modify Read and Execute List Folder Contents Read Write	0000000	
Advanced Allow inheritable permissions from parent to p	propag	gate to this
OK Cano	el	Apply

15. Next, click on the **Add** button. This will bring you to the Select Users or Groups dialog box. In the Look in drop-down menu, select **storksbaseball.com**. Find and add the **Domain Admins** group and the **System** group from storksbaseball.com. Click **OK** to continue.

Add Check Names	
Domain Admins : SYSTEM	
	OK Cancel



16. The two groups will now appear on the security list. By default, these two groups have limited permissions. Highlight **Domain Admins** and check the **Full Control** box in the Allow Column. This will automatically select everything in the column. Repeat the same steps to give full control permissions to the System group. Click **OK** to continue.

Name Add	Name     Add       Image: Domain Admins (STORKSBASEBALL     Remove       Image: SYSTEM     Remove
Permissions:     Allow     Deny       Full Control     Image: Control control control     Image: Control co	Permissions:     Deny       Full Control     Image: Control for the content of the c
Advanced  Advanced  Allow inheritable permissions from parent to propagate to this object	Advanced  Advanced  Allow inheritable permissions from parent to propagate to this object

17. This brings up the Template Security Policy Setting dialog box. Leave the default selection to **Propagate inheritable permissions to all subfolders and files** and click **OK**.

Template Security Policy Setting	<u>? ×</u>
%SystemDrive%\	
Configure this file or folder then	
• Propagate inheritable permissions to all subfolders and files	
<ul> <li>Replace existing permissions on all subfolders and files with inheritable permissions</li> </ul>	
C Do not allow permissions on this file or folder to be replaced	
Edit Security	
OK Cano	el



18. You are now done modifying the settings on the **securews** security template and are ready to save this custom template. Right click on **securews** and select **Save As**.

Open Col: Documenting
Save
Save As
View N
New Window from Here
New Taskpad View
Delete
Export List
Help

19. Type in **Storks Server Security** for the file name and click **Save** to save the template.

Save As			? ×
Save in: 🔄 templat	es		* 💷 •
👼 basicdc	👼 hisecws	👼 setup security	
👼 basicsv	👼 notssid		
👼 basicwk	👼 ocfiless		
👼 compatws	🗓 ocfilesw		
🔋 Custom Template	📓 securedc		
🐻 hisecdc	👼 securews		
File nam Storks	Server Security	>	Save
Save as type: Securi	ty Template (.inf)	•	Cancel



#### Importing the Security Template

There are several different ways to import the Storks' Server Security template into Active Directory. For example, you can set up a shared folder on SA-1 and place the Storks Server Security template in it or you can save the template on to a floppy disk and manually transfer the file. For the purposes of this lab, we are going to save the template to a floppy and manually transfer it over to DC-1.

1. To save the Storks' Server Security template on a floppy, right click on **Storks Server Security** and select **Save As**.

Console Root	
🗄 📴 Security Configuration and Analysis	
🖻 🔂 Security Templates	
- C:\WINNT\Security\Templa	tes
😟 🚺 basicde	
😟 🚺 basicsv	
😟 🚺 basicwk	
🕀 🚺 compativs	
🗄 🚺 Custom Template	
🗈 🚺 hisecdc	
🗈 🛄 hisecivs	
🕀 🚨 notssid	
🕀 🛄 ocfiless	
🕀 🧕 ocfilesw	
🕀 🔂 securedc	
E g securews	
E g setup security	
Storks Server Security	
	Open
	Set Description
	Save
	Save As
	View •
	New Window from Here
	New Taskpad View
	Delete
	Export List
	Help

2. Change the drive letter from C: to A: and leave the default file name. Insert a floppy into the drive and click **Save** to continue.

**Note:** You will use this floppy later in order to import the template to the Servers OU in Active Directory.

Save As		<u>?</u> ×
Save in: 🛃	3½ Floppy (A:)	
	1	
File name:	Storks Server Security	Save
Save as type:	Security Template (.inf)	Cancel



#### Creating the Servers OU

Next, you will need to create the Servers OU on DC-1. The Storks are creating this OU to hold all of their servers, which will simplify management and administration.

1. Log on to **DC-1** and open the **Active Directory Users and Computers** console by going to **Start→Programs→Administrative Tools→Active Directory Users and Computers**.



2. On the left side, right click on storksbaseball.com and select New→Organizational Unit.

Active Directory	Users and Co	mputers			
] 🎻 ⊆onsole 🛛 <u>W</u> inda	ow <u>H</u> elp				_ <del>-</del> - <del>-</del>
Action View	⇔ ⇒   €	📧 🖻 🛃	1	1 10 10 10 10 10 10 10 10 10 10 10 10 10	1
Tree		storksbaseball3.com	5 obje	its	
Active Directory Us	ers and Comp	Name	4	Туре 🛆	Description
Builtin Builtin Computer	Delegate Cor Find Connect to D Connect to D Operations M	ntrol )omain )omain Controller 1asters	tipals	DuikinDomain Container Organizational Unit Container Container	Default container for upgr Default container for new Default container for secu Default container for upgr
	New All Tasks		Con	nputer	
-	View New Window	from Here	Gro Org Prin	up anizational Unit ter	
	Refresh Export List		Use Sha	r red Folder	
	Properties				
	Help				
Create a new object					



3. A screen will appear asking you to specify a name for the new OU. Type in **Servers** and click **OK**. You will now have an OU named Servers within Active Directory.



#### Moving SA-1 to the Servers OU

1. To move SA-1 to the Servers OU, first find SA-1, which is located within the Computers folder in Active Directory. Next, right click on **SA-1** and select **Move**.

Name	Туре	Descrip
■ 5A-1 ■ PRO-1	Disable Account Reset Account Move Manage	
	Delete Refresh Properties Help	

2. That will bring up a small explorer window where you can browse through all the containers that are available within the domain. Select the **Servers OU** and click **OK**.

⊕ <mark>.</mark> ForeignSecurityPrincipals @ <u>Servers</u> Users	
OK Cancel	



3. SA-1 should now appear within the Servers OU.



#### Importing Security Template to Active Directory

The custom template created earlier in this lab will now be imported into Active Directory and applied to the Servers OU. Applying the template to the Servers OU will apply the template's baseline security settings to all of the servers within the Servers OU.

1. Start this process by right clicking the **Servers OU** and selecting **Properties**.

Delegate Control Add members to a group Move Find
New
View •
New Window from Here
Delete
Rename
Refresh
Export List
Properties
Help



 This will open the Servers Properties dialog box. Select the Group Policy tab and click New. Type in Security template – servers settings for the new policy name and click Edit.

Servers Properties	<u>? ×</u>	Servers Properties	<u>? ×</u>
General Managed By Group Policy		General Managed By Group Policy	
Current Group Policy Object Links for Servers		Current Group Policy Object Links for Servers	
Group Policy Object Links No Override Disa	bled	Group Policy Object Links No Override D	lisabled
Group Policy Objects higher in the list have the highest priority. This list obtained from: DC-1.storksbaseball3.com		Group Policy Objects higher in the list have the highest priority. This list obtained from: DC-1.storksbaseball.com	
New Add Edit Up		New Add Edit	Up
Options Delete Properties Dow	n	Options Delete Properties D	own
Block Policy inheritance		Block Policy inheritance	
OK Cancel A	pply	OK Cancel	Apply

3. From within the Group Policy dialog box, click on Computer Configuration → Windows Settings and right click on Security Settings. Now select Import Policy.





4. This will open the Import Policy From dialog box. In order to import the Storks' Server Security template, you will need to insert the floppy disk that contains the template file that you created earlier. Make sure that you select Clear this database before importing, which will clear any policies that may already exist on the GPO (there are none in this case). If you fail to check this box and current policies exist, they will be merged with the settings from the security template. Change the drive letter from C: to A:, select the Storks Server Security file and click Open to import.

Import Policy	From		? ×
Look in: 📑	3½ Floppy (A:)	• 🗲 🔁	r 🗐
📕 Storks Ser	ver Security		
	1		
File name:	Storks Server Security		Open N
Files of type:	Security Template (.inf)	-	Cancel
Clear this	database before importing		1

5. After you have imported the Storks' Server Security file to the Servers OU, SA-1 will need to obtain the policy change before any settings will take effect. For all of these settings to take effect you will need to reboot SA-1. **Reboot SA-1**. When SA-1 has rebooted, the message title and text will appear when you try to logon, as shown below.

Warning L	হ
Warning ! Unauthorized Users Prohibited	^



- 6. Logon to SA-1, go to Start→Programs→Administrative Tools and click on Local Security Policy.
  - Component Services 县 Computer Management 🗐 Configure Your Server 🗃 Data Sources (ODBC) 🔓 Distributed File System 🕴 Event Viewer 🚱 Licensina 😳 🛛 Local Security Polic Performance 6 Routing and Remote Access 🆏 Services 📕 Telnet Server Administration Terminal Services Client Creator Terminal Services Configuration ..... 👫 Terminal Services Manager
- Open Security Settings → Local Policies → Security Options in the left pane of the local security settings. Notice that there are now effective settings, but no local settings for the logon message text and title. These effective settings are the security settings you applied to the Servers OU earlier in the lab.

Tree	Policy 🛆	Local Setting	Effective Setting	<b>_</b>
B Security Settings	BDo not display last user name in lo	Disabled	Disabled	
🗄 🤷 Account Policies 🦷	🕮 LAN Manager Authentication Level	Send LM & NTLM	Send LM & NTLM responses	
🗄 🙆 Local Policies	Message text for users attempting		Warning ! Unauthorized Users Prohibited	
🗄 🛄 Audit Policy	Message title for users attempting		Warning !	
🗄 🧾 User Rights As	🕮 Number of previous logons to cach	10 logons	10 logons	
🔤 Security Option	BPrevent system maintenance of co	Disabled	Disabled	
<b>↓</b>	Revent users from installing print	Disabled	Disabled	•

8. Next, open Account Policies → Password Policies, also found in Local Security Settings. Notice that the effective setting for the Minimum password length is 12 characters. This effective setting is due to the security setting that was applied to the Servers OU earlier in the lab. However, any settings under the Account Policies (i.e. Password Policies and Account Lockout Policies) must be set within a domain level policy for them to take effect on the domain. Therefore, even though the effective setting shows that the policy has taken effect, this setting will not actually work. The minimum password setting will be based on the domain GPOs.

📑 Local Security Settings			
Action View			
Tree	Policy 🛆	Local Setting	Effective Setting
Security Settings	Enforce password history	24 passwords remembered	24 passwords remembered
Account Policies	👪 Maximum password age	42 days	42 days
	👪 Minimum password age	2 days	2 days
🗄 🛄 Account Lockout Policy	👪 Minimum password length	8 characters	12 characters
🗄 📴 Local Policies	Beasswords must meet complexity r	Enabled	Enabled
🗄 💼 Public Key Policies	Store password using reversible e	Disabled	Disabled
🗄 😓 IP Security Policies on Local f	-		



Furthermore, verify that the Messenger service has been disabled, by going to Start→Programs→Administrative Tools and clicking on Services. Double click Messenger from the right pane. Note that the Messenger service has been stopped and disabled.

Tree	Name 🛆	Description	Status	Startup Type	Log On As 🔺
Services (Local)	Note: The section of	Manages I	Started	Automatic	LocalSystem
she	🏶 Kerberos Key Distri	Generates		Disabled	LocalSystem
	License Logging Ser		Started	Automatic	LocalSystem
	🏶 Logical Disk Manager	Logical Disk	Started	Automatic	LocalSystem
	🖏 Logical Disk Manage	Administrat		Manual	LocalSystem
	Messenger	Sends and		Disabled	LocalSystem
	🏶 Net Logon	Supports p	Started	Automatic	LocalSystem
	NetMeeting Remote	Allows aut		Manual	LocalSystem
	Network Connections	Manages o	Started	Manual	LocalSystem
	B. N. L. DOC	Dura da la c		NA	Landonakan 🏼

٢	1essenger Proper	ties (Local Computer)	<u>? ×</u>
	General Log On	Recovery Dependencies	
	Service name:	Messenger	
	Display name:	Messenger	
	Description:	Sends and receives messages transmitted by adminis	stra
	Path to executabl C:\WINNT\Syste	e: m32\services.exe	
	Startup type:	Disabled	•
	Service status:	Stopped	
	Start	Stop Pause Resume	
	You can specify t from here.	he start parameters that apply when you start the servic	e
	Start parameters:		
		OK Cancel Ap	ply



10. Finally, check the NTFS permission settings that you also configured within the security template. Open **Windows Explorer**, right click on the **C**: drive and select **Properties**. On the Properties page, select the **Security** tab. Notice that the Everyone group is removed and both the Domain Admins and System groups are present with Full Control permissions.

System (C:) Properties	? x         System (C:) Properties         ? x
General Tools Hardware Sharing Security Quota	General Tools Hardware Sharing Security Quota
Name       Add         Domain Admins (STORKSBASEBALL       Remove         SYSTEM       Remove	Name     Add       Image: Domain Admins (STORKSBASEBALL     Remove       Image: SYSTEM     Remove
Permissions:       Allow Deny         Full Control       Image: Control of the second se	Permissions:       Allow       Deny         Full Control       Image: Control for the cont
OK Cancel Apply	ply OK Cancel Apply





# Lab 2

## Securing the Springfield Storks' Network Using Group Policy

### You will learn how to:

- Configure settings in the default domain policy.
- Create and configure new group policy objects
- Assign logon scripts within group policy at the OU level
  - Use the LANguard network security scanner



#### <u>Scenario</u>

Joe, the Storks' network administrator, is happy with the progress that you two have made so far. He now has a good understanding of how to use security templates to establish baseline security on the new workstations and servers that are deployed. However, you are just getting started. Now it's time to get more detailed with security settings and really lock down the Storks' network. Group policy is arguably the best new enhancement to Windows 2000, allowing you to control security across your entire company with the click of the mouse.

In this lab, you will configure group policy within the Storks' Active Directory environment. You will see how to create GPOs and then link them to different containers within the domain. You will set and configure security settings such as NTFS permissions, services, security options, administrative templates, Internet Explorer settings and login scripts that have the potential to affect hundreds or thousands of users through one setting.





#### Creating users, OUs and folders

The Storks have decided to create custom OUs for their Servers, Workstations, Notebooks, Vendors, Executives, Administrators, and General Staff. These OUs will help standardize the Storks' network and improve security.

1. **Note:** The Servers OU has already been created in Lab1 and SA-1 was moved to the Servers OU. Use the steps in Lab 1 (Creating a Servers OU) to create the rest of the custom OUs. Also, move **Pro-1** to the Workstations OU.

After you have completed this task, you should see the following custom OUs in your Active Directory Users and Computers console.



2. Next, create the following users in Active Directory Users and Computers and move them to their appropriate OUs

**Note:** You can either create the user account directly in the selected OU by right clicking on the **OU** and selecting **New**  $\rightarrow$  **User** or you can move the user account after it has been created.

First Name	Last Name	Username	Password	OU
Bobby	Bigshot	bbigshot	test	Executives
Rudy	Redhot	rredhot	test	Vendors
Carter	Crackerjack	ccrackerjack	test	Vendors



3. To create the user accounts, log on to **DC-1** and open the **Active Directory Users and Computers** tool. Right click on the **Users** container and select **New**  $\rightarrow$  **User**. You need to create the three users from the table above in the same way by following these steps. If you create the user accounts in the Users container, you will have to manually move them to the correct OU, as specified above.



4. Make sure that you supply accurate information from the table above. The following is an example of what your user accounts should look like.

First name:	Bobby	Initials:
Last name:	Bigshot	
Full name:	Bobby Bigshot	
User logon name:  bbigshot User logon name  STORKSBASEB	(pre-\u0000); ALL bbigshot	com 🔽
	< Back	Next > Cancel



5. Type in the password of **test** for each user. Make sure that "User must change password at next logon" is *not* checked.

Password:	Type in test
Confirm password:	Password
🔲 User must change pass	vord at next logon
🔲 User cannot change pa	ssword
Password never expires	
Account is disabled	
	< Back Next > Cancel

6. For backup purposes (in case you lock yourself out later in this lab), you will need to create a second administrator account and name it **admin2**. To create the account, right click on the **Administrator** (inside the Users container) and click **Copy**. Type in the following information (from the picture below) and click **Next**. Leave the password blank, click **Next** and then **Finish**. Now, move the original **Administrator** account and **admin2** to the Administrators OU.

Copy Object - User	Copy Object - User
Create in: storksbaseball.com/Users	Create in: storksbaseball.com/Users
First name: Backup Initiats:	Password:
Last name: Administrator	Confirm password:
Full name: Backup Administrator	User must change password at next logon
User logon name:	User cannot change password
admin2 @storksbaseball.com	Password never expires
User logon name (pre-Windows 2000):	C Account is disabled
STORKSBASEBALL\ admin2	
< Back. Next > Cancel	< Back Next > Cancel



7. Next, log on to **SA-1** and create the following folders **public**, **users**, and **sales** under the root of the c:\ drive. Share these folders and leave the share name as the folder name. These folders will be used later in the exercise.

public Properties	×
General Sharing Security	
You can share this folder among other users on your network. To enable sharing for this folder, click Share this folder.	
O Do not share this folder	
Share this folder	
Share name: public	
Comment:	
User limit:   Maximum allowed  Allow  Users  Users	
To set permissions for how users access this folder over the network, click Permissions.	
To configure settings for Offline access to	
New Share	
OK Cancel Apply	

🚍 Local Disk (C:)				>
File Edit View Favorites To	ols Help			
📙 🖙 Back 🔹 🔿 👻 🔂 🔯 Search	🛛 🔁 Folders 🛛 🔇 Histor	v   Pi Pi X	n <u>≣</u> .	
Address 🖃 Local Disk (C:)				<b>▼</b> ∂°∽
	Name 🛆	Size	Туре	Modified
	Documents and S		File Folder	8/27/2002 10:04 Al
	🚞 Program Files		File Folder	8/30/2002 8:04 AM
Local Disk (C:)	💭 public		File Folder	2/20/2004 7:22 PM
	💭 sales		File Folder	2/20/2004 7:21 PM
3 items selected.	💭 users 🛛 📐		File Folder	2/20/2004 7:21 PM
			File Folder	8/30/2002 8:04 AM



#### **Default Domain Policy Modifications**

Password Settings and Account Lockout settings for the domain must be set in a domain policy. These settings cannot be deployed individually within policies on Organizational Units or other containers. Therefore, if you want to modify these settings, they must be changed in the default domain policy.

1. Log on to **DC-1** and launch **Active Directory Users and Computers**. Right click on your domain (**storksbaseball.com**) and click **Properties**. Click the **Group Policy** tab, select **Default Domain Policy** and click **Edit**.

Seneral Managed	By Group Policy	ct Links for	storksbaseba	
Group Policy Obj	ect Links		No Override	Disabled
Default Domai	n Policy			
Group Policy Object This list obtained fr	ts higher in the list h	have the hig	hest priority.	
Group Policy Objec This list obtained fr	ts higher in the list hom: DC-1.storksbase	ave the hig eball com	hest priority.	Uρ
Group Policy Object This list obtained in New Options	ts higher in the list hom: DC-1.storksbas Add Delete	eball com Edit	hest priority.	Up Down
Group Policy Object This list obtained for New Options	ts higher in the list h on: DC-1.storksbase Add Delete	Edit Properties	hest priority.	Up. Down

2. In Mega Lab 10 secure settings for both the Password Policy and Account Lockout Policy on a local server were discussed. These same settings can be applied to the Storks domain environment in order to increase security. These settings are shown in the diagrams below:





#### Creating and Configuring a Group Policy Object (GPO)

In the following exercise, you will create a new Group Policy for the Storks. After creating the Group Policy, you will configure various security settings within it to boost security on the Storks' network.

 From within Active Directory Users and Computers right click on your domain (storksbaseball.com) and click Properties. Click the Group Policy tab and click New. Type in Stork's - Company Wide Settings for the new policy name and click Edit.

**Note:** This policy will be applied at the domain level.

storksbaseball.com Properties		? ×
General Managed By Group Policy		
Current Group Policy Object Links fo	r storksbasebal	I
Group Policy Object Links	No Override	Disabled
Default Domain Policy		
Stork's - Company Wide Settings		
Group Policy Objects higher in the list have the h This list obtained from: DC-1.storksbaseball.com	ighest priority.	
New Add Edit		Up
Options Delete Properties		Do <u>w</u> n
Block Policy inheritance		
Close	Cancel	Apply

#### **Security Options**

1. Expand Computer Configuration → Windows Settings → Security Settings → Local Policies and click Security Options. From the right task pane, right click on Do not display last user name in logon screen and click Security.

🝠 Group Policy		
] Action View   ← →   🗈 🔃 🔀   😫		
Tree	Policy A	Computer Setting
Stork's - Company Wide Settings [DC-1.storksbaseball.com] Policy	Audit use of Backup and Restore privilege	Not defined
🔁 👧 Computer Configuration	Automatically log off users when logon time expires	Not defined
🗄 📄 Software Settings	Automatically log off users when logon time expires (local)	Not defined
🖃 💼 Windows Settings	Clear virtual memory pagefile when system shuts down	Not defined
- 🖾 Scripts (Startup/Shutdown)	BDigitally sign client communication (always)	Not defined
🖻 🔂 Security Settings	Bigitally sign client communication (when possible)	Not defined
🕀 🛃 Account Policies	Bigitally sign server communication (always)	Not defined
🖻 🖳 🤯 Local Policies	Bigitally sign server communication (when possible)	Not defined
🗈 🚽 Audit Policy	Disable CTRL+ALT+DEL requirement for logon	Not defined
🗈 🥁 User Rights Assignment	Do not display last user name in logon screen	Enabled
E	🔀 LAN Manager Authentication Level 💦	Not defined
🛨 🧭 Event Log	om	and defined



2. Check the box to **Define this policy setting,** select **Enabled** and click **OK**.

Security	Policy Setting	X
F	Do not display last user name in logon screen	
🔽 Defir	ne this policy setting:	
• e	Enabled	
0.0	Disabled	
	OK Cancel	

3. Within the same Security Options window, right click on Rename administrator account and click Security. Select Define this policy setting, type in storks02 and click OK.

Security	Policy Setting	×
F	Rename administrator account	
Defir stori	ne this policy setting: ks02	-
,		
	OK Cancel	



4. Next, select the policy **Rename guest account** and configure it with the name **visitor**. These options will rename the administrator account to storks02 and the guest account to visitor on all of the computers that are part of the storksbaseball.com domain. At this point, you should restart **DC-1** to ensure that all of the changes propagate through Active Directory. **MAKE SURE** that you are sure of your administrator name and password so that you are not locked out once you reboot.

Tree	Policy A	Computer Setting
Stork's - Company Wide Settings [DC-1.stork ]	Bigitally sign client communication (when pos	Not defined
. Computer Configuration	BDigitally sign server communication (always)	Not defined
🗄 🧰 Software Settings	BDigitally sign server communication (when po	Not defined
🖃 🧰 Windows Settings	BDisable CTRL+ALT+DEL requirement for logon	Not defined
Scripts (Startup/Shutdown)	🐯 Do not display last user name in logon screen	Enabled
🖃 🐺 Security Settings	BLAN Manager Authentication Level	Not defined
🗄 🛃 Account Policies	Message text for users attempting to log on	Not defined
🖻 🚽 🛃 Local Policies	Message title for users attempting to log on	Not defined
🕀 🛃 Audit Policy	Number of previous logons to cache (in case	Not defined
🕀 🛃 User Rights Assignment	Prevent system maintenance of computer ac	Not defined
Security Options	Prevent users from installing printer drivers	Not defined
🕀 🥁 Event Log	Prompt user to change password before expi	Not defined
🕀 🛄 Restricted Groups	Becovery Console: Allow automatic administr	Not defined
	BRecovery Console: Allow floppy conv and ac	Not defined
		storks02
		visitor
	Bestrict CD-ROM access to locally logged-on	Not defined
H Security Policies on Active	Bestrict floppy access to locally logged on mi	Not defined
Administrative remplates	Secure channel: Digitally encrypt or sign sec	Not defined
	Decare channel, bigitally encrypt or sign sec	

**Note:** If you do not restart the domain controller (DC-1), you will receive errors on DC-1 because the administrator account you are logged on as has been renamed to storks02. Remember, you can always use the backup administrator account (admin2) if you have problems logging on with the default admin account.



#### **Disabling the Messenger Service**

 Log on to DC-1 with the Storks02 account and go to Active Directory Users and Computers. Right click on your domain (storksbaseball.com) and click Properties. Click the Group Policy tab, select Stork's - Company Wide Settings and click Edit. Next, expand Computer Configuration → Windows Settings → Security Settings, and click on System Services. From the right task pane, right click on Messenger and click Security. Check mark Define this policy setting in the template and select Disabled from the choices below. Click OK to save your changes.

Template Security Policy Setting	? ×
Messenger	
Define this policy setting in the template	
Select service startup mode:	
C Automatic	
O Manual	
• Disabled	
Edit Security	
	icel

2. Stopping the Messenger service will help to stop unwanted traffic, such as SPAM.





#### Changing the default NTFS Permissions

A default installation of Windows 2000 (Pro or Server) grants the Everyone group full control NTFS permissions starting from the root of the c: drive. To increase security on all of the computers on the storksbaseball.com domain, the Storks have decided to modify the default NTFS permissions by using a group policy.

1. From within the Stork's - Company Wide Settings policy, expand Computer Configuration → Windows Settings → Security Settings and select File System. Right click on File System and click Add File. Select Local Disk (C:) and click OK.



2. From the Access Control List (ACL), remove the **Everyone** group and add the **Administrators, Authenticated Users** and **System** groups. Grant **Full Control** to Administrators and System and leave the default permissions (Read and Execute, List Folder Contents, and Read) for the Authenticated Users. Click **OK** to save your changes.

atabase Security for %SystemDrive%\ Security	<u>? ×</u>	Database Security for %System	Drive%\ ?)
Name  Administrators (STORKSBASEBALLVAdmi  Administrators du Sers  SYSTEM	Agd <u>R</u> emove	Name Administrators (STORKSBASE Authenticated Users SYSTEM	BALLVAdmi
Permissions: Alle Full Control	ow Deny	Permissions:	Allow Deny
Modify & Read and Execute & List Folder Contents & Read & Write &		Modify Read and Execute List Folder Contents Read Write	
Advanced	pagate to this	Advanced	im parent to propagate to this
OKCancel	Apply	ОК	Cancel Apply



3. Choose the following settings and click **OK**.

Template Security Policy Setting	?×
%SystemDrive%	
<ul> <li>Configure this file or folder then</li> </ul>	
Propagate inheritable permissions to all subfolders and files	
C Replace existing permissions on all subfolders and files with inheritable permissions	
$\mathbb{C}$ . Do not allow permissions on this file or folder to be replaced	
Edit Security	
	cel

#### Restrict access to My Network Places

To prevent users from browsing your network you have to restrict access to My Network Places. If you allow users to access My Network Places, then the users might be able to explore and access some of the systems on your network that are accidentally not secured. To prevent this problem, the Storks have decided to restrict access to the My Network Places icon for all users within the domain.

1. In the Stork's - Company Wide Settings policy, expand User Configuration → Administrative Templates and click Desktop. From the right task pane, right click on the Hide My Network Places icon on your desktop and click Properties. Select Enabled and click OK. Reboot DC-1 to ensure that all of the policies are applied.

Tree	Policy	Se
3 Jon Concern Wide Setting (C-1.stuhebanebal.com)     Concern Configuration     Concern Configuration     Concern Configuration     Concern Configuration     Concern Configuration     Con	Adarter Eachton Adarter Eachton Adarter Eachton Adarter Fordury Adarter Fordury Adarter Fordury Adarter Fordury Adarter Fordury Adarter Fordury Adarter Adart	Not or Not of Not of Not of Not of Not of



#### Verifying the Group Policy settings

Before you check to see if your new policies are applied, you will need to restart **Pro-1** and **SA-1**. In the following section, you will be working on Pro-1. To make sure the Group Policy has been applied to SA-1, repeat the same steps on SA-1 to verify the new settings.

**Note:** Computer policy (Computer Configuration) settings are applied when a computer boots and the User policy (User Configuration) settings are applied when a user logs on.

1. Go to **Pro-1** and press **Ctrl+Alt+Del**. Note that the User name is blank - this verifies that the Do not display last user name in logon screen option in group policy has been applied to the storksbaseball.com domain. Now log on to the **storksbaseball.com** domain as the administrator, **storks02**, from Pro-1.

Log On to Wi	hdows Microsoft Copyright © 1985-1999 Microsoft Corporation Windows 2000
User name:	Built on NT Technology
Password:	
Log on to:	
	OK Cancel Shutdown



2. Once you have logged on, you will notice that My Network Places has disappeared from the desktop. However, the UNC path can still be used to access resources on the network (i.e. <u>\\sa-1\public</u>).



3. To verify that the local administrator and guest account have been renamed, open Computer Management by right clicking on **My Computer** and clicking **Manage**. From the System Tools, expand **Local Users and Groups** and click **Users**. Note that the administrator account has been renamed to **storks02** and the guest account to **visitor**.





4. To verify that the Messenger service has been disabled, go to Start → Settings → Control Panel and double click on Administrative Tools. Double click on Services and look at the Messenger service. Note that the Messenger service has been stopped and disabled.

Norvices					_	
] <u>A</u> ction ⊻iew ] ← →	🖿 🖬 🖬 😫 🗟	) 😫 ] 🕨		,		
Tree	Name 🛆	Description	Status	Startup Type	Log On As	<u> </u>
Services (Local)	🖏 Internet Connectio	Provides n		Manual	LocalSystem	
	Note: The section of	Manages I	Started	Automatic	LocalSystem	
	🍓 Logical Disk Manager	Logical Disk	Started	Automatic	LocalSystem	
	🖏 Logical Disk Manage	Administrat		Manual	LocalSystem	
	Messenger	Sends and		Disabled	LocalSystem	
	🆓 Net Logon	Supports p	Started	Automatic 🗟	LocalSystem	

5. Finally, go to your desktop and double click on **My Computer**. Right click on the **C**: drive, click **Properties** and click on the **Security** tab. You will notice that the NTFS permissions are set according to the Stork's - Company Wide Settings group policy.

Local Disk (C:) Properties	?	Local Disk (C:) Propertie	s ?×
General Tools Hardware Sharing Name Administrators (PRD-1\Administra Authenticated Users SYSTEM	Security Quota Add	General Tools Hardw	are Sharing Security Quota D-1\Administrators) S
Permissions: Full Control Modify Read & Execute List Folder Contents Read Wite	Allow Deny	Permissions: Full Control Modify Read & Execute List Folder Contents Read Write	Allow Deny
Advanced OK	Cancel Apply	Advanced	OK Cancel Apply



#### Assigning a Logon Script within Group Policy

In the following exercise, you will need to create a logon script for the Vendors OU. This logon script will map network drives and delete temporary files (.tmp) for the vendors that log on to the Storks' domain. In order to assign a logon script to the Vendors OU, you have to create a GPO on the Vendors OU. Automating these procedures makes the process more secure and efficient.

 Log on to DC-1 as storks02 and launch Active Directory Users and Computers. Expand storksbaseball.com, right click on the Vendors OU, click Properties and click on the Group Policy tab. Click New, type in Logon Script - Vendors as the policy name and click Edit to edit the policy.

Vendors Properties		? ×
General Managed By Group Policy		
Current Group Policy Object Links fo	r Vendors	
Group Policy Object Links	No Override	Disabled
🚭 Logon Script - Vendors		
		_
Group Policy Objects higher in the list have the h This list obtained from: DC-1.storksbaseball.com	ighest priority.	
New Add Edit	J	Up
Delete Properties	7 -	Do <u>w</u> n
Block Policy inheritance		
Close	Cancel	Apply

Expand User Configuration → Windows Settings and select Scripts (Logon/Logoff). From the right task pane, double click on Logon and click on Show Files.

Tree	Name 💎		
Logen Seyle - Vender (DC-Later)     Songe - Vender (DC-Later)     Songe - Vender (DC-Later)     Songe - Vender Settings     Songe - Vender Settings     Wer Configuration     Songe - Vender Settings     Wer Configuration     Songe - Vender Vender     Songe - Vender Vender Vender     Songe - Vender Vender Vender	Logoff	Logan Properties Script Logan Script for Logan Script Verdoe [DC1:statistatebal.con] Name Parameters To view the script files stored in this Group Policy Object ; to store the script files. Story Files.	1 x



3. Create a new text file inside the Logon folder (the folder that opened when you clicked Show Files) and name it **VendorScript**.

**Note:** The location of script file is: \\storksbaseball.com\SysVol\storksbaseball.com\ Policies\**{948954F0-27E9-4607-8E3F-4DC6AEC5BFFF}**\User\Scripts\Logon, however the bold portion of the path will be different on your system. You can navigate to this location through your file system.

-	
🔄 \\storksbaseball.com\SysVo	l\storksbaseball.com\Policies\{948954F0-27E9-4607-8E3F-4DC6AEC5B
File Edit View Favorites	Tools Help
] ← Back → → → 🔂 🛛 📿 Sea	arch 🖓 Folders 🎯 History 🛛 🎬 🧏 🗙 🖄 🛛 🧱 🕶
Address 🗀 m\SysVol\storksbaseb	all.com\Policies\{948954F0-27E9-4607-8E3F-4DC6AEC5BFFF}\User\Scripts\Logon 💌
Logon	VendorScript
Select an item to view its description.	-
See also:	
My Documents	U.
<u>DC-1</u>	

4. Open the VendorScript file and type in the following. Note that the following logon script is only for the Vendors group. You should create different logon scripts for each group that requires unique network drive mappings. Also, if you prefer, this file is available on the CD that came with this course. You should copy this file to the above location and make modifications directly to it.





5. When you are finished modifying the file, you must save the file as a batch file (program) by clicking **File** → **Save As** and then entering in **VendorScript.bat** as the file name. Click **Save**. Close this file and go back to **Vendors Group Policy** console.



6. On the Logon Properties screen, click **Add** and then click **Browse**. Select **VendorScript** (the batch file not the text file) and click **Open**. Click **OK** twice to go back to the Group Policy console.





7. Next, go to Active Directory Users and Computers and open the Vendors OU. Right click on Rudy Redhot and click Properties.

Active Directory Users and Com	puters		
🛛 🎻 Console 🛛 <u>W</u> indow Help			_ 8 ×
Action ⊻iew 🛛 🗢 → 🗈 🖪	🗖 🗙 📽 🖻 🖪 😫	? 🛛 🐮 🐮 🐚 🝸 🍕 🔭	
Tree	Vendors 2 objects		
Active Directory Users and Comput Storksbaseball.com Administrators Users Unit Computers Comput	Name Rudy Redhot Carter Crackerjack	Type Copy Add members to a group Disable Account Reset Password Open home page Send mail All Tasks Delete Rename Refresh Properties Web	Descriptic
		нер	
Opens property sheet for the current se	lection.		

8. Click on the **Profile** tab and select **Connect**. Change the drive letter to **H**, type in \\sa-1\users\%username% in the To: section and click **OK**. This setting will map an H: drive (personal home drive) for Rudy when he logs on to the storksbaseball.com domain. Rudy can use this drive to store his personal data. For security reasons, only Rudy and the Administrators will be able to access this drive.

Rudy Redhot Properties
Member Of Dial-in Environment Sessions Remote control Terminal Services Profile
General Address Account Profile Telephones Organization User profile Profile path: Logon script:
C Local path:
OK Cancel Apply



9. From **Pro-1**, log on to the storksbaseball.com domain as **rredhot**. Double click on **My Computer** from the desktop. Along with your normal drives, you should now see that three network drives are mapped for Rudy. When you are finished exploring, logoff Rudy from **Pro-1** and go to **DC-1**.

💂 My Computer				
File Edit View Favorites To	ools Help			
🗧 🖛 Back 👻 🤿 👻 🔂 📓 🎯 Search	n 强 Folders 🎯 History	1 to X to 1 to -		
Address 🖳 My Computer				
My Computer	3½ Floppy Local Disk (C (A:)	:) Compact Disc (D:) rredhot on 'sa-1\users' (H:)	public on 'sa-1' (P:)	Control Panel
rredhot on 'sa-1\users' (H:) public on 'sa-1' (P:) sales on 'sa-1' (S:)				

#### Securing Internet Explorer on the Storks' network

All of the users on the Storks' network use Internet Explorer as their web browser. Because of the recent security breaches, you and Joe have decided to lock down Internet Explorer so that it is more secure. However, instead of visiting each desktop to accomplish this, you will make these configurations with a GPO. To set the Internet Explorer security settings for the Storks' network, you will need to create a new GPO at the domain level in Active Directory. This GPO will be configured to secure Internet Explorer settings on all of the systems on the Storks' network.

1. Log on to **DC-1** as **storks02** and launch **Active Directory Users and Computers**. Right click on **storksbaseball.com** and click **Properties**. Click the **Group Policy** tab, and then click **New**. Type **IE Security Settings** as the policy name and then click **Edit**.

orksbaseball.c	om Properties		?)
General Manag	ed By Group Policy		
Cur	rent Group Policy Object	Links for stork:	baseball
Group Policy (	Dbject Links	No O	verride Disabled
📆 Default Do	main Policy		
Stork's - Co	mpany Wide Settings		
<b>WIE Security</b>	Settinas		
Group Policy Ot This list obtaine	ojects higher in the list ha d from: DC-1.storksbasel	ave the highest ball.com	priority.
New	Add	Edit	Up
11011			
Options	Delete Pr	operties	Down
Options	Delete P	roperties	Down
Options	Delete Pr	roperties	Down



2. The Storks have decided to use their Intranet website as the home page for all of the users on the network. The Intranet website will provide security alerts, awareness and other information related to the Storks' organization.

To configure this, expand User Configuration  $\rightarrow$  Windows Settings  $\rightarrow$  Internet Explorer Maintenance and then click on URLs. From the right task pane, right click on Important URLs and click Properties.

🗊 Group Policy		
] <u>A</u> ction View    ← →   🔁 📧   😭 🗟   😫		
Tree	Name	Description
IE Security Settings [DC-1.storksbaseball.com] Policy	Favorites and Links	Settings for favorites and links
🖃 🔜 Computer Configuration	Important URLs	Settings for Properties
	Channels	Settings for
Windows Settings     Advisition time Translation     Advisition Translation     Advisition Translation     Advisition     Advisition		Help
Administrative Templates		
🖃 💼 Windows Settings		
🖃 🍿 Internet Explorer Maintenance		
Browser User Interface		
Security		
Programs		
- 🗐 Scripts (Logon/Logoff)		
Security Settings		
Remote Installation Services		

3. Place a check mark next to **Customize Home page URL,** type in:

http://intranet .storksbaseball.com in the text box as the Home page and click OK. This will set the Storks' Intranet website as the default home page for all users. Keep in mind that we have not configured a website on the Storks' network, so this page will not come up.

Important URLs	?
Important URLs	
You can specify a custom home pa when the browser is started or wh	ge, search bar URL, and online support page. The home page is opened en the user clicks the Home button.
Home page URL:	Customize Home page URL
http://intranet.storksbaseball.com	
The search bar is opened within th search bar must be written in HTM	e browser in a separate frame when the user clicks the Search button. The L but has special requirements.
Search bar URL:	Customize Search bar URL
When the user clicks Help in the br will be displayed in the browser.	owser menu bar, and then clicks Online Support, the URL you specify below
Online support page URL:	Customize Online support page URL
	OK Cancel Apply Help



4. Next, you will disable the users ability to change their home page settings within Internet Explorer.

Expand User Configuration  $\rightarrow$  Administrative Templates  $\rightarrow$  Windows Components and then click on Internet Explorer. From the right task pane, right click on Disable changing home page settings and click Properties. Select Enabled and then click OK.

gf Group Policy		
$]$ Action View $] \Leftrightarrow \Rightarrow   \boxdot \square   \boxplus   \boxdot   \square  $		
Tree	Policy	Setting
IE Security Settings [DC-1.storksbaseball.com] Policy	Internet Control Panel	
E - 3 Software Settings	Browser menus	
Windows Settings	Toolbars	
E Administrative Templates	Persistence Behavior     Approved Controls	
	Search: Disable Search Customization	Not configured
Windows Settings     Administrative Templates	<ul> <li>Search: Disable Find Files via F3 within the browser</li> <li>Disable external branding of Internet Explorer</li> </ul>	Not configured
🖻 📲 Windows Components	Disable external or analing of Anternet Explorer Disable importing and exporting of favorites	Not configured
	Disable changing Advanced page settings	Not configured
Windows Explorer	Disable changing home page settings Use Automatic Detection for dial-up connections	Enabled Not configured
- Task Scheduler	😭 Disable caching of Auto-Proxy scripts 😭 Display error message on proxy script download failure	Not configured Not configured

5. Joe, the Storks' administrator, is also concerned with users seeing and changing the settings for security zones, such as scripting, download and user authentication. You will need to hide the Security page on Internet Options to prevent users from seeing and changing these settings.

Expand User Configuration  $\rightarrow$  Administrative Templates  $\rightarrow$  Windows Components  $\rightarrow$  Internet Explorer and then click on Internet Control Panel. From the right task pane, right click on Disable the Security page and click Properties. Select Enabled and then click OK.




6. To test these settings, from **Pro-1**, log on to the storksbaseball.com domain as **rredhot**. Right click on **Internet Explorer** and click **Properties**. Notice, that the home page is set to http://intranet.storksbaseball.com and the address is grayed out (users cannot change the home page). Also, the Security tab is hidden so the users cannot see or change any of these security settings.

Internet Properties
General Content Connections Programs Advanced
Home page
You can change which page to use for your home page. Address: http://intranet.storksbaseball.com
Use Current Use Default Use Blank
Temporary Internet files
for quick viewing later.
Delete Files Settings
History The History folder contains links to pages you've visited, for quick access to recently viewed pages. Days to keep pages in history: 20 + Clear History
Colors Fonts Languages Accessibility
OK Cancel Apply



7. Now, from **Pro-1**, log on to the storksbaseball.com domain as **storks02** and go to the **Internet Properties**. You will notice that you cannot change the home page or see the security tab even though you are logged on as administrator. To prevent this group policy from applying to the domain admins group, you have to filter out the domain admins group with permissions so that the Group Policy Object settings do not apply to them. Logoff **Pro-1**.

When a group policy is first configured it applies to everybody in the domain (via the authenticated users group). One way of preventing the policy from applying to certain groups is to assign **deny** for the **apply group policy** permission. This setting prevents the policy from applying to the particular user or group that is denied the permission.

Log on to **DC-1** as **storks02**, and launch **Active Directory Users and Computers**. Right click on **storksbaseball.com** and click **Properties**. Click the **Group Policy** tab, select **IE Security Settings** and click **Properties**. Click on the **Security** tab, select **Domain Admins** and check **Deny** to Apply Group Policy. Click **OK**, click **Yes** when you receive the caution message and then click **OK** to go back to the group policy.

IE Security Settings Properties		? >	
General Links Security			
Name	1	Add	
Authenticated Users     GREATOR OWNER		Remove	
Comain Admins (STORKSBASEBALL\Domain Ad     Enterprise Admins (STORKSBASEBALL\Enterpris     Start SYSTEM			
Permissions: All	low	Deny	
Full Control	]		
Read	2		
Write	2		
Create All Child Objects	2		
Delete All Child Objects	2		
Apply Group Policy			
Advanced Additional permissions are present but not viewable here. Press Advanced to see them.			
OK Cancel		Apply	



8. Once again, log on to the storksbaseball.com domain as **storks02** from **Pro-1** and go to the **Internet Properties**. Notice that after filtering out the domain admins group from the IE Security Settings policy, storks02 (domain admin) is now able to change the Address of the home page and the Security settings. Basically, the IE Security Settings group policy no longer applies to the domain admins group.

Internet Properties	×
General Security Content Connections Programs Advanced	
Home page You can change which page to use for your home page. Address: http://www.microsoft.com/isapi/redir.dll?prd=	>
Use ⊆urrent Use Default Use Blank	
Temporary Internet files Pages you view on the Internet are stored in a special folder for quick viewing later.	
Delete <u>Fi</u> les	
History The History folder contains links to pages you've visited, for quick access to recently viewed pages. Days to keep pages in history: 20 + Clear History	
Colors Fonts Languages Accessibility	
Cancel Apply	



## Folder Redirection

In Windows 2000 the administrator has the ability to redirect folders so that they appear to the users as a local folder, while they are actually redirected to a more secure location on a network server. The Storks' administrator, Joe, has decided to redirect all of the users' My Documents folders to their home drive (mapped as "H" earlier in this lab). This will store their documents on the network server (home drive), whenever they save information to their My Documents folder. It is always a good idea to save data on a server because it is backed up more regularly and is more reliable than a normal desktop PC.

Go to DC-1 and launch Active Directory Users and Computers. Right click on your domain (storksbaseball.com) and click Properties. Click the Group Policy tab, select Default Domain Policy and click Edit. Expand User Configuration → Windows Settings → Folder Redirection and then click on My Documents. Right click on My Documents and click Properties. From the drop down menu, select Basic - Redirect everyone's folder to the same location and type in \\sa-1\users\%username% under Target folder location.

**Note:** The path for Target folder location is the same as the Storks' users home drive. All users should have home drives setup similar to Rudy Redhot shown earlier in this lab. The variable %username% will automatically create a folder (or create a path) to the currently logged on user.

My Documents Properties	? ×
Target Settings	
You can specify the location of the My Documents folder.	
Setting: Basic - Redirect everyone's folder to the same location	-
This folder will be redirected to the specified location. An example target path is \\server\share\%username%.	
Target folder location	-
\\sa-1\users\%username%	
Browse	
	1
OK Cancel Appl	y



2. Joe also wants to prevent users from storing pictures on the network. To accomplish this, you will have to set an option to leave the My Pictures folder on the local computer. If you do not set this option, pictures that users save in the My Pictures folder will be saved on the network, which can take up a lot of disk space.

Click on the **Settings** tab and select **Do not specify administrative policy for My Pictures**. Click **Apply** and then click **OK**.

My Documents Properties	? ×
Target Settings	
Select the redirection settings for My Documents.	
Grant the user exclusive rights to My Documents.	
$\overline{\mathbf{v}}$ Move the contents of My Documents to the new location.	
Policy Removal	_
C Leave the folder in the new location when policy is removed.	
C Redirect the folder back to the local userprofile location when policy is removed.	
My Pictures Preferences	
O Make My Pictures a subfolder of My Documents.	
Do not specify administrative policy for My Pictures	
OK Cancel Ap	ply

3. Log on to the storksbaseball.com domain as **rredhot** from **Pro-1**. Right click on the **My Documents** folder and click **Properties**. Note that the target folder location is pointing to Rudy's home drive. Click **OK** to go back to the desktop.

My Documents Properties	<u>?</u> ×
Target General Security	
The My Documents folder is a shortcut to folder location shown below.	the target
Target folder location Target: (\\\sa-1\\users\\redho)	
OK Cancel	Apply



4. Next, double click on the **My Documents** folder. Right click on **My Pictures** and then click **Properties**. Notice that the Target: is set to C:\Documents and Settings\rredhot\My Documents\My Pictures. Pictures will be saved locally. Click **OK** to go back to the My Documents folder.

My Pictures Prop	perties	? ×
General Shortc	ut Security	
M.	y Pictures	
Target type:	File Folder	
Target location:	My Documents	
Target: 🤇	"C:\Documents and Settings\rredhot\My Do	cume
Run in sepa	arate memory space 🗖 Run as different us	er
Shortout key:	None	
Run:	Normal window	•
Comment:	My Pictures	
	Find Target Change Icc	on
	Cancel A	pply

5. Create a text file called **Test** inside the My Documents folder and close the folder.

🖄 My Documents			
File Edit View Favorites To	ools Help		
] 🗧 Back 🔻 🔿 👻 💽 🛛 🥘 Searc	n 🔁 Folders	History	Pi Ci
Address 🗠 My Documents			
My Documents This folder is Online. Test Text Document Modified: 2/26/2004 5:44 PM Attributes: (normal)	My Pictures		



6. Next, open **My Computer** and double click the **H: drive** (rredhot on 'sa-1\users'). The text file (Test) that you created inside the My Documents folder is also on your home drive. Basically, the My Documents folder and the H: drive (home drive) are the exact same thing.





### Authentication Protocols

Authentication protocols are used during the network authentication process between two computers. They basically ensure that users and servers are who they claim to be. The following table describes four authentication protocols used in Microsoft operating systems.

Types of Auther	ntication Protocols
LM	Default for Windows 95 and 98. Weakest of the Authentication
	Protocols in this list. The password protection method can easily be
	cracked.
NTLM	Default for NT 4.0. Authentication is slower than Kerberos. Performs
	only one-way authentication. Not compatible with non-Microsoft
	networks.
NTLMv2	Can configure Windows 95, 98, and NT 4.0 to use NTLMv2. Unique
	session key per connection. Not as secured as Kerberos, but more
	secured than LM & NTLM. Used in Windows 2000.
Kerberos	Used in Windows 2000 and later. Also used for Unix authentication.
	More secure than NTLM. Uses Mutual Authentication so both users
	and server are authenticated.

The Storks have decided to use the NTLM v2 authentication protocol on their network in addition to Kerberos. Kerberos will work between the Windows 2000 computers but NTLM is required to support legacy clients running Windows 98 and NT 4.0. These systems will have to be updated to support NTLM v2

 To define the NTLMv2 Authentication level, launch Active Directory Users and Computers on DC-1. Expand storksbaseball.com, right click on the Domain Controllers OU and click Properties. Click the Group Policy tab, select Default Domain Controllers Policy and click Edit. Expand Computer Configuration → Windows Settings → Security Settings → Local Policies and click on Security Options. From the right task pane, right click on LAN Manager Authentication level and click Security. Place a check mark next to Define this policy setting, select Send NTLMv2 response only\refuse LM & NTLM and click OK.

Security	Policy Setting	? ×
F	LAN Manager Authentication Level	
I Defir Ser	ne this policy setting: id NTLMv2 response only\refuse LM & NTLM	V
	OK Can	el



### LANguard Network Security Scanner

The Storks have decided to use the LANguard Network Scanner tool to scan their network for security holes. By analyzing the operating system and the applications running on the Storks' network, it will identify possible security holes if they exist. At the time of writing, you can download an evaluation copy of GFI LANguard for non-commercial use from their website at <u>http://www.gfi.com</u>. Look for the product by name once you reach their website.

1. Install **LANguard** on **DC-1**. After LANguard is installed, launch it, type in **192.168.1.0-192.168.1.205** and hit **Enter** to scan the computers within this IP range. You will notice that 3 computers are found (DC-1, SA-1 and Pro-1) within the IP range you provided.





2. Expand the **TCP Ports** for **192.168.1.200** (DC-1) and notice that there are 5 TCP Ports open on this server. These ports were opened by the system and they should be kept open in order for your Domain Controller to function properly on the network. However, if you see some other ports (21 (FTP), 23 (Telnet), 25 (SMTP), 80 (HTTP), 110 (POP3), etc) that are open and you are not using the service linked to the port, then you should consider closing the port.





3. Next, expand Alerts for DC-1 and notice that Service Pack 4 (the latest service pack) for Windows 2000 Advanced Server is not installed on this system along with other security patches. Also, Internet Explorer is missing the latest service pack and security patches. It is very important to keep your system updated by using Windows Update to protect your system from malicious viruses and hackers.





# Lab 3

# Installing and Configuring Software Update Services (SUS)

# You will learn how to:

- Install Software Update Services (SUS)
  - Synchronize the SUS Server
- Approve updates on a Software Update Services Server
  - Install the Automatic Updates Client
- Configure Automatic Updates Client and install updates



## <u>Scenario</u>

Keeping servers and workstations up to date is essential for better network security. In a small network, running Windows Update on individual systems is adequate. But, as an environment starts to grow, performing these tasks can become very time consuming. Joe, the Storks' network administrator, is currently required to analyze and update each computer individually. You recommend to him that he try the free utility Software Update Services (SUS) from Microsoft. You explain that SUS will download and manage Service Packs and updates for Windows 2000, Server 2003 and XP. The SUS server will download the updates and the clients will update themselves once Joe has approved the updates for distribution.

In this lab, you will install and configure Software Update Services on DC-1. DC-1 will download all of the updates and then distribute them to the Windows Update Clients.





### Software Update Services

An Internet connection for DC-1 is required before you can start this portion of lab. Before you install SUS on DC-1, you will need to have the following on your computer:

- 1. Windows 2000 Server, SP2 or higher.
- 2. IIS 5.0 or later (this service should be installed by default along with your Windows 2000 installation).
- 3. Internet Explorer 5.5 or later.
- 4. SUS must be installed on an NTFS v.5 partition.

Once your system meets the above prerequisites you can download and install the Software Update Service package from Microsoft's Website. This package is a GUI-based tool that was developed by Microsoft to allow you to setup a Windows Update server on your own LAN.

1. To download SUS, go to <u>www.microsoft.com</u> and enter **sus server** in the search box.

🗿 Microsoft Corporation - Microsoft Internet Explorer	_ 6
File Edit View Favorites Tools Help	
🔾 Back + 🕥 - 💌 💈 🏠 🔎 Search 🤺 Favorites 🜒 Media 🚱 🔗 - 嬦 🖾 + 🛄 🧏 🎒 🖓	
Address 🕘 http://www.microsoft.com/	
Google + 💽 💏 Search Web 🕞 🖗 🎽 PagePank 🚯 + 🗗 721 blocked 📲 AutoFill 🧕 🛃 Options 🥒	
Microsoft.com Home   §	ite Map
Microsoft Search Microsoft. Susserver	GO
Microsoft.com Home   MSN Home 🗟 Subscribe   Manage Your Profile	

2. Click on the search result that references SUS. This page should allow you to download SUS.





3. After you have completed the download, double-click the **SUS 1.0 SP1** file (your file name may be different) on DC-1's desktop to install this service. The first screen you will see is the welcome screen. Just click **Next** to pass this screen and also click **Next** to accept the license agreement.

🖟 Microsoft Software Update Ser	rvices Setup Wizard	Hicrosoft Software Update Services Setup Wizard	×
	Velcome to the Microsoft Software Update Services	End-User License Agreement Please read the following license agreement carefully.	Ð
The second secon	NetLap Wilzard	Microsoft Software Update Services SP1 SUPPLEMENTAL END USER LICENSE AGREEMENT FOR MICROSOFT SOFTWARE ("Supplemental EULA") IMPORTANT: READ CAREFULLY - These Microsoft Corporation ("Microsoft") operating system components, including any "online" or electronic documentation ("OS Components") are subject to the terms and conditions of the agreement under which you have licensed the applicable Microsoft ocerating system coduct described below (each an "End User	
То	o continue, click Next.	C I go not accept the terms in the License Agreement	
	< Back Next > Cancel	<u>Back Next &gt; </u> Cancel	

4. The next screen will ask you to choose a setup type. For the purposes of this lab, click **Custom**.





5. On the choose file locations screen, you can select to either save updates to a local folder or to direct clients to a Microsoft Windows Update server. Make sure that the **Save the updates to the local folder:** is selected and click **Next** to continue.

🖟 Microsoft Software Update Services Setup Wizard	×
Choose file locations Specify where to store the Microsoft Software Update Services Web site files and the update files you approve.	$\mathfrak{S}$
Save Microsoft Software Update Services Web site files to this local folder:	
C:\SUS\	Br <u>o</u> wse
Update Storage You can choose to store updates locally or direct clients to a Microsoft Windows I server. © Save the updates to this local folder: C:\SUS\content\ C:\SUS\content\ Will direct clients	Update Bro <u>w</u> se
< Back	Cancel

6. This will bring you to the Language Settings screen. There are 3 selections you can choose from: English only, All available languages and Specific languages. The default is set on All available languages. This setting requires a lot of available hard disk space for update storage and takes a considerable amount of time for downloads. Therefore, just select **English only** as the supported language. Click **Next** to continue.

🛃 Microsoft Software Update Services Setup Wizard	×
Language Settings	$\mathfrak{F}$
Choose the languages in which you would like the updates to be available.	
© English only C All available languages	
C Specific languages:	
<u> &lt; B</u> ack <u>Next &gt; </u>	Cancel



7. Next, is the "Handling new versions of previously approved updates" screen. Select I will manually approve new versions of approved updates as the update approval setting. This will avoid any compatibility issues you might face by turning new version updates loose on your network. Click Next to continue.

🐺 Microsoft Software Update Services Setup Wizard	×
Handling new versions of previously approved updates	B
Choose whether to automatically approve new versions of approved updates or manually approve them at your convenience.	
Update Approval Settings	
C Automatically approve new versions of previously approved updates	
○ I will manually approve new versions of approved updates	
< Back Next >	Iancel

8. This will bring you to the Ready to install screen. This screen provides you with the URL to which Automatic Updates client computers should be configured to point, which will be <u>http://DC-1</u> on the Storks' network. Click **Install** to begin the installation.

🖟 Microsoft Software Update Services Setup Wizard	×
Ready to install	$\mathfrak{S}$
To begin the installation, click Install. If you want to review or change any of your installation settings, click Back.	
Specifying a download URL	
Computers running the Automatic Updates client should be configured to point to the Following URL to download updates: http://DC-1	
< <u>Back</u> Canc	:el



 After you have successfully installed Software Update Services, open Internet Explorer and type in <u>http://DC-1/SUSAdmin</u> (you can also type in <u>http://localhost/SUSAdmin</u>). This will bring you to the Software Update Services admin page.



10. Before you can distribute any updates to your clients, you will need to synchronize your SUS server with the Microsoft Windows Updates server. Click the **Synchronize server** button on the left side of the SUS server admin page. On the right pane of the SUS server admin page, as you see, there are 2 selections: Synchronize Now and Synchronization Schedule. You can either manually synchronize or schedule a date and time for synchronization. Since this server has never been synchronized with the Microsoft Windows Updates server, click **Synchronize now** to synchronize it. The server will start downloading updates right away from the Microsoft Windows Update server. There are a lot of updates to download so this process may take quite some time.

Microsoft <sup>®</sup> Software Update Serv				
Software Update Services	Synchronize server Last synchronization: Friday, December 19, 2003 7:21:00 PM			
Welcome     Synchronize server     Approve updates	Next synchronization: <b>(None)</b> You can choose to set a schedule for your server to automatically synchronize with the Software Update Services servers, or manually synchronize your server at any time.			
Other Options  View synchronization log  View approval log	Synchronize Now Synchronization Schedule			
© 2002 Microsoft Corporation. All rights reserved. <u>Terms of use.</u> <u>Accessibility.</u>				



11. After all of the updates have been downloaded, you will be asked to select and approve new updates. Click **OK** to continue.

Microsoft Software Update Services - Mici	osoft Internet Explorer
File Edit View Favorites Tools Help	
↔ Back • → - 🙆 🕼 🖓 🥘 Search [	🗑 Favorites 🞯 Media 🎯 🗳 - 🎒
Address 🕘 http://localhost/SUSadmin/	▼ 🖉 Go Links ≫
Software Updat	e Servi
Software Update Services	Synchronize server
Welcome	Next synchronization: (None)
Synchr VBScript	
Other Op	y synchronized with the Microsoft Windows Update servers. Click
View st     View at	ок
Set options	server
Monitor server	Downloading package 178 of 178 (762 KB / 762 KB) 100% complete
See Also	Detailed item description files (Read This First and End User License Agreement for all items)
About Software Update Services	
Microsoft Windows Update	
Microsoft Security	Total Progress (100% complete)
Microsoft Support Knowledge	
© 2002 Microsoft Corporation. All rights rese	rved. <u>Terms of use.</u> <u>Accessibility.</u>
Done	🛛 🛛 🗮 Local intranet

12. When using SUS, updates need to be approved before you can distribute them to your clients. This gives the administrator control of exactly what to distribute on the network. To approve updates for distribution, just click **Approve updates** in the left pane of the SUS server admin page. In the right pane of the SUS server admin page, there are many updates waiting to be approved for distribution.





13. Check all of the updates that apply to the Windows 2000 family and click **Approve** for distribution. Also, click **Yes** to approve this new list of updates to become available to your Automatic updates clients.

Software Update Services	Approve updates Choose the updates that you would like to distribute to your clients, ar	nd then click <b>Approve</b> .
Synchronize server	Available Updates	Sort by: Status
Approve updates	Security Update, March 7, 2002, 12/4/2003	(Approved)
Other Options Usew synchronization log View approval log Set registers	Powniad size: 1.6 MB This update resolves the "Unchecked Buffer in Windows Shell Co Byscution" security vulnerability in Windows 2000, and is discuss Buffett MSG-014. Download now to help prevent a malicious us ubauthorized programs on your computer. Details Applies to: Windows 2000 SP1, Windo	ould Lead to Code sed in Microsoft Security ser from running 000 SP2
Monitor server See Also About Software Update Services Microsoft Windows Update	C dB23172: Security Update, 11/13/2003 Dwnload size: 333 KB The update resolves the "Haw in Digital Certificate Enrollment C Deletion" security vulnerability in Windows 2000. Sownload now HTML email from deleting digital certificates on your computer a dang the services they are associated with. Details opplies to Windows 2000 SPL, Windows 2000 SPL, Windows 2000 SPL	(Approved) component Allows Certificate to help stop a Web site or and preventing you from 000 SP3
Microsoft Security	0323255: Security Update (Windows 2000), 11/13/2003	(Approved)
Microsoft Support Knowledge	$\lor$	Approve
2002 Microsoft Corporation. All rights res	erved. Terms of use. Accessibility.	
VBScript: Software Upda	te Services	×
You are about to approve	a new list of updates to become available to your clie	nt computers. This

14. On the Software Update Services admin page, you can also view a Synchronization Log. This log provides you with information about synchronization that has occurred between DC-1 and the Windows Update servers. Click **View** synchronization log to view the log.

Software Update Services         Welcome         Synchronize server         Approve updates         Other Options         View synchronization log         View approval log         Set options         Set options         Monitor server         About Software Update Services         Microsoft Windows Update         Microsoft Windows Update         Microsoft Windows Update         Microsoft Security	Software Upda	te Services
About Software Opdate Services     (822925) - q822925_4c06ec6d1cd1351b50b56be3dacf8b0.exe     August 2003, Cumulative Patch for Internet Explorer 5.01 for Windows 2000 Service Pack 4     (822925) - q822925_52201cd39f7130d760c3128a3b66f9c.exe	Software Update Services  Welcome Synchronize server Approve updates  Other Options View synchronization log View approval log Set options Monitor server  See Also Above Scheme Update Service	Version 1.0.3630.2552         Synchronization Log         This log includes information about synchronizations that have occurred between your local server and the software Update Services servers.         Manual Sync Started- Tuesday, December 30, 2003 5:31:36 PM Software Update Services is up to date. No changes were required during synchronization.         Sync Finished-Tuesday, December 30, 2003 5:31:55 PM         Manual Sync Started- Monday, December 29, 2003 4:11:32 PM Successful Updates Added: Q328676: Security Update (Outlook Express 5.5 SP2) - q32839_301.645C05107C006472F83958DD424027D051C3.exe Security Update, February 14, 2002 (Internet Explorer 5.01) - VB551NEN_667984E5AD916D6462A3AB5B4C28B12867CA1E6.EXE August 2003, Cumulative Patch for Internet Explorer 5.01 for Windows 2000 Service Pack 3
Clear Log Print Log	About Software Update Services Microsoft Windows Update Microsoft Security Microsoft Support Knowledge Pace	(822925) - q822925_4c06ec6d1cd1351b50b56be3dacf8b0.exe August 2003, Cumulative Patch for Internet Explorer 5.01 for Windows 2000 Service Pack 4 (822925) - q822925_52201cd39f7130d760c3128a3b66f9c.exe Clear Log Print Log



15. You can also view approved and unapproved updates by clicking on the **View approval log** in the SUS admin page.



## Automatic Updates client

 After you have approved the required updates on the Storks' SUS server, you need to download and install the Automatic Updates client software on your client machine, Pro-1. This client is already present with Windows 2000 SP3 or later, XP SP1 and Server 2003. Otherwise, go to <u>www.microsoft.com</u> and do a search for: susclient

Microsoft Corporation -	Microsoft Internet Explorer
File Edit View Favorite	es Tools Help
🚱 Back 🔹 📀 👻 💌	😰 🏠 🔎 Search 🧙 Favorites 🜒 Media 🤣 🎅 + 連 🔯 🐇 🐻 🐇
Address 🙆 http://www.micr	iosoft.com
Google -	💌 😚 Search Web 🔹 🖚 🎴 🔤 🖓 🕈 🗣 🖓 721 blocked 📲 AutoFili 🧕 🔩 Options 🥒
	Microsoft.com Home
<b>Microsoft</b>	Search Microsoft.com sus client
Microsoft.com Home	MSN Home   Subscribe   Manage Your Profile
Product Families	



2. After you have downloaded the Automatic Updates client installation package, just double-click the **wuau22.msi** file (the name of the file at time of writing) on Pro-1's desktop to install it. The installation will take less than a minute. After you have completed the installation, a new applet will be created in the Control Panel.



3. The Automatic Updates client is initially not enabled to download updates from your SUS server. It is configured to download updates from the Windows Update server by default. Therefore, you will need to configure it so that it will download updates from your dedicated SUS server.

Automatic Updates settings are configured through a special administrative template. You need to add this template to the group policy console. To do this, go to  $Start \rightarrow Run$ , type in gpedit.msc and click OK. This brings up the Group policy console. Right click on Administrative Templates and select Add/Remove Templates.





4. In the Add/Remove Templates dialog box, click **Add** and then select the **wuau.adm** template. Click **Open** to confirm this choice. Then click **Close** to close the Add/Remove Templates box.

Add/Rem	nove Template	25			?	×
Current F	Policy Templates:					
Name				Size	Modified	
🛛 📄 con	f			32KB	12/7/1999 6:00	
🛛 🔊 inet	res			109KB	12/7/1999 6:00	
syst 🔊	em			721KB	5/4/2001 11:05	
Add	i Re	move			Close	
cy Template	:5					[
Look in	: 🔂 inf			- +	🗈 💣 🎟 -	
History Desktop	<ul> <li>common.adm</li> <li>conf.adm</li> <li>inetcorp.adm</li> <li>inetset.adm</li> <li>inetset.adm</li> <li>system.adm</li> <li>windows.adm</li> <li>winnt.adm</li> <li>wmp.adm</li> </ul>	n				
ly Computer	a wuau,adm					
dy Computer	File name:	wuau	>		•	Oper



5. In the group policy console, expand the **Administrative Templates** node and expand the **Windows component** node. Click on the **Windows Updates** folder. As you see in the right pane of the group policy console, there are 2 policies you need to configure for your SUS client.

Tree	Policy	Setting
🛃 Local Computer Policy 🚽	🛐 Configure Automatic Updates	Not configured
🔄 🚚 Computer Configuration	🛱 Specify intranet Microsoft update service location	Not configured
🖻 💼 Administrative Template:		
🖻 💼 Windows Componen		
🚞 NetMeeting		
📄 Internet Explore		
Task Scheduler 💳		
Windows Installe		
🕂 🔁 System		
📃 🗄 📄 Network 📃 🗾		

6. Double click on the **Configure Automatic Updates** policy. It will bring you to its properties dialog box. Select **Enabled** and choose **Auto download and notify for install**. Click **OK** to complete the configuration.

Cor	nfigure Automatic Updates Properties	? ×
F	Policy Explain	
	🛱 Configure Automatic Updates	
	C Not Configured	
<	© Enabled	
	© Disabled	_
	Configure automatic updating:	
$\langle$	3 - Auto download and notify for install	
	The Tollowing estings are only required and applicable if 4 is selected.	
	Scheduled install day: 0 - Every day	1
	Scheduled install time: 03:00	1
	Previous Policy Next Policy	
	OK Cancel Ap	ply



7. Next, double click the **Specify intranet Microsoft update service location** policy. You will see the properties dialog box below. Select **Enabled** and enter **http://DC1** as the update service and statistics server. Click **OK** to complete the configuration. You have now completed configuration of the Automatic Updates client.

5	pecify intranet Microsoft update service location Properties Policy Explain	<u>? ×</u>
	Specify intranet Microsoft update service location	
	Not Configured     Enabled	
	Disabled     Set the intranet update service for detecting updates:	-
(	Set the intranet statistics server:	
	http://DC-1 (example: http://intranetUpd01)	
	Previous Policy Next Policy	
	OK Cancel	iply

8. After you have completed the Automatic Updates client configuration on Pro-1, a Windows Update notification will be appear on the task bar. It will sometimes take a period of time (up to 24 hours) for this to appear depending on the number of updates you have approved. When this appears, double click it.





9. This brings you to the Automatic Updates dialog box. Click on **Details** to verify all of the updates that you approved in your SUS server and click **Install** to start the installation process. As soon as the installation is completed, click **Yes** to restart **Pro-1**.

🕙 Automatic Updates	×	🚷 Automatic Updates 🔀
<b>45</b>	Ready to Install Windows is ready to install the recommended updates for your	Ready to Install
	computer. If you would like to postpone installation to a more convenient time.click "Bernind Me Later."	The following updates are recommended for your computer. Review the list of updates and click. "Install" to continue.
KA		814033: Critical Update     This update addresses the "Offered driver may not install using Windows Update"     issue in Windows 2000, and is discussed in Microsoft Knowledge Base (KB) Article     814033. Download now so you can download drivers that Windows Update offers.
		Q323172: Security Update
	Note Some updates may require that you restart your computer. Please save your work and close all programs before proceeding.	This update resorves the "Traw in Digital Lettricate Enclotheric Component Allows Certificate Deletion" security vulnerability in Windows 2000. Download now to help stop a Web site or HTML e-mail from deleting digital certificates on your computer and preventing you from using the services they are associated with.
	Details Remind Me Later Install	Settings Remind Me Later
🎨 Automatic Updates	×	Nutomatic Updates
Installation in P	rogress	Restart Your Computer To Finish
		The updates will not be fully installed until you restart your computer.
updates are being instal	ied. You will be notified when installation is complete.	Before restarting, be sure to save your work and close any open programs.
		Restart the computer now?
		Yes No

10. After you have completed the installation, you can go to **Add/Remove** programs in Control Panel and verify that all of your updates have been installed.

🖬 Add/Remov	e Programs		- X
Change or Remove Procrams	Currently installed programs: Windows 2000 Hotfix (Pre-SP3) [See Q311967 for more information] Windows 2000 Hotfix (Pre-SP3) [See Q313829 for more information] Windows 2000 Hotfix (Pre-SP4) [See q323172 for more information] Windows 2000 Hotfix (SP4) Q814033	Sort by: Name	4
Programs			Close



## Configuring Automatic Updates with a GPO

Configuring the Automatic Updates client on all of the machines in your network is time consuming and inefficient. Instead, you can deploy the settings through a group policy object (GPO).

1. Log on to **DC-1** and launch **Active Directory Users and Computers**. Right click on your domain (**storksbaseball.com**) and click **Properties**. Click the **Group Policy** tab and click **New**. Type in **SUS Client Settings** for the new policy name and click **Edit**.

**Note:** This policy will be applied at the domain level. In a production environment you may not want to deploy this policy onto servers.

storksbaseball.com Properties	<u>? ×</u>
General Managed By Group Policy	
Current Group Policy Object Links for storksbaseball	
Group Policy Object Links No Override Disable	ed b
🚮 Default Domain Policy	
🚮 Stork's - Company Wide Settings	
IE Security Settings	_
SargsUS Lient settings	
, Group Policy Objects higher in the list have the highest priority. This list obtained from: DC-1.storksbaseball.com	
New Add Edit Up	
Options Delete Properties Down	- 1
	-
Block Policy inheritance	
Close Cancel App	y I



2. Under Computer Configuration, right click on Administrative Templates and click Add/Remove Templates.

🝠 Group Policy	
ActionYiew] ← →   🔁 🚺	ਗ਼ 🖪 🕄
Tree SUS Client settings [DC-1.storksbas Computer Configuration Gomputer Settings Administrative Templates Guser Configuration Guser Configuration Guser Settings Guser Settings Guser Configuration Guser Config	Policy Windows Components System Network Printers Add/Remove Templates All Tasks View Export List Help
Manage administrative templates	

3. In the Add/Remove Templates dialog box, click Add and select the wuau.adm template. If this file is not present in the Policy Templates dialog box, you can download it from the Microsoft web site and save it to c:\winnt\inf (assuming that you have Windows 2000 installed on your C: drive). If the file is present, make sure you check its size. If it is 18KB (or 19KB), this is an older version. There is a newer version, 24KB (or 25KB), that has two additional configuration options. The newer version is demonstrated in this lab. Click **Open** to continue.

				Policy T	emplates					<u>? ×</u>
_					Look in:	🔁 inf		•	+ 🗈 💣 📰-	
A	Id/Remove Templates Current Policy Templates: Name continue in Petres in system	Size 32KB 109KB 721KB	.?         X           12/7/1999 6:00         12/7/1999 6:00           5/4/2001 11:05         5/4/2001 11:05	His Des My Do	story sktop cuments pomputer	common.adm     conf.adm     inetcorp.adm     inetcorp.adm     inetres.adm     inetset.adm     system.adm     windows.adm     wint.adm     wuqu.adm				
	Add		Close	My Net	work P	File name: Files of type:	wuau Policy Templates		▼ ▼	Open Cancel



4. You should now see **wuau.adm** included in the list of templates. Make sure this file shows up as 24KB in size and click **Close**.

Add/Remove Templates		<u>?</u> ×
Current Policy Templates:		
Name	Size	Modified
📄 🖻 conf	32KB	12/7/1999 6:00
🔊 inetres	109KB	12/7/1999 6:00
🔊 🔊 system	7 <u>21KB</u>	5/4/2001 11:05
🔊 wuau	(24KB)	3/18/2004 10:1
Add Remove		Close
		V

5. Back in the group policy console, expand the **Administrative Templates** node and expand the **Windows components** node. Click on the **Windows Updates** folder. In the right pane of the group policy console, there are 4 policies that you can configure.





6. Double click the **Configure Automatic Updates** policy. This brings you the properties dialog box. Select **Enabled** and **Auto download and notify for install.** Click **Next Policy**.

Configure Automatic Updates Properties	<u>? ×</u>
Policy Explain	
🖗 Configure Automatic Updates	
C Not Configured	
Configure automation to the second se	-
Auto download and notify for install     The following extings are only required     and applicable if 4 is selected.	
Scheduled install day: 0 - Every day	
Scheduled install time: 03:00	
Previous Policy Next Policy	
OK Cancel Ap	oly

 The next policy is Specify intranet Microsoft update service location Properties. Select Enabled and enter <u>http://DC-1</u> as the update service and statistics server. Click Next Policy to continue.

Specify intranet Microsoft update service location Properties	<u>?</u> ×
Specify intranet Microsoft update service location	
C Not Configured C Enabled	_
C Disabled Set the intranet update service for detecting updates:	
Set the intranet statistics server:	
(example: http://intranetUpd01)	
Previous Policy Next Policy	
OK Cancel Ap	ply



8. In the **Reschedule Automatic Updates scheduled installations Properties** dialog box, select **Enabled** and leave the **Wait after system startup** at the default setting of 5 minutes. Click **Next Policy** to continue.

Reschedule Automatic Updates scheduled installations Prope ? X
Reschedule Automatic Updates scheduled installations
C Not Configured
• Enabled
C Disabled
Previous Policy Next Policy
OK Cancel Apply

9. The last policy is **No auto-restart for scheduled Automatic Updates installations.** Select **Enabled** to prevent computers from restarting automatically after performing updates. Click **OK** and you have finished configuring the windows update client through group policy.

No auto-restart for scheduled Automatic Updates installation 🏋 🗙
Policy Explain
H No auto-restart for scheduled Automatic Updates installations
C Not Configured
O Disabled
Previous Policy Next Policy
OK Cancel Apply