

AppLoader7

Windows Server 2003
Injector Optimization



Protocol Independent
Load Testing

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PREREQUISITES

Before proceeding ensure that the following NRG Global products are installed:

- ✓ ScenarioBuilder
- ✓ AppLoader
- ✓ Injector

Note that these applications may all be installed on the same Windows Server or on separate machines.

INTRODUCTION

This document will outline the steps to properly configure Windows Server 2003 R2 for optimal use as an AppLoader Injector.

When working with **Virtual Machines**, we recommend completing the configuration steps outlined in this document and running a typical load test to see how many rUsers your server can handle. Once you are happy with the performance of this prototypical server, clone the server to create additional Injectors. For details and tips on cloning Injectors, please refer to the [Cloning Injectors on Virtual Servers](#) section of this guide.

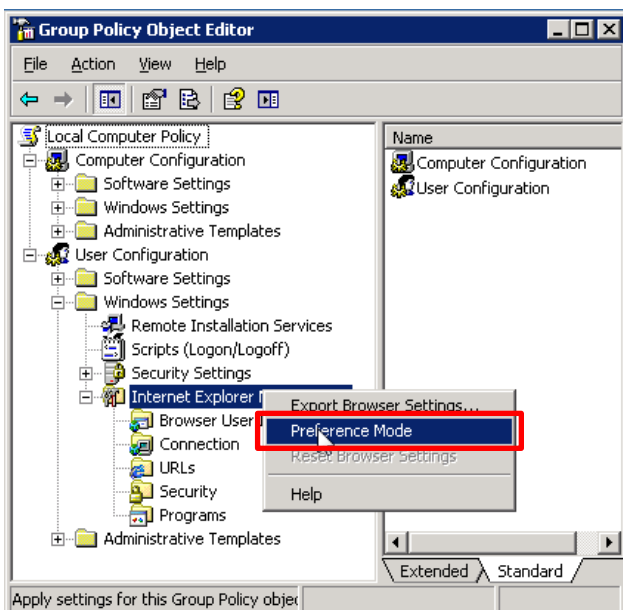
INJECTOR OPTIMIZATIONS

GROUP POLICY CONFIGURATIONS

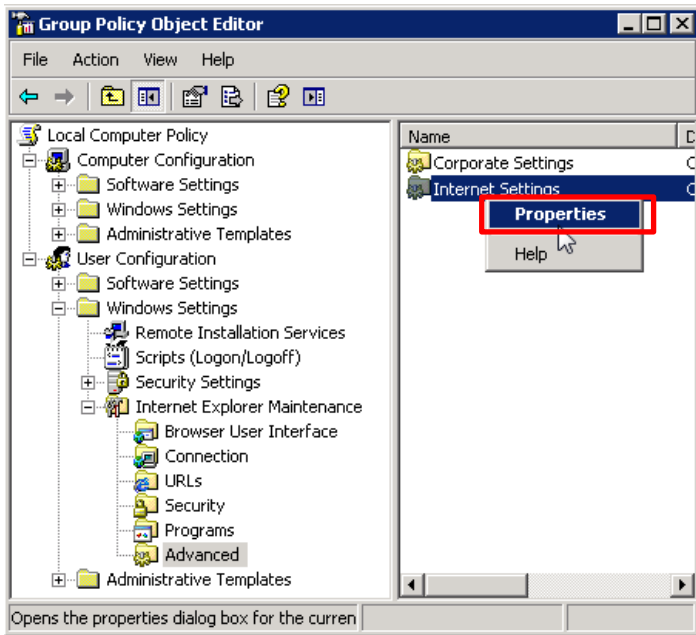
INTERNET EXPLORER - DISABLE *AUTOCOMPLETE* AND HTTP ERROR MESSAGE POP-UPS

Go to “Group Policy Object Editor” (GPO), Start → run→ type **gpedit.msc**.

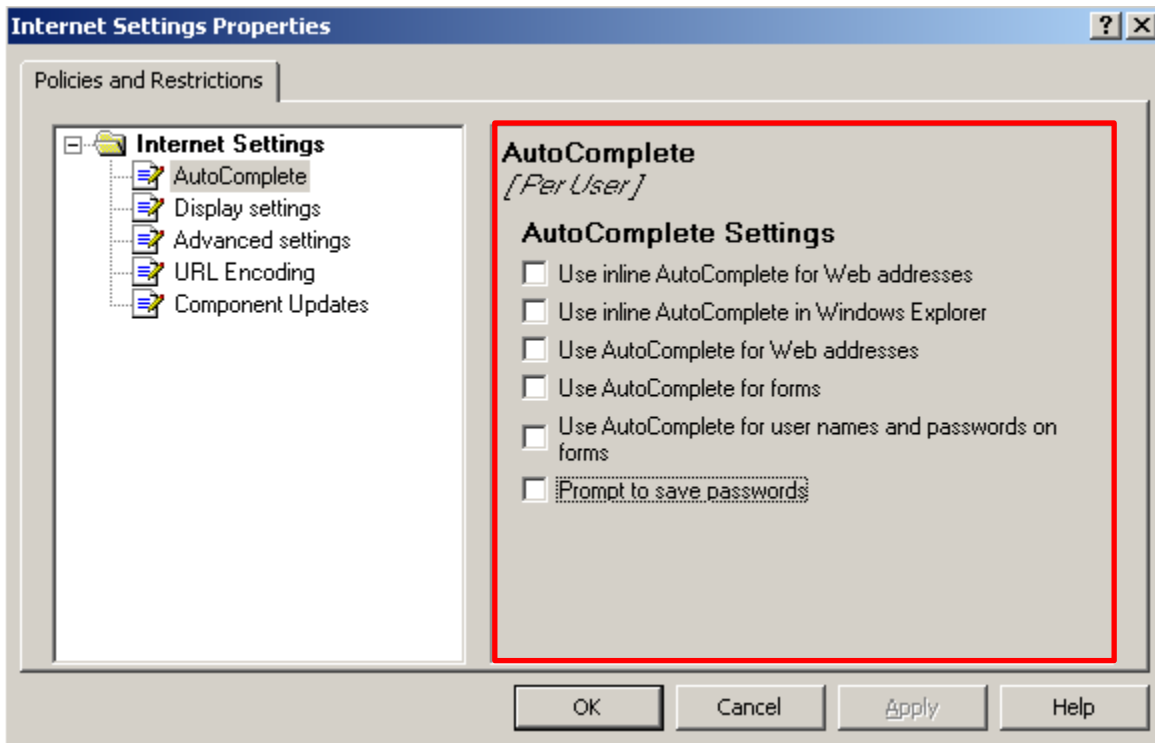
Expand the “User Configuration tree”→ “Windows Setting” → Right click “Internet Explorer Maintenance” → select “Preference Mode”.



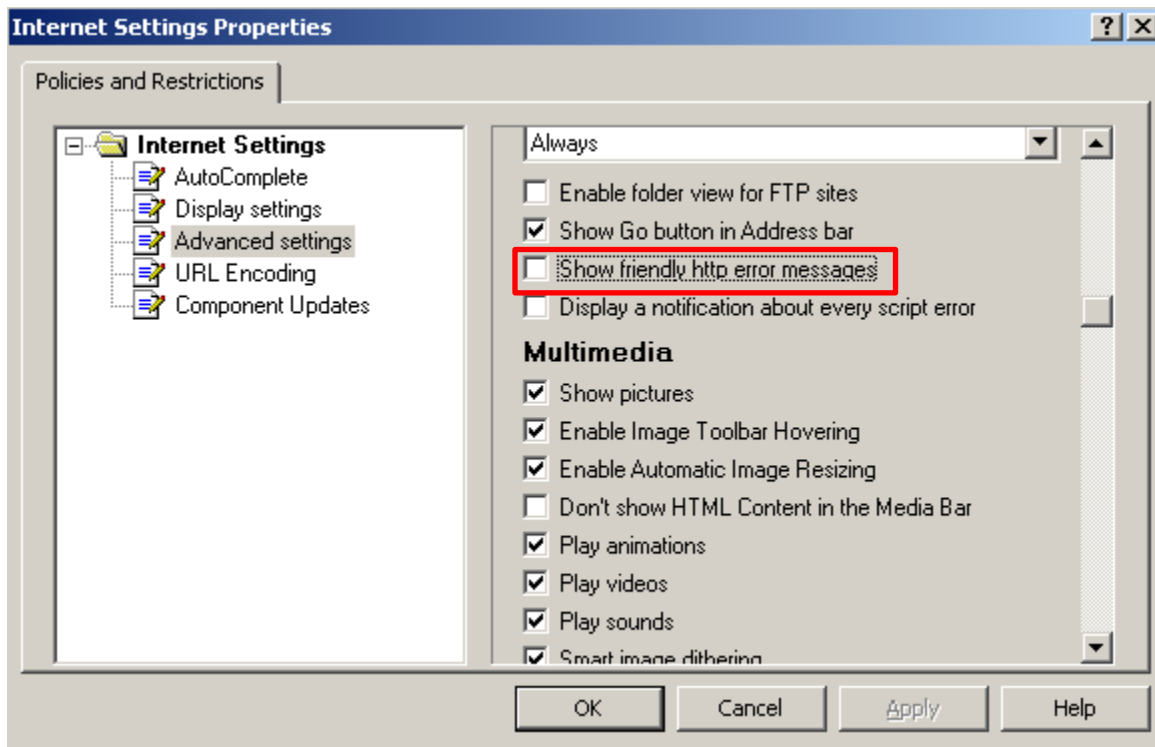
Under “Internet Explorer Maintenance”, click “Advanced”. In the right pane, right-click on “Internet Settings” and select “Properties”



Uncheck everything in the “AutoComplete” section.



Uncheck “Show friendly http error messages” in “Advanced Settings”.



Click “OK” to save settings and close the window.

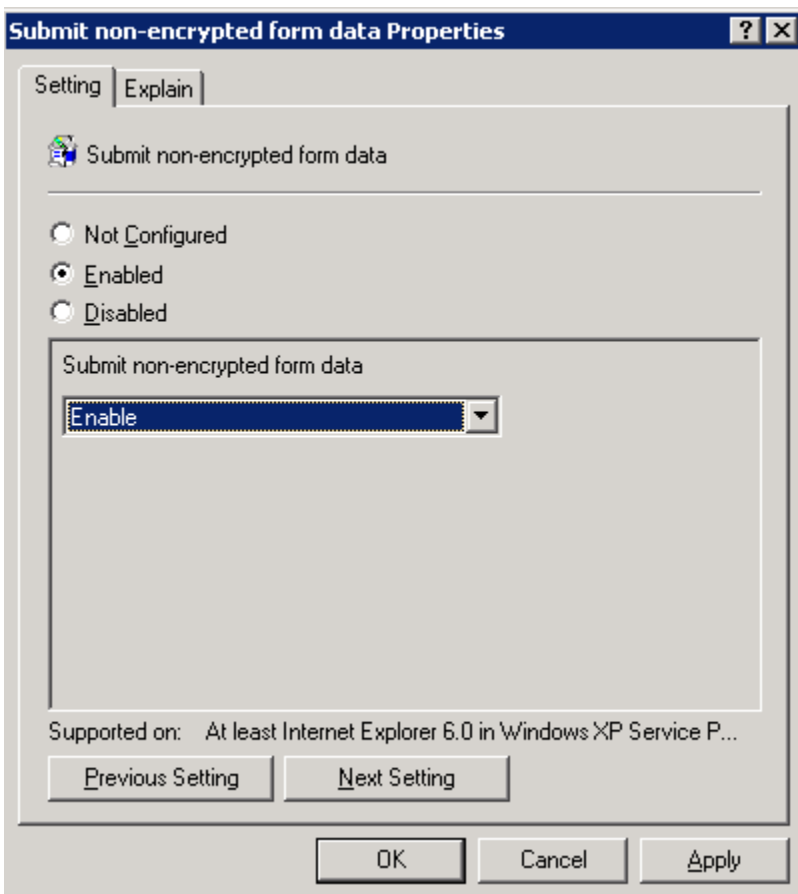
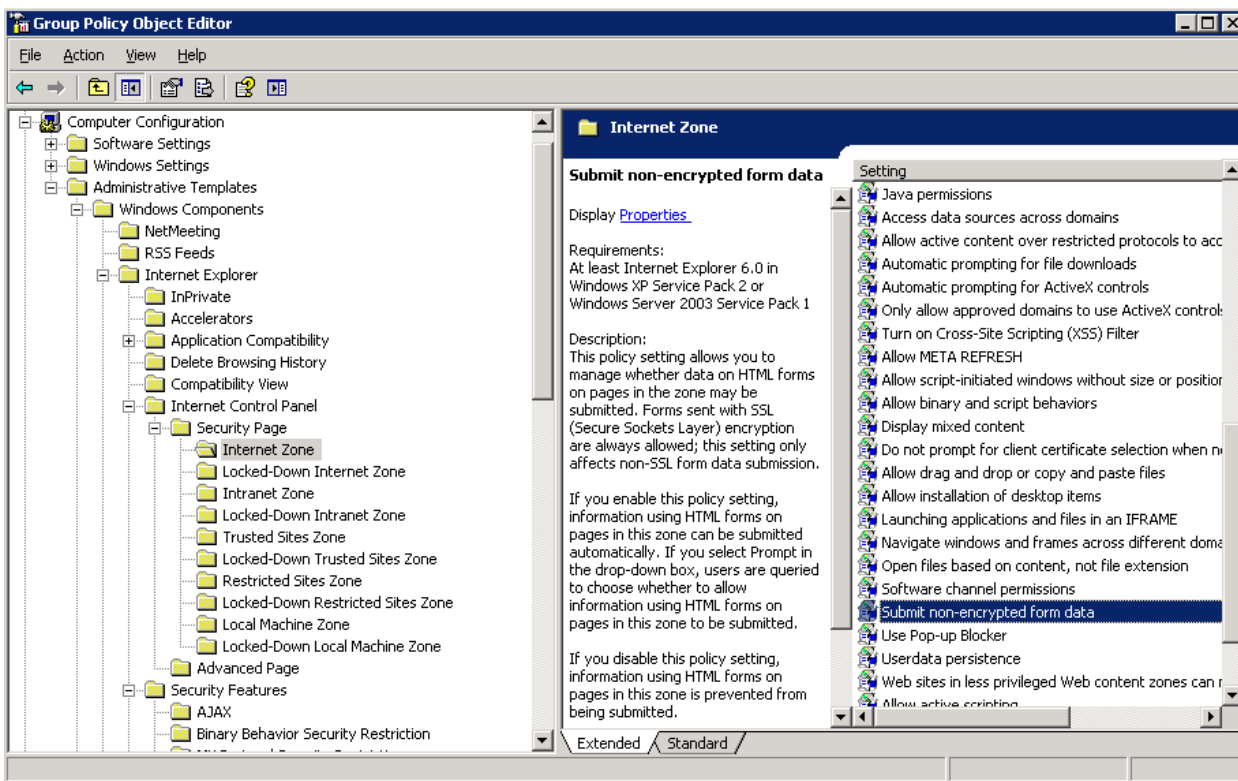
INTERNET EXPLORER - ENABLE SENDING OF NON-ENCRYPTED DATA (WITHOUT “WARNING” MESSAGE)

Prevent the following pop-up from occurring in Internet Explorer:



In Group Policy Object Editor, navigate to “Internet Zone” settings and Enable “Submit non-encrypted form data”:

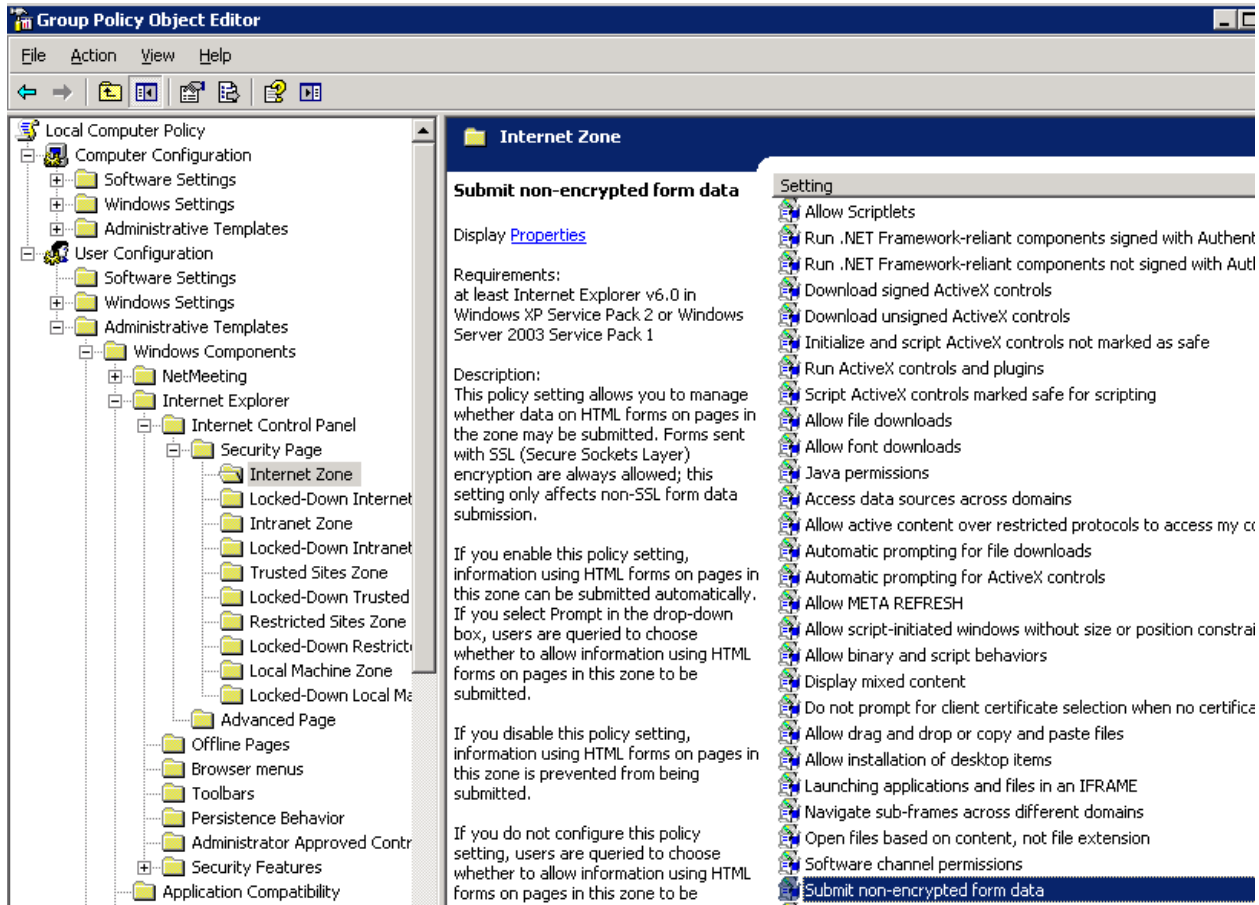
Computer Configuration→ Administrative Templates→ Windows Components→Internet Explorer→ InternetControl Panel→Security Page→ Internet Zone



Click "Apply".

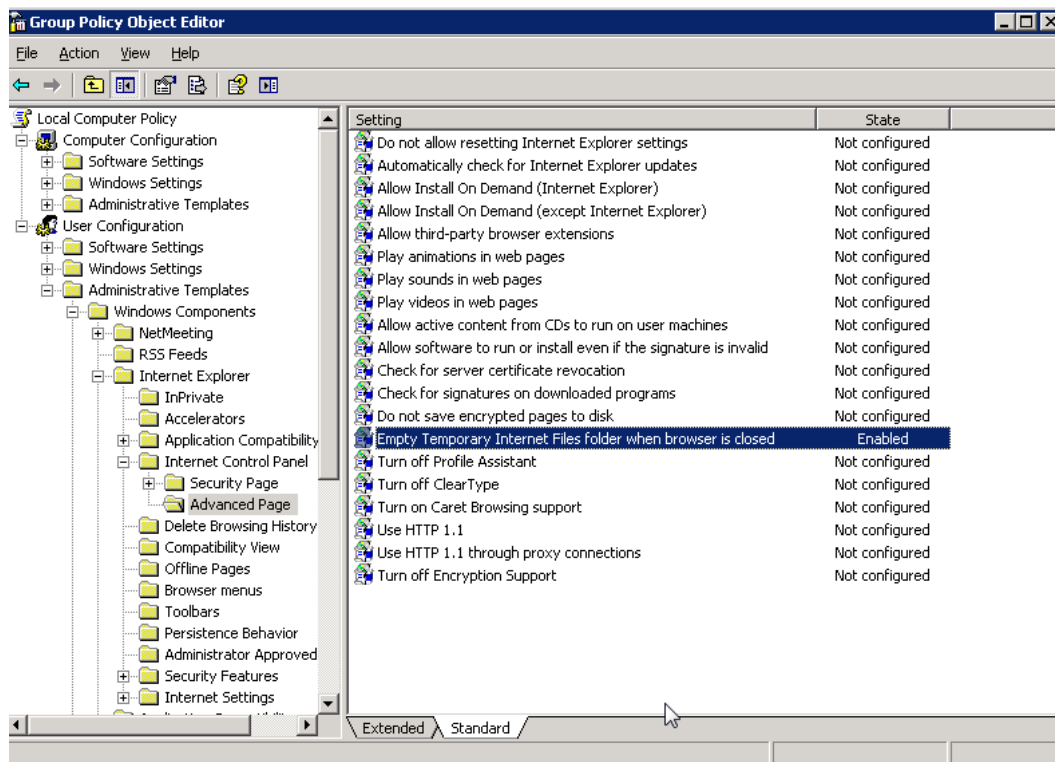
Repeat for “User Configuration”

User Configuration→ Administrative Templates→ Windows Components→Internet Explorer→ InternetControl Panel→Security Page→ Internet Zone

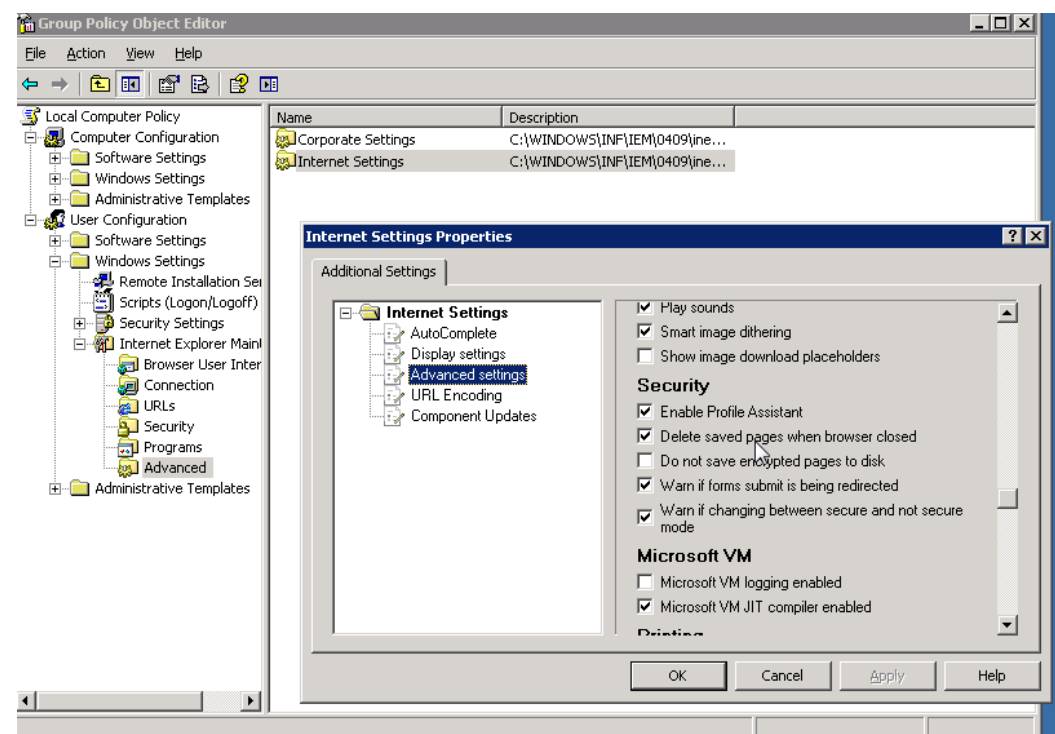


INTERNET EXPLORER - EMPTY TEMPORARY INTERNET FILES FOLDER

Enable “Empty Temporary Internet Files folder when browser is closed” setting in Group Policy Object Editor to clear the browser cache:



Check “Delete saved pages when browser closed” in Advanced Settings – Security section:

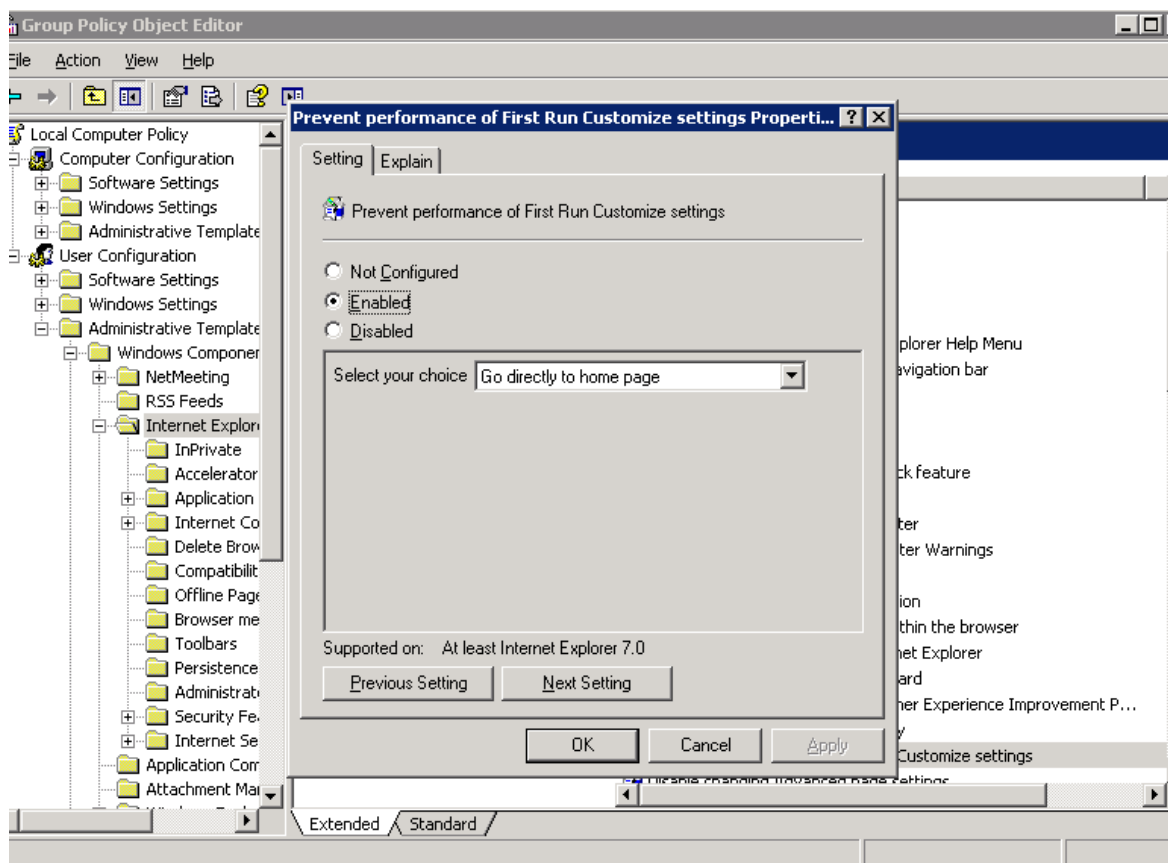


INTERNET EXPLORER - PREVENT IE “WELCOME” MESSAGE



Run GPEDIT.MSC

Find “Administrative Templates”, drill to “Windows Components”, “Internet Explorer.” Double click on “Internet Explorer” to bring up the list of settings in the right pane. Find “Prevent Performance of First Run Customize Settings” and right-click on it. Select “Edit” and click “Enabled”. In the “Options” pane choose “Go directly to home page” from the drop down list. Click “Apply”.



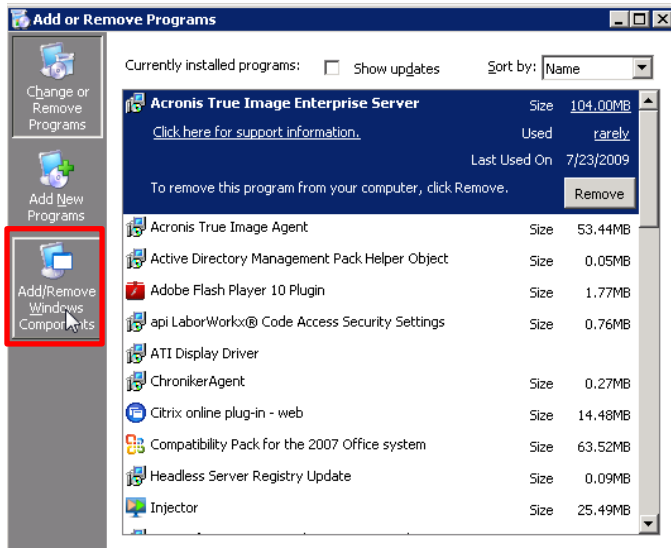
Click “OK” and close Group Policy Object Editor.

WINDOWS COMPONENTS & SYSTEM PROPERTIES

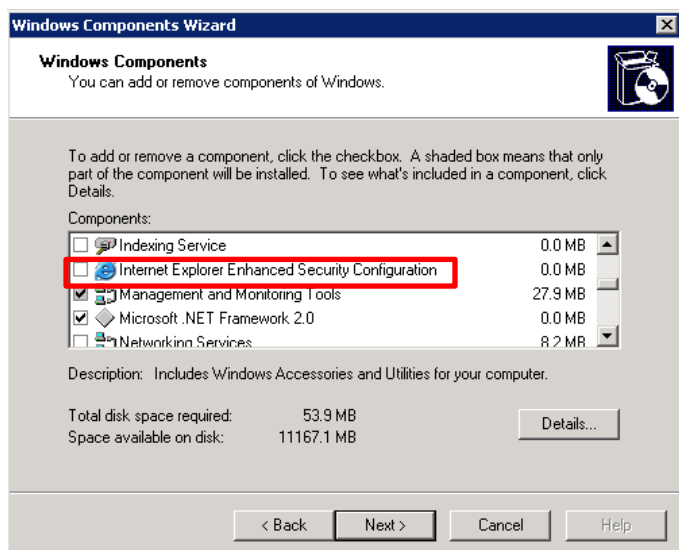
INTERNET EXPLORER - DISABLE IE ENHANCED SECURITY CONFIGURATION

This will eliminate the majority of IE pop-up messages

Go to “Control Panel” → “Add Remove Programs” → “Add Remove Windows Components”



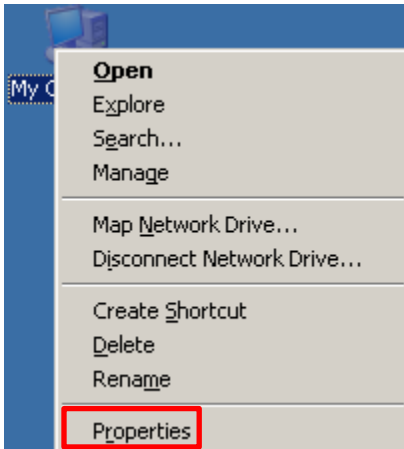
Uncheck “Internet Explorer Enhanced Security Configuration”



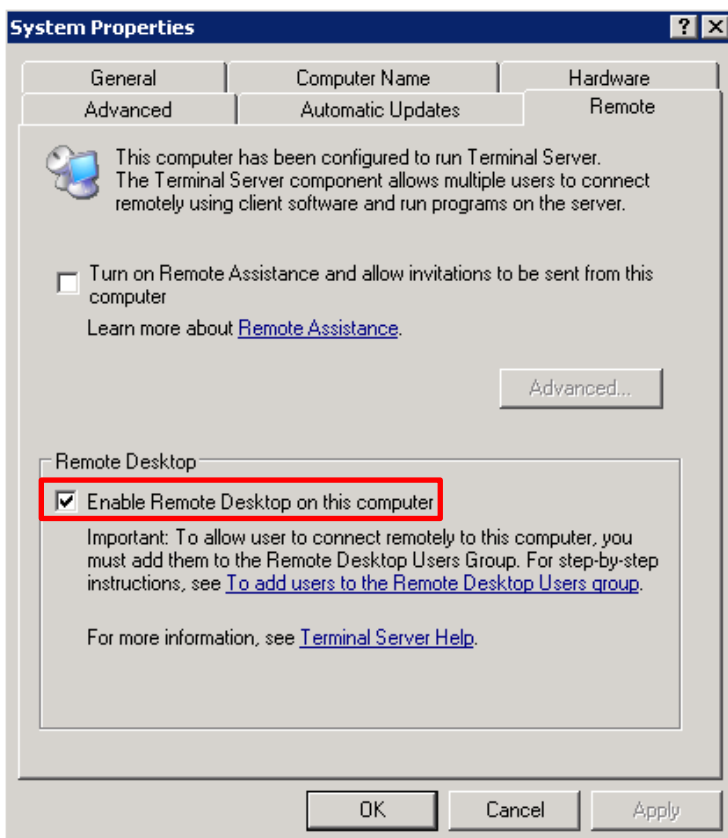
ALLOW REMOTE DESKTOP CONNECTIONS TO THE INJECTOR SERVER

Injectors require that remote desktop connections are allowed.

Right click “My Computer” → “Properties”



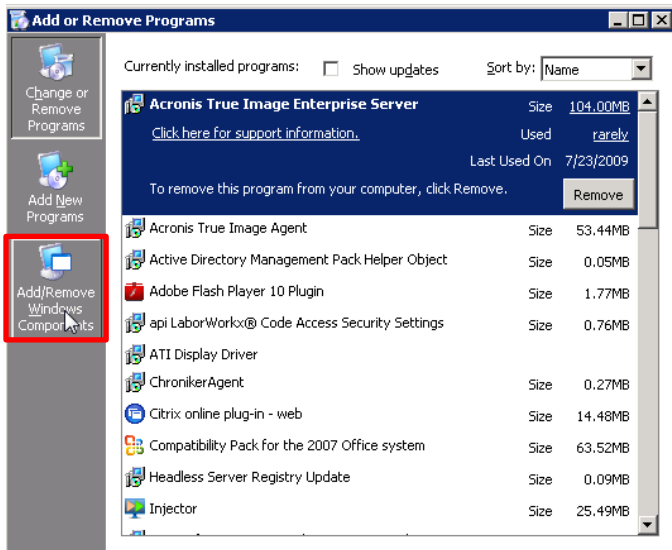
Click on the “Remote” tab and check the “Enable Remote Desktop on this computer” check box. Click “OK”



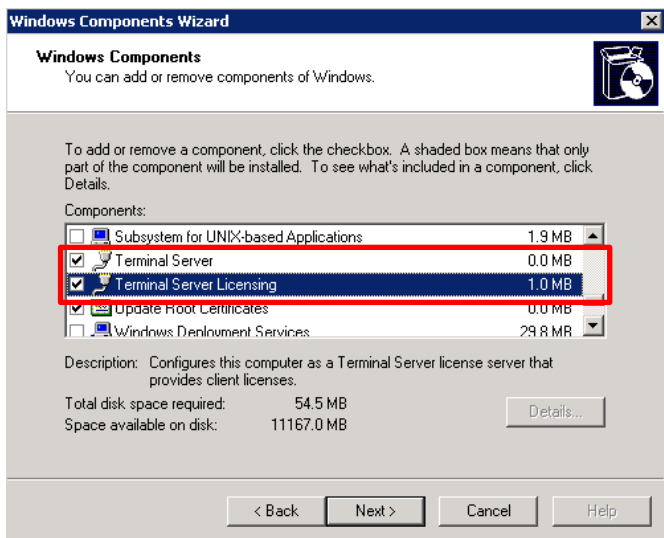
INSTALL WINDOWS TERMINAL SERVICES LICENSE

Install Windows Terminal Services License if you don't have one already. Microsoft allows for unlimited users for 4 months on any machine.

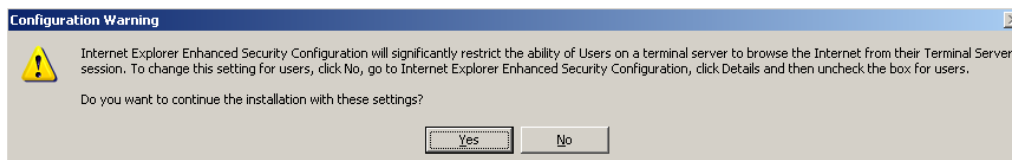
Go to "Control Panel" → "Add Remove Programs" → Click "Add Remove Windows Components";



Click the check boxes for "Terminal Server" and "Terminal Server Licensing";

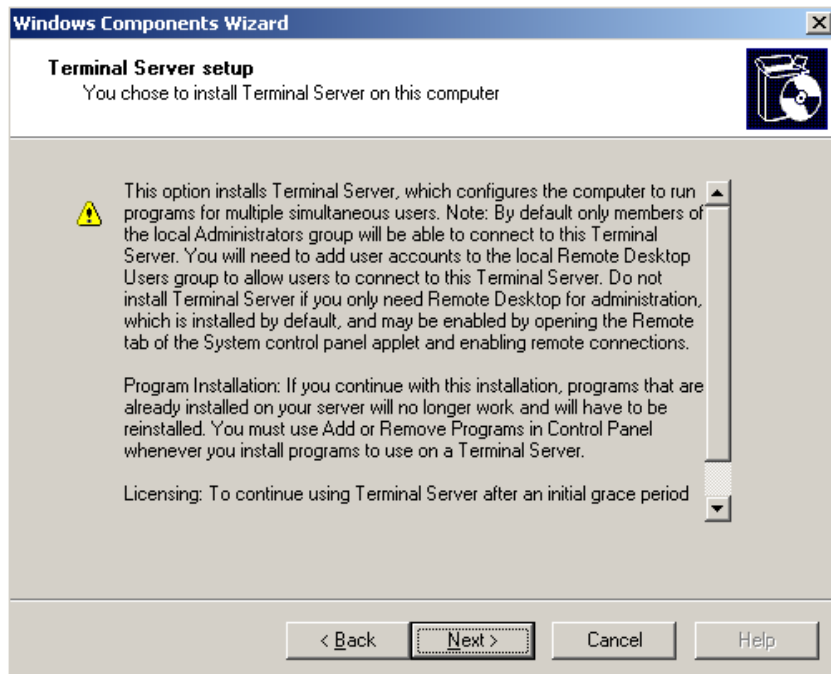


Click "Yes" to the "Configuration Warning" message;

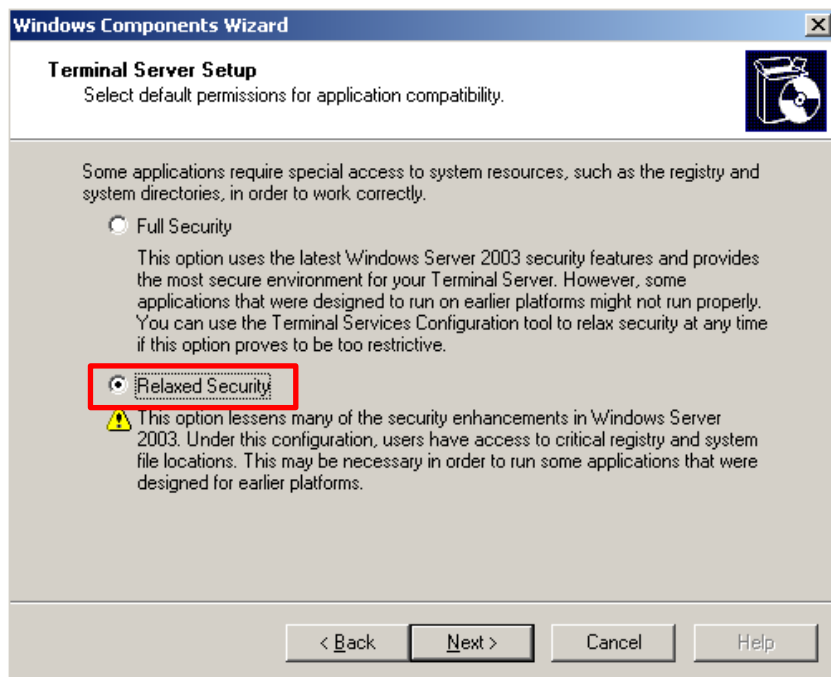


After you have selected the two check boxes click "Next".

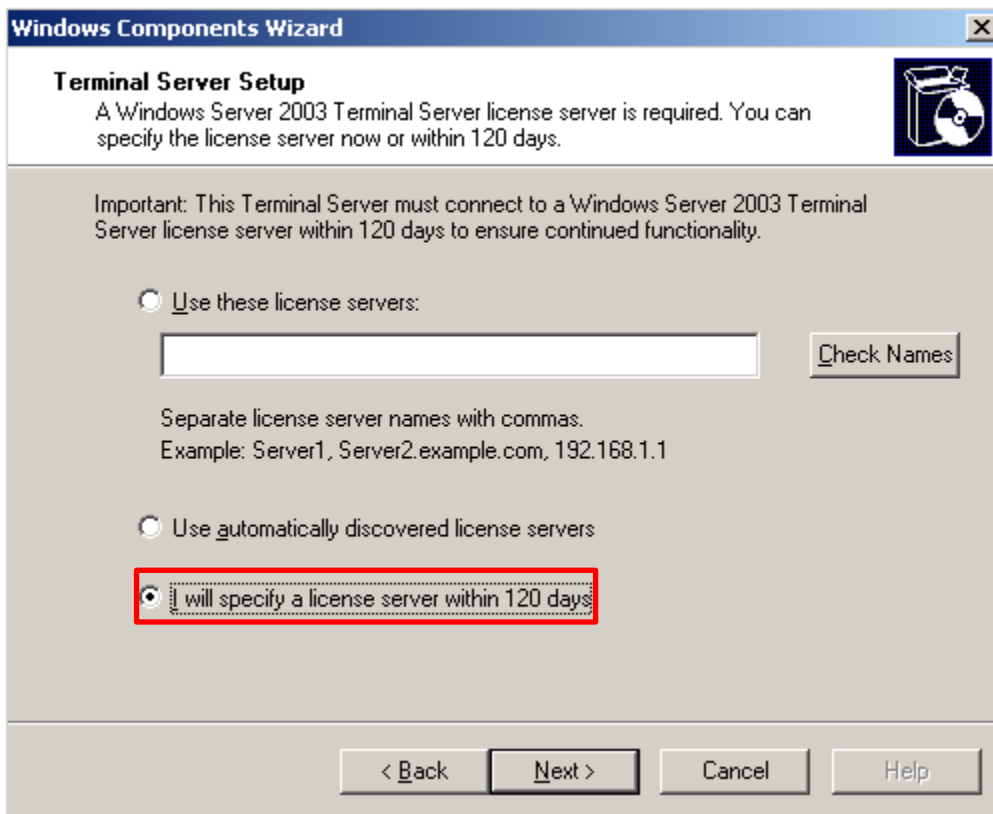
Click “Next”



Select “Relaxed Security” and click “Next”



Check the radio button next to “I will specify a license server within 120 days” and click “Next”



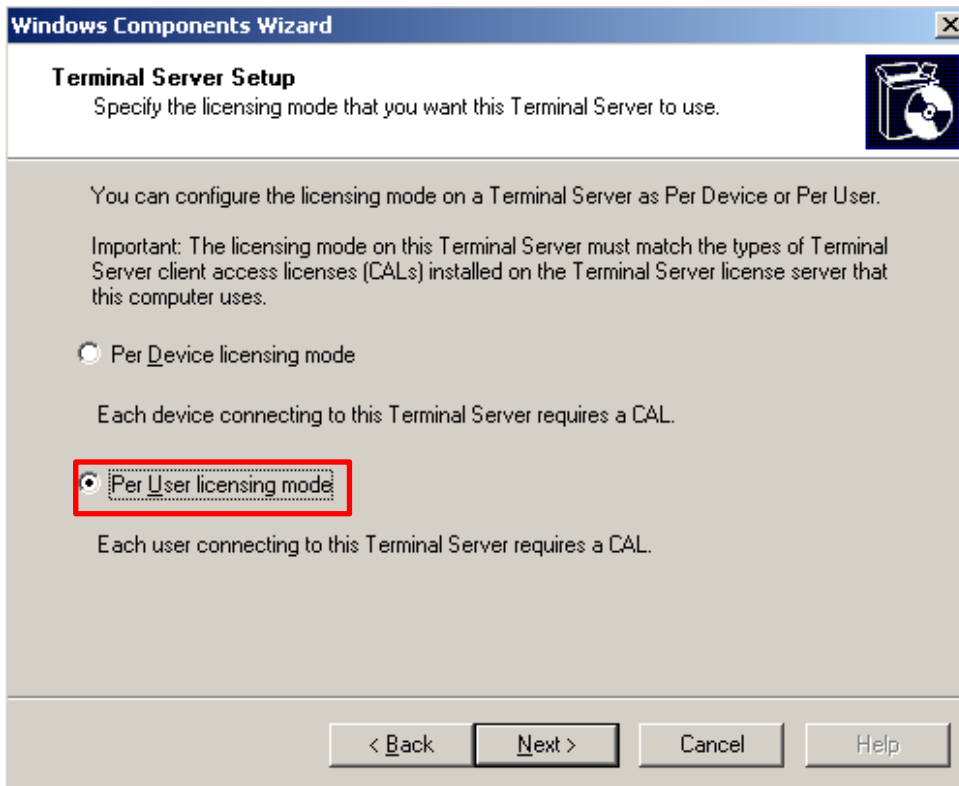
The screenshot shows the 'Terminal Server Setup' window of the Windows Components Wizard. The title bar reads 'Windows Components Wizard'. The main heading is 'Terminal Server Setup'. Below the heading, a message states: 'A Windows Server 2003 Terminal Server license server is required. You can specify the license server now or within 120 days.' To the right of this text is an icon of a CD-ROM. Below the message, an important note says: 'Important: This Terminal Server must connect to a Windows Server 2003 Terminal Server license server within 120 days to ensure continued functionality.'

There are three radio button options for selecting a license server:

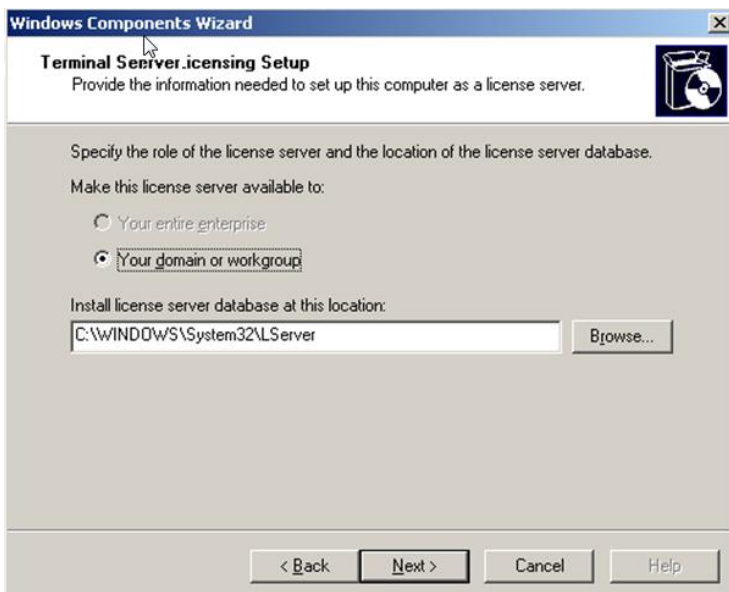
- ☐ Use these license servers:
Below this option is a text input field and a 'Check Names' button. Below the input field, it says: 'Separate license server names with commas. Example: Server1, Server2.example.com, 192.168.1.1'
- ☐ Use automatically discovered license servers
- ☒ I will specify a license server within 120 days

The third option, 'I will specify a license server within 120 days', is selected and highlighted with a red rectangular box. At the bottom of the window are four buttons: '< Back', 'Next >', 'Cancel', and 'Help'.

Select the radio button next to “Per User Licensing mode” and click “Next”.



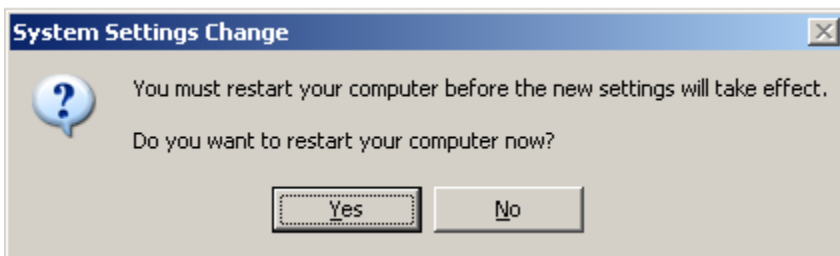
Click “Next”



Windows Server 2003 will then begin installing your Terminal Server. Click “Finish” when done.



A system restart will be required. Click “Yes”

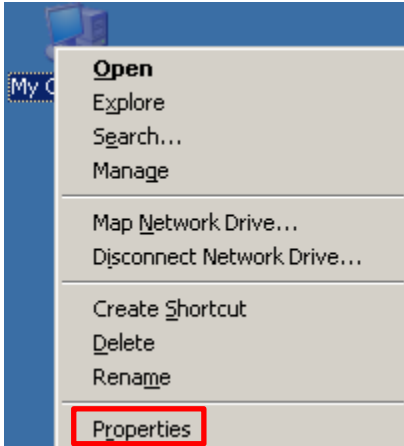


ADVANCED OPTIMIZATIONS

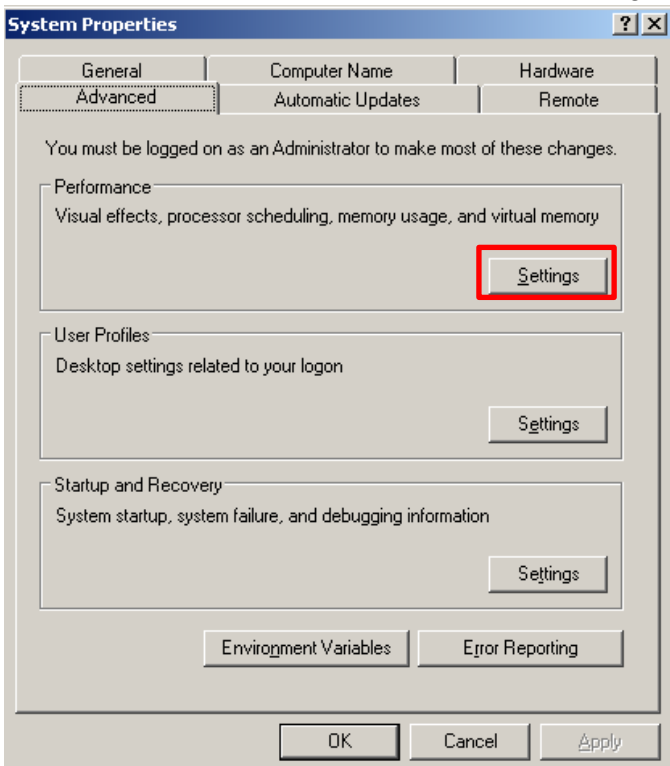
[OPTIONAL] SETTINGS FOR BEST PERFORMANCE AND DISABLING PAGING

Optimizing your server to use more physical memory and less disk I/O and CPU can be a performance enhancer. However, disabling Page Filing on systems with low RAM can cause degradation in performance. **This step should only be taken by advanced users with a comprehensive understanding of their system's resources.**

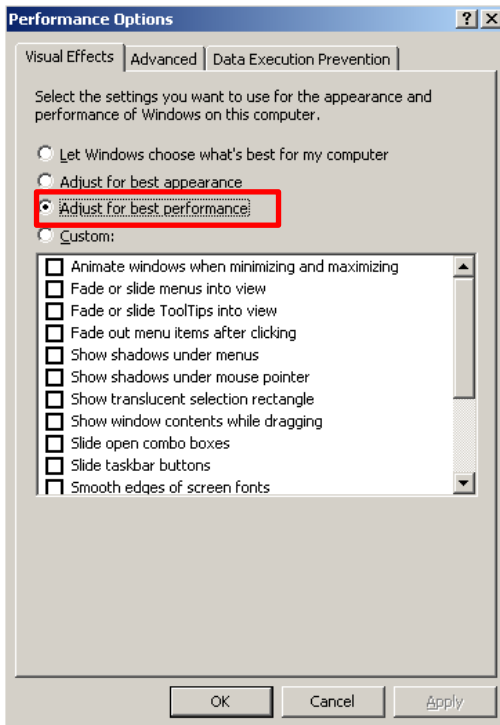
Right click on “My Computer” → “Properties”



Click on the “Advanced” tab. Click on the “Settings” button under the “Performance” area.

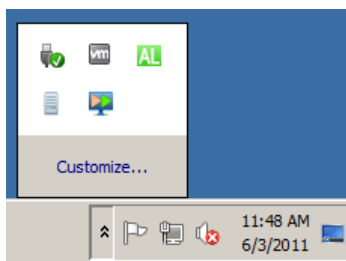


Click on the radio button “Adjust for best performance” under “Visual Effects”. Click Ok.



AFTER MAKING CHANGES

After making any of the recommended configuration changes in this document, you’ll need to reboot your Injector server for your changes to take effect. Be sure that the AppLoader process is running on the Controller machine, and the Injector and Vstation processes are running on the Injector machine prior to creating rUsers. The process icons should appear in the Windows taskbar;



CLONING INJECTORS ON VIRTUAL SERVERS

Virtual Servers are a cost effective alternative to expensive physical hardware. Additionally, they offer the flexibility to customize and duplicate configurations with ease. But to fully maximize the benefits of virtual servers, it is imperative that you create the most efficient server possible before cloning. We can’t stress

enough, the importance of taking the time to optimize your server as outlined in this document and creating and running sample test cases prior to cloning. Once you have optimized your prototypical server, clone away!

UPDATE VSTATION.INI FILE

To register each Injector with the AppLoader Controller you'll need to execute the following steps on each cloned server:

From the Windows Task Manager, look for the **Injector.exe** process. If running, *End Process*.

Browse to Program Files\NrgGlobal\Injector\ and find the **vstation.ini** file. Open with Notepad. Overwrite the following parameters with the Injector IP address and Name (the file will show the IP address and Name of the prototypical server from which you cloned):

```
//vstation's own IP address- this is the ip used to communicate with the Controller  
ipaddress=192.168.0.1
```

```
//host of the injector  
host=Injector1
```

```
//alias of the injector to be shown on Controller  
alias=Injector1
```

```
//location of injector for display on Controller  
location=Injector1 - 192.168.0.1
```

```
//description of injector  
description=Injector Injector1 added via Injector Installer
```

Save and close the vstation.ini file.

From *Start*, open **All Programs>Injector**. Click “Start Injector” and “Register Injector with Controller” (which starts the Injector.exe and checkserver.cmd processes).

Each successfully registered Injector will appear in the ‘Manage Injectors’ window of the AppLoader Controller.