How to run Nesstar with IIS Socket Pooling

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1   Introduction

The Nesstar Service will not start under Win 2K or Win 2K3 Server when IIS 5/6 (Internet Information Server) is running. This is because of IIS Socket Pooling. The instructions below explain how to change IIS setting to enable the Nesstar Service to run.

1.1   What is Socket Pooling?

Socket pooling is non-blocking socket usage, introduced in IIS 5.0 where more than one application can use any given socket. When IIS 5.0 and 6.0 start on 2000 or 2003 server, IIS binds to all IP addresses on the server and not just the IP addresses that are assigned to web sites. The HTTP service, for example, listens to port 80 on all unassigned IP addresses even if you specify a particular IP address for the default virtual server. The same is true for the FTP and SMTP services on port 21 and 25 respectively.

1.1.1   How to confirm this is the problem

To check if IIS socket pooling is the cause of the problem:
1. Open a 'Command Prompt' by clicking **Start > Run**, and typing '**cmd**'.
2. Type "**netstat –na**" in the command prompt window.
3. You will see something like this in the list:

   Active Connections

Proto	Local Address	Foreign Address	State
TCP	0.0.0.0:80	0.0.0.0:0	LISTENING

4. This means that port 80 is listening on all **IP** addresses. This occurs in spite of the fact that IIS is configured to use only a specific IP address.

2   Solving the Problem

The procedure for fixing this problem differs between IIS 5.0 and IIS 6.0.

2.1   Solving the Problem for IIS 5.0

To fix the problem on a computer running IIS 5.0:

1. Open a command prompt by clicking **Start > Run**, and typing '**cmd**'.
2. Type '**cscript c:\inetpub\adminscripts\adsutil.vbs set w3svc/disablesocketpooling true**'.
3. Press **Enter**.
4. When Socket Pooling has been successfully disabled you will see:

Microsoft ® Windows Script Host Version 5.6
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Disablesocketpooling   : (BOOLEAN) True

2.2   Solving the Problem for IIS 6.0

DisableSocketPooling is defined as a valid property in the IIS 6.0 metabase schema (MBSchema.xml) and can be set using Adsutil.vbs as above for IIS 5.0. However, this has no effect even if the metabase property **DisableSocketPooling** is returning True.

In IIS 5.0, the TCP listener is Winsock. In IIS 6.0, the TCP listener is HTTP.sys which does not use the Winsock API. Therefore API sockets are a non-configurable property. Instead, HTTP.sys uses an **IP inclusion list**. By default this list is blank and IIS listens on all IP addresses. You can specify the IP addresses IIS listens on by adding them to the IP inclusion list.

Note that the functionality of IIS 6.0 is part of the new kernel level driver HTTP.sys. To configure HTTP.sys, you must use httpcfg.exe. This executable file is usually located at c:\Program Files\Support Tools. If it is not there you will need to install Microsoft Windows support tools:

1. Insert the Windows Server 2003 CD in the CD-ROM or DVD-ROM drive.
2. When the CD opens, click **Perform Additional Tasks**.
3. Click **Browse this CD**.
4. Double-click **Support**.
5. Double-click Tools.
6. Double-click **SUPTOOLS.MSI**.
7. Click **Next**, type your information in the **Name** and **Organization** boxes, click **Next**, and then click **Next** on the following screen.
8. Click **Next** again to start the installation.
9. Click **Finish**.

To add an IP address to the IP inclusion list:

1. Open a command prompt by clicking **Start > Run**, and typing '**cmd**'.
2. Type the following: '**httpcfg set iplisten –I xxx.xxx.x.x:y**' where 'xxx.xxx.x.x' is the IP you want to add and 'y' is the port.
3. When successful, Httpcfg returns the following:
    HttpSetServiceConfiguration completed with 0.
4. To view additional status codes see Httpcfg help.
5. After the IP address is added, list it with the following command:

    Httpcfg query iplisten

    Httpcfg returns the following: **IP :xxx.xxx.x.x:y**

    Do **NOT** add this IP address of the Nesstar Server to the IP inclusion list.
    DO add to the IP inclusion list every other IP address used by a web site.

Remember that after you add IP addresses to the IP inclusion list you must add each IP address that is used by a web site. If you bind a web site to an IP address that is not on the list, the web site will not start.

The IP inclusion list is read during startup of the HTTP service. If you change the list, you must restart the service. To restart the HTTP service:

1. Open a command prompt by clicking **Start > Run**, and typing '**cmd**'.
2. Type '**net stop http /y**' and press ENTER. This stops the HTTP Secure Sockets Layer (SSL) service and the World Wide Web publishing services.
3. To start the HTTP service type '**net start w3svc**' at the command prompt. This starts the HTTP SSL service and the HTTP service.
4. You may need to reboot your computer.
5. Re-open a command prompt window and type '**netstat –na**'. You should see something like this in the list:

   Active Connections

Proto	Local Address	Foreign Address	State
TCP	21.10.225.229:80	0.0.0.0:0	Listening
TCP	21.10.225.228:80	0.0.0.0:0	Listening

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