

Service Managed Gateway™

How to Configure NetBIOS and WINS Proxy on an SMG



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1 About this document

This document describes how to configure a Service Managed Gateway (SMG) for Dynamic Host Configuration Protocol (DHCP) using the Expert View interface.

1.1 Scope

This document:

- describes the terms NetBIOS, a proxy server, and WINS proxy;
- explains how to configure WINS Proxy on your branch office gateway; and
- explains how to use the Trace Analyzer and diagnostic tools.

1.2 More information

For more information about managing the SMG, read the Service Managed Gateway documentation. The current documentation is available online at <http://virtualaccess.com/smgdocs/>

Visit the Microsoft website: <http://support.microsoft.com/search/> for information on:

- Configuring WINS proxy on remote PC client operating systems;
- Configuring WINS Proxy on a Windows NT workstation; and
- Remote access through your gateway/WINS proxy.

2 Introduction

2.1 What is NetBIOS?

The Network Basic Input/Output System (NetBIOS) is a program that facilitates communication between devices on a local area network (LAN). At the session layer it provides applications with an application programming interface (API) for sharing devices and information across lower layer network protocols such as Internet Protocol (IP). This means that applications can communicate with other applications on networked devices without needing details about network information.

2.2 NetBIOS services

NetBIOS services fall into four categories:

- Name service
- Session service
- Datagram service
- Miscellaneous services

The **name service** allows applications to identify the name service's own name as being unique. It also allows applications to manage names, and to identify server addresses on the basis of names.

The **session service** is connection orientated. It facilitates the reliable exchange of sequenced information between applications, or groups of applications, over a network. This service is appropriate when destination applications need to acknowledge receipt of information.

The **datagram service** permits session-free 'connectionless' exchange or broadcasting of information between applications, or groups of applications, over a network. This service is appropriate when destination applications do not need to acknowledge receipt of information.

Miscellaneous services deal with abnormal situations, such as errors.

2.3 What is a proxy server?

A proxy server is an intermediary server that sits between a client and its actual server. The proxy server facilitates security, administration, and information caching. In a LAN environment, the proxy server is generally between the gateway and the outside network.

2.4 WINS proxy

Windows Internet Naming Service (WINS) constitutes a distributed database that registers NetBIOS names and corresponding IP addresses, and supports dynamic queries against them for name resolution. A WINS proxy maintains a mapping table of computer machine names to local IP addresses. It allows transparent access to the office LAN by using this mapping table to convert between the Service Managed

Gateway's IP address and the address of the destination machine on the home network. The purpose of the WINS proxy on your Service Managed Gateway is to allow gateway clients to gain remote access to the office Windows network.

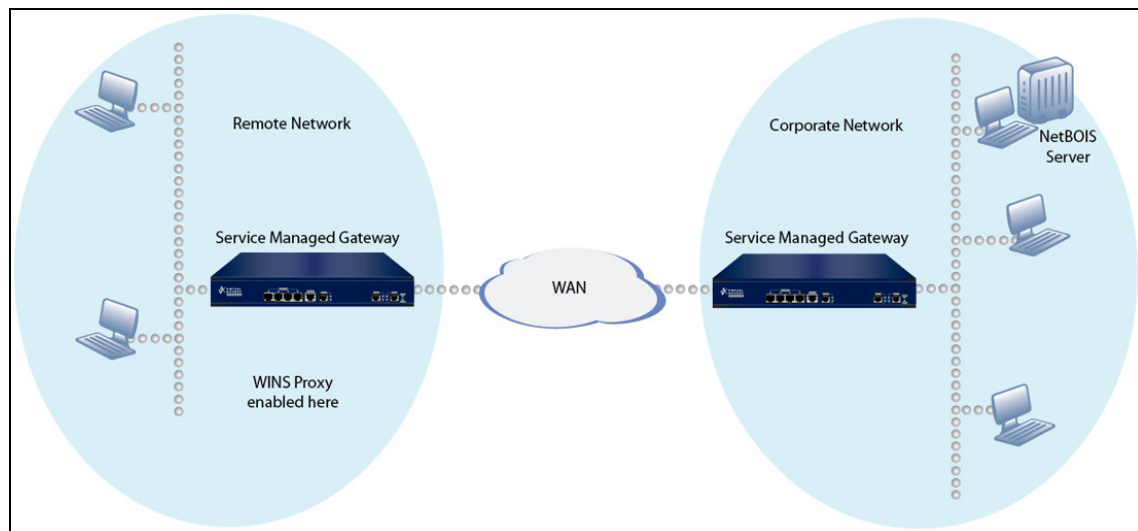


Figure 1: NetBIOS proxy server architecture

Many organizations use private data connections to connect branch offices to the central network. To reduce overheads associated with maintaining IP address schemes at remote branches, it is often desirable to configure address translation at the remote site and use a local Dynamic Host Configuration Protocol (DHCP) server to allocate addresses dynamically and automatically to branch office PCs. This allows the administrator to allocate a single address per remote office, namely, the address allocated to the wide area (WAN) connection of the router of the gateway.

Microsoft networking requires the use of WINS, which does not operate across a network translation boundary. To resolve this problem, the router must support an application 'proxy' that intelligently 'translates' the WINS protocol across this boundary. This is the function of the WINS proxy that operates on the router at the remote branch or office.

2.5 WINS proxy and remote access

You can configure your Service Managed Gateway as a WINS proxy in order to facilitate remote access to the main office Windows network. When you configure a WINS proxy on an Internet Protocol Address Translation (IPAT)-enabled Service Managed Gateway, you enable remote Microsoft networking. This means that offsite users can log onto the main office network (LAN) through the remote router or gateway's WINS proxy server and see all devices on that network. Also, with appropriate permission, offsite users can see, download, and send files to machines on the LAN.

3 Configuring the SMG

The Service Managed Gateway (SMG) contains an internal web server that is used to configure the SMG. Before you can access the internal web server and start the SMG configuration, you must ensure that your PC has the correct networking set up.

When your Service Managed Gateway is correctly connected to your PC, type fast.start into the URL line of your browser to display the Start page.

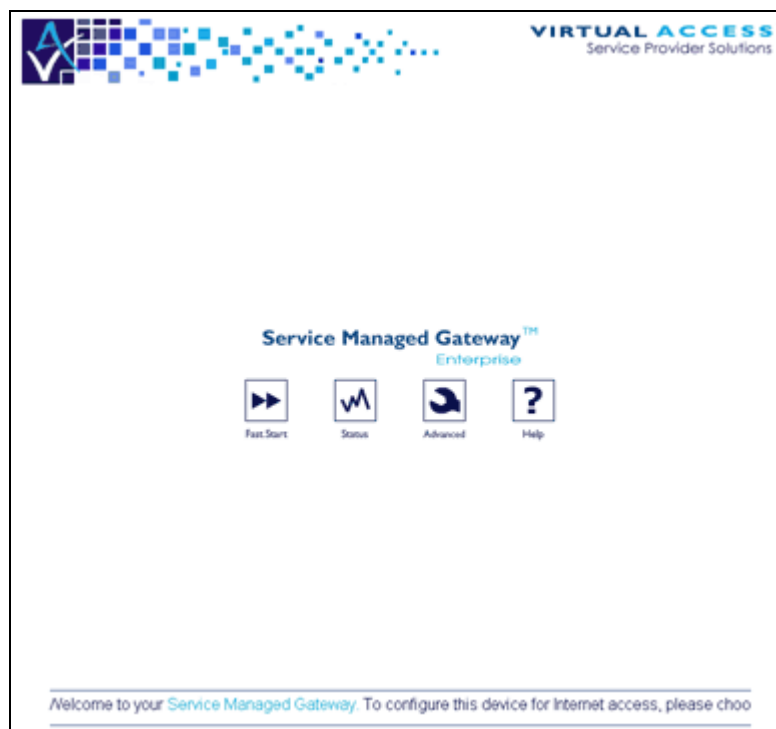


Figure 2: The SMG start page

If a login page appears type in the login password you received from your administrator.

If you have not received a password, contact the Virtual Access Support team.

Access the Fast Start Wizard by clicking the Fast.Start icon on the Start page of the embedded web.

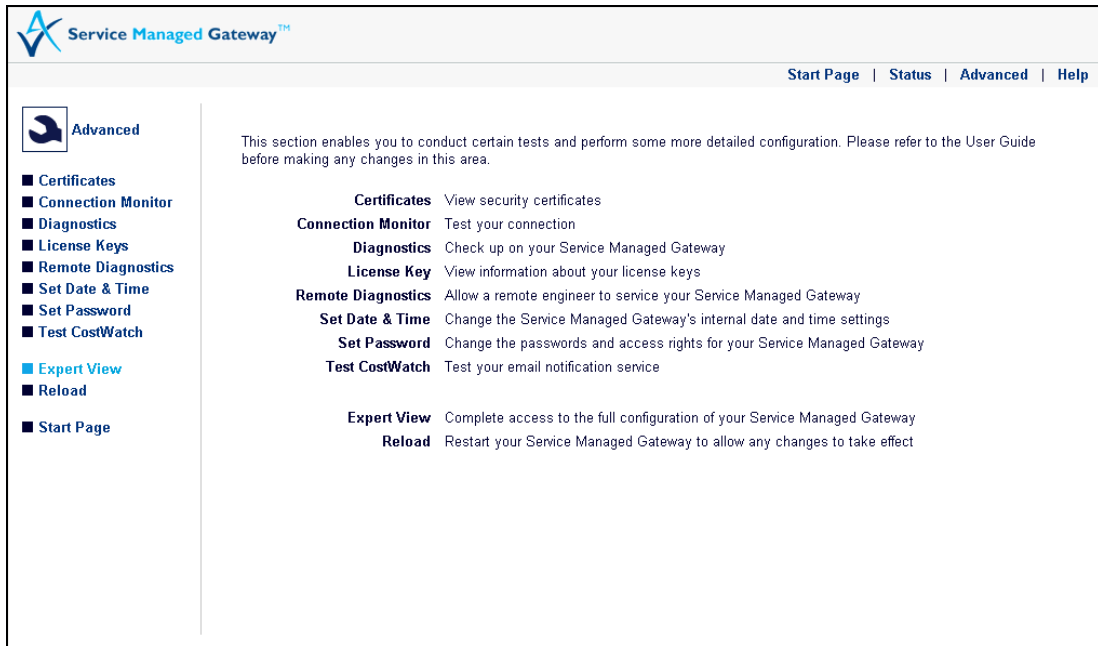
The Fast Start Wizard will guide you through a series of forms that you must complete to configure your SMG. Configuring WINS proxy on your branch office gateway

To configure WINS proxy to allow Microsoft networking through a router or gateway with address translation enabled, you need to configure the proxy feature on the branch office router and ensure that the local (branch office) PCs behind the router are set for WINS operation.

The main site's router should be configured without IPAT or WINS proxy enabled.

To configure WINS proxy on your branch office (remote) Gateway, from the SMG Start.Fast page click **Advanced**.

In the Advanced menu, click **Expert view**.



Service Managed Gateway™

Start Page | Status | **Advanced** | Help

Advanced

- Certificates
- Connection Monitor
- Diagnostics
- License Keys
- Remote Diagnostics
- Set Date & Time
- Set Password
- Test CostWatch
- **Expert View**
- Reload
- Start Page

This section enables you to conduct certain tests and perform some more detailed configuration. Please refer to the User Guide before making any changes in this area.

- Certificates** View security certificates
- Connection Monitor** Test your connection
- Diagnostics** Check up on your Service Managed Gateway
- License Key** View information about your license keys
- Remote Diagnostics** Allow a remote engineer to service your Service Managed Gateway
- Set Date & Time** Change the Service Managed Gateway's internal date and time settings
- Set Password** Change the passwords and access rights for your Service Managed Gateway
- Test CostWatch** Test your email notification service
- Expert View** Complete access to the full configuration of your Service Managed Gateway
- Reload** Restart your Service Managed Gateway to allow any changes to take effect

Figure 3: The advanced menu

In the Expert View menu, click **system -> netbios -> netbios proxy**. The NetBIOS Proxy page appears.

netbios proxy

Netbios Proxy Enabled

Netbios Interface

WINS address

Wins Address Configured

Figure 4: The NetBIOS proxy page

Field	Description	Command Line
Netbios Proxy Enabled	Enables or disables Netbios Proxy.	Set Netbios Proxy enabled
	yes Enables Netbios Proxy.	
	no Disables Netbios Proxy.	
Netbios Interface	Specifies the WAN interface. This should be the same as the default route for your Service Managed Gateway. This is normally ppp-1. Note: to view the default route, open System->- ip -> default route in the Advanced Configuration menu and look at the value of the Next Hop for Unnumbered interfaces field.	Set Netbios interface
WINS address	The address you specify is the address of your WINS server on the main office subnet. The field may be set to an IP address with Format a.b.c.d.	Set DHCP server WINS Address 1,
Wins Address Configured	Supplies this WINS address with the DHCP information. This is necessary to gain	Set DHCP server WINS Address Configured 1

	<p>access to any Microsoft networking facilities across the Internet.</p> <p>Yes Configure WINS address.</p> <p>No Does not configure WINS address.</p> <p>Select yes.</p>	
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Table 1: The NetBIOS proxy fields, their descriptions and command lines

3.1 Configure the domain name for a PC

To define in which network group the PC will reside you must configure its domain name.

From the Windows start menu, right-click **My Computer**. In the drop-down menu, click **Properties**.

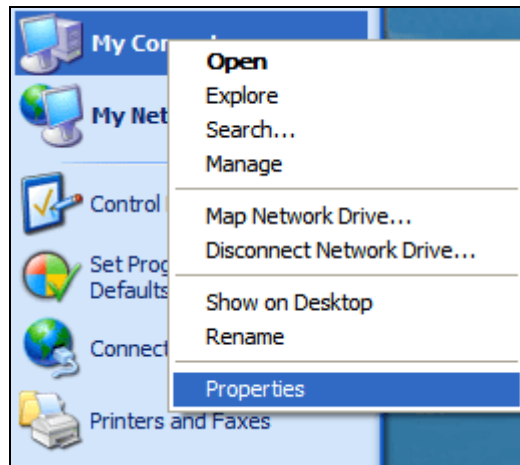


Figure 5: My computer menu showing properties

The System Properties window appears.

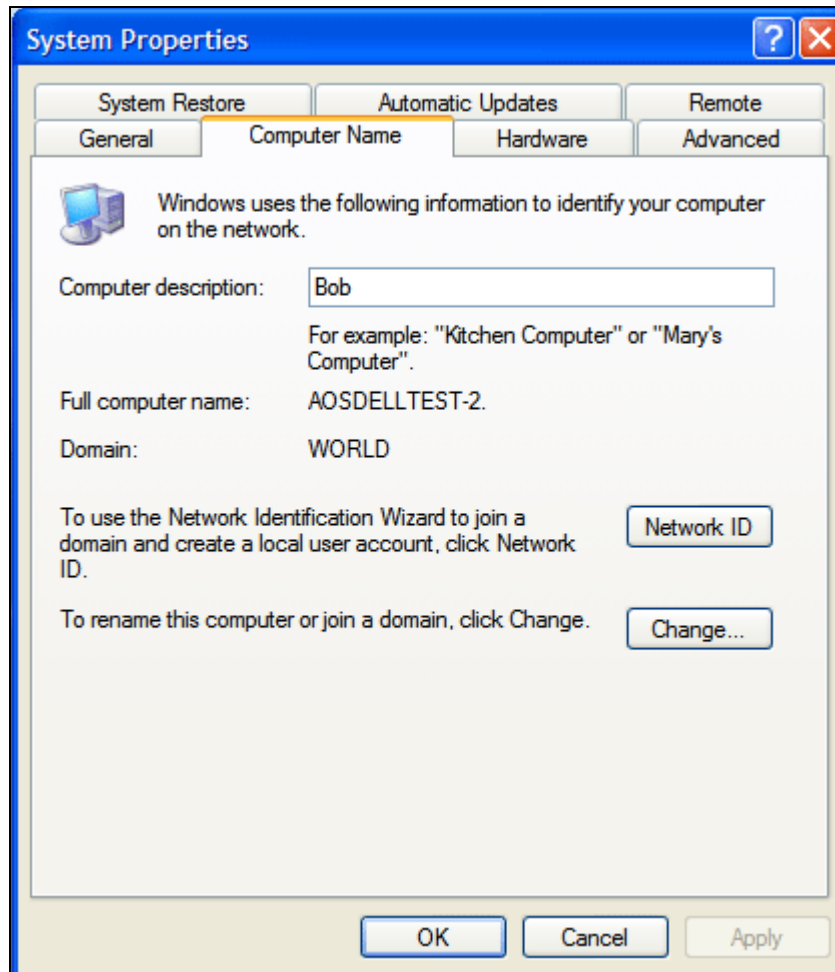


Figure 6: The system properties window

Select the Computer Name tab and then click **Change....**

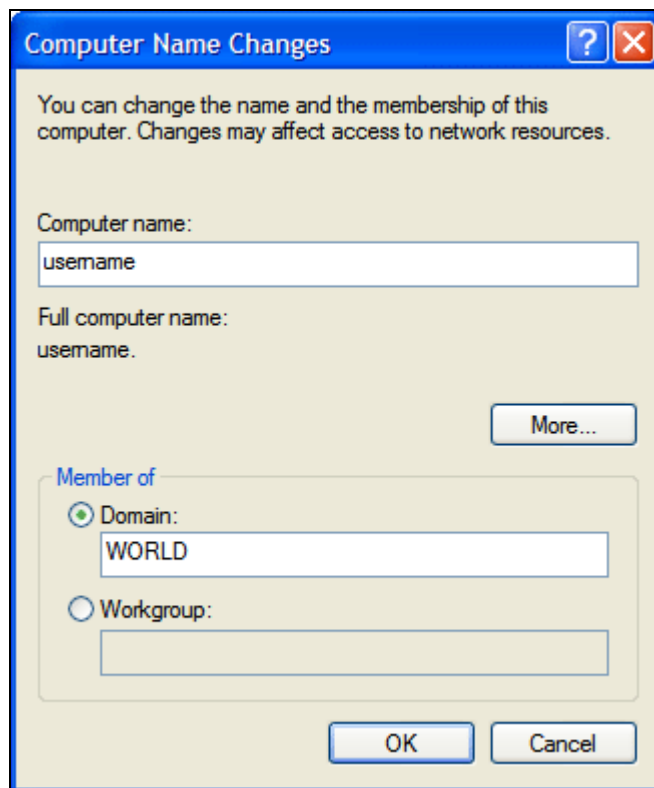


Figure 7: The computer name changes window

In the Computer name field, enter the name of the computer. This is usually the same as the user's name.

Make sure the Domain radio button is checked, and enter the Domain name in the Domain field.

Click **OK**.

4 Diagnostics

The Service Managed Gateway supports extensive remote diagnostics, status and SLA monitoring capabilities.

The status and diagnostics tools are provided as a series of Java applets.

4.1 Trace analyzer

The Trace Analyzer provides a web interface to event tracing allowing you to quickly locate and analyze problems.

To view the Trace Analyzer, from the SMG start page, click **Advanced**.

In the **Advanced** menu, click **Diagnostics**.

On the Diagnostics page, click **Trace Analyzer**. The Trace Analyzer pop-up window appears.

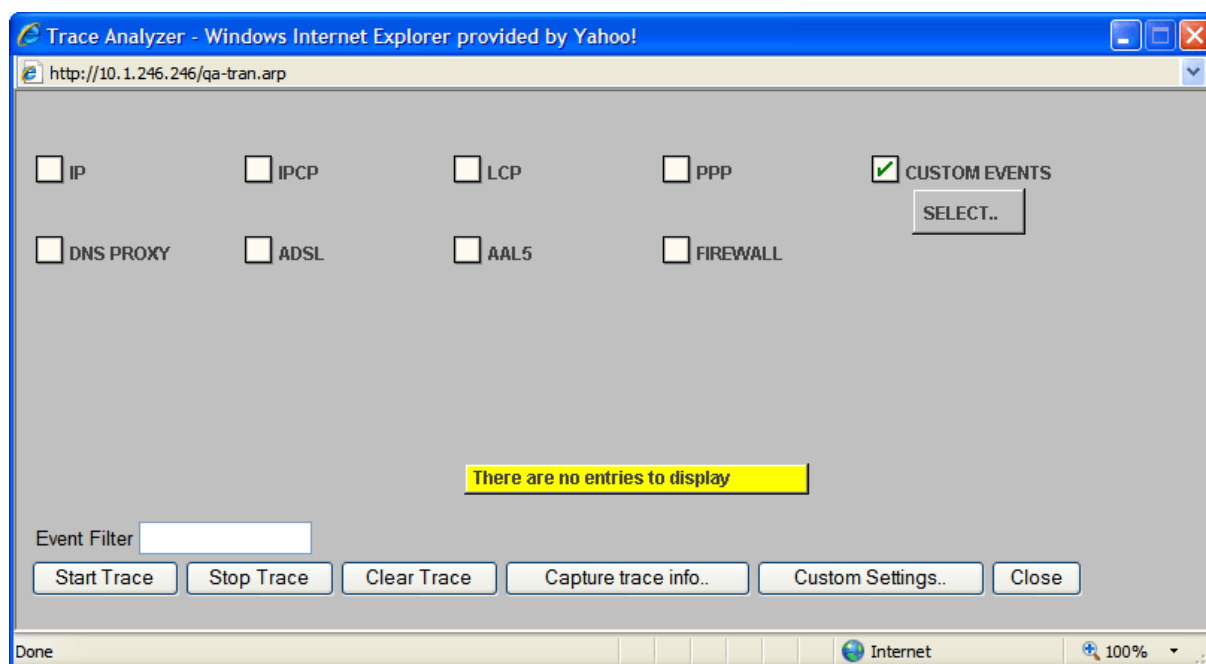


Figure 8: The select event classes to trace pop-up window

To view the NETBIOS traces check **Custom Events** and then click **Select**. The Select Events to Trace pop-up window appears.

In the Events Available window, scroll to the bottom of the list and select **NETBIOS**. NETBIOS and HTTP appears in the Selected Events window.

Click **ADD**.

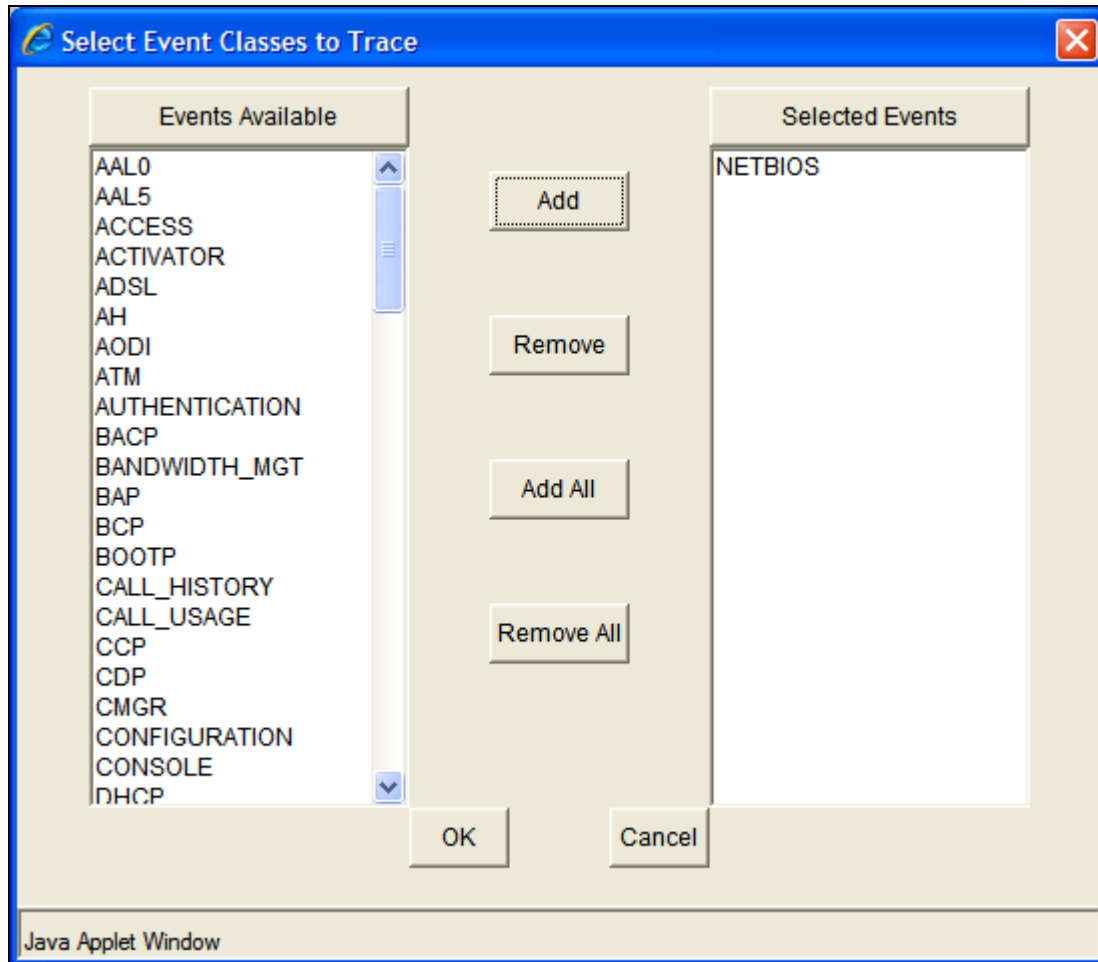


Figure 9: The select event classes to trace pop-up window

When you have added the events, the Trace Analyzer will capture NETBIOS events. Click **Start Trace**.

Time	Class	Severity	Dir	Details
19:10:32	NETBIOS	DEBUG		NetBios: Query response - unable to find entry for ' FDEBC0FHEJE0EEEP
19:10:33	NETBIOS	DEBUG		NetBios: Query response - unable to find entry for ' FEEFFDFECACACACA
19:10:34	NETBIOS	DEBUG		NetBios: Query response - unable to find entry for ' FDEBC0FHEJE0EEEP
19:10:34	NETBIOS	DEBUG		NetBios: Query response - unable to find entry for ' FEEFFDFECACACACA
19:10:35	NETBIOS	DEBUG		NetBios: Query response - unable to find entry for ' FDEBC0FHEJE0EEEP
19:10:35	NETBIOS	DEBUG		NetBios: Query response - unable to find entry for ' FEEFFDFECACACACA
19:10:36	NETBIOS	DEBUG		NetBios: Query response - unable to find entry for ' FDEBC0FHEJE0EEEP
19:10:36	NETBIOS	DEBUG		NetBios: Query response - unable to find entry for ' EDFCENFEEFFDFECA
19:10:37	NETBIOS	DEBUG		NetBios: Query response - unable to find entry for ' EDFCENFEEFFDFECA
19:10:41	NETBIOS	DEBUG		NetBios: Query response - unable to find entry for ' EDFCENFEEFFDFECA
19:10:41	NETBIOS	DEBUG		NetBios: Query response - unable to find entry for ' EDFCENFEEFFDFECA
19:10:42	NETBIOS	DEBUG		NetBios: Query response - unable to find entry for ' EDFCENFEEFFDFECA
19:10:44	NETBIOS	DEBUG		NetBios: Query response - unable to find entry for ' FEEFFDFECACACACA
19:10:45	NETBIOS	DEBUG		NetBios: Query response - unable to find entry for ' FEEFFDFECACACACA

Figure 10: Captured NETBIOS events in the trace analyzer window