

# Limiting Port Numbers Used by GENTRAN:Server<sup>®</sup>

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**Introduction** This technical bulletin explains how to limit the number of ports GENTRAN:Server for UNIX<sup>®</sup> accesses during client/server interactions that cross an internal firewall.

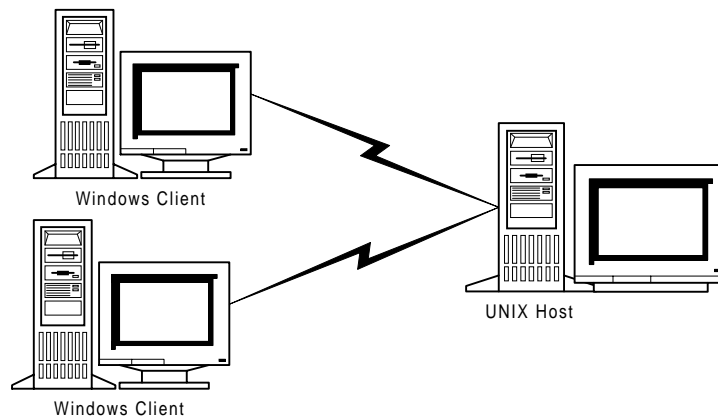
**WARNING**

**This information applies only to GENTRAN:Server for UNIX revision 5.2 and higher.**

**This information does not apply to using a client to access a host through the Internet.**

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**Background** At a typical GENTRAN:Server for UNIX site, Windows<sup>®</sup>-based client computers communicate to the UNIX host across a network.



Both the GENTRAN:Server client and UNIX host receive a new port assignment each time the client accesses the host. Each time a client attempts to access the host, GENTRAN:Server dynamically assigns a port number for the session using the host **ltb\_server** namebroker process and a portmap process on the client.

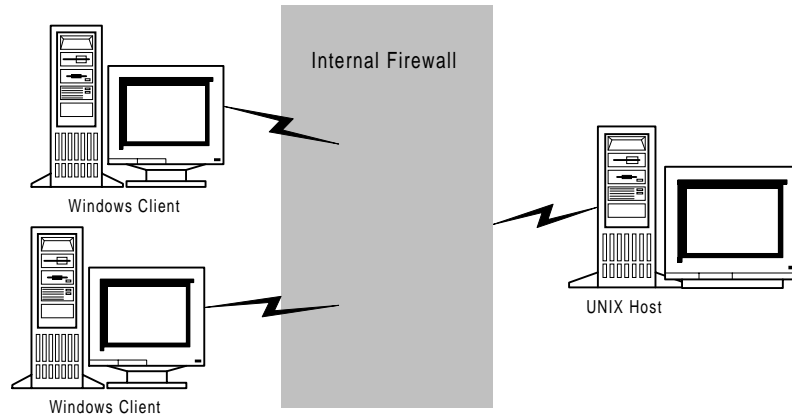
GENTRAN:Server normally selects from the full range of unreserved, unused port numbers on the system. If the first port is not available, GENTRAN:Server increases the port number by one and tries again.

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**The problem**

At some sites, communication traffic on the corporate network crosses an internal firewall.



If you allow GENTRAN:Server communications to pass through the firewall with unrestricted access to ports:

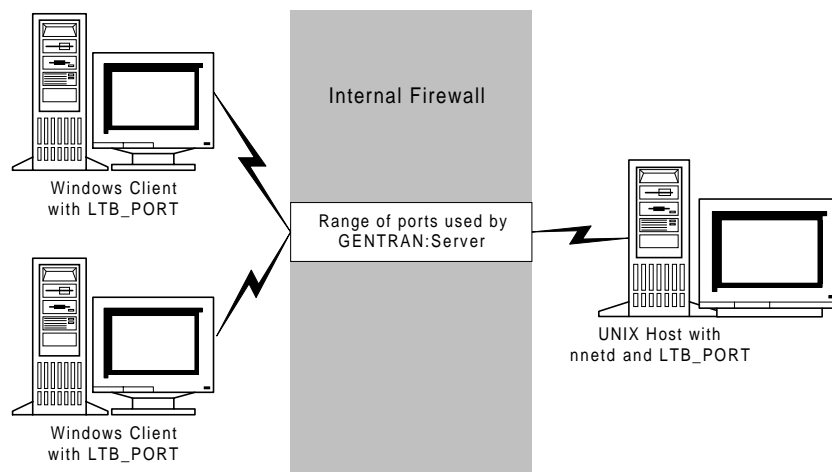
- The firewall security must be completely open.
- Functions that monitor traffic through the firewall will be unable to determine what portion of that traffic results from GENTRAN:Server transactions.

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**The solution**

Obtain the **nnet** daemon from Customer Support, install and configure it on the UNIX host, and set the `LTB_PORT` environment variable. The **nnetd** daemon allows you to control the port assigned to the namebroker process (**ltb\_server**).

`LTB_PORT` limits the possible port values used by the portmap process to a range of 100 from a starting value that you specify. Setting `LTB_PORT` causes GENTRAN:Server to look for an available port starting at the specified number. If that port is unavailable, GENTRAN:Server increases the port number by one and tries again.



## How to Set Up the nnet Daemon

**Introduction** The **nnet** daemon allows you to assign a specific port number to the **ltb\_server** process. This topic explains how to install and configure the **nnet** daemon on the UNIX host.

**Before you begin** Before you start this procedure, obtain the *nnetd.io* file from GENTRAN Customer Support.

**Installing the daemon** Use this procedure to install and configure the **nnet** daemon on the UNIX host.

Step	Action
1	Log on to the UNIX host as the owner of the GENTRAN:Server installation.
2	Enter the <b>stoprpcs.sh</b> command to stop the <b>mhs_server</b> and <b>mhp_server</b> processes.
3	If prompted, enter the values for the \$EDI_ROOT and \$SADMIN_ROOT environment variables for the desired GENTRAN:Server installation.
4	Stop the namebroker ( <b>ltb_server</b> ) process.
5	Rename the \$SADMIN_ROOT/startnb.sh script.  <b>Example</b> mv \$SADMIN_ROOT/startnb.sh \$SADMIN_ROOT/startnb.orig.sh
6	Unpack the <i>nnetd.io</i> file.  <b>Example</b> cpio -ivcd < nnetd.io  Be sure to include the redirect symbol (<) as shown.
7	Copy the resulting files to the \$SADMIN_ROOT/broker directory.  <span style="color: red;">(Continued on next page)</span>

<b>(Contd)</b>	<b>Action</b>
8	Does your installation use SUN Solaris®? <ul style="list-style-type: none"><li>▶ If YES, then continue with Step 9.</li><li>▶ If NO, then skip to Step 10.</li></ul>
9	Does the new <i>ltb_server</i> file have “execute” permissions? <ul style="list-style-type: none"><li>▶ If YES, then skip to Step 10.</li><li>▶ If NO, then change permissions on the <i>ltb_server</i> file.</li></ul> <b>Example</b> chmod 775 ltb_server
10	Open the <i>ltb_server.cfg</i> file in a text editor.
11	Set <b>Command =</b> to the path of the <i>ltb_server</i> file. <b>Example</b> Command = \$SADMIN_ROOT/broker
12	Set <b>Port =</b> to the port number you want the <b>ltb-server</b> process to use. <b>Note</b> Assign a number outside the range specified by the LTB_PORT environment variable.
13	Save your changes and exit the editor.

## How to Set The LTB\_PORT Variable

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### Introduction

This topic explains how to set the LTB\_PORT environment variable to help control the port numbers that the GENTRAN:Server portmapper process uses.

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### Rules for using LTB\_PORT

Before setting the LTB\_PORT environment variable, note the following rules:

- Set LTB\_PORT before you start the GENTRAN:Server listener processes (**mhs\_server** and **mhp\_server**).

#### WARNING

**You MUST stop the processes, set LTB\_PORT, and then restart the processes. Do not set LTB\_PORT with the listener processes running.**

- Set LTB\_PORT on each GENTRAN:Server Windows client, and in each GENTRAN:Server environment on each UNIX host.
- Set LTB\_PORT to the same value on every GENTRAN:Server computer at your site.
- The port number assigned to LTB\_PORT must be higher than the port number you assigned within the *ltb\_server.cfg* file.
- The range of port numbers in frequent use differs from site to site. However, sites often use many of the ports below port 700. Ask your system administrator for a recommended value for LTB\_PORT.

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### Setting LTB\_PORT on the Host

On the UNIX host, add the LTB\_PORT environment variable to the profile of the owner of each GENTRAN:Server environment.

#### Syntax

In ksh:

```
export LTB_PORT=<start>
```

In csh:

```
setenv LTB_PORT <start>
```

where <start> is the lowest port number that GENTRAN:Server should attempt to access

#### Example

```
export LTB_PORT=1030
```

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### Setting LTB\_PORT on the Client

You have different options for setting LTB\_PORT on the Windows client depending on whether the client uses the Windows NT or the Windows 95 operating system.

- For Windows NT, you can set LTB\_PORT either in the *autoexec.bat* file or in the Windows Control Panel.
- For Windows 95, you must set LTB\_PORT in the *autoexec.bat* file

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### How to set LTB\_PORT in the *autoexec.bat* file

To set LTB\_PORT in the *autoexec.bat* file, open the file in a text editor and add LTB\_PORT.

#### Syntax

```
set LTB_PORT=<start>
```

where <start> is the port number that GENTRAN:Server should attempt to access.

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### How to set LTB\_PORT in the Windows NT Control Panel

To set LTB\_PORT in the Windows NT Control Panel, open the System icon and add LTB\_PORT to the System Environment tab.

#### Syntax

```
set LTB_PORT=<start>
```

where <start> is the port number that GENTRAN:Server should attempt to access.

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### How to check whether the broker is running

After you set up the nnetd daemon, the lists of processes running on the host show the **nnetd** process instead of the **ltb\_server** process. To check whether the namebroker is running you need to log on to the host and enter the following command.

```
ps -ef |grep nnetd
```

#### Example response

```
accounting::/usr/security/broker: ps -ef |grep nnetd
```

```
    keng 1903    1  0  Jan 03  ?        0:00 nnetd ./
```

```
    jimb 3431  3413  1 17:10:07 pts/6    0:00 grep nnetd
```

```
accounting::/usr/security/broker:
```

