

## Receive Packet Size (-r Parameter) for BSPXCOM

[Applies to](#)

This parameter determines the maximum SPX packet size that Btrieve communications uses to communicate with a NetWare server.

### To change the Receive Packet size setting using the Setup utility:

1. Click **Start**, point to **Programs**, and select the **Pervasive Software** folder.
2. Choose Setup from the list of programs.
3. Click **Connect** and enter the name of the NetWare server with which you wish to connect.
4. Select the Btrieve Communications Manager component.
5. From the list of settings, click **Receive Packet Size**.
6. If your network is Ethernet, set this value to 1500. If your network is Token-ring, set this value to 4096.

### To Change the Receive Packet size setting using a command-line argument (for versions prior to 7.0)

For versions prior to 7.0, it can be set using a command line parameter on BSPXCOM.NLM, which is usually set in BSTART.NCF.

Add **-r=1500** for Ethernet networks, **-r=4096** for Token-ring networks, or **-r=1876** for ArcNet networks.

Failure to set this parameter can result in a [status 95](#).

### **85: The file is locked.**

The workstation MicroKernel has a file open, and another workstation that has the Requester loaded tries to open the same file via the server MicroKernel. The server MicroKernel cannot open the file because it cannot obtain exclusive access. The workstation that has the Requester loaded receives this status code.

While one user has a file locked in an exclusive transaction, another user attempts to lock all or part of that file.

When opened by a server MicroKernel, a file is in transition into continuous operation mode. Retrying eventually works.

When opened by a server MicroKernel, two data files have the same filename but different extensions (for example, INVOICE.HDR and INVOICE.DET). One file is open and is in continuous operation mode, causing the MicroKernel to generate a delta file (for example, INVOICE.^^^). The MicroKernel returns this status code when you attempt to open the second file.

When opened by a Windows NT server MicroKernel using Microsoft File and Print Services for NetWare on behalf of a 16-bit Windows workstation, the file was also opened simultaneously by a 32-bit Windows NT or Windows 95 workstation. This causes the server MicroKernel to open the same physical file using two different paths.

### **88: The application encountered an incompatible mode error.**

If an application opens a file in Exclusive mode, all other applications receive this status code when they try to open the same file in any mode.

If an application opens a file in any mode other than Exclusive, all other applications receive this status code when they try to open the same file in Exclusive mode.

If another workstation has the Requester loaded and has the file open, applications running v6.15 or later MicroKernels receive this status code when they try to open the same file in SEFS mode.

If a server application tries to remove files from continuous operation mode when they are not in continuous operation mode.

### **46: Access to the requested file is denied.**

The application opened a file in Read-only mode and tried to perform a write operation on that file.

The application attempted to perform a write operation on a file that is flagged read-only by the operating system.

When the application opened the file, it did not correctly specify the owner name required for updates.

If a workstation engine opens a file that is already open by a server engine, a write operation results in a Status 46 for the workstation engine user..

## **Related Topics**

[Status 94 - Permissions](#)

Windows NT

Novell NetWare

Windows NT Server

Windows NT Workstation acting as a server

Novell NetWare

This is the SPX communications module for the NetWare version of Btrieve.

The following files must be loaded in order to support client-server access:

NWBSRVCM.NLM

BSPXCOM.NLM (SPX)

BTCPCOM.NLM (TCP/IP)

## Bad Server Address

The Btrieve and Scalable SQL requesters resolve the name of your server into a network address before making a request. In general, network addresses appear one of two ways depending on the protocol used:

### SPX address

ABBBDDDD:00001B036D4C:8059

### TCP/IP address

192.148.1.109 port 170D.

If the incorrect address is returned by the server (Windows NT) or an incorrect address is in the HOSTS file (NetWare), Btrieve and Scalable SQL are not able to communicate.

Ensure that the Btrieve and/or Scalable SQL engines are started on the server.

### Common Causes of a Bad Server Address

Btrieve did not respond

Scalable SQL did not respond

RAS is installed on the Windows NT server

The NetWare server returns the wrong SAP address

## Bindery Problems - Btrieve

This error only applies to clients attempting to connect to NetWare servers.

Btrieve was not found in the NetWare Bindery, which defines the mappings in the network.

If you receive this error, ensure that the engine is running. If the engine is already running, then consult your NetWare documentation for information on adding to the Bindery.

## Bindery Problems - Scalable SQL

This error only applies to clients attempting to connect to NetWare servers.

Scalable SQL was not found in the NetWare Bindery, which defines the mappings in the network.

If you receive this error, ensure that the engine is running. If the engine is already running, then consult your NetWare documentation for information on adding to the Bindery.

Pervasive Software's navigational database engine.

## Btrieve Inactive

[See Also](#)

InstallScout was trying to test Btrieve Functionality but received a "Btrieve Inactive" error.

This can be caused by the following [Btrieve Status Codes](#):

20, 2010, 3011, 3001, 3003, 3009, 3013, 3014, 3020

The solution to the problem varies with each code. Refer to *Status Codes and Messages* (Code\_msg.pdf in Server release) or the [Status Codes Help File](#) for more information.

These errors can be the result of a Network [Communications Problem](#) or a workstation configuration problem.

Make sure the Btrieve Engine is started on the server.

## Btrieve Not Responding

[See Also](#)

This software requires Btrieve to be running on the server being tested.

To resolve this condition, verify that:

Btrieve is running on the server

You are logged into and connected to the Server

### To verify that Btrieve is running at the server:

#### NetWare

Run **Modules** at the server console prompt and look for `BTRIEVE.NLM` and `NWBSRVCM.NLM`

#### Windows NT

1. Click **Start**, point to **Settings**, and select **Control Panel**.
2. Double-click on **Services**.
3. Check to see if the Btrieve for Windows NT service is running.

## Btrieve Tests Completed Successfully

[See Also](#)

Btrieve was tested with a small suite of functions and has been verified to be functional. After rebooting your PC, your new software should function properly.

The tests that were performed include:

- Creating an empty data file.

- Loading a sample data file.

- Inserting data into the sample data.

- Updating that data.

- Reading the data back from the sample data file.

When these tests complete successfully, it means that your requester software performed actual Btrieve operations with the server, thus showing that your configuration is correct. Other Btrieve applications should also work correctly after passing these tests.

## Required DLLs for Btrieve Client-Server Access

[See Also](#)

These DLLs are typically found in the Windows\System or WinNT\System32 subdirectory. You should have one and only one copy of the DLLs installed on your workstation.

Note that the DLLs below are listed with a "100" or a "101" in the filename. This is the Version of the DLL. The 100 and 101 version is the initial release of this DLL. Future updated versions will have names like 102, 103, or 200 etc. etc. Only the latest version of each DLL should be needed.

### **Btrieve version 7.00**

#### **16-bit application on Windows 3.1 or Windows for Workgroups**

WBTRCALL.DLL (used only by 6.x applications)  
W1AIF101.DLL  
W1BTRV7.DLL  
W1BIF101.DLL  
W1MIF101.DLL  
W1CRS100.DLL  
W1NSL101.DLL

#### **16-bit application on Windows 95 or Windows NT workstation**

WBTRCALL.DLL (used only by 6.x applications)  
W1AIF101.DLL  
W1BTRV7.DLL  
W1BIF101.DLL  
W1MIF101.DLL (thunking done here)  
W3AIF101.DLL  
W3BIF101.DLL  
W3MIF101.DLL  
W3CRS100.DLL  
W3NSL101.DLL  
W16NR.DLL  
W32NR.DLL

#### **32-bit application on Windows 95 or Windows NT workstation**

WBTRV32.DLL (used only by 6.x applications)  
W3AIF101.DLL  
W3BTRV7.DLL  
W3BIF101.DLL  
W3MIF101.DLL  
W3CRS100.DLL  
W3NSL101.DLL

**Btrieve version 6.15**

**16-bit application on Windows 3.1 or Windows for Workgroups**

WBTRCALL.DLL

WBTRVRES.DLL

WBTICOMM.DLL

NWLOCALE.DLL

NWIPXSPX.DLL (for NetWare server)

NWCALLS.DLL (for NetWare server)

**16 bit application on Windows 95 or Windows NT workstation**

WBTRCALL.DLL

WBTRVRES.DLL

WBTRTHNK.DLL

WBTRV32.DLL

W32BTICM.DLL

W32NR.DLL

W16NR.DLL

NWLOCALE.DLL

**32-bit application on Windows 95 or Windows NT workstation**

WBTRV32.DLL

W32BTICM.DLL

The Btrieve Service "is" Btrieve. The service is normally set to Automatically run when your server starts.

You can manually Stop or Start it through the Service icon in the Control Panel.

Note that the Btrieve Service can run on Windows NT Advanced Server as well as NT Workstation. Windows NT versions 3.51 and 4.0 are supported.

## Product Version

InstallScout is designed to work with the following components of Pervasive Database:

Btrieve version **7.0** or higher.

Scalable SQL version **4.0** or higher

These products often ship as an embedded database within another software package.

## CISCO Router Configured to block SAPs

A CISCO router can be configured to hold up Service Advertising Protocol packets by setting the NOVELL OUT-SAP-DELAY <LENGTH> parameter in the port configuration setup. The LENGTH parameter is in milliseconds.

Holding up SAP packets for more than one minute causes all file servers on the opposite side of the router from the BTRIEVE.NLM to delete the NLM from the bindery. This causes a Status 20 (Record Manager Inactive) or Status 95 (Session No Longer Valid) to be returned to applications that were running when this happened.

To solve this, set the NOVELL OUT-SAP-DELAY LENGTH parameter to a value that does not delay SAP packets long enough for the file servers on the opposite side of the router from the BTRIEVE.NLM to delete the NLM from the bindery.

Pervasive Software recommends a value of 15.

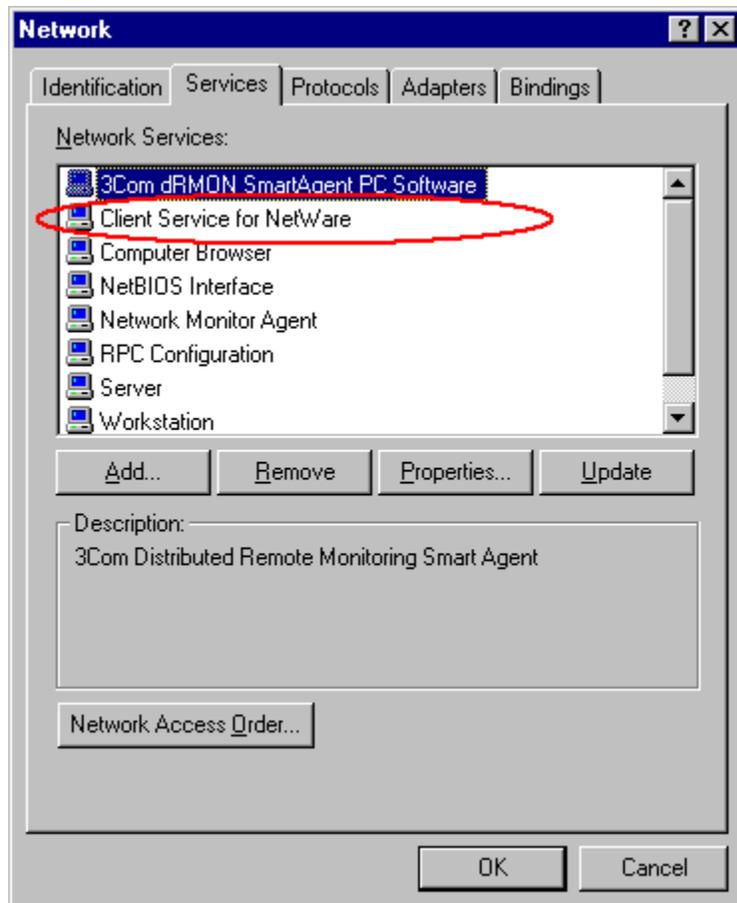
CLIB is a set of libraries for NetWare. The latest package can be downloaded from <http://www.novell.com> and has a filename of LIBUPx.ZIP where "x" is the latest revision letter.

Note that CLIB contains several NLMs to be installed - these all need to be installed together. That is, you cannot install portions of the LibUp package.

## Client Service for NetWare

This is the "Service" that allows a Windows NT workstation to access NetWare networks. Installing the *IPX/SPX Compatible Protocol* is usually enough for Windows applications to use the protocol. However, if you run DOS applications, you must install the *Client Service for NetWare*. This service is necessary in order to run DOS applications, even when targeting an NT server.

You do not need to install this service on your server.



## Network Communications Tested OK

[See Also](#)

Your network communications were tested with a small suite of functions and have been verified to be functional.

InstallScout displays information about your configuration in the top of the dialog. In the bottom part of the dialog, there is more detailed information concerning how the test proceeded. Specifically, InstallScout determined the following information:

Available protocols

Available network clients

Target name of the server

Target address of the server

Engine version

When these tests complete successfully, it means that your requester will be able to communicate with the Btrieve server using the noted protocol. Your client is therefore ready to accept the installation of the Pervasive files.

## Resolved Server Path, but Communications Failing

[See Also](#)

This indicates that there is a problem at the server or workstation in the communications settings.

The client or protocol being tested may not be installed or configured correctly.

Also, verify that your engine is running.

## Communications Problems

[See Also](#)

**Communications problems** are operating system and network dependent. These are not errors caused by your Pervasive Software product, but rather from your operating system or network. However, since your product is dependent on communications and your network to function, the following basic information is provided to assist you in correcting problems in these areas. Further information can be found in your operating system and network help files and documentation

### Common Causes of Communication Problems

\_\_\_ Old workstation drivers for the network

Old LAN card drivers at the workstation or server

Bad hardware (usually the LAN cards at the workstations or server)

Configuration problems in the routers and/or bridges between the workstation and the server.

Always make sure your system is using the latest workstation drivers (such as Novell Client 32 for Windows 95 or Windows for Workgroups NDIS drivers from Microsoft), as well as the latest LAN card drivers from the LAN card manufacturer. If possible, check with the OS vendor to see if they have any known reported conflicts with the cards and drivers you are using; you can typically check Novell's or Microsoft's web site for this type of information.

### Related Topics

[Protocols](#)

[Network Clients](#)

[Btrieve Version](#)

[Status 95](#)

[Btrieve Not Responding](#)

[Required Networking DLLs](#)

## **Contacting Pervasive Customer Support**

1-800-287-4383 (Toll-free: USA and Canada)

512-794-1719 (USA and Canada)

011-353-1-612-7440 (European support center - Dublin)

techsupport@pervasive.com (USA and Canada)

int-techsupport@pervasive.com (European support center - Dublin)

## Data Inconsistent

[See Also](#)

[Status Code List](#)

The Btrieve test performed either creates a file in the directory you chose during the Network Communications tests or uses SAMPLE.BTR if the Create fails. Sample records are inserted into the new file and then read back in to verify that they are written correctly. Under normal situations the data should have the correct values, but InstallScout was unable to get the correct record.

This condition can be caused by SAMPLE.BTR being modified from its original state, or a communications problem.

Further testing is suggested.

## Data Inconsistent

[See Also](#)

[Status Code List](#)

The Scalable SQL test performed uses the Demo database supplied with the Pervasive Database product. Sample records are read from the database to verify that your new Scalable SQL drivers are functioning. Under normal situations the data should have expected values, but InstallScout was unable to get the correct record.

This condition can be caused by the following:

- The demo database was modified from its original state

- You did not choose the correct DemoData directory. The default location for the DemoData in the Windows environment is C:\PVSW\DEMODATA on the Windows NT server. If you are at a workstation, you should map a drive to the server on which the Pervasive engine is installed so that you can provide InstallScout the location of the DemoData directory.

- You experienced a communications problem.

Further testing is suggested.

## Data Read is Incorrect

[See Also](#)

[Status Code List](#)

The Btrieve test performed either creates a file in the directory you chose or uses SAMPLE.BTR if the Create fails. Sample records are inserted into the new file and then read back in to verify that they are written correctly. Under normal situations the data should have the correct values, but InstallScout was unable to get the correct record.

This could be due to SAMPLE.BTR being modified from its original state, or a communications problem.

Further testing is suggested.

## Demodata Database Not Found

During the installation tests, InstallScout uses a sample database included with Pervasive Database to test the operation of your newly installed product.

InstallScout was unable to locate the DEMODATA directory on the server in which you installed Pervasive Database. If you installed Pervasive Database to the default location on the server, the DEMODATA should be in the following locations:

For Windows NT servers, C:\PVSW\DEMODATA

For NetWare servers, SYS:\PVSW\DEMODATA

This condition can be caused by the following:

The directory you chose during the Network Communications test of InstallScout does not exist.

The DEMODATA directory is missing File.DDF, Field.DDF, or Index.DDF.

You have a [communication problem](#).

Restart your computer and try the operation again. You can run InstallScout outside of the installation process; see [Running InstallScout Manually](#).

### Related Topics

[InstallScout Overview](#)

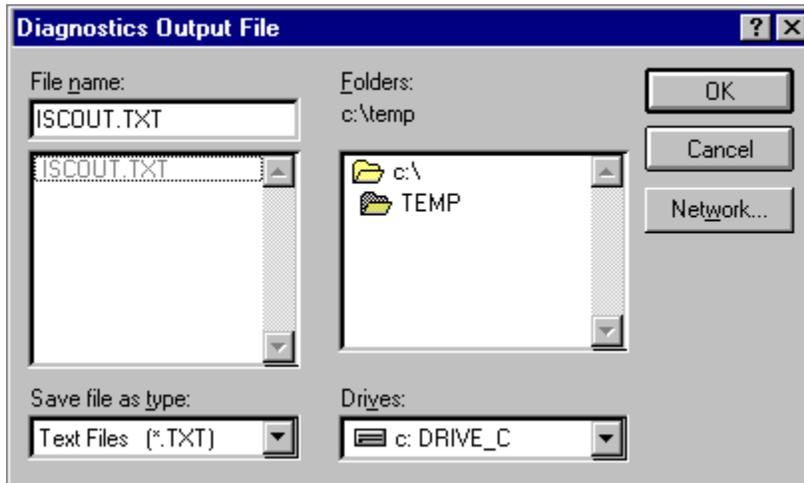
[Communication Problems](#)

[Testing Scalable SQL](#)

## Diagnostics Output File

This window prompts for the location of an output file that InstallScout writes when running outside of the installation program. The created file is an ASCII text file that can be viewed with any text editor, including Notepad in the Windows environment.

If you have difficulties with your Pervasive Database product that cannot be resolved with the help of InstallScout, you can forward this file to Pervasive Software Customer Support for analysis.



Choose a directory to write the output file. When you are done, click **OK** to continue.

## Disk Full

### [Status Code List](#)

InstallScout tries to create a temporary Btrieve file in the directory you chose for the purpose of verifying database functionality. A Disk Full error was encountered while doing this.

The MicroKernel can return this status code in the following situations:

The disk is full, and the MicroKernel cannot expand the file to accommodate additional records. Erase any unnecessary files.

There is not enough space to append a new page to the data file.

For files located on a NetWare server, the NetWare owner name for the file is no longer valid, and your application tried to insert or update records in the file, thus causing the file to expand. In this case, the MicroKernel returns this status code when it needs to add a page to the file, regardless of how much disk space is available. To check for an owner name, use the NetWare utility NDIR. To add an owner name, use either FILER (a NetWare text utility) or the NetWare Administrator graphical utility.

In some environments, you can restrict the amount of disk space available to each user. This status code indicates that the application attempted to expand a data file beyond the amount of disk space allocated to the file's owner.

You tried to read or modify a file that was not closed properly after a disk full error. Make sure that every application that used the file at the time of the disk full error closed the file successfully.

## File Path Error

[See Also](#)

[Status Code List](#)

InstallScout tries to create a Btrieve file in the sample data directory. A problem was encountered accessing this path.

The path you chose might be invalid or you may not have sufficient rights to this directory. You may choose another directory to test in or exit Install and reboot your PC. Then try using your application.

If you are still having trouble, look through this help file for more information or contact Customer Support.

Further testing is suggested.

**File Table Full** [See Also](#)

[Status Code List](#)

InstallScout tried to create and open a temporary Btrieve file to test database functionality. This test failed because the Btrieve server engine has too low of a setting for its "Open Files" configuration option. Use the Setup utility to increase this value.

Btrieve is probably functional but has not been fully tested at this point. Please reboot your PC and try your new software. If there are still problems, search through this help file for more information or call Customer Support.

Further testing is suggested.

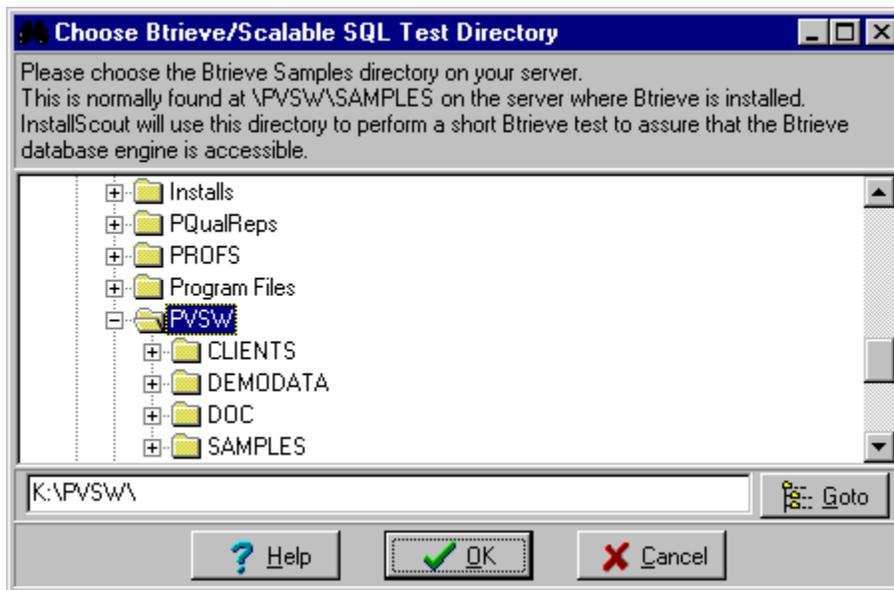
## Finding the Test Directory

The test directory is used by InstallScout to perform a software functionality test of your newly installed Pervasive Database software.

InstallScout tests your software setup by performing actual database operations using the sample database provided with Pervasive Database.

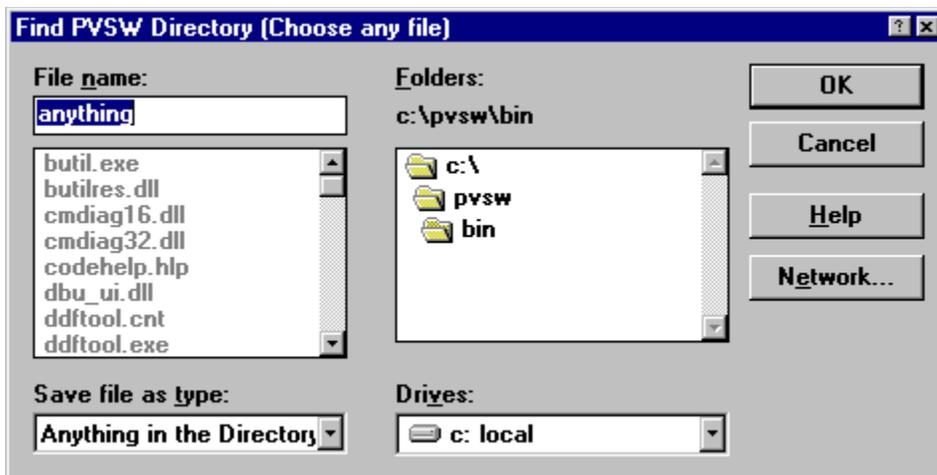
### Win32 Dialog

In the Windows NT and Windows 95 environment, the Win32 version of InstallScout displays the following dialog to find the test directory. Browse to the location of your Pervasive server directory. If you installed to the default location on the server, this is C:\PVSW. However, you need to substitute the C: for the drive letter that you used to map to the server's drive. In the following example, drive letter K is mapped to C: on the server.



### Win16 Dialog

In the Windows 3.x environment, the Win16 version of InstallScout displays the following dialog to find the test directory.



## Frame Type

[See Also](#)

Determines how IPX/SPX packets are relayed over the network. The frame type in most operating systems defaults to Auto. Pervasive recommends you force the frame type to the one specific to your network environment (for example, 802.2 Ethernet). For information on frame types and how to configure them, consult your operating system help, documentation, or vendor. If Frame Type is set to Auto, the workstation will default to the frame type of the first machine it finds on the network. If the frame type of the machine auto detected is incorrect, then network communications will fail with the IPX/SPX protocol.

### To set the frame type in Windows 95/NT:

1. Determine which network frame type your Local Area Network is using. In most cases, this is either 802.2 or 802.3.
2. Click **Start**, point to **Settings**, and select **Control Panel**.
3. Double-click **Network**.
4. Select "NWLink IPX/SPX Compatible Transport" from the list and click **Properties**.
5. Click the **Advanced** tab.
6. Under Property, highlight Frame Type and choose the appropriate frame type from the list at the right. Select only one frame type. Do not choose Auto frame type detection.
7. Click **OK** to save the changes.
8. Restart the workstation and retry the Btrieve operation(s).
9. If the problem persists, configure the frame type at the workstation.

## GPF

[See Also](#)

While testing Btrieve, a General Protection Fault or Access Violation was encountered. This can be the result of many errors in the Windows Operating System.

Since you just finished installing a new product, Pervasive suggests that you reboot your PC and try the application before troubleshooting further.

You may also want to run ScanDisk or Chkdsk.exe after rebooting to ensure file system integrity.

Further testing is suggested.

## GPF

[See Also](#)

While testing Scalable SQL, a General Protection Fault or Access Violation was encountered. This can be the result of many errors in the Windows Operating System.

Since you just finished installing a new product, Pervasive suggests that you reboot your PC and try the application before troubleshooting further.

You may also want to run ScanDisk or Chkdsk.exe after rebooting to ensure file system integrity.

Further testing is suggested.

InstallScout Overview

Step 1: Network Communications Tests

Step 2: Software Functionality Tests

## Handle Table Full

[See Also](#)

[Status Code List](#)

InstallScout tried to create and open a temporary Btrieve file to test database functionality. This test failed because the Btrieve server engine has too low of a setting for its "Maximum File Handles" configuration option. Use the Setup utility to increase this value.

This error may also occur if the Btrieve Engine on the server has already opened as many files as the Operating System allows. Refer to your operating system documentation to increase this value.

Btrieve is probably functional but has not been fully tested at this point. Please reboot your PC and try your new software. If there are still problems, search through this help file for more information or call [Customer Support](#).

It is helpful to know the following details regarding the MicroKernel's requirements for handles from the operating system.

- When the same file is opened multiple times, the MicroKernel uses only one operating system handle.

- If the file is in v6.x or later format and the file is shared via MEFS mode, the MicroKernel opens a second handle for the associated .LCK file.

- If the file is in v5.x format, the MicroKernel might request a second handle, for the .PRE file.

- If the file (in any format) is placed in continuous operation mode, the MicroKernel requests another handle for the delta file.

- If the file is extended, the MicroKernel requests an operating system handle for each of the extension files.

## How to Test Btrieve

Because Btrieve is an Embedded Client Server database driver that works underneath an application, finding the cause of an error can be difficult. The network may not be functioning properly; the data may be corrupted (very rare); the application may have problems; or DLLs may be incorrect, missing, or corrupt.

Pervasive has provided several tools to help determine which software layer may be having troubles.

1. Use Pervasive Software's Smart Scout utility to test the IPX/SPX or TCP/IP network connection to the server. This will differentiate whether the problem lies in the Network configuration or the workstation's DLL, INI, or Registry settings.
2. Try using BUTIL, the Btrieve Function Executor, BSIM, or any other low level Btrieve utility to test with -- thus differentiating between a problem with Btrieve or the Application. This will also give a true Status Code wherein the application may only be reporting that "Btrieve not loaded".

If WBExec does not function, you may want to call Pervasive Software Customer Support.

Once Btrieve can function with WBExec or BUTIL, your application should work. If not, please call the Application Vendor for further support.

## How to Test Scalable SQL

Because Scalable SQL is an Embedded Client Server database driver that works underneath an application, finding the cause of an error can be difficult. The network may not be functioning properly; the data may be corrupted (very rare); the application may have problems; or DLLs may be incorrect, missing, or corrupt.

The following can be a cause of Scalable SQL not functioning correctly:

- The network may not be functioning properly

- the data may be corrupted (very rare)

- the application may have problems

- DLLs may be incorrect, missing, or corrupt.

Pervasive provides a tool called SmartScout to help determine which software layer may be having troubles.

Use Pervasive Software's SmartScout utility to test the IPX/SPX or TCP/IP network connection to the server. This will differentiate whether the problem lies in the Network configuration of the workstation's DLL, INI, or Registry settings.

If you cannot solve your problem, contact Customer Support.

## I/O Error

### Status Code List

An error occurred while reading from or writing to the disk. One of the following has occurred:

The file is damaged, and you must recover it. Refer to the *User's Guide* for more information about recovering a file.

In NetWare, at least one MicroKernel data file is flagged as Shareable. All MicroKernel data files should be flagged as Non-Shareable. The MicroKernel is the only user that accesses the files (on behalf of many users). As the only user, the MicroKernel can control the integrity of the data files. If you flag your MicroKernel data files as Shareable, data corruption can occur.

For pre-v6.0 data files, there is a large pre-image file inside a transaction, and there is not enough disk space for a write to the pre-image file.

For pre-v6.0 data files, there is one pre-image file for multiple data files. For example, if you name the data files CUSTOMER.ONE and CUSTOMER.TWO, both files have pre-image files named CUSTOMER.PRE.

For pre-v6.0 data files that are larger than 768 MB, there is a conflict among locking mechanisms. The file has not been corrupted. Your application can retry the operation until the conflict is resolved (when the competing application releases the lock your application requires).

A pre-v6.0 Btrieve engine attempted to open a v6.x or later MicroKernel file.

## IPX/SPX

[See Also](#)

[Applies To](#)

IPX/SPX is a protocol that allows network access to NetWare or Windows NT servers (more commonly used on NetWare). In order to use this protocol to run your Pervasive Software product, it must be installed and configured correctly on both the workstation and server. For further information on installing and configuring the IPX/SPX protocol, consult your operating system documentation and help.

IPX and SPX are actually two different layers of protocols. IPX is the more typical implementation because of its speed and routability. It is capable of functioning on its own. However, it has no guarantees that the information from one computer will reach another computer.

SPX sits on top of IPX and sacrifices a small amount of speed for the ability to verify that the server receives information sent from a workstation. Because of the important nature of your data, Btrieve and Scalable SQL both use SPX.

Since most applications rely solely on IPX, your network may appear to be working. However, this does not mean that SPX is functioning.

## **InstallScout Contents**

**The InstallScout Tests**

**Networking Topics**

**Troubleshooting**

## Communication Settings Window

[See Also](#)

A problem was detected during testing. To better isolate and troubleshoot this, the *Communications Settings* Window prompts you for information about your network configuration. Specifying information on [protocols](#) and [networking clients](#) can assist in determining the cause of the problem.

**Communications Settings**

A problem has occurred while accessing Btrieve on the server you specified. To assist you in the best manner, more information will be needed. Please choose the items below that you know.  
If you do not know which items to choose, just click OK.

**Client**

- Microsoft Client for Windows NT
- Microsoft Client for NetWare
- Novell Client
- Microsoft NDS Client for NetWare
- Unknown

**Server**

- Windows NT
- NetWare
- OS/2
- Unknown

**Protocol**

- TCP/IP
- Winsock IPX/SPX
- Novell IPX/SPX
- Unknown

**NetWare Login**

- via NDS
- via Bindery
- Unknown

OK Help

Select the areas that apply in your environment. If you are unsure of one or more areas, select *Unknown*.

The purpose of this dialog is to focus the attention of InstallScout on the detail of your configuration. Selecting a value other than *Unknown* aids InstallScout in displaying the most helpful information to correct your communication problem. If you select *Unknown* for one or more categories, InstallScout still tries to determine as much as possible as to the cause of the communication problem.

InstallScout has the following categories of information

### Client

This field indicates the type of network client software that you use to connect to your servers. If you do not know what type of client software you use, consult your network administrator.

### Server

This field indicates the type of server to which your client connects.

### Protocol

This field indicates the type of [protocol](#) that your client uses to connect to the server.

### NetWare Login

This field only applies to clients that connect to Pervasive database engines on NetWare servers. Your NetWare login screen should indicate the type of login you perform. If you cannot determine this information, consult your network administrator.

After you have entered the information on this dialog, click **OK** to continue with the InstallScout tests.

## InstallScout Overview

[See Also](#)

[Status Code List](#)

InstallScout is a utility that runs during install and performs a test of your network communications and the functionality of the installed software. There are two main things InstallScout checks:

Your workstation can communicate properly with your server.

Your client software on your workstation is working properly performing Pervasive database operations with the Pervasive server software on your server.

### The InstallScout Process

InstallScout performs the following steps during the installation of your Pervasive Database product:

1. The utility checks for installed [protocols](#) and network [clients](#) and ensures that your network is correctly configured to run your new software. This is called the [Network Communications](#) portion of the tests.
2. Install then copies the workstation files for your product to your hard drive.
3. The utility performs a functionality check of basic database operations. This ensures that your product is working as intended. This is called the [Software Functionality](#) portion of the tests.

### InstallScout Prerequisites

To run InstallScout, the following must be true:

Both the Btrieve and Scalable SQL server engines must be running (they are started automatically if you chose the Typical install).

Network client software and protocol must be installed on your workstation (either SPX or TCP/IP)

The server on which you installed Pervasive Database must be accessible from your workstation. To do this, you must map a drive to the remote server as discussed in the installation chapters of *Getting Started*.

If running InstallScout standalone (from the Start menu, not the Install program), then the Btrieve and Scalable SQL requesters should already be installed.

If running during your Pervasive Install, the requesters must be installed before InstallScout is run. This happens automatically during a Typical install.

### Types of Errors That Can Be Received During InstallScout

InstallScout can detect two types of errors - those that arise from a problem with your network or communication setup, and those that indicate a problem with your Pervasive software setup, which usually manifest themselves as a status code.

[Communications/Network Problems](#)

[Pervasive Software Status Codes and Error Messages](#)

### How to Get Additional Help

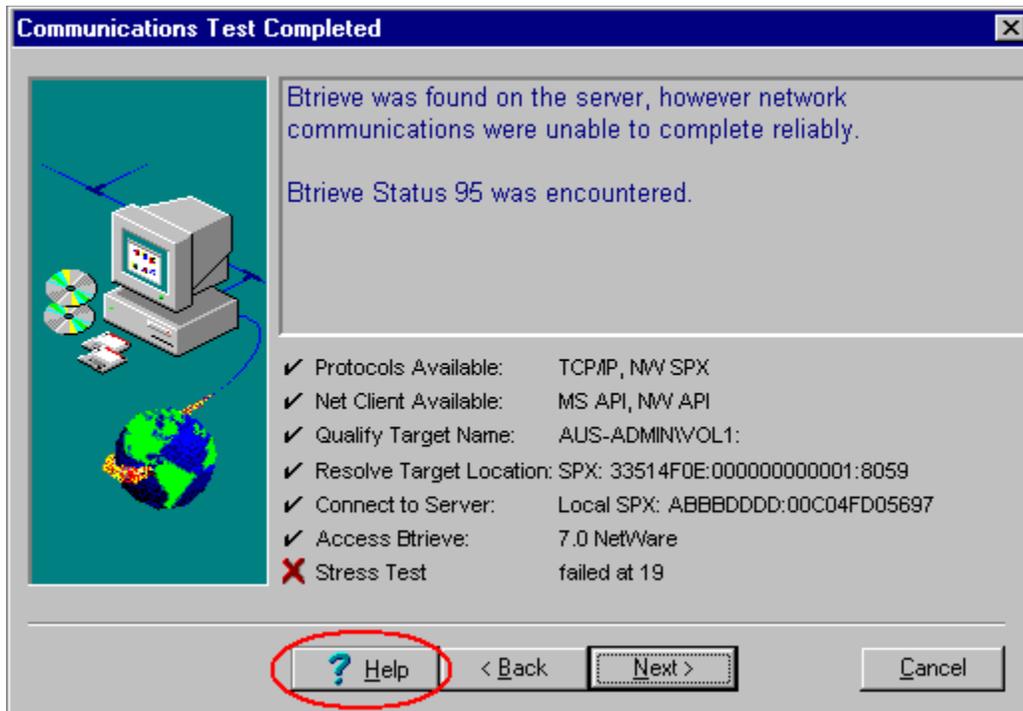
Additional information on these topics is available on the Pervasive Web site:  
<http://www.pervasive.com>

Consult your operating system and network help files and documentation.

Run the Pervasive utility [SmartScout](#), which is designed to provide troubleshooting help after Pervasive Database is installed.

### What to Do When An Error Occurs

When an error occurs, review any additional information in the InstallScout windows.



Click **Help** if you receive an error while running InstallScout. The program displays additional information if available about the error that occurred.

### How to Review InstallScout's Report

InstallScout creates a text file while it runs that can help in troubleshooting your problem. This file is COMMDIAG.TXT and is located in the client directory you chose during install (normally C:\PVSW). If InstallScout was unable to create the file in this directory, it may have been placed in your Windows directory.

Being that InstallScout is meant to be run during Install, it cannot check for every possible problem. To further assist you, [SmartScout](#) is provided for testing communications once Installation is complete.

### Details of InstallScout Operation

This section outlines details of how InstallScout does its work. You do not have to understand this information in order to run InstallScout; it is provided for informational use only.

#### Network Communications tests

The network communication tests do not use any Btrieve or Scalable SQL DLLs and do not reference the BTI.INI or the Pervasive Registry entries. Thus, strictly the networking protocols are tested.

#### Software Functionality Tests

Btrieve and Scalable SQL testing are performed now that the database drivers (DLLs) are installed. If the Network Communication tests ran without error, then the Software Functionality Tests should also go without incident. Sometimes, though, an error during installation might cause a problem.

## Multi-homed Servers

Multi-homed servers contain more than one network card and are connected to more than one physical network via multiple network interface cards. If you are installing a Pervasive server on such a server using Windows NT or NetWare and you want the workstations on these subnets to communicate with the Btrieve and Scalable SQL engines, then follow the instructions in this topic.

Multi-homed servers require some setup in order for Pervasive software to function. Symptoms of an improperly configured multi-homed server include the following:

Your server cannot communicate with a Btrieve or Scalable SQL server.

When using the Ping utility, you receive the error "destination host unreachable" or "request timed out".

You should perform these steps prior to installing a Pervasive database server to properly configure your network.

### How to Configure a Multi-Homed Server

1. Enable IP forwarding at the multi-homed server
2. At each workstation on the subnets, configure the default gateway address as either the multi-homed server's IP address (the one matching the network address of the subnet) or some other router/gateway's IP address that can route to the multi-homed server.

Both of these steps are performed during the TCP/IP configuration process. Refer to your system documentation for more specific information.

### Related Topics

[Protocols](#)

[Status 20](#)

[Status 91](#)

[Btrieve Not Responding](#)

[Scalable SQL Not Responding](#)

## Network Clients Defined

Network clients are the workstation API's (application programming interfaces) that 'talk' to protocols and allow access from the workstation to your network. The Microsoft network client or the NetWare network client can be used with your software product. For information on installing and configuring network clients, consult your operating system help and documentation. The following is list of network clients supported by Btrieve and Scalable SQL.

Microsoft Client for Microsoft Networks

Microsoft Client for NetWare Networks

Novell Client for NetWare Networks

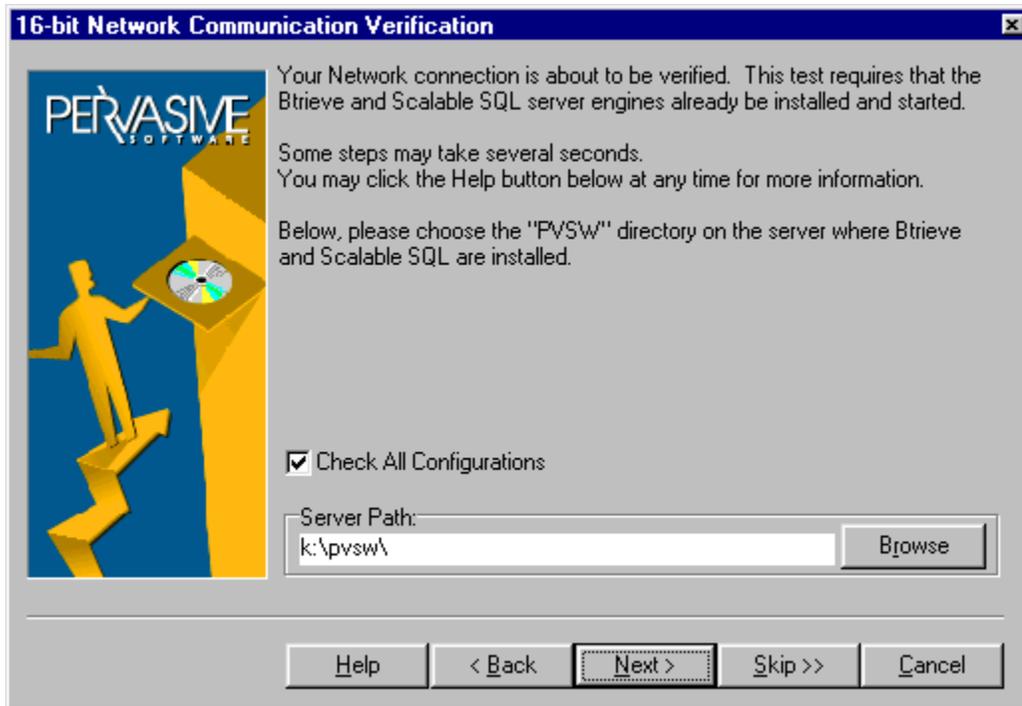
Novell Client32 for NetWare Networks

## Network Communication Verification Window

The Network Communications tests are performed in order to verify that your client workstation can communicate with network protocols to reach the machine on which your Pervasive server is installed. This is the first of two parts to the [InstallScout](#) tests. The second, performed later, checks that the installed requester software can manipulate data using the Btrieve and SQL engines on your server.

**Note:** This test does not occur on Workstation versions of Pervasive.SQL.

The following dialog displayed by InstallScout.



This is the Network Communication Verification Screen.

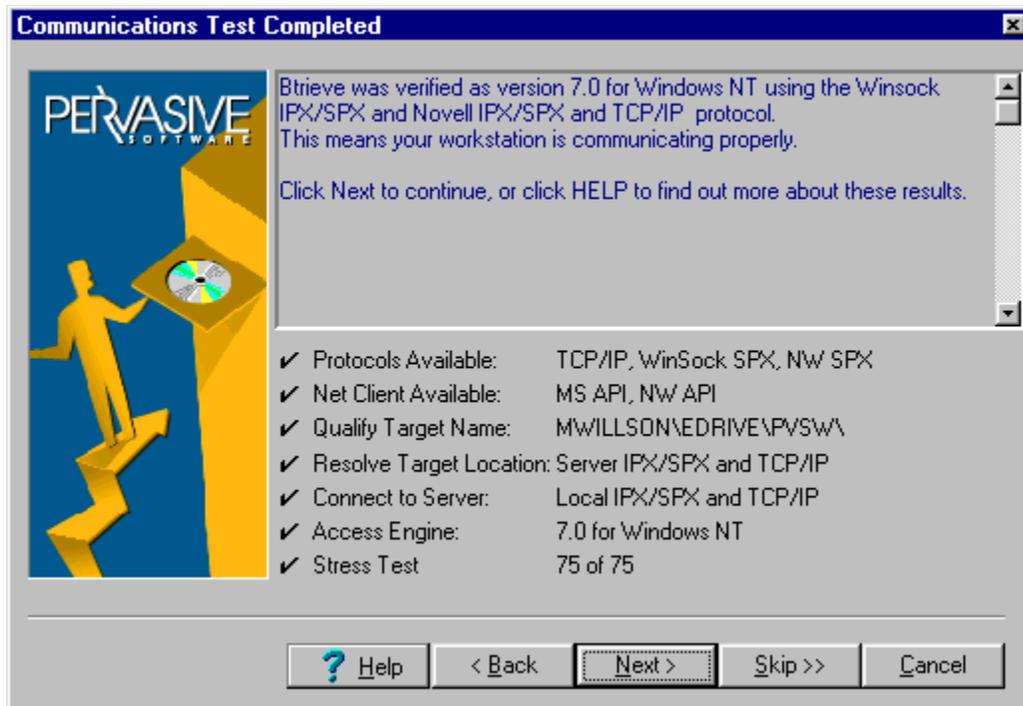
Clear the **Check All Configurations** check box if you do not want to verify all networking options. Pervasive suggests leaving this checked normally. If you clear the check box, the [Networking Options](#) dialog displays.

The Server Path input section is asking for the location where a Functionality check can be performed later. If you ran InstallScout from the server, the correct directory should already be listed. If not, use the [Browse](#) button to find the install directory of your Pervasive 7.0 server product.

**Note:** You cannot use a local hard drive. You must map a drive letter to the remote machine on which your Pervasive server is installed.

When the tests begin, InstallScout performs its check, showing the steps it is performing along the way. When a step has been completed, you see a check mark to the left of the step. If problems are encountered, you see an "X" to the left of the step. If you receive an X, then press F1 to receive help on and possible solutions to the error condition you received.

Some of the steps performed include checking for available protocols, determining the network client software, and connecting to the remote Pervasive server.



## Related Topics

[Communication Problems](#)

## Network Number Incorrectly Set

The Network Number for each frame type must be the same on network devices connected to the same network segment.

### **To Check Your Network Number**

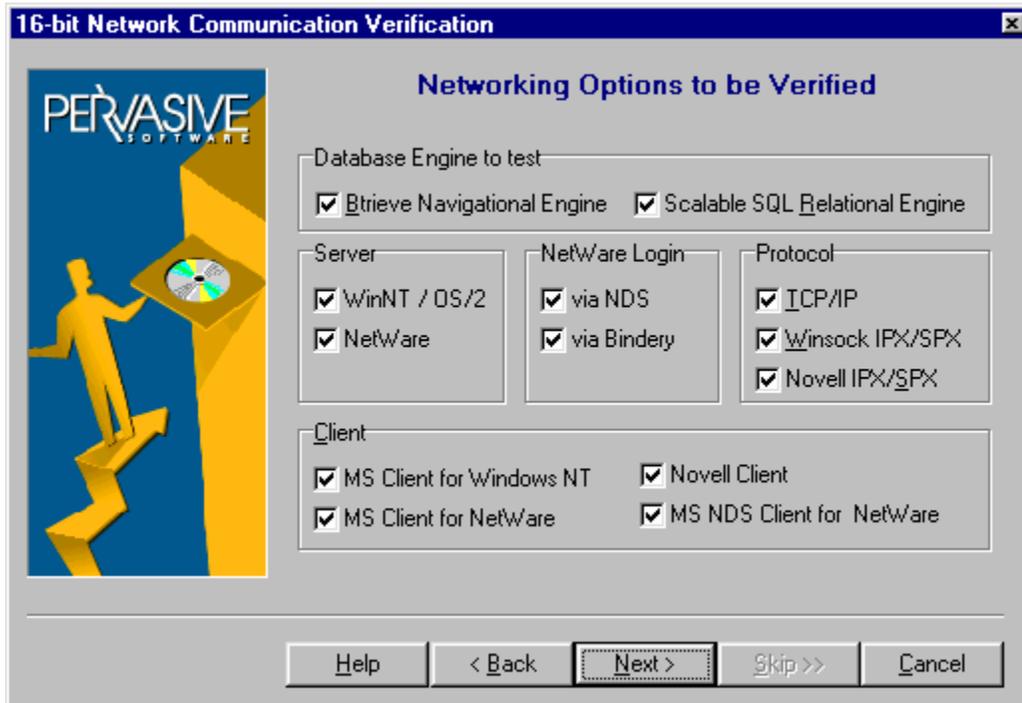
1. Run "ipxroute config" from a DOS box on the workstation. Note the network number (NOT internal network number).
2. Run "ipxroute config" from a DOS box on the server. Note the network number (NOT internal network number).

### **To Change Your Network Number:**

Change the network number in the registry to zero on the workstation. This allows the workstation to pick the network number up from the wire, ensuring it will always be right.

## Network Options Window

This dialog allows you to customize the level of network testing that InstallScout performs. This screen is displayed if you clear the **Check All Configurations** check box that appears during the Network Communications Tests.



The check boxes on this dialog show the extent of testing that InstallScout performs. If you do not have some of the drivers listed on this dialog, clear the check box of the appropriate item. Some items are dependent on others. For example, if you clear the NetWare check box, other items such as the NetWare Login are also cleared since they are irrelevant to any server except NetWare. If you are unsure of your configuration, click **Next** to continue with the tests and InstallScout will attempt to test all possible configurations.

### Database Engine to Test

This determines which database models InstallScout tests. You can select Btrieve, Scalable SQL, or both. The tests are similar against each engine and are run serially.

### Server

Ensure that only the type of server you have is selected in this box. If you are unsure what type of server you have, leave both boxes checked. If you clear the NetWare box, the other Novell only settings are made unavailable.

### NetWare Login

Choose the method by which you log into NetWare servers. Select either NetWare Directory Services (NDS) or Bindery.

### Protocol

Choose the protocol you use to connect to your servers. If you use IPX/SPX, select either Winsock IPX/SPX (Microsoft) or Novell IPX/SPX.

**Client**

Choose the client software you use to log in to your server.

The MS Client for NT is used by Windows 95 and Windows NT workstations to connect to Windows NT servers.

The MS Client for Novell is used by Windows 95 and Windows NT workstations to connect to NetWare servers via the bindery.

The MS NDS Client for NetWare is used by Windows 95 and Windows NT workstations to connect to NetWare servers via NetWare Directory Services.

The Novell client is used by Windows 95 and Windows NT workstation to connect to NetWare servers via NetWare Directory Services.

Communications Problems

TCP/IP

IPX/SPX

Frame Type

Packet Size

Unable to Resolve Server Address

Multi-homed Servers

## Number of Remote Sessions

This is a Pervasive server configuration setting that controls how many remote clients can access a Pervasive server at one time. There are two different settings called Number of Remote Sessions: one for Btrieve and one for Scalable SQL.

You received this error most likely because your setting for this value is too low. The default for both Btrieve and Scalable SQL is 15.

### To increase your Number of Remote Sessions:

1. Click **Start**, Point to **Programs**, then to the **Pervasive** folder.
2. Select **Setup** (Win32 or Win16).
3. If you are on a client workstation, you must connect to the Pervasive server. Click **Connect** and enter the name of the server on which the Pervasive server is installed.
4. Select either Btrieve Communication Manager or Scalable SQL Communication Manager, depending on which interface caused the error.
5. Number of Sessions is the first setting in the list for the Communication Managers. Enter a higher value in the field and click **Save**.
6. Click **Exit** to terminate the Setup utility.
7. You must stop and restart the Btrieve or Scalable SQL services on the remote server in order for this change to take effect. To do this, follow the instructions in the *Getting Started* manual.

Determines the size of IPX/SPX packets sent across the network.

For information on packets and setting the size for your operating system, you should consult your operating system help, documentation or vendor.

Btrieve also has an internal Receive Packet Size that can be set.

## Pervasive Software



### **Who We Are**

At Pervasive Software, we've become the leader in embeddable databases for packaged applications serving small to mid-sized businesses and departments within large corporations. We target middle-market solution providers exclusively - providing the right answers to the database needs of today's developers and resellers.

### **The Pervasive Way**

Knowing the market and providing the solutions is the Pervasive way. Whether you're a developer looking for the right database for your middle-market application, or the end user who is interested in the application - not the underlying database - a Pervasive solution makes all the difference.

### **Pervasive is the Perfect Fit**

Small businesses and single departments simply do not have the resources - time, money, and personnel - to implement and run an enterprise database solution. What's more, they don't need most of the sophisticated functionality. But desktop database applications simply aren't powerful enough to meet the needs of today's high-demand organizations. Pervasive products fill the gap with affordable-to-own, powerful, and maintenance-free navigational or relational databases targeted to the needs of middle-market applications.

Please visit our web page at <http://www.pervasive.com> for more information.

# Ping

[See Also](#)

## Overview

Ping is a command line utility that comes with TCP/IP based server operating systems to allow connectivity testing between machines running the TCP/IP protocol and connected via the network. In simple terms, Ping verifies that you can communicate with the server by using the protocol (language) that your client normally uses to communicate with the server. Instead of performing a database operation, however, Ping answers the simple question of whether you can connect to the server at all using TCP/IP.

To understand the concept of ping, you can think of it as being similar to RADAR. You initiate a ping signal and wait to see if any signal bounces back and shows on your screen, indicating that your target is out there.

In a TCP/IP ping, you send a signal to a specific server (either by name or by Internet IP address). If the ping is successful, you receive a series of replies from the remote server with some additional information such as the time it took for the reply. If you receive the reply, you can be assured that the two-way TCP/IP communication between your client and the server is functioning, and you can eliminate that as a cause for any software functionality problems you are having.

## How to Use Ping in Windows 95/NT:

1. Click **Start** and select **Run**.
2. Type `Ping MachineName` at the prompt and press Enter.

## What You Should See if the Ping is Successful

If successful, you should see a return message such as:

```
Pinging YourServerName [192.168.1.207] with 32 bytes of data:  
Reply from 192.168.1.207: bytes=32 time=1ms TTL=128  
Reply from 192.168.1.207: bytes=32 time=1ms TTL=128  
Reply from 192.168.1.207: bytes=32 time=1ms TTL=128  
Reply from 192.168.1.207: bytes=32 time=1ms TTL=128
```

If you do not get a reply, you probably have a network communication problem.

For your Pervasive software to function, the workstation must be able to Ping the server by name and the server must be able to Ping the workstation by name.

Your software product can use one of 2 protocols -- IPX/SPX or TCP/IP.

These protocols allow your workstation to communicate with your server.

One or both of these protocols is required to be installed and functioning correctly before your client-server product will function.

Also note that the Btrieve and Scalable SQL Engines must be started on the targeted server.

### **Related Topics**

Multi-homed Hosts (servers with more than one network card)

Protocols are the transport that transfer packets (data) to and from systems on a network. Your Pervasive Software product can use the TCP/IP protocol or the IPX/SPX protocol.

## Status 20 with RAS installed on NT Server

[Status Code List](#)

### The Problem

After installing RAS (Remote Access Server) on an NT server running Btrieve for Windows NT Server edition, workstations can no longer access the MicroKernel engine. Status 20 (Btrieve not loaded) is returned to DOS and Windows Btrieve applications.

**Note:** when referring to network numbers, we are referring to the IPX network numbers, not the "Internal Network Number", which Windows NT uses for internal routing and identification purposes.

Novell's routing protocol specification does not allow routers to send *Routing Information Protocol* (RIP) responses to network number zero (network number 0 typically means "this network"). In certain situations, Windows NT will associate a network number of all zeros with one or more IPX frame types that are enabled on the server. When there are no routers on the network, this is acceptable. However, when RAS is installed on a Windows NT server - since RAS is essentially a router - problems can occur. RAS, since it is written to Novell's IPX Router Specification v1.20, will not route RIP responses on a network with any virtual network numbers of all zeros.

When a Btrieve requester makes a call to the NT server engine, it sends a RIP request for a network route to the server. If RAS is installed, and any of the IPX frame type network numbers are all zeros, RAS will not route. This will cause the RIP request to fail, and the Btrieve requester will issue a Status 20.

### The Solution

**(CAUTION: Changing the IPX network numbers manually can cause routing failures and other network related errors, and should be done by qualified personnel ONLY)**

Change all zero IPX network numbers on the server to a non-zero value. The registry setting location is:

H\_Key\_Local\_Machine

  \System

    \CurrentControlSet

      \Services

        \NwlnkIpx

          \NetConfig

            \<driverName>

              NetworkNumber

A NetWare utility that allows a user to control the NetWare console from a remote workstation.  
For RCONSOLE to work, the server must have RSPX.NLM and REMOTE.NLM loaded.

## ReadWrite Test Failed

[See Also](#)

[Status Code List](#)

InstallScout tried to Create and Open a Btrieve file in the sample directory but was unable to do so.

This can be caused by Communications Problems; however, InstallScout should have already verified your network to be functional before Install got underway.

This problem can also occur due to configuration issues. It is possible that you simply need to reboot to allow the new installation to become active.

Try your new software - if you are still having trouble, you may look through this help file for more information, or contact Customer Support.

To help diagnose the problem better, InstallScout will now try to open SAMPLE.BTR in the directory to see if any database activity can be performed.

## Required Files for Network Communications

Start by choosing which Operating system your Workstation is running.

Win16 (Windows 3.x and Windows for Workgroups)

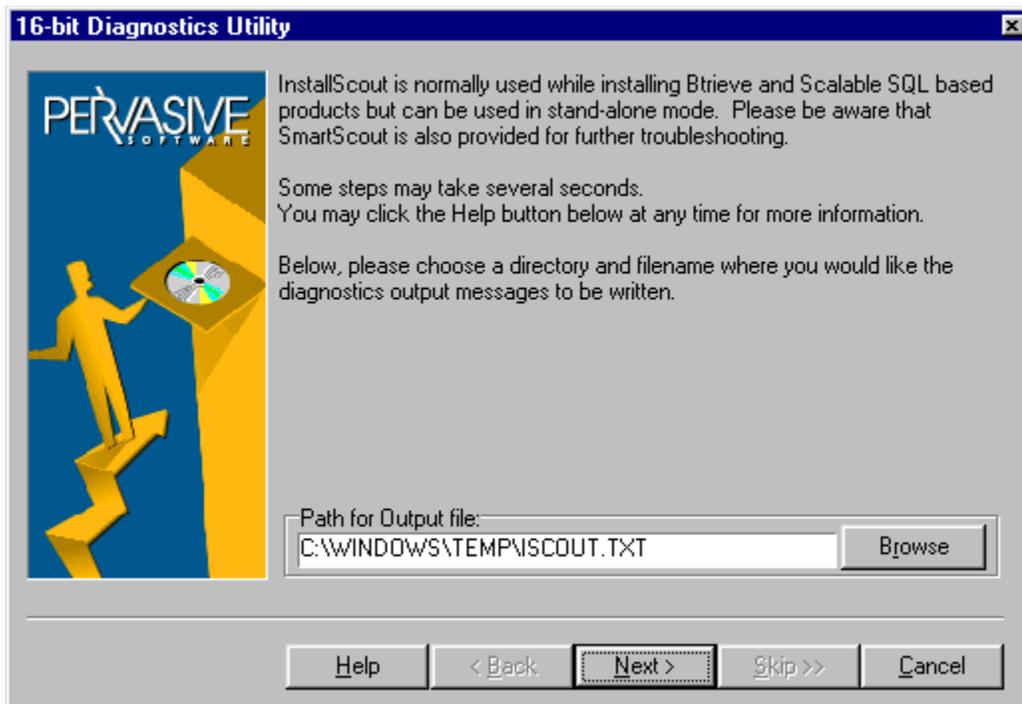
Win32 (Windows 95 and Windows NT)

## Running InstallScout Manually

[See Also](#)

In addition to running during the installation process, you can run InstallScout at a later time to confirm that your network communication is still functioning and that your client software can talk to the server's Pervasive Database engine.

If you run InstallScout later, it performs identically to the way it did during Install, except that it first prompts you for the location of an output file to write its report. Enter a name and path for the output file and click **Next** to start the tests.



### Differences between InstallScout and SmartScout

SmartScout is another Pervasive utility that helps you determine the cause of software or communication problems that may arise. It is similar to InstallScout in the types of problems it discovers, but SmartScout provides more information on the types of problems encountered, provides a list of all active Pervasive DLLs and registry and INI file settings, and steps through the communication process. This way, if you have trouble, you can determine the exact cause.

For complete documentation on the SmartScout utility, see *Getting Started*.

## SPX Time Out Settings

A status 95 (session no longer valid) indicates that an SPX session had been established, but due to network delays and/or network communication problems, the SPX session has been terminated. If the problem is due to delays in receiving a response from the server, it may be advisable to increase the SPX TIMEOUT parameters in the workstation's NET.CFG file or in the SPXCONFIG.NLM at a NetWare server. These parameters are shown below with their default values:

```
SPX VERIFY TIMEOUT =54
SPX LISTEN TIMEOUT =108
SPX ABORT TIMEOUT  =540
```

These three parameters (in the order listed above) have values in a 1:2:10 ratio. If the values are changed from the default settings, they should be kept in this ratio. At most, just double or triple the default values. If the status 95s persist, the problem is probably not related to a timing issue. SPX timing issues are common in WAN environments or large LAN segments, and are usually resolved by increasing these parameters. (Refer to the NetWare workstation documentation for more information about these parameters.)

Other causes of status 95s are related to communication problems on the network. This can be due to old workstation drivers for the network, old LAN card drivers at the workstation or server, bad hardware (usually the LAN cards at the workstations or server), or routing configuration problems in routers and/or bridges. It is often difficult to diagnose exactly what is causing the problem, but there are some actions that can be taken to help prevent it.

First, make sure your system is equipped with the latest workstation drivers from Novell, as well as the latest LAN card drivers from your LAN card manufacturer. Also, make sure that your LAN cards and drivers are certified by Novell to run on the version of NetWare that you are using.

Next, try to isolate the problem. Is it happening on all workstations, or only some of them? Check with workstations on different segments on the LAN. You may want to try swapping hardware components at the server or at workstations to see if different LAN cards make a difference.

It is often a good idea to try other SPX applications. RCONSOLE is a good test for DOS workstation applications that use SPX. If having problems with a DOS Btrieve application:

- 1) Run RCONSOLE on a workstation,
- 2) Let it run the length of time it takes for the Btrieve application to get the status 95, and
- 3) See if RCONSOLE reports any errors.

Try running RCONSOLE from DOS and in a Windows DOS box if the problem is Windows-related.

In almost all cases, Btrieve status 95s are caused by a problem in the communications on your network. Consult with your NetWare reseller for more assistance with SPX configurations.

Pervasive Software's relational database engine.

## Scalable SQL Inactive

InstallScout was trying to test the functionality of Scalable SQL, but received a "Scalable SQL Inactive" error.

### Status Codes

This condition can be caused by the following [Scalable SQL Status Codes](#):

200, 802, 2103

The solution to each status code is different. Please refer to *Status Codes and Messages* (CODE\_MSG.PDF or CODE\_MSG.HLP) for more information.

### Communications Problems

These errors can be the result of a network [communications problem](#) or a workstation configuration problem.

### Engine Not Started

Make sure the Scalable SQL Engine is [started](#) on the server.

### Configuration Problems

Your engine settings for LOCAL TARGET ENGINE and REMOTE ACCESS could be set incorrectly. Run the Setup utility and verify your settings under the **Scalable SQL Requester** component.

For more information on changing your configuration, see the *Pervasive.SQL User's Guide*.

## Scalable SQL Tests Completed Successfully

[See Also](#)

Scalable SQL was tested with a small suite of functions and has been verified to be functional. After rebooting your PC, your new software should function properly.

The tests that were performed include:

- Open the Demo database that ships with the product.

- Obtain a list of tables.

- Retrieve a record from the database.

When these tests complete successfully, it means that your requester software performed actual Scalable SQL operations with the server, thus showing that your setup is correct. Other Scalable SQL applications should also work correctly after passing these tests.

## Required DLLs for Scalable SQL Client-Server Access

[See Also](#)

These DLLs are typically found in the Windows\System or WinNT\System32 subdirectory. You should have one and only one copy of the DLLs installed on your workstation.

### **Scalable SQL version 7.0**

**16-bit application on Windows 3.1 or Windows for Workgroups**

**16-bit application on Windows 95 or Windows NT workstation**

**32-bit application on Windows 95 or Windows NT workstation**

### **Btrieve version 6.15**

**16-bit application on Windows 3.1 or Windows for Workgroups**

**16 bit application on Windows 95 or Windows NT workstation**

**32-bit application on Windows 95 or Windows NT workstation**

## Scalable SQL Version 0.0

InstallScout queried the version of the Scalable SQL engine on the server, and the server returned version 0.0, which is incorrect.

### **Common Causes**

The Scalable SQL Engine is not started.

The user count license is not installed for the engine. For more information on installing user counts, see *Getting Started*.

## Scalable SQL Not Responding

[See Also](#)

This software requires Scalable SQL to be running on the server being tested.

Verify the following:

Scalable SQL is running on the server

You are logged in and connected to the server

**To verify that Scalable SQL is running at the server:**

### NetWare

Run **Modu1es** at the server console prompt and look for `SSQL.NLM` and `NWSSRVCM.NLM`

### Windows NT

1. Click **Start**, point to **Settings**, and select **Control Panel**.
2. Double-click on **Services**.
3. Check to see if the Scalable SQL service is running.

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## SmartScout

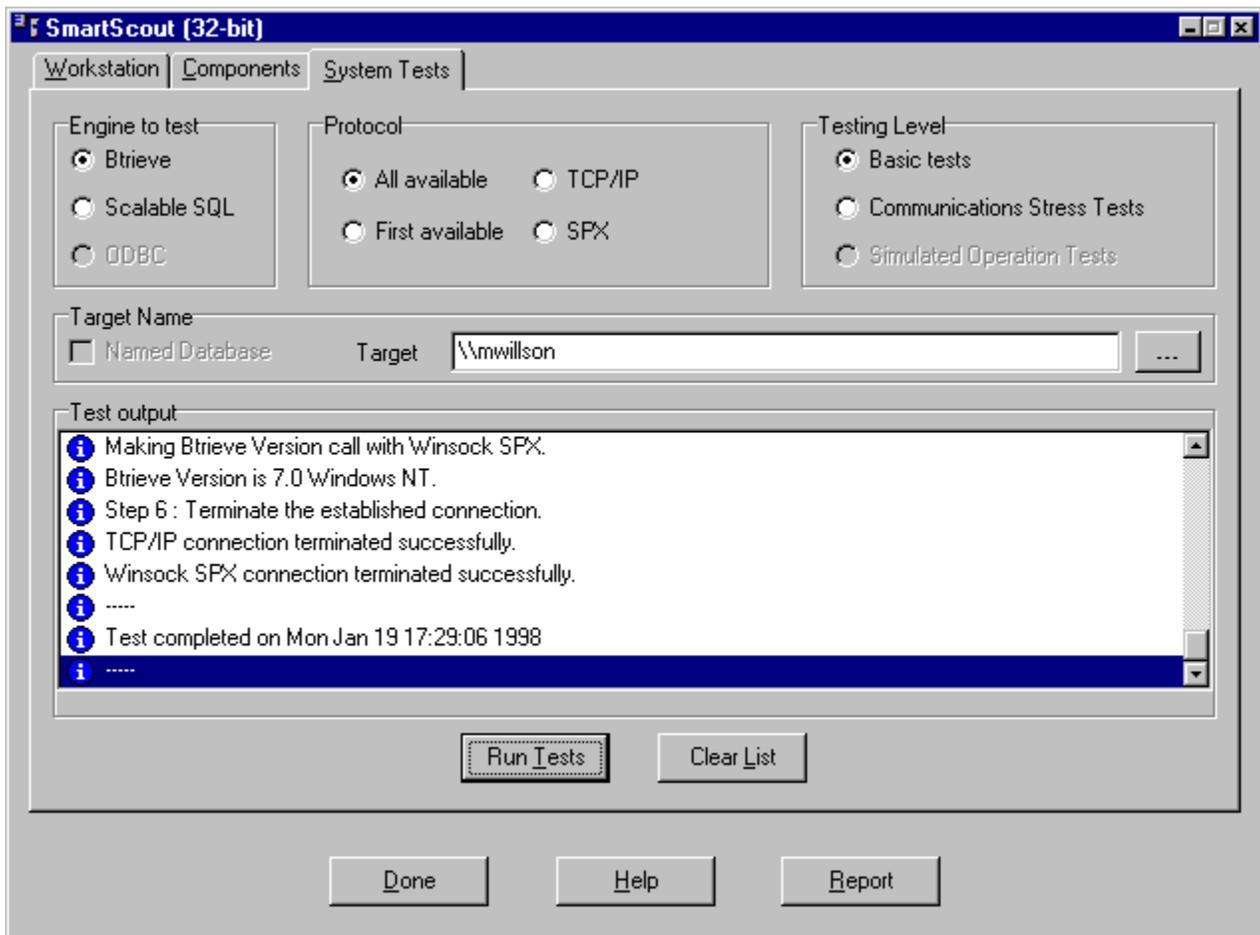
[See Also](#)

### Overview

SmartScout is a utility for testing Network communications from a workstation to a Pervasive server. It is similar to InstallScout but is intended for use after Pervasive Database is already installed. It also provides more technical and detailed information about the steps it is taking and any problems that are discovered.

SmartScout is a Pervasive utility that helps you determine the cause of software or communication problems that may arise. It is similar to InstallScout in the types of problems it discovers, but SmartScout provides more information on the types of problems encountered, provides a list of all active Pervasive DLLs and registry and INI file settings, and steps through the communication process. This way, if you have trouble, you can determine the exact cause.

For complete documentation on the SmartScout utility, see *Getting Started*.



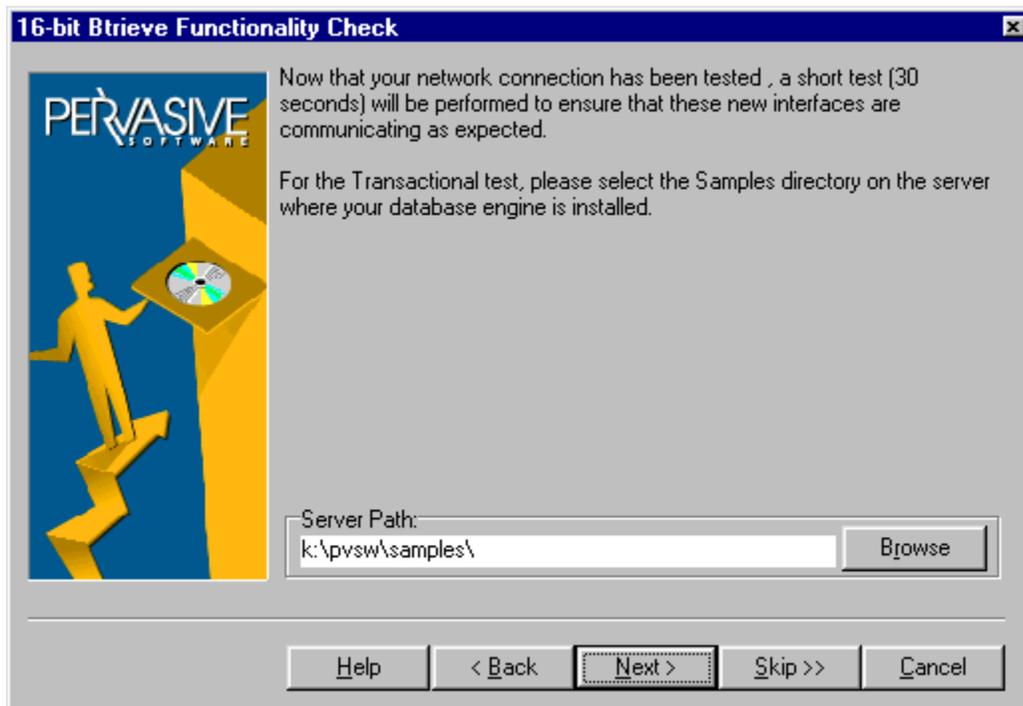
### How to Run SmartScout

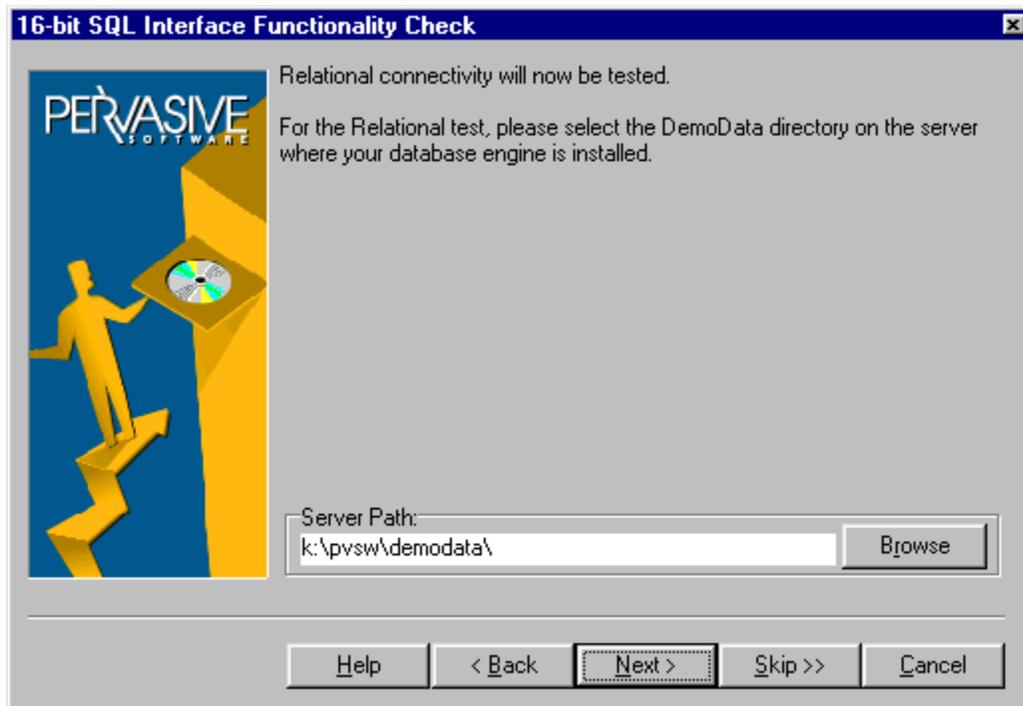
1. Click **Start** and select **Programs**, then the Pervasive folder.
2. Select **SmartScout** (either Win32 or Win16) from the menu.

## Software Functionality Check

The Software Functionality Check is the second part of InstallScout's operation. The first part of the tests (not performed on Workstation engines) checked your network for proper operation. Then Pervasive Database installed the remainder of the client files to your workstation.

This part of the test ensures that your machine is using compatible versions of Btrieve and Scalable SQL software and that all of your components are properly installed.





InstallScout now performs a check of the installed Pervasive database software. These tests perform a series of Btrieve and Scalable SQL operations that shows your software is setup correctly and that you have connectivity to the database engine.

InstallScout tests the Btrieve and Scalable SQL interfaces separately. While performing the tests, InstallScout performs database operations to the engine. For each interface, InstallScout opens a sample database, inserts a record, modifies that record, and then reads the record back to ensure that the database operations are completing as expected. Once these tests are performed for Btrieve and Scalable SQL, you can be certain that the Btrieve and Scalable SQL engines are functioning normally, and that your client software and the server's software are in communication.

The following dialog displays during the test. A similar dialog opens after the Btrieve tests complete to test the Scalable SQL interface of Pervasive Database.



See [Testing Btrieve API](#) or [Testing SQL API](#) for more information about the software tests..

If you are running InstallScout during the installation of your Pervasive Database client software, you can review the results of the tests in the file COMMDIAG.TXT, located in the directory where your Pervasive software is installed.

## Specifying User Name and Password for IDS Server Access

During the installation, the target IDS server was found to have security enabled.

The settings "IDS User" and "IDS Password" in the Setup utility are used to authenticate your client with this IDS server.

After completing the installation, run the Pervasive.SQL Setup utility and change the values for these two settings (found under the MicroKernel Router component) to the values given to you by the IDS Administrator.

For more information about changing your configuration with the Setup utility, see the Pervasive.SQL *User's Guide*.

For more information about IDS security, see *Getting Started with I\*net Data Server*.

## Starting Pervasive Engines

### Windows NT

In Windows NT, the Btrieve and Scalable SQL engines run as services. To start the engines:

1. Click **Start**, point to **Settings** and select **Control Panel**.
2. Double-click **Services**.
3. Find the Btrieve and Scalable SQL services in the list and click **Start**.

### NetWare

At the NetWare command console, enter `BSTART` and `SQLSTART`.

For more information about Starting and Stopping Pervasive engines, see *Getting Started*.

## Status 20 -- Btrieve Inactive

[See Also](#)

[Status Code List](#)

Status 20s are caused by the application not being able to communicate with the Btrieve Database Engine.

Generally, if a Status 20 occurs quickly, you should check the local configuration (DLLs, BTI.INI and Registry settings). If the Status 20 occurs after a delay, the engine or requester may be loaded locally but is having trouble talking to the server -- check the server configuration, directory rights, etc.

Beyond ensuring the product is installed and running on client and server machines, there are several things to check for:

### General Configuration

In the Windows environment, be sure that the [Btrieve Requester DLLs](#) are in your Windows\System directory.

On NetWare 3.12, After311.NLM and A3112.NLM must be loaded along with BTRIEVE.NLM.

In the OS/2 environment, be sure that the necessary DLLs are in a directory listed in your config.sys LIBPATH.

Data file directory must grant Read, Write, Create, Delete, Execute, and Scan rights to the users.

For Win16 applications accessing NetWare servers, NWCALLS.DLL must be in the Windows\System directory (can be obtained from Novell)

To run a DOS application on a Windows NT workstation -- load NW16.EXE and VWIPXSPX.EXE (also has VWIPXSPX.DLL) before BREQUEST or BREQNT

**Note:** you may have to install [Client Service for NetWare](#) to obtain these files.

Under Windows 95, correctly set your IPX Network Properties. To do this:

1. Click **Start**, point to **Settings**, and select **Control Panel**.
2. Double-click **Network**.
3. Select IPX/SPX Protocol and click **Properties**
4. Click the **Advanced** Tab
5. Set the Maximum Sockets and Max Connections to at least 30.
6. Set the Frame Type to that of your network instead of "Auto" (check with your Network Administrator).

MS TCP/IP is fine for Windows 3.11, Windows 95, and Windows NT clients.

### Common Causes

[RAS is installed on NT Server](#)

[CISCO Router Configured to block SAPs](#)

[Network Number Incorrectly Set](#)

[Wrong SAP Address under NetWare](#)

## Status 91 -- The Application Encountered a Server Error

[See](#)

[Also](#) [Status Code List](#)

### Common Causes of Status 91

\_\_\_ Either the server-based MicroKernel Database Engine is not loaded or the server is not active.

Invalid frame-type or packet size settings for the **IPX/SPX** protocol.

An application specified a path for a file and did not include the volume name in the path.

The Number of Remote Sessions configuration option is set too low. Return to the server-based Setup utility and specify a higher value for this option.

The NetWare server has bad SPX patches.

Workstation is not connected to the server (check the cables)

A path for a file was specified that did not include the volume name in the path.

Incorrect version or missing winsock

## Status 94 -- The Application Encountered a Permission Error

[See](#)

[Also](#) [Status Code List](#)

Status 94 indicates that Btrieve is not able to grant full access to the requested files.

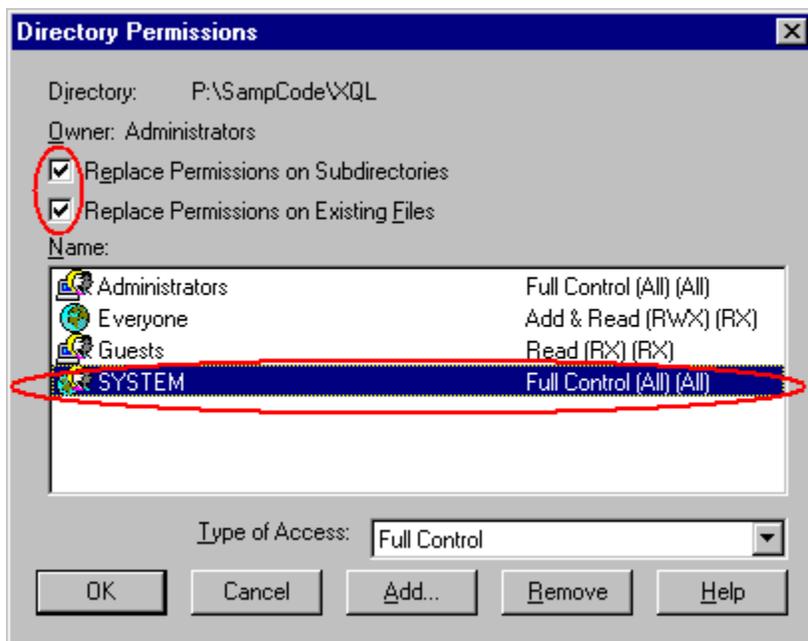
Btrieve requires that the user have, at minimum, Read, Write, Create, and Modify rights on every Btrieve file that will be accessed.

For security reasons, Btrieve does not allow a user logged in with the name or "ADMIN", "SUPERVISOR" or "ADMINISTRATOR" to have access to files. Status 94 will be returned.

### Common Solutions to Status 94

#### Windows NT Server

1. Modify the [Btrieve Service](#) to log into the system as admin - see the Microsoft documentation for NT on how to modify a service's login.
2. Add "SYSTEM" to the users who have rights to the [Directory](#) and to the [Share](#), being sure to check the "Replace Permissions on Subdirectories" and "Replace permissions on Existing Files" check boxes.



#### Novell NetWare Server

When using NDS, the user must log into the same Container as the Btrieve.nlm.

## Status 95 - The Session Is No Longer Valid [List](#)

[See Also](#)

[Status Code](#)

A status 95 is returned in a Client/Server Btrieve environment and indicates that an SPX or TCP session had been established, but due to network delays and/or network communication problems, the session has been terminated.

### Common Causes of Status 95

1. Incorrect version or missing winsock
2. Invalid frame-type or packet size settings for the **IPX/SPX** protocol
3. Missing -r parameter on BSPXCOM.NLM (NetWare Only)
4. The NetWare server has bad SPX patches.
4. Workstation is not connected to the server (check the cables)
6. Protocol Packet Collisions at a concentrator, HUB, or Router -- May need to use a Lanalyzer tool to watch network traffic.

### Information to Gather

1. What version of the Btrieve components are being used at the server and workstations? Make sure the latest components are being used.
2. When did the problem start occurring? Did the application(s) ever run without the problem occurring? Have there been any known changes in the Btrieve or network environment at the time the problem was introduced (i.e. more users, new hardware, new application, or new Btrieve components)?
3. When the problem occurs, is it system-wide (occurring on all workstations simultaneously) or only occurring on one machine at a time?
4. If the problem is not system wide, does it occur on only a subset of workstations, or on all workstations at some point in time? Is it associated with a certain type of application (i.e. DOS vs. Windows)?
5. Does the problem occur on more than one segment of a multi-segment LAN? In a WAN environment, does the problem only occur on remote workstations, or on both remote and local workstations?
6. How often does the problem occur?
7. Is the occurrence of the problem related to load/utilization?
8. Is the problem reproducible? That is, can one or more users perform a certain activity and make the problem occur? If so, describe the requirements to reproduce the error.
9. When the problem occurs, what is showing in the Btrieve Monitor Utility for the users(s) who received the error? Do they still have a session?
10. If the problem is system-wide, is the Btrieve engine running on the server still functional? You can test this by using the server-based BUTIL utility to try and perform a -STAT of a data file. It is a good idea to get this set up ahead of time, so that you have all the components you need for this test available when the problem occurs.
11. If the problem is system-wide, are new sessions able to connect to Btrieve after the problem occurs without reloading Btrieve at the server?
12. If the problem is system-wide, is the server hung/abended? Does Btrieve have to be reloaded to restore functionality, or does the server have to be rebooted?

### Tests

To verify network settings and configuration are correct, the following 'tests' may help identify any problems:

**For TCP/IP**

Ping the server by name from the workstation

Ping the workstation by name from the server

Both of these must work for communications to function properly.

**For IPX/SPX**

Verify RCONSOLE can be run from the workstation to the server (requires network rights)

NOTE: For more information, review the status 95 document located at

<ftp.pervasive.com/support/refshelf>

**Other Suggestions**

— Ensure that you have the latest network drivers installed on the workstation as well as the server. This includes the Network Card drivers, VLM drivers, CLIB (for NetWare), etc.

Ensure that you, as a network user, are Logged in or "attached" to the target server. Mapping a driver letter will guarantee this.

## Status Code

[See Also](#)

[Status Code List](#)

Btrieve and Scalable SQL return a number to the application to indicate Success or Failure.

Typically a Zero means success and a non-zero number means some sort of failure. These status codes have specific meaning and are closely tied to the context of the operation being performed. Knowing what the status number is when an error occurs is vital; however, many applications do not tell the user what the number is. They might simply report "Btrieve Not Loaded" which could mean error 20, 91, 95, and on and on.

To obtain the actual error code, you must enable Tracing within Btrieve or Scalable SQL on the server or use a utility such as WBExec or WBManage to reproduce the error. These utilities return the status code for each operation performed. You may find BTOOLS.EXE at <ftp://ftp.pervasive.com/support/toolbox>. This is a self-extracting file containing several utilities of use.

See the *User's Guide* for information on enabling tracing at the server.

To view the Status Codes, see CODE\_MSG.PDF (server edition) or CODE\_MSG.HLP (workstation or SDK edition).

## TCP/IP

[See Also](#)

TCP/IP is a protocol that allows network access to NetWare and Windows NT servers (more often NT). In order to use this protocol to run your Pervasive software product, it must be installed and configured correctly on both the workstation and server.

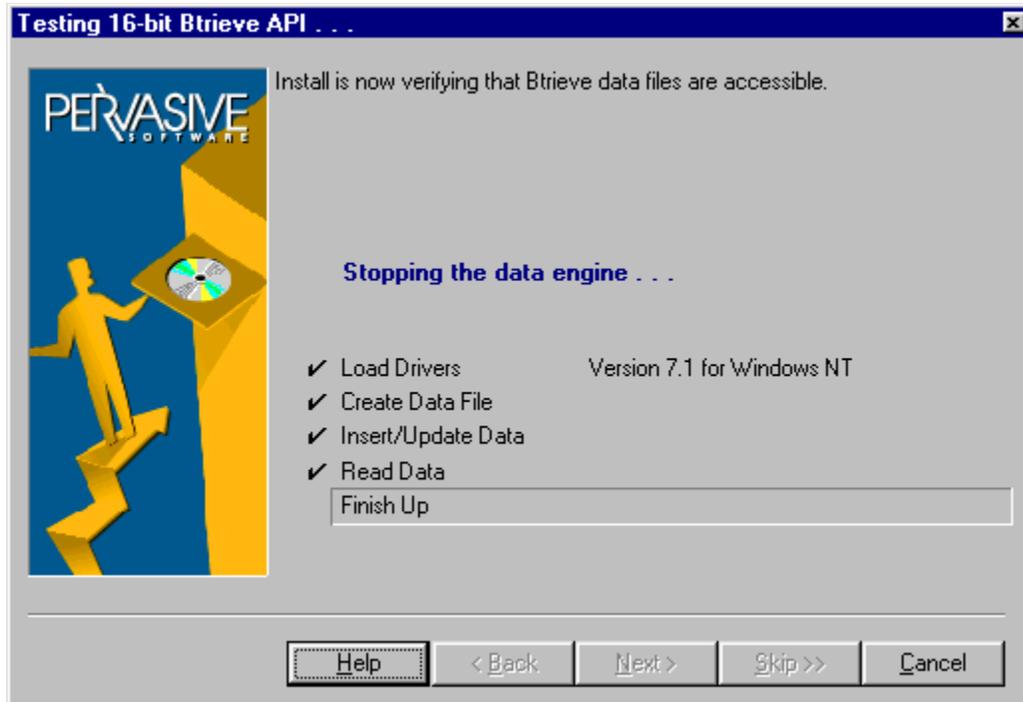
Under Windows NT (workstation or server edition) the NetBIOS protocol must also be installed. Windows 95 does this automatically (even though you don't see it).

For further information on installing and configuring the TCP/IP protocol, consult your operating system documentation and help.

For TCP/IP to function properly, your workstation must be able to Ping the server by **name** and the server must be able to Ping the workstation by **name**.

## Testing Btrieve API

This test runs a series of Btrieve operations to simulate your requester performing actual Btrieve database work. The following dialog is displayed during the tests.



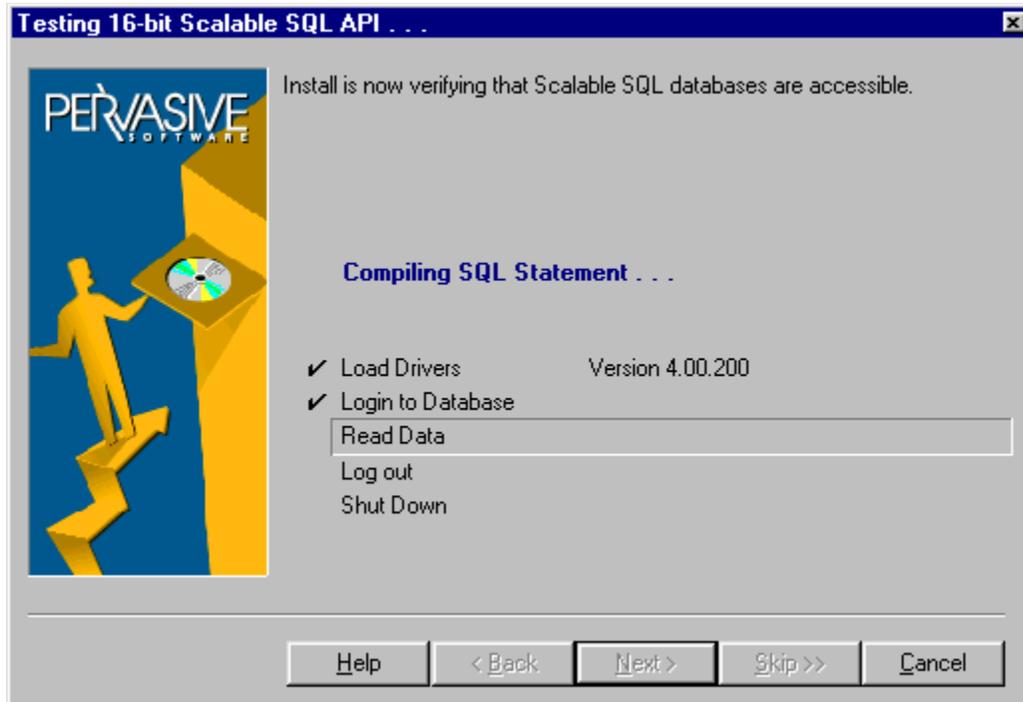
The steps involved are:

1. Load drivers for the database.
2. Create data file. If the data file cannot be created, InstallScout attempts to load the sample database SAMPLE.BTR.
3. Insert data into the data file.
4. Change data in the data file.
5. Read the data back from the data file.

If these steps are successful, you have a working Btrieve requester that has connectivity to the server.

## Testing Scalable SQL API

This test runs a series of Scalable SQL operations to simulate your requester performing actual SQL database work. The following dialog is displayed during the tests.



The steps involved are:

1. Load drivers for the database.
2. Create data file. If the data file cannot be created, InstallScout attempts to load the sample database from the DEMODATA directory.
3. Insert data into the data file.
4. Change data in the data file.
5. Read the data back from the data file.

If these steps are successful, you have a working Scalable SQL requester that has connectivity to the server.

Btrieve Inactive

Scalable SQL Inactive

Communications Failing

Status 94

Status 95

Status 91

Btrieve Not Responding

Scalable SQL Not Responding

## Unable to Resolve Server Address

In order for Btrieve or Scalable SQL communications to take place, the name of your Server must be resolved into a network address (a number). There are several windows libraries (DLLs) that are capable of doing this.

NWCalls

CalWin32

WinSock

WSock32

Verify that your engine is running.

For the NetWare platform, this problem can be caused by incorrect SAP address settings.

## Unexpected Error

[See Also](#)

[Status Code List](#)

Status Codes are returned for each operation Btrieve performs. Each operation has an expected set of return codes.

An operation was performed and returned a code that was not expected.

This means Btrieve may not be fully functional and needs more testing.

## Unexpected Error

[See Also](#)

[Status Code List](#)

Status Codes are returned for each operation Scalable SQL performs. Each operation has an expected set of return codes.

An operation was performed and returned a code that was not expected.

This means Scalable SQL may not be fully functional and needs more testing.

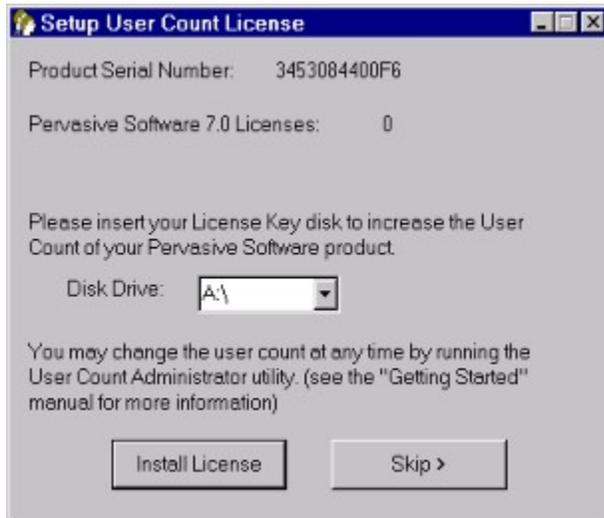
## User Count Exceeded

Your Pervasive Database user count limit was reached. To verify your user count, you use the User Count Administrator (for more information, see the *Getting Started*).

### Checking Your Maximum User Count

1. Click **Start**, point to **Programs**, then to your Pervasive software folder
2. Select User Count Administrator.

The following dialog displays.



### Monitoring Active Users

If you want to monitor the usage of your Pervasive server, you use the Monitor utility.

1. Click **Start**, point to **Programs**, then to your Pervasive software folder.
2. Select Monitor (either Win32 or Win16).
3. Select the Active Users command from the MicroKernel menu.

## Using NT Security Audit to Troubleshoot Status 94 [See Also](#)

Any access granted or denied to a file can be logged to the Event Viewer with NT's Security Auditing feature. This can help you determine the reason for the Status 94 error. If nothing appears in the Audit trail for the files you are targeting, the Btrieve request never made it to the server. In this case, there may be a configuration problem on the workstation.

1) Select User Manager for Domains in the Administrators Tools group. Under Policies, select Auditing, then select Audit These Events

2) Select the following check boxes:

*File & Object Access*

and

*Use of User Rights*

2) Exit User Manager; run File Manager or Explorer. Select the directory that Btrieve is trying to access (the directory in which you think you're getting permission errors).

3) In the Security Menu, select Auditing and click **Add**.

4) Select the "Everyone" group and click **Add** and then **OK**.

5) Check the boxes for *Replace Auditing on Existing Subdirectories* and *Replace Auditing on Existing Files*. In the lower check boxes, check the following:

*Read Success Failure*

and

*Write Success Failure*

and

*Execute Success Failure*

6) Click **OK**, Exit, Log Off and Re-logout to the server.

7) Repeat the steps to produce the Status 94 error.

8) Go into the Event Viewer, select Security from the file menu, and see what it says.

## Winsock Defined

An operating system DLL that controls access to socket services to make calls to the network. You should consult your operating system help documentation or vendor to ensure the version of `winsock.dll` (for 16-bit) or `wsock32.dll` (for 32-bit) you have is correct. The following versions are known to work. There may be other versions that will work, but these are recommended:

### Windows for Workgroups

`winsock.dll`

### Windows 95A

`winsock.dll` 42080 7/11/95

`wsock32.dll` 66560 7/11/95

### Windows 95B

`winsock.dll` 42080 8/24/96

`wsock32.dll` 66560 8/24/97

### Windows NT Workstation 3.51

`winsock.dll` 2880 5/26/95

`wsock32.dll` 100656 5/26/95

### Windows NT Workstation 4.0

`winsock.dll` 2880 8/3/96

`wsock32.dll` 20240 8/9/96

## W1BTRV7.DLL / W3BTRV7.DLL Not Found

W1BTRV7 and W3BTRV7 (AKA "Glue" DLLs) are the Btrieve 7.0 Application Interface DLLs -- the DLLs that all Btrieve 7.0 applications depend upon.

Btrieve 6.15 applications were linked to WBTRCALL and WBTRV32. These two DLLs are still supplied with Btrieve version 7 for 6.15 applications; however, the DLLs supplied merely pass the application's requests to the appropriate version 7 DLLs. Thus, a 6.15 application will still function with the 7.0 engine and requesters in place.

## Wrong SAP Address under NetWare

When Btrieve for NetWare v6.x loads on a NetWare server, `BSPXCOM.NLM` asks the server for its address. `BSPXCOM` then starts advertising with SAP packets, using that address to tell other servers on the network that Btrieve is available. Any server that receives this SAP packet, including the server where Btrieve is running, will add an entry to its *bindery* with the information in the SAP packet. This bindery entry is used by the workstation requesters to connect to Btrieve on the server.

There is a situation that can occur in a NetWare 4.10 environment where `BSPXCOM` receives the wrong address from NetWare. `BSPXCOM` does not detect this, and sends out the incorrect address in its SAP packets, resulting in incorrect information in the bindery. As a result, the workstation requesters get the wrong server address out of the bindery, and are unable to communicate. A status 20 "Btrieve is not loaded" is a typical indicator of this problem.

If you are receiving a status 20 when running a Btrieve application on a NetWare 4.10 server, you can confirm whether the problem is related to this issue by using a special utility called `BINDERY.EXE`. This utility is included in the `BTOOLS.EXE` that can be downloaded from [LIB 5](#) of the BTRIEVE forum on CompuServe or from <ftp://ftp.pervasive.com/support/toolbox>. `Bindery` is a DOS utility that should be run from a drive mapped to the target 4.10 server that is returning the status 20. The output from `bindery` will include a listing of all servers on your network that can be seen from your current server, and for each of these, a listing of all services being advertised from that server. For example, if you map a drive to ServerA and run `Bindery`, you might see output like:

```
Total file servers found           : 3
Total SAP servers found            : 3
Total SAP servers on unknown file server : 0
```

```
Server      : SERVERA
Address     : 0A090002000000000001
SAP Servers : (8059, 4B, 01, 177) BSER4.00-6.10_0A0900020000000000010000
```

```
Server      : SERVERB
Address     : 0A4140BD000000000001
SAP Servers : (805B, 4C, 01, 138) SSQL_SERVER_0A4140BD0000000000010000
              (8059, 4B, 01, 208) BSER4.00-6.10_0A4140BD0000000000010000
```

```
Server      : SERVERC
Address     : 0DBA3456000000000001
SAP Servers :
```

This indicates that ServerA's bindery (since we ran the utility from a drive mapped to ServerA) contains an entry for Btrieve running on ServerA and ServerB, and an entry for Scalable SQL running on ServerB. By comparing the address of each server with the address Btrieve has stored in its SAP Server entry, you can verify whether or not Btrieve received the correct information from NetWare. In the above example, ServerA's address is `0A090002000000000001`, and the address Btrieve received (first 20 characters after `BSER4.00-6.10_`) are the same. Similarly, ServerB's address, and the Btrieve entry for ServerB also match. Btrieve should respond correctly in this environment.

If the output from Bindery on a NetWare 4.10 server does not show the correct address information for the server and for Btrieve, you may be experiencing the "wrong address" problem. To fix this situation, you should perform the following steps:

1. Unload Btrieve using the BSTOP command at the server console.

2. At the server console, issue the following commands:

```
UNLOAD IPXRTRNM
```

```
UNLOAD IPXFLT
```

```
UNLOAD IPXRTR
```

These NLMs are loaded in conjunction with the `INET.CFG`.

3. At the server console, issue the following commands:

```
SET DSTRACE=* . (that's an asterisk followed by a period)
```

You will see messages on the server console indicating that various modules have changed their address. It is possible that the `autoexec.ncf` will need to be modified to remove the modules listed in Step 2, and then reboot the server in order to get everything working again.

After these steps, bindery should show the correct output, and workstation applications should be able to successfully communicate to Btrieve running at the server.

Novell has recalled two of its SPX patches for NetWare -- SPXACKFX.NLM and SPXTRMFX.NLM. If these are present on your server, remove them and ensure that they have been Unloaded from NetWare's memory.

Novell can be contacted at <http://www.novell.com>

## Required Files for Network Communication -- Win16

[Required Network DLLs](#)

Now select which server you are targeting:

[NetWare](#)

[Windows NT](#)

## Required Files for Network Communication -- Win16 -- NT

[Required Network DLLs](#)

Which Protocol do you want to use?

IPX/SPX

TCP/IP

## Required Files for Network Communication -- Win16 -- NT -- SPX [Required Network DLLs](#)

### **Name Resolution**

NETAPI.DLL

### **Protocol**

NWIPXSPX.DLL (on Windows 3.x workstation)

WINSOCK.DLL (on WinNT or Win95 workstation)

# Required Files for Network Communication -- Win16 -- NT -- TCP/IP [Required Network DLLs](#)

## **Name Resolution**

NETAPI.DLL

## **Protocol**

WINSOCK.DLL

## Required Files for Network Communication -- Win16 -- NetWare

[Required Network DLLs](#)

Which Protocol do you want to use?

IPX/SPX

TCP/IP

**Required Files for Network Communication -- Win16 -- NetWare**  
**-- IPX/SPX**      Required Network DLLs

Which Client service do you use?

Microsoft's Client

Novell's Client

**Required Files for Network Communication -- Win16 -- NetWare**  
**-- IPX/SPX -- MS Client**      Required Network DLLs

**Name Resolution**

NWCALLS.DLL

**Protocol**

NWIPXSPX.DLL      (on Windows 3.x workstation)

WINSOCK.DLL      (on WinNT or Win95 workstation)

**Required Files for Network Communication -- Win16 -- NetWare**  
**-- IPX/SPX -- Novell Client**      Required Network DLLs

**Name Resolution**

NWCALLS.DLL

**Protocol**

NWIPXSPX.DLL      (on Windows 3.x workstation)

WINSOCK.DLL      (on WinNT or Win95 workstation)

**Required Files for Network Communication -- Win16 -- NetWare**  
**-- TCP/IP**      Required Network DLLs

Which Client service do you use?

Microsoft's Client

Novell's Client

**Required Files for Network Communication -- Win16 -- NetWare**  
**-- TCP/IP -- MS Client**      Required Network DLLs

**Name Resolution**

WINSOCK.DLL

**Protocol**

WINSOCK.DLL

**Required Files for Network Communication -- Win16 -- NetWare**  
**-- TCP/IP -- Novell Client**      Required Network DLLs

**Name Resolution**

WINSOCK.DLL

**Protocol**

WINSOCK.DLL

## Required Files for Network Communication -- Win32

[Required Network DLLs](#)

Now select which server you are targeting:

[NetWare](#)

[Windows NT](#)

## Required Files for Network Communication -- Win32 -- NT

[Required Network DLLs](#)

Which Protocol do you want to use?

IPX/SPX

TCP/IP

**Required Files for Network Communication -- Win32 -- NT --  
SPX**      Required Network DLLs

**Name Resolution**

NETAPI.DLL

**Protocol**

WSOCK32.DLL

**Required Files for Network Communication -- Win32 -- NT --**  
**TCP/IP**      Required Network DLLs

**Name Resolution**

NETAPI.DLL

**Protocol**

WSOCK32.DLL

## Required Files for Network Communication -- Win32 -- NetWare

[Required Network DLLs](#)

Which Protocol do you want to use?

[IPX/SPX](#)

[TCP/IP](#)

**Required Files for Network Communication -- Win32 -- NetWare**  
**-- IPX/SPX**      Required Network DLLs

Which Client service do you use?

Microsoft's Client

Novell's Client

**Required Files for Network Communication -- Win32 -- NetWare**  
**-- IPX/SPX -- MS Client**      Required Network DLLs

**Name Resolution**

WSOCK32.DLL

**Protocol**

WSOCK32.DLL

**Required Files for Network Communication -- Win32 -- NetWare**  
**-- IPX/SPX -- Novell Client**      Required Network DLLs

**Name Resolution**

CALWIN32.DLL

**Protocol**

WSOCK32.DLL

**Required Files for Network Communication -- Win32 --**  
**NetWare -- TCP/IP**      Required Network DLLs

Which Client service do you use?

Microsoft's Client

Novell's Client

**Required Files for Network Communication -- Win32 -- NetWare**  
**-- TCP/IP -- MS Client**      Required Network DLLs

**Name Resolution**

WSOCK32.DLL

**Protocol**

WSOCK32.DLL

**Required Files for Network Communication -- Win32 -- NetWare**  
**-- TCP/IP -- Novell Client**      Required Network DLLs

**Name Resolution**

WSOCK32.DLL

**Protocol**

WSOCK32.DLL

## Version 6.15 Status Codes Expanded in Version 7

Several status codes in v6 and below had origins in multiple problems, which made diagnosing the problem difficult. For example, Status 20 could mean missing DLLs on the workstation, a broken network connection, or the Btrieve Server engine not running.

To solve this problem, Version 7 splits these codes into multiple codes that are more specific to the problem. The following is a summary of the status code changes. For a complete explanation of these codes, see *Status Codes and Messages*. (Code\_Msg.hlp or Code\_Msg.pdf)

### **Status Code 3** (File not Open)

3006: Invalid Session.

### **Status Code 20** (Btrieve Inactive)

2009: Cannot load router.

2010: Thunk path not accessible.

3001: Local access unavailable.

3003: Incompatible network component.

3008: Invalid configuration.

3009: NETAPI.DLL not loaded.

3010: NetWare API DLLs not loaded.

3011: Thunk path not accessible.

3013: Remote engine not accessible.

3014: Cannot find engine.

3020: Error loading MicroKernel.

3103: Server name not found.

3104: Permission error.

3105: No available transport.

### **Status Code 75** (Routing List too Small)

3102: PNSL not initialized.

3108: Invalid session.

### **Status Code 91** (Server Error)

3106: Connection failure.

3115: Transport failure.

### **Status Code 95** (Session no Longer Valid)

3110: Network layer not connected.

3111: Failure during send.

3112: Failure during receive.

**Status Code 109** (Semaphore error)

3004: Timeout error.

3019: Semaphore error.

**Status Code 2003** (Local Access not Allowed)

3012: Local engine not accessible.

