Relish Net

Desktop Time and Information Organizer for OS/2

Administrator's Guide

Version 2.2

(SSC RNA22 - D)

Contents

Section 1. Getting Started

In addition to the normal Relish system requirements, Relish Net requires an appropriate network environment - generally Artisoft LANtastic, IBM Warp Server (or LAN Server), IBM Peer Services, or Novell NetWare.

The phrase "LAN Environment" is used in this document when the operation being described is the same under each of these networks. When a distinction must be made, the phrases "LANtastic," "Warp Server," "Peer Services," or "NetWare" are used specifically.

Installation Overview

While Relish Net is designed to work with any of the mentioned LAN Environments, supported by any particular version of OS/2, there may be restrictions on some combinations. You should consult the README.NOW file on the first Relish Net disk for the latest information.

Installation is a two-step process. As a true client-server application, Relish Net must be installed on a server and one or more workstations. On the server, the Relish Net software is installed manually. On the workstation(s), the Relish Net installation program is used to install the workstation portion of the software.

It is not possible to install all the software on the server and download the workstation portion at runtime (as is done for Remote Public Applications on Warp Server). Rather, you may copy the distribution disk(s) to a directory on the server and run the installation program on the workstation from the server directory.

Installation of the server portion is somewhat different depending on the LAN Environment being used. In particular, under Peer Services, NetWare and LANtastic, the server software does not actually run on a "server" per se.

 * In Novell terms, Relish Net is a "distributed application" in which the server software actually runs on a workstation (an "application server") rather than on the NetWare server itself.

 * In the case of Peer Services or LANtastic, since it is a peer-to-peer network, there are no servers. (Or, depending on how you wish to think about it, every system is a server.)

Thus, for Peer Services, NetWare and LANtastic, the discussion which follows concerning installation of the Relish Net server actually refers to the installation of the server software on an (appropriately configured) OS/2 workstation.

Named Pipes

The Relish Net workstation and server software components communicate with each other using a mechanism known as named pipes. This mechanism is one that is built into OS/2 for use between communicating programs on a single system. The various different LAN Environments supported by OS/2 extend the named pipes mechanism to allow communication over the LAN between programs running on different systems. When used in this way, named pipes are sometimes referred to as remote named pipes.

In an ideal world, this would be of no direct concern when managing Relish Net. However, each different LAN environment implements the named pipe mechanism a bit differently. In some environments, it is always installed and ready for applications to use; in others, it is optional and not necessarily installed by default. Further, each environment takes a different approach regarding the administration and configuration of support for named pipes.

 * For Warp Server or Peer Services, support is automatically installed and capacity configuration is an issue only if

25 or more workstations are being connected to the server.

 * For LANtastic, support is automatically installed and capacity configuration is an issue only if 10 or more work-stations are being connected to the server.

 * For NetWare, support is not automatically installed. Thus, installation and configuration is required before Relish Net can be fully utilized.

Most of the capacity configuration parameters have something to do with the number of connections that are sup-ported simultaneously between a number of workstations and the server - in the case of NetWare, this is the application server, not the NetWare server. There are often several related parameters because one level of the LAN Environment's remote named pipe communication protocol is built on top of another, which, in turn, is built on top of still another, etc. - and each layer has its own capacity settings.

Further, the names of the parameters, and the procedures for modifying them, vary considerably from one LAN Environment to another (and from one version of the same environment to another). The key is to determine the LAN Environment and version you are configuring and then only concern yourself with the terminology and con-figuration methodology for that setting. The specific named pipe issues for each LAN Environment are fully discussed in later sections.

Installation on the Server

The server software may be installed on any machine running a supported LAN Environment under OS/2 - a dedi-cated system is not required. Only one Relish Net server is required to support all of the users on a LAN. While Relish Net can be installed on multiple servers on the same network, the various copies of the Relish Net server software do not directly communicate with each other. Further, such a configuration may require that each work-station be configured to ensure that it connects to the correct server.

In the case of Warp Server (or LAN Server), the server software need not run on the same server to which the user logs on. With NetWare, the server software is never installed on the NetWare server but rather on an arbitrarily chosen workstation. With Peer Services or LANtastic, the server software also runs on an arbitrarily chosen work-station.

The server software requires about 1 Mbyte of free disk space. Additional disk space must be allowed, however, to accommodate the notes entered by each user. While this can vary widely from person to person, it is best to allow at least 0.5 Mbyte per user. It is important to realize that much more disk space may be needed, particularly if users attach extensive memos to their notes.

The server software requires about 0.5 Mbyte of memory in addition to that required for OS/2. No significant amount of extra memory is required to support each additional workstation. However, an atypical peak load - such as occurs if all users view a complex combination of schedules and then send notes at the same instant - may require additional memory (up to 0.1 Mbyte per user) for short periods of time. Thus, the OS/2 SWAPPER.DAT file should be able to grow by several Mbytes, if necessary, when a large number of workstations are connected to the server.

A summary of the server software installation steps are as follows:

Step 1: Make sure the server is configured for named pipes.

Step 2: Create a directory for the Relish Net software.

Step 3: Copy the Relish Net server software to the directory.

Step 4: Make the Relish Net software start when the system starts.

Step 5: Modify server capacity parameters, if necessary.

Step 6: Handle security restrictions, if necessary.

Step 7: Change the server administration password.

Step 8: Change the number of workstation licenses, if necessary.

Section 2. Details for Warp Server

  (and LAN Server)

The discussion in this section assumes familiarity with administration of the Warp Server environment. If not, contact your local network administrator. Throughout this section, the term "Warp Server" is used generically to refer to either Warp Server or LAN Server running on top of either OS/2 or OS/2 Warp.

It is suggested that you perform the following installation steps locally (not remotely) at the server. Further, you must have administrative permission on the server to perform these steps.

Step 1 - Make sure the server is configured for named pipes.

Under Warp Server, remote named pipe support is automatically installed on both the server and the workstation as part of the normal installation process. It is, in fact, impossible to install the server without named pipe support. No special configuration is required at the workstation other than to be sure than File and Print Services (or LAN Requester in earlier versions) has been installed. At the server, however, some of the capacity parameters may need to be changed if more than 25 or so workstations are to be connected to a single server (as discussed later).

Step 2 - Create a directory for the Relish Net software.

The suggested directory is C:\RNET, but any drive and directory will do. This directory does not require any special access permissions. The directory should be used solely for the Relish Net server software and database.

CAUTION: On a single system, do not install both the workstation and server software in the same directory.

Step 3 - Copy the Relish Net server software to the directory.

Using the method of your choice, copy the following files from the first Relish Net distribution disk to the newly created directory:

NOWAGENT.EXE

NOWBUILD.EXE

NOWKEEP.EXE

NOWSERVE.EXE

RNET.EXE

Step 4 - Make the Relish Net software start when the system starts.

The Relish Net server software must be started before it can be used by the workstation software. There are two distinct ways to do this in a Warp Server environment.

Option 1 - Defining and Starting the RELISHNET service.

The Relish Net server software is designed to run as a Warp Server (or LAN Server) service. This means it can be controlled by the LAN administration interface (or by using NET START or NET STOP commands) like any other service such as NETLOGON, ALERTER, etc.

To make Warp Server aware of the service, the appropriate entries must appear in the IBMLAN.INI file. The file is found in the directory in which the server components of Warp Server are installed - typically C:\IBMLAN. The file can be edited with any text editor, such as the OS/2 System Editor. As a precaution, make a backup copy of the file before modifying it.

Add the following line to the [services] section of the file (substituting the correct drive and directory for C:\RNET):

RELISHNET = C:\RNET\NOWAGENT.EXE

The [services] section is typically at or near the end of the file. The RELISHNET line can be placed anywhere before the blank line at the end of the section. Some versions of Warp Server and LAN Server contain a bug which causes incorrect operation unless the last line of the file is blank, so be sure to leave a blank line at the end.

CAUTION: While the other services listed in the section do not typically include the complete drive and directory as part of the file name which defines the service, this information must be included, as shown above, for REL-ISHNET.

Also, most Warp Server services have an additional section of entries somewhere in the IBMLAN.INI file to contain parameters specific to the service. Such sections start with the name of the service, [NETLOGON] for example. The Relish Net service does not have any settable parameters, and thus does not use such a block of entries.

It is best to have the RELISHNET service start each time Warp Server starts. To do so, modify the "srvservices" entry in the [server] section of the IBMLAN.INI file by adding RELISHNET to the list of services already there. Be sure to spell RELISHNET exactly the same as in the line you added to the [services] section. (It does not matter, however, whether the name is in UPPER, lower, or Mixed case.) The line should read something like the following:

srvservices = alerter,netlogon,relishnet

CAUTION: The above line is only an example. Do not change any of the other services listed in your actual IBMLAN.INI file.

Alternatively, you can start the RELISHNET service manually each time you want to use it. You can do this from the command line approach by typing:

NET START RELISHNET

or you can use the LAN Server administration interface to start the service from the appropriate menu option.

Option 2 - Starting the Relish Net server as a command.

Alternatively, the Relish Net software can be run independently rather than as a Warp Server service. To do this, you use the RNET program that was copied into the Relish Net server software directory earlier.

It is best to have the server software start each time the system starts. To do so, modify (or create) the STARTUP.CMD file on the server to start the Relish Net software. (The STARTUP.CMD file is an ordinary text file in the root directory of the drive from which OS/2 is booted.) Simply add a line to the file which reads:

 C:\RNET\RNET START

In this, as with all of the examples, be sure to substitute the appropriate drive and directory from step (2) for C:\RNET.

The STARTUP.CMD file probably also contains a command to start Warp Server. This would typically be NET START SERVER. Since Relish Net requires the services of Warp Server to run correctly, the RNET command should come after the command to start Warp Server itself.

If both the server and workstation portions of the Relish Net software are installed on the same system, the STARTUP.CMD file also contains a STARTNOW command to start the workstation software. The lines can be in either order but should read as follows:

 C:\RNET\RNET START
 C:\RELISH\STARTNOW

Alternatively, the RNET START command can be used to start the server software manually. In this way you can start the server each time you want to use it by typing:

 C:\RNET\RNET START

Similarly, you can shutdown the Relish Net server software at any time by typing:

 C:\RNET\RNET STOP

It is not necessary to perform this step before shutting down the system, however.

CAUTION: Avoid using RNET STOP to shutdown the Relish Net server software if it is running as a Warp Server service. Use NET STOP RELISHNET instead.

Step 5 - Modify server capacity parameters, if necessary.

Since the Relish Net workstation and server software communicate with each other on a continuous basis, you may need to increase some of the capacity configuration parameters of the LAN Environment. This is particularly true if you are using one Relish Net server to support more than 25 Relish Net workstations.

If you have 25 or fewer workstations per Relish Net server under Warp Server, there's no need to concern yourself with this step.

Note: While the following is fairly comprehensive, it is strongly recommended that you also consult the appropriate documentation for your version of Warp Server (or LAN Server) before considering these words as being definitive.

Step 5a - IBMLAN.INI

There are several parameters in the [server] section of the IBMLAN.INI file that may need modification:

The "maxusers" parameter controls the maximum number of users who can use the server simultaneously. Depending on the version of Warp Server or LAN Server used, the default value is typically 32, 45, 100, or 101. Each Relish Net workstation counts as one such user. Therefore, set this value to at least the number of Relish Net workstations using the server plus any other workstations (or servers) using the server for other reasons. (Each workstation is counted only once, however - if all of the Relish Net workstations already make use of this server, such as using it as their logon server, there is no need to change the value.

The "maxconnections" parameter controls the maximum number of resource connections that users may have in effect at one time. The default value is typically 128, 300, or 400, and must always be equal or greater than the "maxusers" parameter. Each Relish Net workstation requires one such connection in addition to all other connections required by software running on the workstation. There are several ways to arrive at the best value for this parameter, depending on the version of Warp Server or LAN Server being used. (Consult your Server Administrator's Guide for details.) In general, however, if you increase the "maxusers" value, you should increase the "maxconnections" value by the same amount.

The "maxopens" parameter controls the maximum number of files, pipes, and devices that users may have open on the server at one time. The default value is typically 64 or 256. Each Relish Net workstation requires one open pipe in addition to any open files, pipes, or devices required by other software running on the workstation. Thus, if you increase the "maxusers" value, you should also increase the "maxopens" value by the same amount.

If the "maxusers" parameter is changed, some of the settings in the "net1" statement in the [networks] section (near the beginning of the IBMLAN.INI file) may also need to be changed.

If you didn't change the value of "maxusers," you can skip to step 6.

There are two parameters referred to in the Warp Server documentation as X1 and X2. X1 controls the number of NETBIOS sessions and X2 controls the number of NETBIOS commands. Unfortunately, they are not so labeled in the IBMLAN.INI file, but rather are part of the "net1" statement.

With Warp Server, the "net1" statement typically reads as follows:

 net1 = NETBEUI$,0,LM10,93,212,14

while with LAN Server 4.0 (or higher), it might read:

 net1 = NETBEUI$, 0, LM10, 102, 175, 14

and with LAN Server 2.0 or 3.0, it is typically:

 net1 = netbeui$, 0, LM10, 32, 50, 14

The last three parameters in each statement are X1, X2, and X3 - X3 is not relevant to this discussion.

X1 is critical because it controls the number of NETBIOS sessions, and each Relish Net workstation requires one such session. (But, as with "maxusers," a workstation is never counted more than once.) The Warp Server and LAN Server documentation contains recommendations, formulas, and tools for computing the correct value of X1. While the details of the recommendations are beyond the scope of this guide, the calculations typically result in a value for X1 that is slightly larger than "maxusers" though sometimes much higher; the value of X1 should never be less than "maxusers" and any increase in "maxusers" results in the same increase to X1. Thus, if you increase the "maxusers" value, you should increase the X1 value by the same amount.

The proper value for X2 - which controls the number of NETBIOS commands - is directly related to X1. The Warp Server and LAN Server documentation states that the optimal setting for X2 is twice the setting for X1 (but this is not typically reflected in the default settings). Further, the value of X2 should not be less than X1. Thus, if you increase X1, you should increase X2 by twice the amount.

Note: If you have installed more than one LAN adapter card in the server, there may also be "net2," "net3," and "net4" statements in the IBMLAN.INI file. In this case, you must consider and possibly modify the X1 and X2 values in all the statements.

Step 5b: NETBIOS Protocol

If "maxusers" (and thus X1 or X2) is changed in the IBMLAN.INI file, some of the NETBIOS protocol parameters

must also be changed to reflect the same values.

If you didn't change the value of "maxusers," you can skip to step 6.

Under most Warp Server and LAN Server versions, these parameters are stored in the PROTOCOL.INI file, a text file similar in format to the IBMLAN.INI file (though kept in a different directory). IBM recommends changes be made to the file using the appropriate configuration utility rather than editing the file directly. Thus:

* With Warp Server, these changes should be made by using the Multi- Protocol Transport Services (MPTS) pro-gram to configure the Network Adapters and Protocol Services.

* With LAN Server 4.0, these changes should be made by using the Multi- Protocol Transport Services (MPTS) program to configure the LAN Adapter and Protocol Support.

* With LAN Server 3.0, these changes should be made by configuring the NETBIOS protocol using the LAN Adapter and Protocol Support program.

* With Extended Services 1.0 and LAN Server 2.0, these changes should be made using the Advanced Configura-tion option of the Communications Manager to configure the LAN Adapter and Protocol Support.

* With LAN Server 2.0 (without Extended Services), these changes should be made using the Advanced Configu-ration option of the LAN Services Installation/Configuration program to configure the LAN Adapter and Protocol Support.

Using the appropriate configuration utility, make the following changes in the NETBIOS configuration:

The "maximum sessions" parameter should be increased by the same amount that X1 was increased.

The "maximum commands" parameter should be increased by the same amount that X2 was increased. Note that some versions of the IBM documentation suggest that "maximum commands" should be set to twice "maximum sessions"; this guideline is not followed by the default settings, however. Thus the above change is suggested instead. "Maximum commands" should never be less than "maximum sessions" regardless of which guideline is used.

Step 6 - Handle security restrictions, if necessary.

Warp Server and LAN Server provide the ability to control access to named pipes just as they do for other resources such as printers and files. If you wish to control access to the specific pipe used by Relish Net, the name of the pipe is:

 \PIPE\SUNDIAL\RELISH\NET

Within any given domain, however, by default Warp Server (and LAN Server) allows all users to access all named pipes. Thus no special action is required during the installation of Relish Net.

On the other hand, if more than one domain is defined under Warp Server (or LAN Server) and a Relish Net work-station is in a different domain than the Relish Net server, special action may be required to avoid unexpected security restrictions.

For the Relish Net workstation software to be able to access the Relish Net server, the user who is logged-on must be defined within the domain containing the Relish Net server. The user may logon to any domain (not necessarily the one containing the Relish Net server), but Warp Server or LAN Server will generally deny access to the resources needed to connect the workstation and server software unless the user's logon name (and password) is also defined as a valid logon name within the domain containing the Relish Net server. If necessary, define all such user names within the Relish Net server's domain.

Most versions of Warp Server and LAN Server alternatively allow you to use the GUEST feature to provide access to the necessary resources without defining each name. To do this, you must update the "access control profile" for the "\PIPE" resource to grant access to the GUESTS group. Alternatively, you can allow such guest access only to the specific pipe used by the Relish Net software (\PIPE\SUNDIAL\RELISH\NET).

Consult your Server Administrator's Guide for the procedure for changing access controls on pipes using the LAN Administration interface. See the section on "updating an access control profile for resources without aliases" and

grant the GUESTS group "read/write" (RW) access to the "\PIPE" resource.

Alternatively, one of the following commands could be used to grant the access directly from the command line (when logged on at the server with administrative access):

 NET ACCESS \PIPE /GRANT GUESTS:Y

for all pipes. Or, for the Relish-specific pipe:

 NET ACCESS \PIPE\SUNDIAL\RELISH\NET /ADD GUESTS:Y

Also note that, in a cross-domain configuration, the Relish Net workstation software cannot automatically find the Relish Net server. After installing the workstation portion of the software, use the Server button in the Settings (Setup) Network dialog to indicate the name of the server on which the Relish Net server software is installed.

Step 7 - Change the server administration password.

After installing the server, change the Relish Net password used to administer the server through the Administer Server dialog on the workstation, as discussed later in this guide.

Step 8 - Change the number of workstation licenses, if necessary.

If you have more than the default number workstation licenses (typically two or five), you must configure the server to support the additional workstations. This is done through the Administer Server dialog of the workstation software as discussed later in this guide.

CAUTION: To insure your workstation has access to the server, change the number of licenses before installing the workstation software on more than the default number of workstations.

Section 3. Details for Peer Services

The discussion in this section assumes familiarity with administration of the IBM Peer Services environment. If not, contact your local network administrator.

It is suggested that you perform the following installation steps locally (not remotely) at the workstation acting as the Relish Net server. You must have administrative permission on the workstation to perform these steps.

Step 1 - Make sure the workstation acting as the server is configured for named pipes.

Under Peer Services, remote named pipe support is automatically installed on all workstations as part of the normal installation process. (It is, in fact, impossible to install Peer Services without named pipe support.) No special configuration is required at the ordinary workstations. At the server workstation, however, some of the capacity parameters may need to be changed if more than 25 or so workstations are to be connected to a single server (as discussed later).

Step 2 - Create a directory for the Relish Net software.

The suggested directory is C:\RNET, but any drive and directory will do. This directory does not require any special access permissions. The directory should be used solely for the Relish Net server software and database.

CAUTION: On a single system, do not install both the workstation and server software in the same directory.

Step 3 - Copy the Relish Net server software to the directory.

Using the method of your choice, copy the following files from the first Relish Net distribution disk to the newly created directory:

NOWAGENT.EXE
NOWBUILD.EXE
NOWKEEP.EXE
NOWSERVE.EXE
RNET.EXE

Step 4 - Make the Relish Net software start when the system starts.

The Relish Net server software must be started before it can be used by the workstation software. To do this, you use the RNET program that was copied into the Relish Net server software directory earlier.

(Note: Unlike with Warp Server, you cannot run the Relish Net server software as a service, you must start the Relish Net server with a command.)

It is best to have the server software start each time the system starts. To do so, modify (or create) the STARTUP.CMD file on the server to start the Relish Net software. (The STARTUP.CMD file is an ordinary text file in the root directory of the drive from which OS/2 is booted.) Simply add a line to the file which reads:

 C:\RNET\RNET START

In this, as with all of the examples, be sure to substitute the appropriate drive and directory from step (2) for C:\RNET.

Your STARTUP.CMD file probably also contains a statement to start Peer Services itself.   Typically this will be either a NET START PEER or NET START REQ command.   Since Peer Services must be running for the Relish Net server software to start, be sure your RNET command comes after the statement which starts Peer Services.

(If you start Peer Services some other way than in your STARTUP.CMD file, you should use that same method to start Relish Net.)

If both the server and workstation portions of the Relish Net software are installed on the same system, the STARTUP.CMD file also contains a STARTNOW command to start the workstation software. The lines can be in either order but should read as follows:

 C:\RNET\RNET START
 C:\RELISH\STARTNOW

Alternatively, the RNET START command can be used to start the server software manually. In this way you can start the server each time you want to use it by typing:

 C:\RNET\RNET START

Similarly, you can shutdown the Relish Net server software at any time by typing:

 C:\RNET\RNET STOP

It is not necessary to perform this step before shutting down the system, however.

Step 5 - Modify server capacity parameters, if necessary.

Since the Relish Net workstation and server software communicate with each other on a continuous basis, you may need to increase some of the capacity configuration parameters of the LAN Environment. This is particularly true if you are using one Relish Net server to support more than 25 Relish Net workstations.

If you have 25 or fewer workstations per Relish Net server under Peer Services, there's no need to concern yourself with this step.

The details of this step are the same for Peer Services as they are for Warp Server and LAN Server.   So if you are using more then 25 workstations with Peer Services, please consult the Warp Server section of this guide for the details on checking (and modifying) your server capacity parameters

Step 6 - Handle security restrictions, if necessary.

This step is usually not an issue with Peer Services and thus no special action is required.   However, if you have enabled extra security features on names pipes under Peer Services, consult the Warp Server section of this guide for details on how those changes might affect Relish Net.

Also note that the Relish Net workstation software cannot automatically find the Relish Net server under Peer Services. Thus, after installing the workstation portion of the software, use the Server button in the Settings (Setup) Network dialog to indicate the name of the workstation on which the Relish Net server software is installed.

Step 7 - Change the server administration password.

After installing the server, change the Relish Net password used to administer the server through the Administer Server dialog on the workstation, as discussed later in this guide.

Step 8 - Change the number of workstation licenses, if necessary.

If you have more than the default number of workstation licenses (typically two or five), you must configure the server to support the additional workstations. This is done through the Administer Server dialog of the workstation software as discussed later in this guide.

CAUTION: To insure your workstation has access to the server, change the number of licenses before installing the workstation software on more than the default number of workstations.

Section 4. Details for LANtastic

This section assumes familiarity with the administration of your LANtastic environment. If not, it is recommended that you contact your local network administrator.

Step 1 - Make sure the server is configured for named pipes.

Under LANtastic, remote named pipe support is automatically installed - for use in both server and workstation modes - as part of the normal installation process. (In fact, it is impossible to install either without named pipe support.) No special configuration is required at the workstation. At the server, however, some of the capacity parameters may need to be changed if more than 10 or so workstations are to be connected to a single server (as discussed later in this section).

Step 2 - Create a directory for the Relish Net software.

The suggested directory is C:\RNET, but any drive and directory will do. This directory does not require any special access permissions. The directory should be used solely for the Relish Net server software and database.

CAUTION: On a single system, do not install both the workstation and server software in the same directory.

Step 3 - Copy the Relish Net server software to the directory.

Using the method of your choice, copy the following files from the first Relish Net distribution disk to the newly created directory:

 NOWAGENT.EXE
 NOWBUILD.EXE
 NOWKEEP.EXE
 NOWSERVE.EXE
 RNET.EXE

Step 4 - Make the Relish Net software start when the system starts.

The Relish Net server software must be started before it can be used by the workstation software. This is done using the RNET program which was copied into the Relish Net server software directory.

It is best to have the server software start each time the system starts. To do so, modify (or create) the STARTUP.CMD file on the application server to start the Relish Net software. (The STARTUP.CMD file is an ordinary text file in the root directory of the drive from which OS/2 is booted.) Simply add a line to the file which reads:

 C:\RNET\RNET START

In this, as with all of the examples, be sure to substitute the appropriate drive and directory from step (2) for C:\RNET.

If both the server and workstation portions of the Relish Net software are installed on the same system, this file also contains a STARTNOW command to start the workstation software. The lines can be in either order but should read as follows:

 C:\RNET\RNET START
 C:\RELISH\STARTNOW

Alternatively, the RNET START command can be used to start the server software manually. In this way you can start the server each time you want to use it by typing:

 C:\RNET\RNET START

Similarly, you can shutdown the Relish Net server software at any time by typing:

 C:\RNET\RNET STOP

It is not necessary to perform this step before shutting down the system though, under LANtastic, it is good practice to do so.

Step 5 - Modify server capacity parameters, if necessary.

Since the Relish Net workstation and server software communicate with each other on a continuous basis, you may need to increase some of the capacity configuration parameters. If a single Relish Net server is being used to support more than 10 workstations, there are a number of network capacity parameters that probably need to be increased.

If you have 10 or less workstations per Relish Net server with LANtastic, there's no need to concern yourself with this step.

Note: While the following is fairly comprehensive, it is strongly recommended that you also consult the appropriate documentation for your version of LANtastic before considering these words as being definitive.

Step 5a: General Server Options

There are several General Server Option parameters that may need modification. To access these options, open the LANtastic Network Manger in the LANtastic for OS/2 folder and click on the Options page.

* The "Maximum Number of Users" parameter controls how many users can use the server simultaneously. The default value is typically 10. Each Relish Net workstation counts as one such user. Therefore, set this value to at least the number of Relish Net workstations using the server plus any other workstations (or servers) that are using the server for other reasons. (Each workstation is counted only once, however - thus if all of the Relish Net workstations already make use of this server, there is no need to change the value.)

* The "Maximum Open Files" parameter controls the maximum number of files, pipes, and devices that users may have open on the server at one time. The default value is typically 50. Each Relish Net workstation requires one open pipe in addition to any open files, pipes, or devices required by other software running on the workstation. Thus, if you increase the "maxusers" value, you should consider increasing the "Maximum Open Files" value by the same amount. However, the default value is probably sufficient for any number of users up to at least 30 unless

they also use this server for other uses besides Relish Net.

Step 5b: NETBIOS Protocol

If the "Maximum Number Of Users" parameter is increased to 100 or more, some of the NETBIOS protocol set-tings must also be changed.

If you didn't change the value of "Maximum Number of Users," or the value is less than 100, you can skip to step 6.

These parameters are stored in the PROTOCOL.INI file which is a text file stored in the LANtastic directory. The file can be edited with any text editor, but LANtastic includes a utility (in the LANtastic Utilities folder) to view and edit the file. Details of the procedure are discussed in the LANtastic Installation and Management Guide.

All of the changes being made to the file relate to the number of users beyond the suggested LANtastic maximum of 100. Thus, for instance, if 110 users are to be supported, 10 is the suggested addition to each parameter. In what follows, this is referred to as the "additional number of users." Also note that several of the parameters appear in multiple places in the PROTOCOL.INI file - the changes should be made only in the [AILANBIO_nif] (and [AILANBIO_nif2], etc.) sections of the file, not in the [NETBEUI_nif] section.

 The "MAX_SESSIONS" parameter should be increased by the additional number of users.

 The "SESSIONS" parameter should be increased by the additional number of users.

While not specifically mentioned in the LANtastic documentation, the following parameters should also be changed whenever the MAX_SESSIONS and SESSIONS parameters are changed:

 The "MAX_NCBS" parameter should be increased by the additional number of users.

 The "NCBS" parameter should be increased by the additional number of users.

Step 6 - Handle security restrictions, if necessary.

LANtastic does not support security restrictions on named pipes and thus no special action is required.

Step 7 - Change the server administration password.

After installing the server, change the Relish Net password used to administer the server through the Administer Server dialog on the workstation, as discussed later in this guide.

Step 8 - Change the number of workstation licenses, if necessary.

If you have more than the default number of workstation licenses (typically two or five), you must configure the server to support the additional workstations. This is done through the Administer Server dialog of the workstation software as discussed later in this guide.

CAUTION: To insure your workstation has access to the server, change the number of licenses before installing the workstation software on more than the default number of workstations.

Section 5. Details for NetWare

The discussion in this section assumes you are familiar with the administration of NetWare workstations. If not, contact your local network administrator.

Step 1 - Make sure the server is configured for named pipes.

Under NetWare, remote named pipe support is an optional feature that is not installed by default. For Relish Net to operate correctly, each workstation must be configured as a "named pipe client." Additionally, the workstation

being used for the Relish Net server must also be configured as a "named pipe server." (It may not be obvious without examining the Novell NetWare documentation in detail, but a workstation configured as a named pipe server is always also configured as a named pipe client.) The workstation used as the Relish Net server may also need some of its capacity parameters changed if more than 15 or so workstations are to be connected (as discussed later).

To configure a NetWare workstation for remote named pipe support, use the NetWare Workstation Installation Utility (or the NetWare Requester Installation Utility in older versions) to make the appropriate updates to the OS/2 CONFIG.SYS file. Note that a "machine name" must be chosen for the workstation being used as the Relish Net server. This name is arbitrary but will be required later when each Relish Net workstation is connected to the Relish Net server. Also be aware that the NetWare remote named pipe support also requires support for Novell's SPX protocol. For details on the complete procedure for installing NetWare named pipe support, consult the Novell NetWare Client for OS/2 (or the Novell NetWare Requester for OS/2) documentation.

Note: If it is unclear whether or not a NetWare workstation is configured to support remote named pipes, the CONFIG.SYS file can be examined for the appropriate statements. (The NetWare installation program usually includes all of the following statements even if remote named pipe support is not installed - in this case the unnecessary statements are each preceded by "rem" to turn them into remarks.)

 * A DEVICE statement which loads NMPIPE.SYS indicates that named   pipe client support has been installed.

 * Another DEVICE statement for NPSERVER.SYS indicates that named   pipe server support is also installed.

 * A RUN statement for NPDAEMON (usually following the   NPSERVER.SYS DEVICE statement) ends with the "name" of the   server.

Alternatively, the NetWare Workstation Installation Utility can be used to (start to) reinstall the requester on the workstation - before installation begins, the Edit CONFIG.SYS dialog shows the current state of the named pipe support.

Step 2 - Create a directory for the Relish Net software.

The suggested directory is C:\RNET, but any drive and directory will do. The directory should be used solely for the Relish Net server software and database.

CAUTION: On a single system, do not install both the workstation and server software in the same directory.

Step 3 - Copy the Relish Net server software to the directory.

Using the method of your choice, copy the following files from the first Relish Net distribution disk to the newly created directory:

 NOWAGENT.EXE
 NOWBUILD.EXE
 NOWKEEP.EXE
 NOWSERVE.EXE
 RNET.EXE

Step 4 - Make the Relish Net software start when the system starts.

The Relish Net server software must be started before it can be used by the workstation software. This is done using the RNET program which was copied into the Relish Net server software directory.

It is best to have the server software start each time the application server starts. To do so, modify (or create) the STARTUP.CMD file on the application server to start the Relish Net software. (The STARTUP.CMD file is an ordinary text file in the root directory of the drive from which OS/2 is booted.) Simply add a line to the file which reads:

 C:\RNET\RNET START

In this, as with all of the examples, be sure to substitute the appropriate drive and directory from step (2) for

C:\RNET.

If both the server and workstation portions of the Relish Net software are installed on the same system, this file also contains a STARTNOW command to start the workstation software. The lines can be in either order but should read as follows:

 C:\RNET\RNET START
 C:\RELISH\STARTNOW

Alternatively, the RNET START command can be used to start the server software manually. In this way you can start the server each time you want to use it by typing:

 C:\RNET\RNET START

Similarly, you can shutdown the Relish Net server software at any time by typing:

 C:\RNET\RNET STOP

It is not necessary to perform this step before shutting down the system though, under NetWare, it is good practice to do so.

Step 5 - Modify the server capacity parameters, if necessary.

Since the Relish Net workstation and server software communicate with each other on a continuous basis, you may need to increase some of NetWare's capacity configuration parameters. This is particularly true if you are using one Relish Net server to support more than 15 Relish Net workstations.

If you have 15 or fewer workstations per Relish Net server with NetWare, there's no need to concern yourself with this step.

Note: While the following is fairly comprehensive, it is strongly recommended that you also consult the appropriate documentation for your version of NetWare before considering these words as being definitive.

The NetWare Client stores its various configuration parameters (including those related to capacity) in a file named NET.CFG. The file is found in the root directory of the drive from which OS/2 is booted (not the directory where the NetWare Client is installed). The file can be edited with any text editor, such as the OS/2 System Editor or with the NetWare Workstation Installation Utility for OS/2. As a precaution, make a backup copy of NET.CFG before modifying it.

Note: It is often the case that no NET.CFG file is found on a workstation. This is because NetWare has a built-in set of default values and the NET.CFG file is consulted only for non-default settings.

There are several parameters in the "named pipes" section of the NET.CFG file that may need modification:

* The "server sessions" parameter controls the maximum number of named pipes that can be open between individual workstations and the server at one time. (The NetWare Client for OS/2 v2.1 documentation does not mention this parameter. However, it is defined in the on-line help for configuring a workstation using the Installation utility.) The default value is typically 32. Each Relish Net workstation requires one such connection in addition to all other connections required by software running on the workstation or server. Therefore, set this value to at least the number of Relish Net workstations connected to the server.

CAUTION: As discussed below, NetWare also requires at least as many SPX sessions as you have named pipe server sessions and the default number of SPX sessions lower than the default number of named pipe server sessions.

* Older versions of the NetWare requester also use the "service threads" parameter to control the number of distinct threads used by the NetWare requester to move data through named pipes. A single thread can handle more than one pipe but increasing the number usually results in quicker service (at the expense of consuming more system resources). By default, the value of this parameter is typically 3 and thus, by default, each thread handles up to about 11 (one-third) of the total number of pipe connections. For Relish Net, the recommended value is at least 1 for each 10 connections.

Thus, for example, the named pipes section of NET.CFG for a Relish Net server supporting 50 workstations might

read:

```
 named pipes
  server sessions 50
  service threads 5
```

There are also several parameters related to Novell's SPX protocol that may need to be changed in the "protocol stack spx" section of NET.CFG.

* The "sessions" parameter controls the number of SPX connections that may be open simultaneously, and one such connection is required for each named pipe. Thus, if you increased the number of sessions in the "named pipes" section, you should also include the number of sessions in the "protocol stack spx" section by the same amount.

CAUTION: Most versions of the NetWare requester (including those from the NetWare Client for OS/2 v2.1 and v2.11) use a default value of 16 for the number of SPX sessions if no entry appears in the NET.CFG file. Thus the default value of 32 Named Pipe server sessions will automatically be reduced to 16 or less unless the number of SPX sessions is increased.

The NetWare documentation also states that the SPX timeout parameters should be doubled for any system being used as a named pipe server. (Again, The NetWare Client for OS/2 v2.1 documentation does not mention this, however it is defined in the on-line help for configuring a workstation using the Installation utility.) These timeout parameters include:

```
  "abort timeout" (from 30000 to 60000 milliseconds);
  "listen timeout" (from 6000 to 12000 milliseconds); and
  "verify timeout" (from 3000 to 6000 milliseconds).
```

Thus, for example, the "protocol stack spx" section of NET.CFG for a Relish Net server supporting 50 workstations might read:

```
 protocol stack spx
  abort timeout 60000
  listen timeout 12000
  verify timeout 6000
  sessions 50
```

Step 6 - Handle security restrictions, if necessary.

NetWare does not support security restrictions on named pipes and thus no special action is required.

Step 7 - Change the server administration password.

After installing the server, change the Relish Net password used to administer the server through the Administer Server dialog on the workstation, as discussed later in this guide.

Step 8 - Change the number of workstation licenses, if necessary.

If you have more than the default number of workstation licenses (typically two or five), you must configure the server to support the additional workstations. This is done through the Administer Server dialog of the workstation software as discussed later in this guide.

CAUTION: To insure your workstation has access to the server, change the number of licenses before installing the workstation software on more than the default number of workstations.

Section 6. On the Workstations

Installation

The workstation portion of the Relish Net software is installed using the same procedure as the single-user Relish

software. Start the installation process from the first disk; the installation program will ask for the second disk, if necessary. Consult the Relish User's Guide for details.

If the distribution disks have been copied to a directory on a server, you can run the installation program from the server's directory the same way you would run it from the distribution disks. For this to work correctly, you must be logged onto the workstation with administrative privileges or you must have at least Read permission for the directory which contains the files from the distribution disk.

The installation program will suggest installing the software in C:\RELISH (or, if Relish is already installed elsewhere, the directory where it is installed). Wherever you install it, putting it in a separate directory is preferable. If you install Relish Net over an existing copy of Relish, Relish Net will make use of the existing database of notes.

To use both Relish and Relish Net separately on the same system, they must be installed in separate directories. Further, unless you run the STOPNOW program before switching from one to the other, the database associated with whichever one started first will be in use. Also, Relish Net operations will not be available when it is used with the Relish database.

CAUTION: Do not copy databases between one workstation and another and then use both databases at the same time. Each database used by Relish Net is assigned an internal identification number when first connected to a Relish Net server. Using the same database from two different workstations may result in nondelivery of notes to one workstation or the other.

After Installation

First, make sure to take any necessary steps (as discussed earlier) to start the Relish Net server software on the server.

Under NetWare, be sure that the workstation has been configured as a named pipe client. (Named pipe support is always properly configured under LANtastic, Warp Server, or Peer Services.)

For Warp Server (or LAN Server) or Peer Services, make sure the workstation is logged on using your normal method. (Logon is not required under LANtastic or NetWare.)

Setting Up the Workstation Connection

The installation program added a Relish Net icon to the desktop. If Relish Net was installed over an existing copy of Relish, another Relish icon may remain, but both will run the same program. (The program file is named RELISH.EXE in both products). If desired, the prior icon can be deleted.

The first time Relish Net is used on any given workstation, the Settings (Setup) Network dialog must be used to "connect" to the network. Just check the "Network Available" box. Consult the Relish User's Guide for details.

Under Peer Services, LANtastic, and NetWare (as well as Warp Server or LAN Server if the Relish Net server is in a different domain than the workstation), use the Server button in the Settings (Setup) Network dialog to indicate the system on which the Relish Net server software is installed. Select the Use Specific Server option and enter the applicable server name (with or without the \\ at the beginning of the name).

After OKing the Settings (Setup) Network dialog, you will be prompted for a Relish Net "name" and password(s) for the user on this workstation.
The user's Relish Net name can contain spaces, punctuation characters, and digits, as well as both upper and lower case letters. Essentially the only restriction is a maximum length of 20 characters. And, although Relish Net will allow you to have two workstations using the same name, it is definitely not recommended.

The name used for Relish Net is independent of the "user ID" that is used to logon to the LAN Environment. However, the same name can be used if it is most familiar to the people on your network. On the other hand, if your environment's logon names are cryptic, you may wish to use a more meaningful name in Relish Net.

Likewise, the Relish Net passwords have no relationship to the passwords used to logon to the LAN Environment:

* The local password is needed to access Relish Net from the user's own workstation. It prevents reminders from being displayed on the workstation until after Relish Net is started and the password entered.

* The remote password is needed to access personal Relish Net information from any other workstation. It prevents other Relish Net users from changing the user's schedule and/or password(s).

Note: Case is significant in Relish Net passwords - test, TEST, and Test are all treated differently.

After Setup

When the workstation is disconnected from the network or the server software isn't running (or when there is a connection problem between the workstation and the server), Relish Net will act the same as single-user Relish. The extra network features will be available, but attempting to use them results in a warning that the server connection isn't available.
Note: You can use the Server button in the Setup Network dialog to see if the workstation is connected to the Relish Net server (and if not, why not).

Section 7. Common Administrator Tasks

After initial installation, most Relish Net administrative tasks are performed from a Relish Net workstation using the Relish Net workstation software. Many of these tasks involve the "currently connected server." This is the Relish Net server to which the workstation software is connected, as indicated by the message line displayed in the Settings (Setup) Network Server dialog.

To administer the Relish Net server, use the Admin button in the Settings (Setup) Network Server dialog. (The button is disabled when the workstation isn't connected.) You will need to enter the server administration password for the currently connected server; the Server Administration dialog appears after entering the password.

Changing the Server Administration Password

When the Relish Net server software is installed, the server administration password is "Password" (in Mixed case - upper and lower case characters are different in Relish Net passwords). For security reasons, one of the first things you should do after installing a Relish Net server is to change the password for that server.

Use the Server Administration dialog and select the Password button. Then simply enter a new password of your choosing, remembering that UPPER, lower, and Mixed case is significant in Relish Net passwords. You will be asked to verify the password after entering it.

Relish Net allows you to specify that no Server Administration password is required. However, it is recommended that a password always be used, unless the situation dictates otherwise.

CAUTION: It is impossible to recover the server administration password if it is forgotten. Be sure to record the new password in a secure location. Even reinstalling the software will not reset the password unless the entire Relish Net database on the server is removed or destroyed.

Changing the Number of Licenses

If you have purchased more than the default number of Relish Net workstation licenses (typically two or five depending on the package purchased), you need to use the Licenses button in the Administer Server dialog to reconfigure the server to support the additional workstations.

After selecting Licenses, you will be asked to enter the total number of workstations the server should support together with an Authorization Code for that number of licenses. This code is supplied by Sundial Systems as part of the License Agreement which allows you to use the software on additional workstations.

If you increase the number of licenses by ten or more at any one time, it is recommended (though not required) that you stop and restart the Relish Net server software after changing the number of licenses. This will optimize the runtime configuration of the software for the larger number of licenses.

Upgrading to a Newer Version of Relish Net

You can upgrade your workstations and server in any order, and need not upgrade them all at the same time. To upgrade an earlier version of Relish or Relish Net on a workstation, follow the simple instructions you used to originally install the software. The installation program handles all of the details and automatically preserves the workstation's database of notes. (Refer to the Relish User's Guide for details.)

Follow these steps to upgrade the server software.

 * You must first stop the Relish Net server software with the appropriate   command:
 Under Warp Server (or LAN Server) when Relish Net is running as a   service, type:
  NET STOP RELISHNET
 In all other cases, type:
  C:\RNET\RNET STOP
 (substituting the drive and directory where the Relish Net server software   is installed for C:\RNET).

 * Then copy the server software files (NOWAGENT.EXE,   NOWBUILD.EXE, NOWKEEP.EXE, and NOWSERVE.EXE) to the   appropriate directory on your server. (See Step 3 of the server   installation instructions for your LAN Environment as discussed earlier.)

 * Finally, restart the server software with the appropriate command:
 For Warp Server (or LAN Server) when Relish Net is running as a   service, type:
  NET START RELISHNET
 For all other cases, type:
  C:\RNET\RNET START
 (again substituting the correct directory for c:\RNET).

As People Come and Go

From time to time it's necessary to inform Relish Net of changes as people come and go. When someone leaves, you will want to remove them from Relish Net. What you need to do, in part, depends on whether or not the work-station is to remain part of the Relish network.

Removing a Workstation

To separate a workstation from Relish Net, you must delete all the files from the directory where it is installed. You will need to run the STOPNOW program before you can delete the files.

If the workstation user has left or no longer intends to use Relish Net, his or her name and schedule should be eliminated. From another workstation, use the Person option on the Settings (Setup) menu to Eliminate the former Relish Net user and associated schedule. If you eliminate the person but don't delete the files from the workstation, the person's name will reappear the next time that workstation connects to the server.

Note: You can also temporarily separate a workstation from Relish Net by simply unchecking the Network Avail-able checkbox in the Settings (Setup) Network dialog.

Reassigning a Workstation

On the other hand, you may want to reassign the Relish Net workstation to a new user. At the workstation, use the Settings (Setup) Network dialog to change the Name associated with the workstation. Then, if it is necessary, eliminate the prior workstation user with the Settings (Setup) Person dialog - you can do this from any workstation.

Just Changing a Name

It is also possible that a Relish Net user will want to change their name. This is an action that the user can actually do on their own. On the user's workstation, select the Rename button on the Settings (Setup) Person dialog and provide the new name. Passwords associated with the user will remain the same.

Temporarily Bypassing Password Security

Some administrative tasks may require that you temporarily bypass one or more of the passwords used in Relish Net. Ordinarily, passwords are changed using the Settings (Setup) Person dialog (or, alternatively, the Settings (Setup) Network dialog on that person's workstation), but this process requires use of the current local or remote password. To get around this requirement, you can temporarily bypass password verification by using the Bypass button in the Administer Server dialog. Selecting this button temporarily turns off the need to enter other passwords.

For example, assume that a Relish Net user has forgotten his or her password and asks you to change it. You would:

 Use the Bypass button to turn password verification off;

 Close the Administer Server, Choose Server, and Settings (Setup) Network dialogs;

 Select the Settings (Setup) Person dialog;

 Select the person in question;

 Select the Password button;

 and then, enter (and verify) the new password.

Once you bypass password verification, it remains bypassed until you close your current Relish Net window or until you again select the Bypass button. It applies to all situations where Relish Net requires a password, not just changing a person's password as illustrated here. However, only your current Relish Net window is affected when password verification Bypass is selected. Passwords are still required on all other workstations and any other Relish Net windows open on your workstation.

CAUTION: Do not place your workstation in Bypass mode and leave it unattended. Anyone with access to the workstation could change Relish Net passwords or eliminate Relish Net users at will.