EnterNet

EnterNet 300 User's Guide

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Introducing EnterNet 300

EnterNet 300 v. 1.41 for Windows broadband desktop connectivity software is used by the world's largest and most reputable ISPs to enable their end-user customers to gain access to their high-speed Internet access services. Worldwide, more users rely on EnterNet for high speed Internet access than any other PPPoE desktop connectivity product.

EnterNet 300 for Windows provides the user with the following capabilities:

- PPPoE client software to access high-speed "broadband" Internet access services like DSL, cable modem, and fixed wireless

- A rich compliment of application controls to tailor EnterNet to the specific needs and desires of both the host ISP and the end user.

- Extensive, built-in diagnostics tools to help technical support personnel quickly determine and correct the cause of technical difficulties.

System Requirements

EnterNet 300 for Windows minimum system requirements:

- Microsoft Windows 9x, Windows Me, Windows NT 4.0, or Windows 2000

- Pentium™ class processor or equivalent

- Sufficient RAM to support minimum requirements of the host Windows version

- Minimum of 4MB free hard drive space

- Microsoft-compatible Ethernet adapter with an NDIS 3.0 or higher compliant driver.

Optional

Microsoft Dial-Up Networking version 1.2c or later, with a minimum of one profile established. (Required to support EnterNet's optional Dial-on-Demand feature.)

Installing EnterNet 300 for Windows

EnterNet 300 is distributed on CD-ROM and via electronic download, either as a stand-alone application or as part of an integrated suite of network access applications. If you received EnterNet 300 with a suite of network access applications, please follow the installation instructions provided by the suite's master installer.

Some of the panels depicted in this User's Guide may not be present on your version of EnterNet, depending on how your ISP has pre-configured the application.

Installing EnterNet 300 from a CD

To install EnterNet 300 when received as a stand-alone application on a CD-ROM, locate and run the file named setup.exe in the root directory of the CD-ROM. Follow the on-screen instructions, as described below in "The EnterNet Installer, Step-by-Step".

Installing EnterNet 300 from a Downloaded File

To install EnterNet 300 when received as a stand-alone application via electronic download, simply run the downloaded file – typically named enternet300.exe – to begin the installation process. Follow the on-screen instructions, as described below in "The EnterNet Installer, Step-by-Step".

The EnterNet Installer, Step-by-Step

This section will take you step-by-step through all the panels presented to you by the EnterNet installer.

The "Existing Installation Detected" Panel

If you already have EnterNet 300 installed on your computer, the EnterNet installer will ask if you would like to upgrade to this version. If you select "Yes", EnterNet 300 installation will continue and any pre-existing EnterNet Connection Profiles from the prior installation will be copied into the new installation.
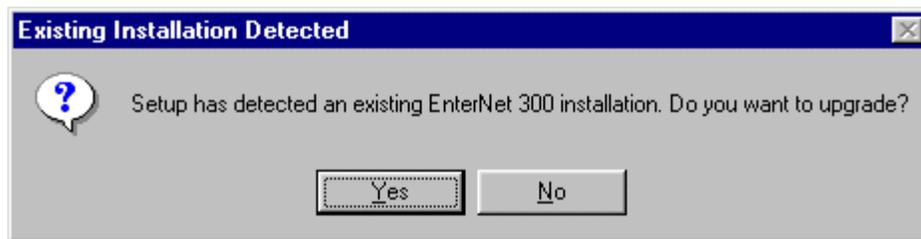
The "EnterNet 300 Setup" Panel

Before the EnterNet installation process gets underway, you will be presented with the EnterNet 300 setup panel. This panel allows you to choose between an automatic or manual installation process. If you select the radio button marked "Quick Install," the EnterNet installation process will require no further input from you until the Setup Complete panel appears at the end of the installation. If you select the radio button marked "Step-by-Step" install, the EnterNet installer will guide you step-by-step through the process of choosing the install location and other EnterNet settings as the application is installed.
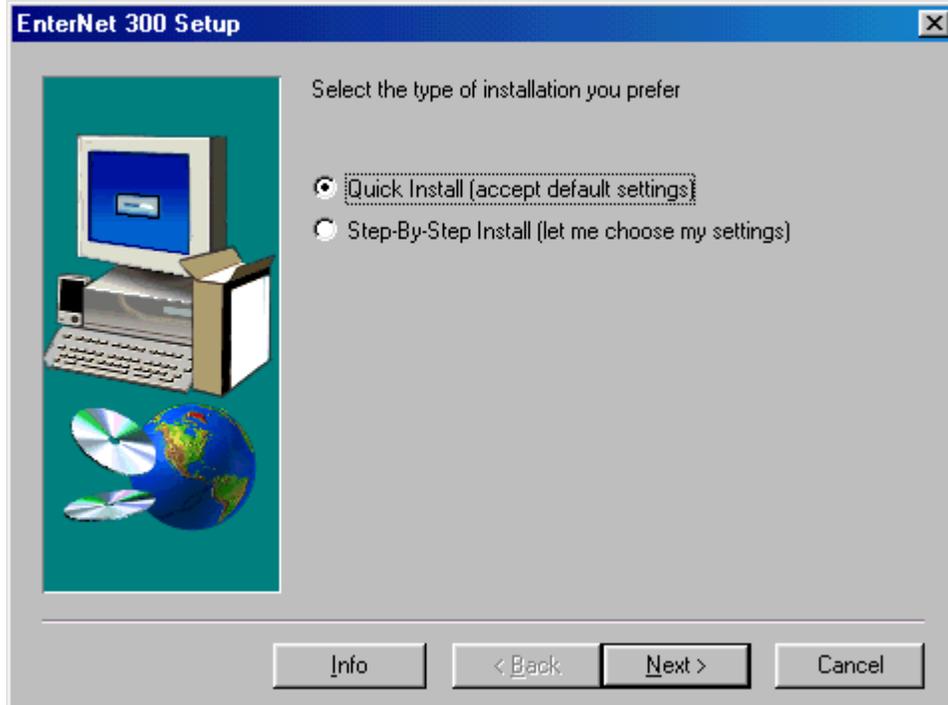
The "Welcome" Panel

If you are installing EnterNet 300 for the first time, or if you were presented the "Existing Installation Detected" panel and you clicked the "Yes" button, the next panel you will encounter is the EnterNet "Welcome" panel. This panel will advise you to exit all other programs before proceeding with the installation process.

The "Software License Agreement" Panel

This panel presents you with an opportunity to view the EnterNet ReadMe file, which contains helpful information about installing EnterNet and getting support for it. Clicking the "View ReadMe" button will launch your default text editor (usually Microsoft Notepad) and open the EnterNet ReadMe file for your review. The installer will remain paused while you review the file. You should close the ReadMe file before proceeding with EnterNet installation.

This panel also presents the Software License Agreement, the terms of which you must accept in order to proceed with EnterNet installation. By pressing the "Yes" button you are indicating that you have read, understand, and agree to comply with the terms and conditions of the Software License Agreement.

The "Software License Agreement Panel" (continued)
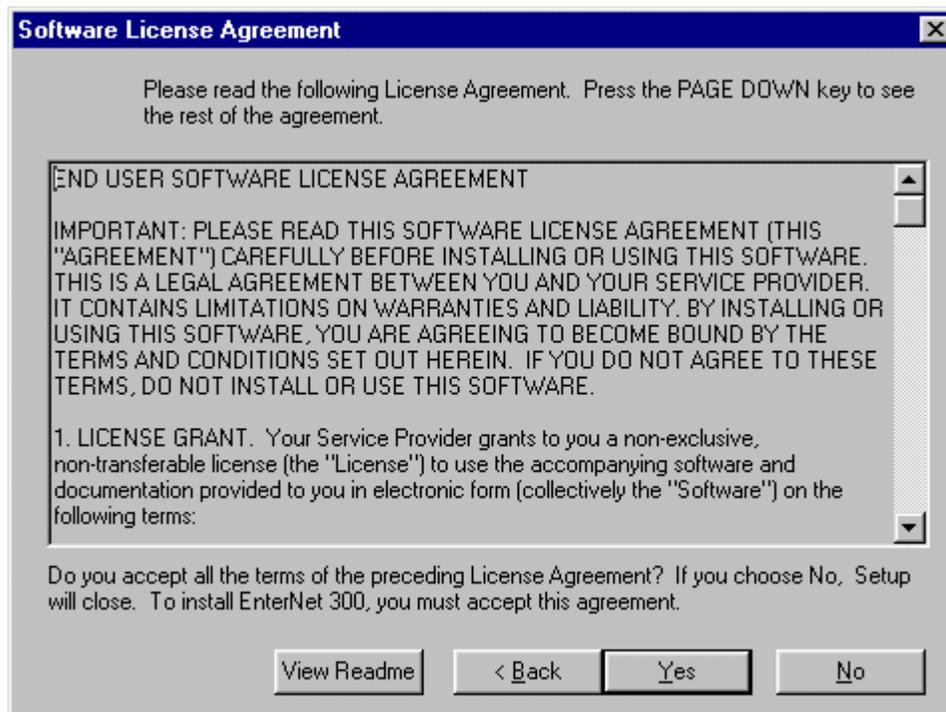
The "Choose Destination Location" Panel

Here you are informed of the program's default installation directory. Click the Next button to accept the default installation location (recommended), or click Browse to specify a different installation location.
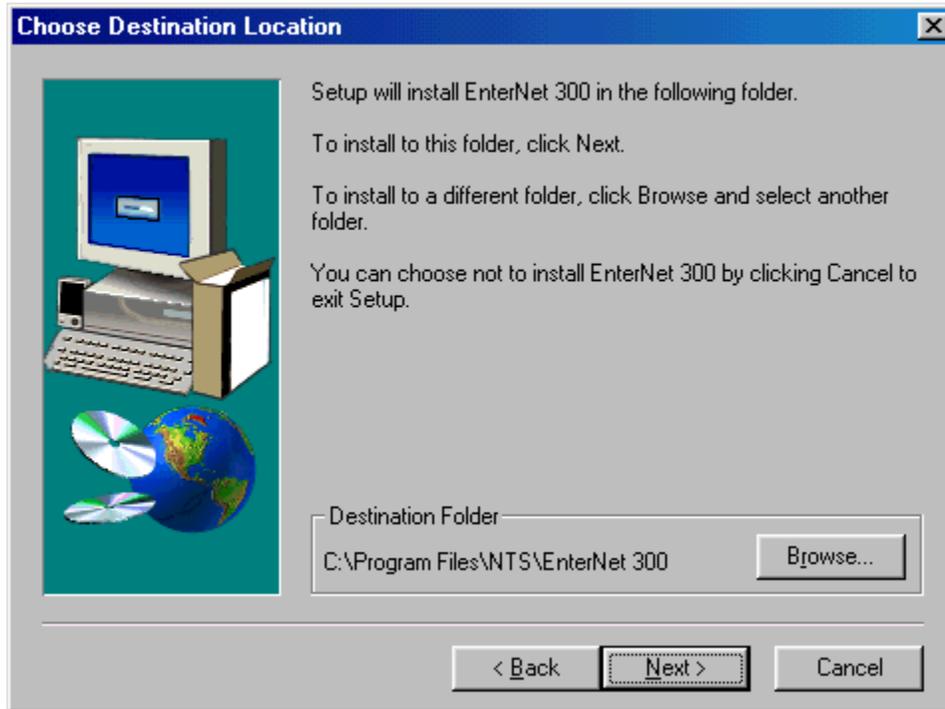
The "Choose Folder" Panel

If you wish to install EnterNet to other than the default installation folder, clicking the Browse button on the Choose Destination Location panel will present the "Choose Folder" panel.

You can either manually type the path to the desired installation location in the Path window, or you can navigate to the desired folder in the Directories tree. If the folder where you wish to install EnterNet does not yet exist, you will need to create it with Windows Explorer before you can select it here. If you need to create the folder, do so now. Before the newly created folder will appear in the Choose Folder panel, you must close Choose Folder and click the Browse button on the "Choose Destination Location" panel again. Once the desired installation location is reflected in the Path window, click the OK button to close the Choose Folder panel and resume EnterNet installation.

NOTE: Installing EnterNet on a network drive, as would occur if the installation location were selected from the Network button on the Choose Folder panel, is not supported.

The "Choose Folder" Panel (continued)

The "Question" Panel

The EnterNet installer will present you with the option of automatically creating a shortcut to the EnterNet application during the installation process. Click "Yes" if you wish to create a shortcut on your desktop. Your Service Provider may have elected not to present this option.
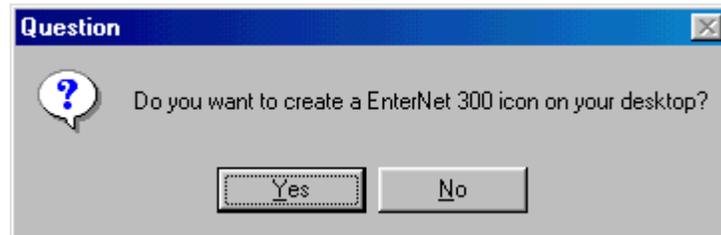
The "EnterNet 300 Setup" Panel (Optional Dial-on-Demand)

If your ISP has pre-configured EnterNet to provide you the option to install EnterNet's optional Dial-on-Demand feature, you will be presented with the "EnterNet 300 Setup" panel. To learn more about this optional feature, see the "EnterNet Dial-on-Demand" section of this User's Guide. The options presented by "EnterNet 300 Setup" panel are:

- Yes: If you wish to install EnterNet's optional Dial-on-Demand feature, click this button.

  NOTE: Familiarity with MS DUN and the Windows Connection Wizard will be helpful when installing Dial-on-Demand.

- Info: Clicking this button will launch the EnterNet Help facility, presenting the Topic that that discusses Dial-on-Demand. The installer will remain paused while you review the Help facility. It is advisable to close the Help facility before continuing with EnterNet installation.

- • <u>Note</u>: Some users will not care to activate Dial-on-Demand. Click this button to skip Dial-on-Demand activation and proceed with the installation process. EnterNet will function normally in all respects.

The "EnterNet 300 Setup" Panel (continued)
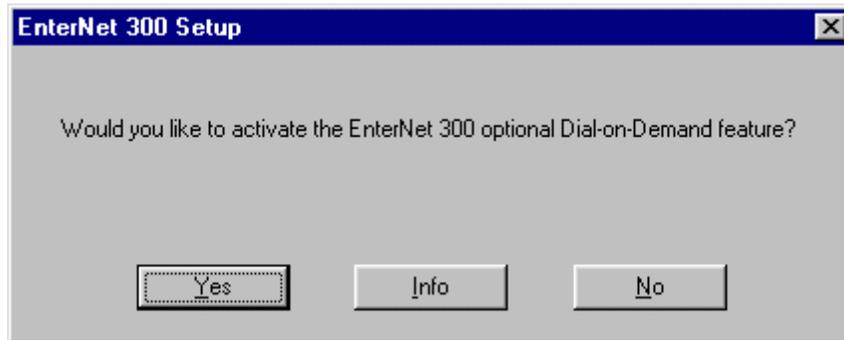
There are two screens related to activating Dial-on-Demand that you may or many not see, depending on the existence and state of certain Microsoft software elements. These screens are as follows.

<u>Wrong DUN Version</u>

If you elect to activate the Dial-on-Demand feature and your computer does not have Microsoft DUN version 1.2c or newer installed, you will see the following panel:
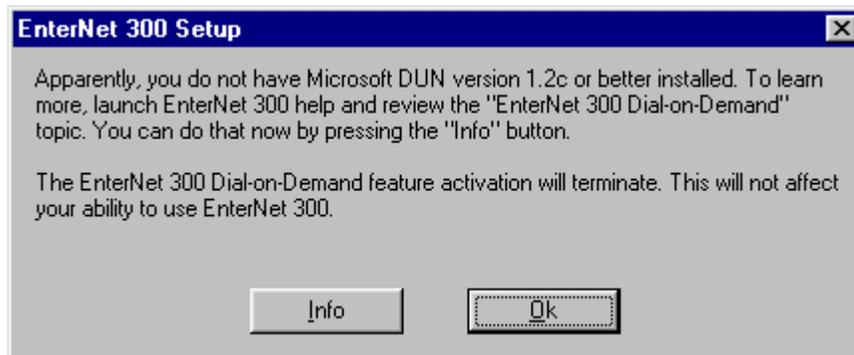
On the above panel, clicking the Info button will launch the EnterNet Help facility, presenting the Topic that discusses Dial-on-Demand. The installer will remain paused while you review the Help facility. It is advisable to close the Help facility before continuing with EnterNet installation. Clicking OK will resume the installation process. The "EnterNet Dial-on-Demand" section of this User's Guide provides instructions for activating Dial-on-Demand after EnterNet installation has completed.

NOTE: Dial-on-Demand is an optional feature. It is not required for EnterNet to function normally.

No DUN Profiles Created

Activating EnterNet's optional Dial-on-Demand feature requires that you have at least one DUN Profile created before activating Dial-on-Demand. If you have Microsoft DUN version 1.2c or newer installed on your computer, but if you do not have at least one DUN profile created before electing to activate Dial-on-Demand, you will be presented with the following panel:
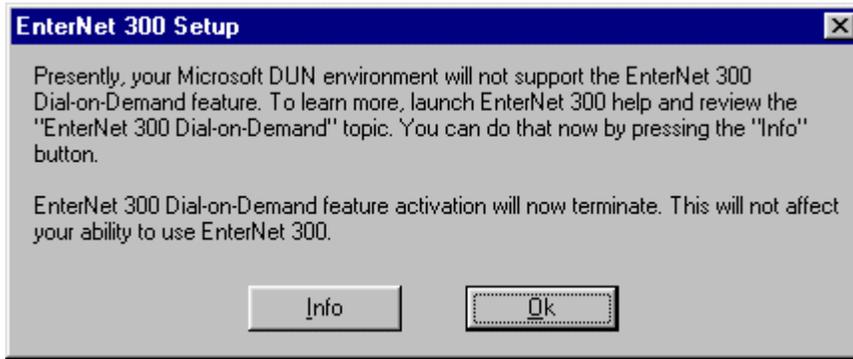
On the above panel, clicking the Info button will launch the EnterNet Help facility, presenting the Topic that that discusses Dial-on-Demand. The installer will remain paused while you review the Help facility. It is advisable to close the Help facility before continuing with EnterNet installation. Clicking OK will resume the installation process. The "EnterNet Dial-on-Demand" section of this User's Guide provides instructions for activating Dial-on-Demand after EnterNet installation has completed.

NOTE: Dial-on-Demand is an optional feature. It is not required for EnterNet to function normally.

Dial-on-Demand Active

Once the optional Dial-on-Demand feature is successfully installed, you will be presented with the following panel:
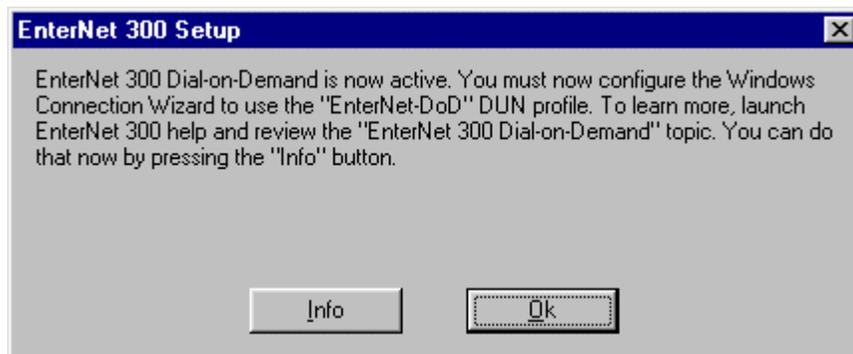
In order to begin using Dial-on-Demand, you will need to make a configuration change to your Microsoft Windows environment. Clicking the info button on this panel will take you to the section of the Help facility that discusses the necessary configuration change. You can also learn about this change by reviewing the "EnterNet Dial-on-Demand" section.

The "Setup Complete" Panel

When the EnterNet installer has completed its tasks, you will be presented with this final panel. Please note that a system restart is required after installing EnterNet. The requisite restart may take longer than usual. This is due to the remaining, behind-the-scenes tasks being performed by the EnterNet installer and by Windows. This process may result in as much as two minutes of apparent inactivity, depending on the speed and configuration of your system.
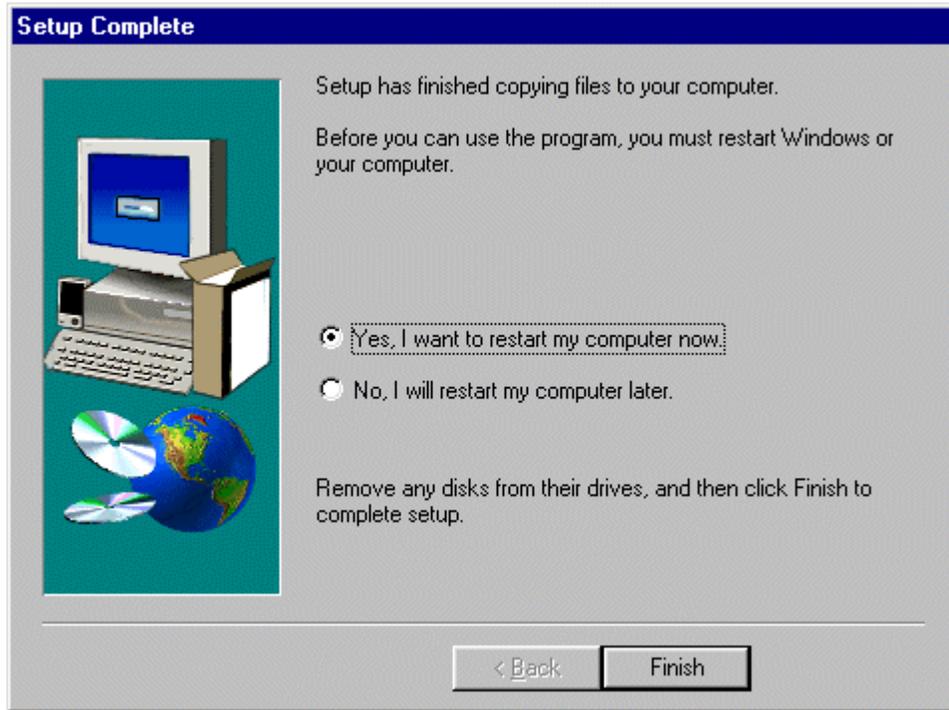
Summary

By successfully completing the above steps you have installed EnterNet 300 for Windows. You may now begin using EnterNet to establish a connection to your ISP.

The next section of this User's Guide, "Getting Help with EnterNet", describes ways you can learn more about EnterNet 300 for Windows. Review the getting help section if you like, or jump ahead to "Opening the EnterNet Folder" if you would like to get started right away using EnterNet 300.

Getting Help for EnterNet

On-line help is available for most EnterNet features. To use on-line help, either select "Help Contents" from the EnterNet folder application, select "EnterNet 300 Help" from the "Efficient Networks EnterNet 300" folder on the Windows Start menu, or, when present, click the "?" button in the upper right-hand corner of any EnterNet screen.

While viewing a Help page, hovering your cursor over some Help file graphics will cause the cursor to change into a hand. This indicates the availability of additional information. Simply click on the graphic to view an informational pop-up.

Most EnterNet panels offer ToolTips to clarify the purpose or function of a feature or parameter. Momentarily hover the cursor over a region of an EnterNet panel to see a ToolTip, if available.
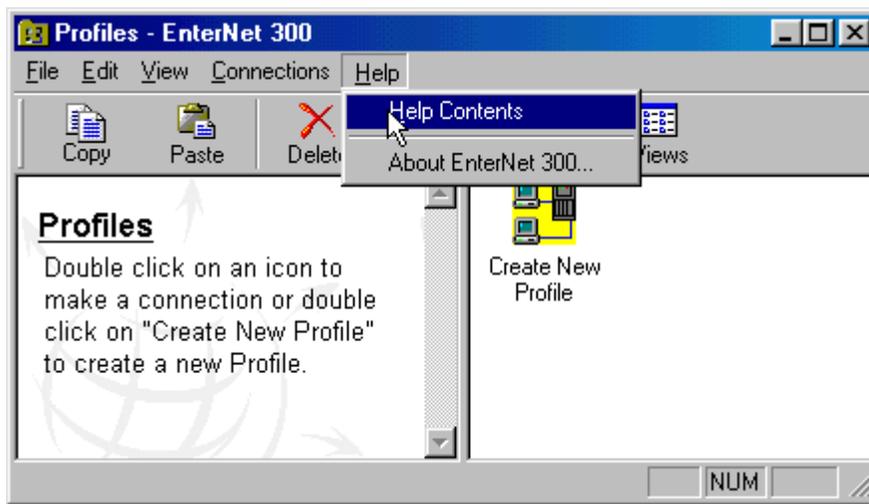
For additional assistance with EnterNet, you may wish to visit the EnterNet Frequently Asked Questions (FAQ) page at the following URL: http://support.efficient.com/KB/NTS/index.html

Opening the EnterNet Folder

You can easily access EnterNet by launching either the EnterNet 300 shortcut on your desktop (if your service provider pre-configured the EnterNet installer to place one there, and you answered "Yes" when the installer asked if you want the shortcut installed) or you can launch EnterNet 300 from the Windows Start menu. From the Windows Start menu, navigate to the folder where the EnterNet 300 application was installed. By default, the Start menu path will be: Start\Programs\Efficient Networks EnterNet 300.

Launching either of the above Windows shortcuts will start the EnterNet folder application, which is where you will create and launch the Connection Profiles and Profiles that serve to provide EnterNet with programmatic information about each specific profile, and to authenticate you onto the desired network.
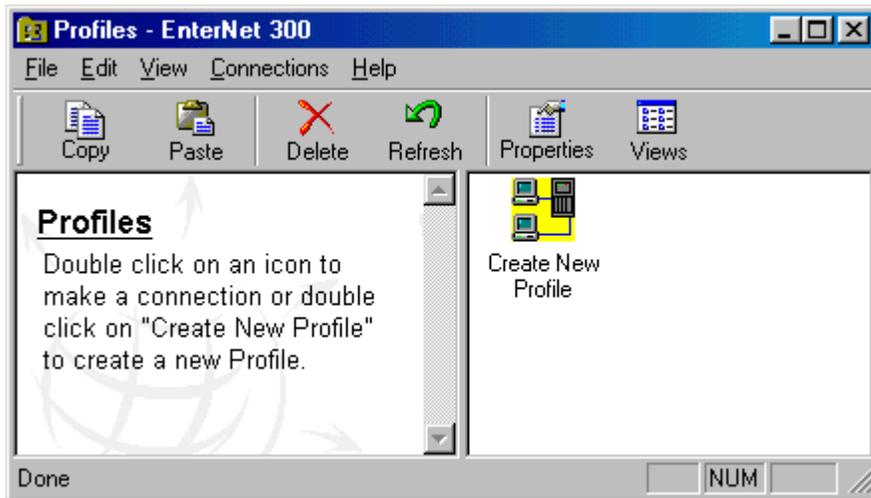
EnterNet Profiles

Connection Profiles

The configuration information you will need to establish a network connection will be provided to you by your service provider. You will use this information to create Connection Profiles that will be stored in the EnterNet folder. Connection Profiles are located in the right-hand pane of the EnterNet folder. For convenience, you can create Windows shortcuts to these profiles and place the shortcuts on your desktop, in the Quick Launch portion of your Windows taskbar, or in any other folder you specify.

Connection Profile

Service Profiles

One powerful characteristic of PPPoE (Point-to-Point Protocol over Ethernet) is the ability to offer users premium online content, such as live video feed of an important event, or access to a high-speed, interactive gaming network. These premium services can be offered to users on a one time only basis, as would occur with a video feed, or perhaps as an always available premium service, as might be the case with a gaming network.

Available services are dynamically learned by EnterNet and, depending on how you have configured EnterNet, may appear in the EnterNet folder. In any case, before a service may be access, a Service Profile must be configured for it. See the section "Advertised Services" for more information.

Service Profile   **Service Profile - configured**

Creating a Connection Profile

To create a new Connection Profile, double-click on the Create New Profile icon, located in the right-hand pane of the EnterNet folder, or select Make New Connection from the EnterNet folder Connection menu. This will launch the Connection Profile Wizard, which will guide you step by step through the process of creating a new Connection Profile.

Connection Name

The first step in creating your profile is to choose a name. Enter the desired name (i.e., "DSL Connection", "Work Connection", etc.) in the text field of the Connection Name panel. When you have finished, click Next to continue.

Note: The name you give your connection need not be the same as the User Name that will be associated with the profile.

Connection Name (continued)
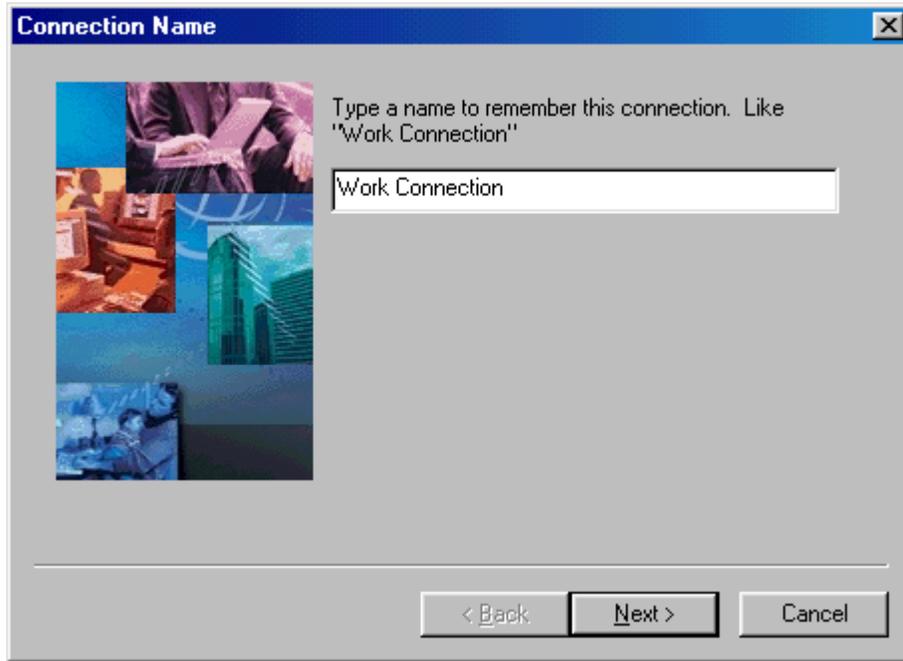
User Name and Password

Your profile's User name and Password will be used to authenticate you as a valid network user. They are both case-sensitive: "Password" and "PASSWORD" differ from "password." You must enter them exactly as they are specified. When you have finished, click Next to continue. If you wish to modify information entered on a previous panel, click Back.

The "Locate Servers" Panel

The next panel to be displayed will be the Locate Servers panel. This panel will inform you that EnterNet is ready to attempt to locate servers and services.
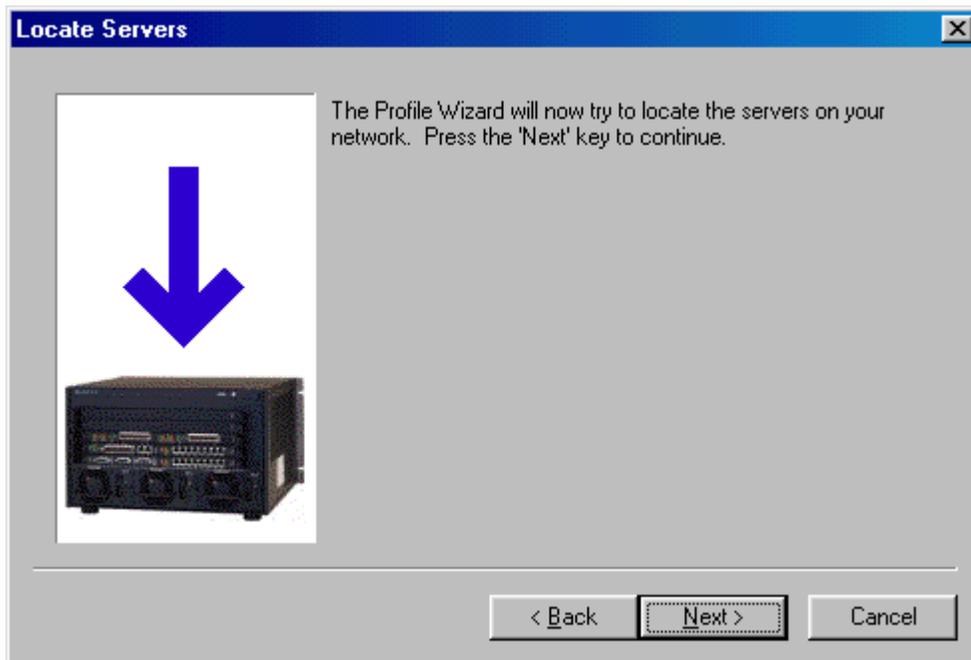
Entering the Server Selection

The EnterNet application displays a list of network servers and services that may be accessible to you via the network. These values are discovered by EnterNet automatically and listed in the window. It also enables you to select a specific network server and the available services provided by that server. The Server and Services fields are left blank by default, which means the first available server will respond to your request for a connection.

Note: You should leave these fields blank unless otherwise instructed by your service provider or Network Administrator.
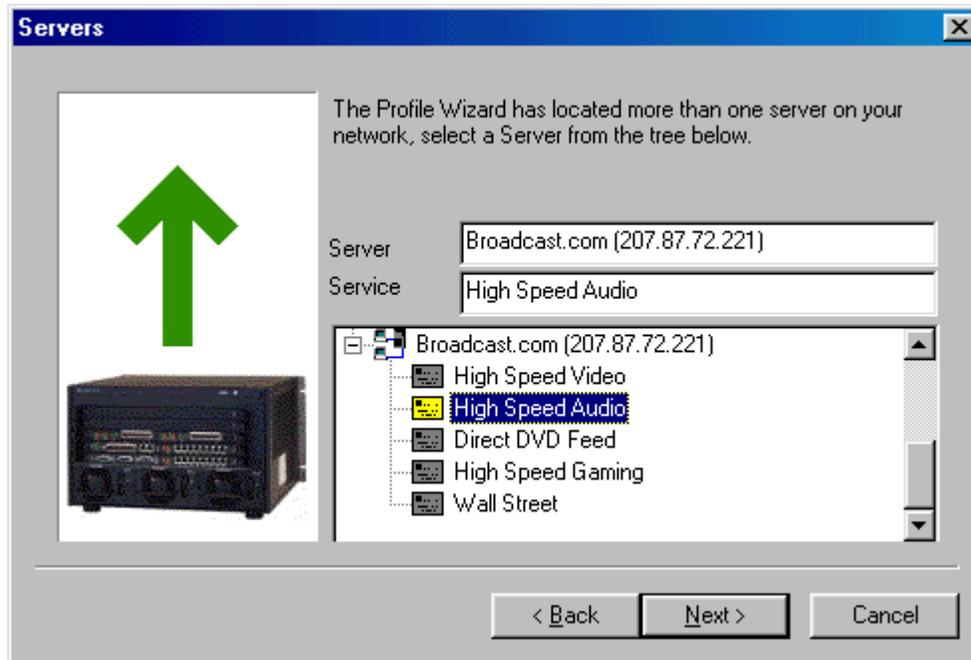
Note: The Servers window can be hidden by the provider, in cases where servers or services are not advertised.

Finishing the Profile

The last panel the Profile Wizard will display is the Finish Connection panel. In the text field you will find the name of your profile as it was entered in the first panel of the Profile Wizard. If you are satisfied that you have correctly completed the Connection Profile, click the Finish button. You may click the Back button to review and change any of the information you provided to the Profile Wizard.

Once you have clicked the Finish button, your new profile will appear in the right-hand pane of the EnterNet folder (the same window as the Create New Profile icon).

Finishing the Profile (continued)
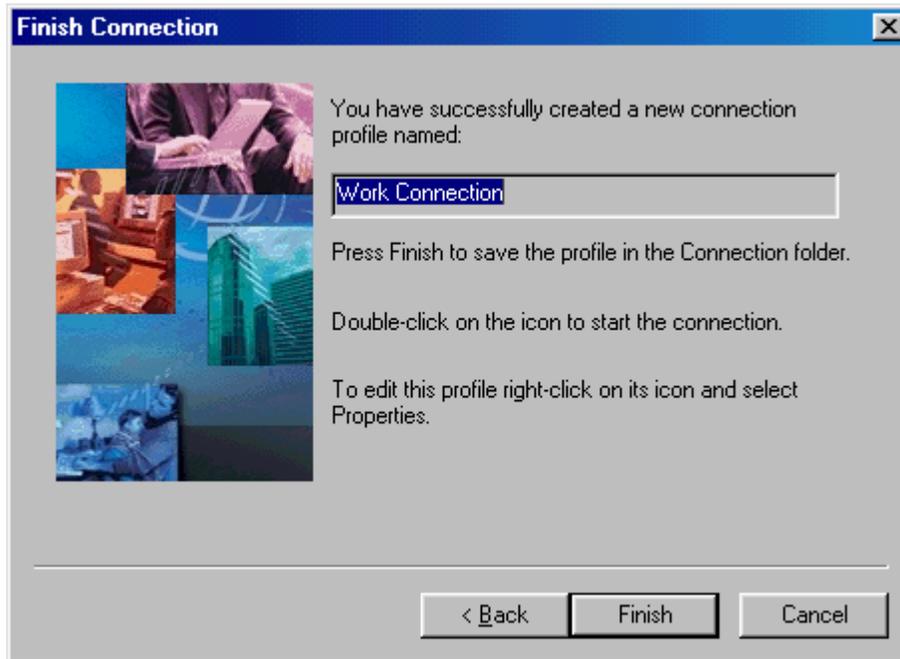
Modifying a Profile

You can modify the information entered for a Connection Profile at any time by right-clicking on the desired Profile icon in the EnterNet folder and selecting Properties from the pop-up menu. If you have already launched the profile you wish to modify, right-click on the profile's system tray icon and select Properties from the pop-up menu.

Advertised Services

Services carried and advertised by your service provider will be discovered by EnterNet automatically and, if you have enabled the "Show advertised services in main folder" option on the Application Settings panel, they will be displayed as icons in the right-hand pane of the EnterNet folder; the same place where Connection Profiles are displayed. Service Profiles can be distinguished from Connection Profiles by the small red bar they feature.

Before you can use a Service Profile, you must configure it. To configure a Service Profile, double-click its icon in the EnterNet folder and provide the requested information. Service Profiles are differentiated from Connection Profiles by the red bar Service Profiles feature. You will be able to identify Service Profiles that you have configured by the green 'screens' on their EnterNet folder icons. Un-configured Service Profiles have black screens. Sample Connection Profiles and Service Profiles appear below.

Note: Most servers do not advertise Services and thus Service Profiles may not appear in the folder, even though you have elected to display them.
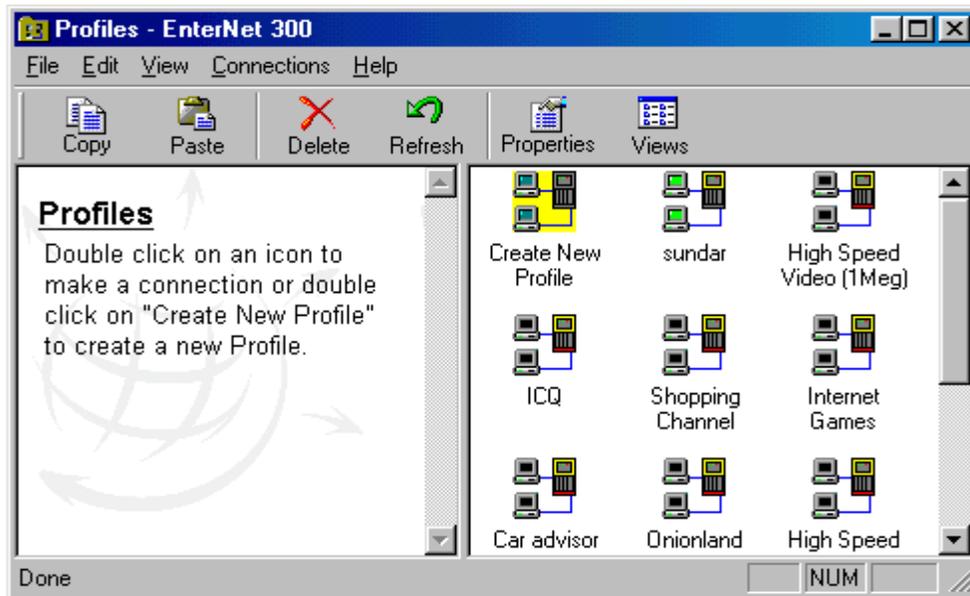
| **Connection Profile** | **Service Profile** | **Service Profile - configured** |

Making the Connection

Connecting with EnterNet

Once your Connection Profile has been saved, an icon representing it will appear in the right-hand pane of the EnterNet folder. Double-clicking on this icon will invoke the Connect panel, on which the User Name and Password are displayed. It will also result in the appearance of an EnterNet icon in the Windows system tray, which is by Windows default present in the lower right corner of your computer's screen. To establish a connection, ensure that the User Name and Password presented on the Connect panel are correct, and then click the Connect button. Once you have clicked the Connect button, EnterNet's system tray icon will change. See the user's guide section titled "System Tray" for more information about the various states of the EnterNet system tray icon.

Once a connection has been successfully established, the Connection panel will disappear from your screen. If the attempt to establish a connection fails, the Connection panel will remain on your screen and a message indicating the reason for the failure will be present in the Messages window of the Connection panel, directly above the Connect button. By double-clicking the message, you will be presented with an activity log for this session, at the bottom of which will be the error message that was in the Messages window. This information will help you and your service provider determine and correct the problem that led to your connection failure. You will find more information about error messages in the "Connection Errors" section of this User's Guide.
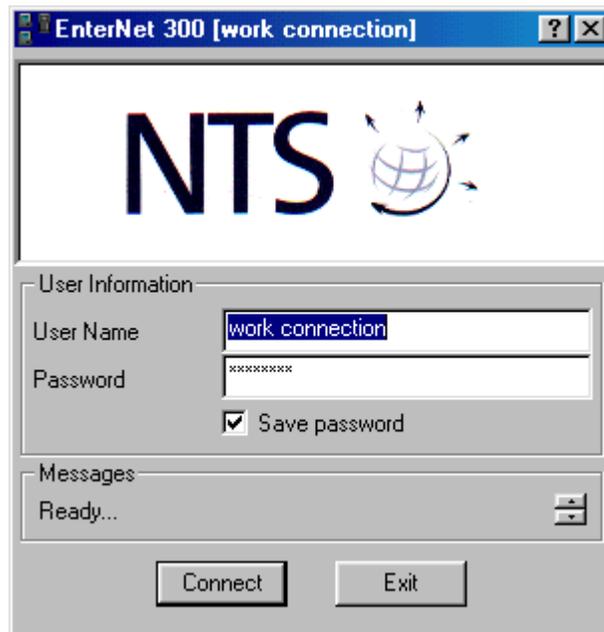
System Tray Icon

Once you have launched an EnterNet Connection Profile, EnterNet will place a status icon in the Windows system tray, which by Windows default appears in the lower right corner of your screen, at the end of the Windows taskbar.

The EnterNet status icon provides you with information about the current state of your connection. The icons reflect the following information:

- Connection status
- Send data status
- Receive data status
- Network Health (see "Advanced Diagnostics")

Refer to the images below to better understand the meaning of each EnterNet system tray icon state.

"Connect" button not yet pressed	**attempting to connect**	**connected, idle**

connected, sending data	**connected, receiving data**	**sending and receiving**

Network Health good	**Network Health marginal**	**Network Health bad**

Disconnecting with EnterNet

There are several ways to disconnect with EnterNet. If you want both to terminate your session and close the Active Connection Profile, right-click on the EnterNet system tray icon and select Exit from the pop-up menu. If you want to terminate your session but leave the active Connection Profile open, either select Disconnect from the system tray pop-up menu, or select Connection Details, and press the Disconnect button when the Connection Details panel appears (See Connection Details).

System Tray Menu
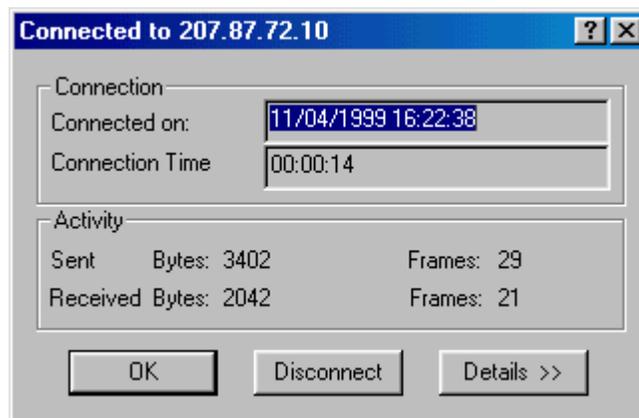
Connection Details Panel

Connection Messages

Throughout the process of establishing your connection, the Messages field of the Connections panel will keep you updated of its status. The messages that will be displayed, along with a brief explanation of each, are as follows:

- **Beginning Negotiation**--Initial contact made with remote server. Negotiating for authentication.

- **Authenticating**--Authentication successfully taking place.

- **Receiving Network Parameters**--Negotiating network configuration parameters.

- **Updating Network Parameters**--IP addresses received from server and passed on to TCP/IP stack bound to EnterNet adapter.

Connection Details

The Connection Details panel provides a variety of general information about your connection, including the time and date of its initiation and its overall duration. In the event of problems with your connection, click on the Details button and the panel will enlarge, providing you with additional information that may be of use to technical support personnel. (See "Disconnecting with EnterNet").
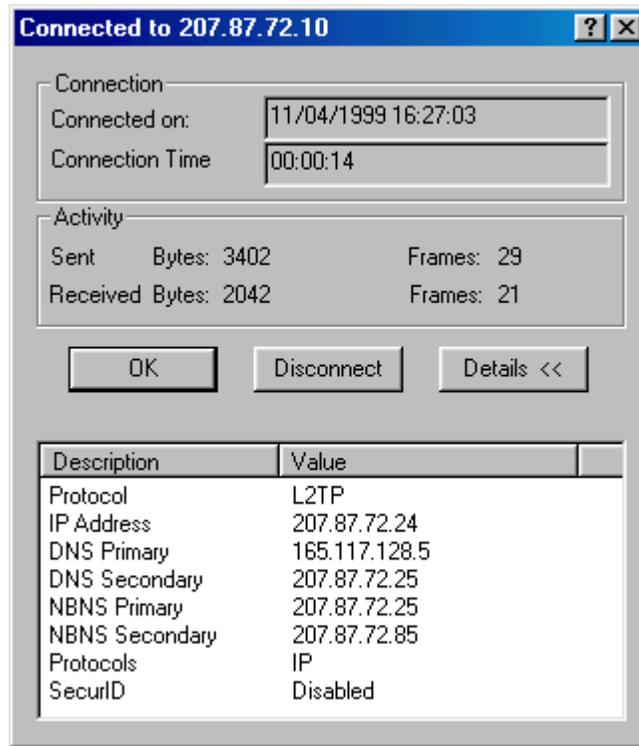
Profile Properties Panel

You can invoke the Profile Properties panel by selecting Profile Properties from the system tray pop-up menu, by selecting Properties from the right-click pop-up menu of your Connection Profile icon in EnterNet folder, or by clicking Properties on EnterNet folder's toolbar.

User Information Tab

The User Information panel may be reached by clicking on the "User Information" tab of the Profile Properties panel. On this panel you can change the User ID or Password of your Connection Profile. Also, by checking the Default Profile check box, you can identify this Connection Profile as your default profile. The default profile is the profile EnterNet will launch of you have "Launch EnterNet 300 at Windows Startup" selected in the Application Settings panel. If you have only one Connection Profile created, the Default Profile check box will be grayed as this profile is naturally pre-determined to be the default.
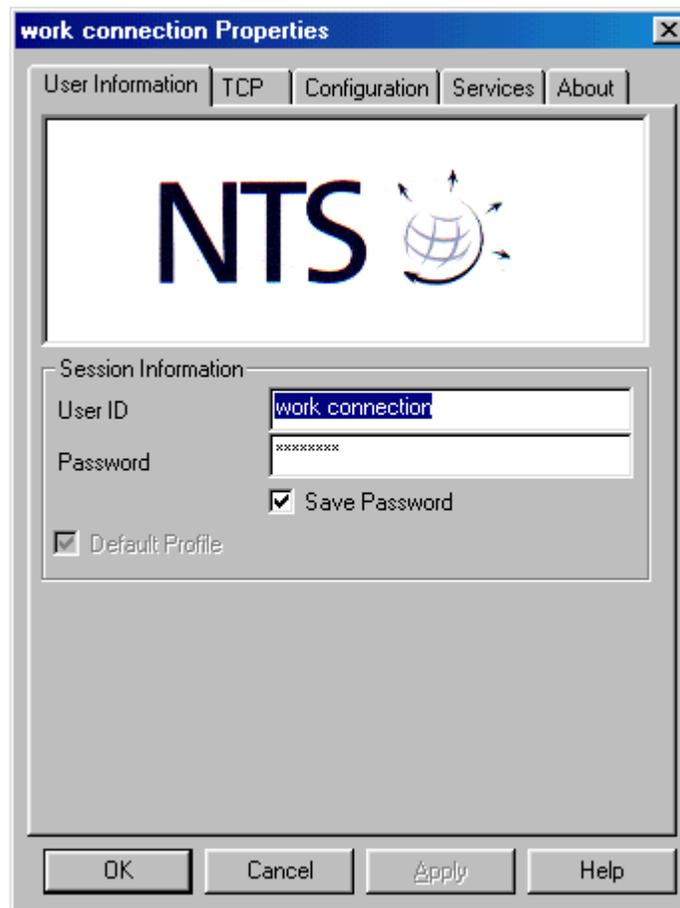
TCP Tab

The TCP panel may be reached by pressing on the TCP tab of the Profile Properties panel. This panel allows you to specify the IP address for your session and for your name servers. It also contains the settings for IP header compression and default gateways.

Note: Unless you are specifically directed by your service provider to change the settings on this panel, you are advised to leave them as they are. However, feel free to turn on the Idle TimeOut feature, and to change the time-out duration. Idle TimeOut will cause EnterNet to disconnect from the network after the indicated period of idle time.
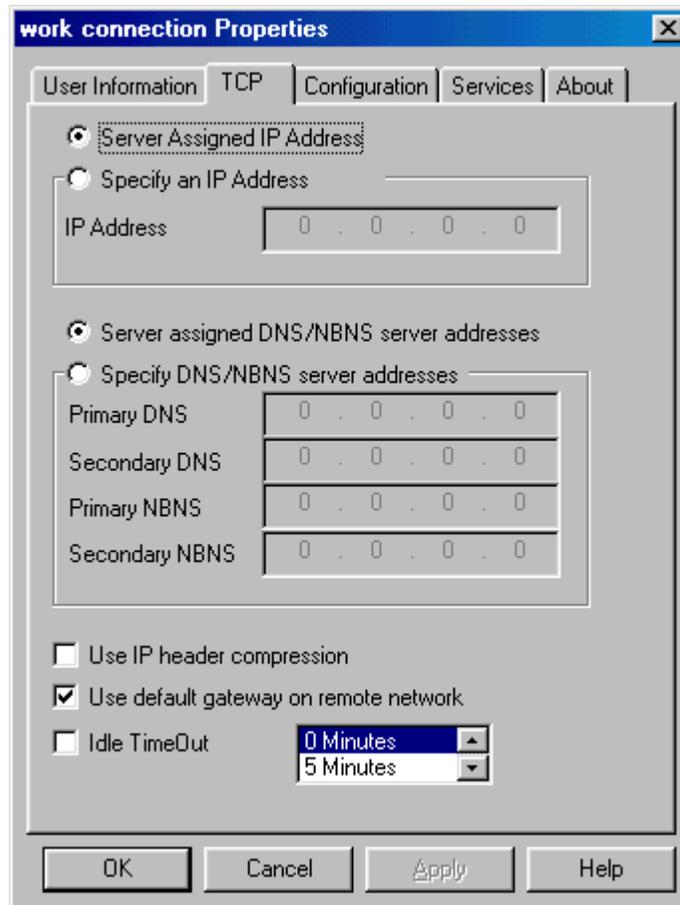
Configuration Tab

The Adapter Configuration panel can be reached by selecting the Adapter Tab of the Profile Properties panel. The top section, Configuration, consists of a drop-down list of adapters from which you can select the device you wish to use to make your connection. Note: EnterNet requires that an EtherNet adapter be selected in this field.

The bottom section, Options, displays a list of three check boxes that may be marked to require encryption, log onto the network automatically, and modify route metrics when connecting.

Unless you are specifically instructed to change these values, we recommend that you leave them at their default settings.
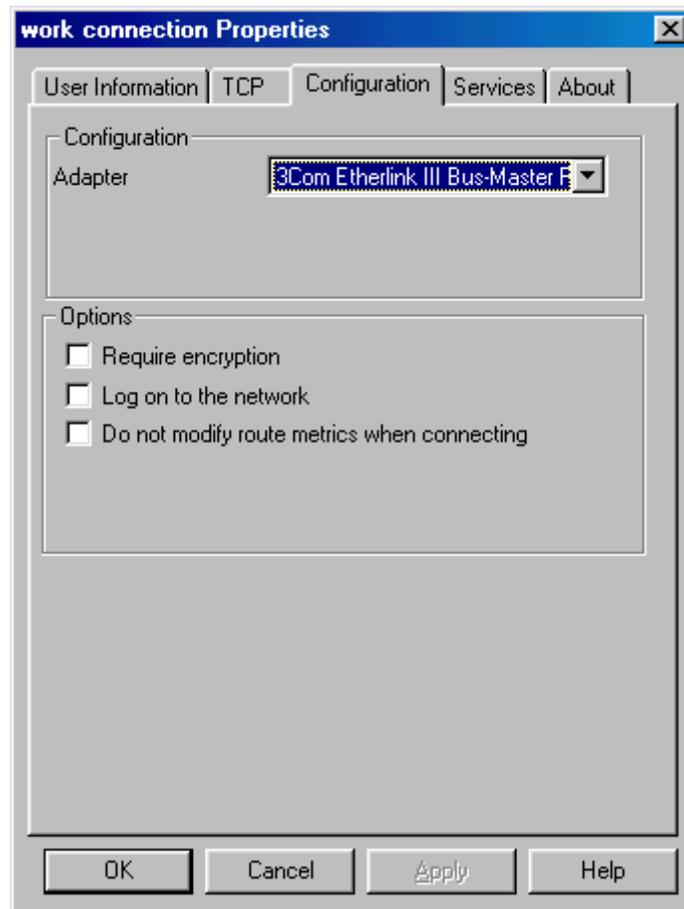
Services Tab

The Services panel can be reached by selecting the Services tab of the Profile Properties panel.

On this panel, you can change the PPPoE server to which you wish to authenticate, and you can select the Service associated with the profile. See the section titled "PPPoE Server Address" above, for a detailed discussion of Servers and Services.
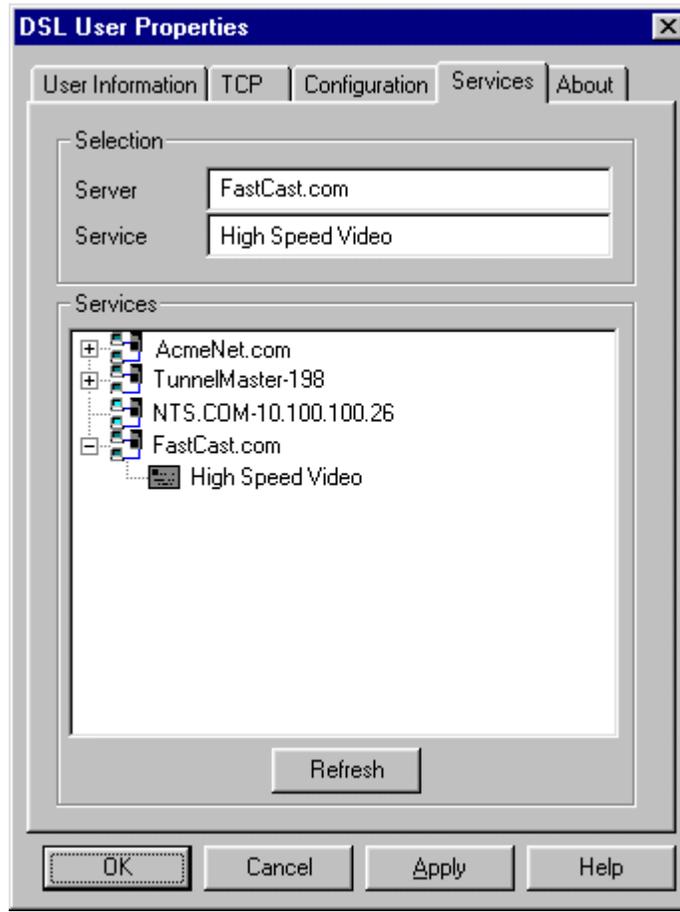
DSL User Properties

| User Information | TCP | Configuration | Services | About |

Selection
- Server: FastCast.com
- Service: High Speed Video

Services
- AcmeNet.com
- TunnelMaster-198
- NTS.COM-10.100.100.26
- FastCast.com
  - High Speed Video

Refresh

OK   Cancel   Apply   Help

Note: The Servers window can be hidden by the provider, in cases where servers or services are not advertised.

About Tab

The EnterNet About Menu can be reached by selecting the About Tab of the Profile Properties panel. The About panel displays the company name, application version and software build dates, which can be helpful to your service provider when troubleshooting problems.
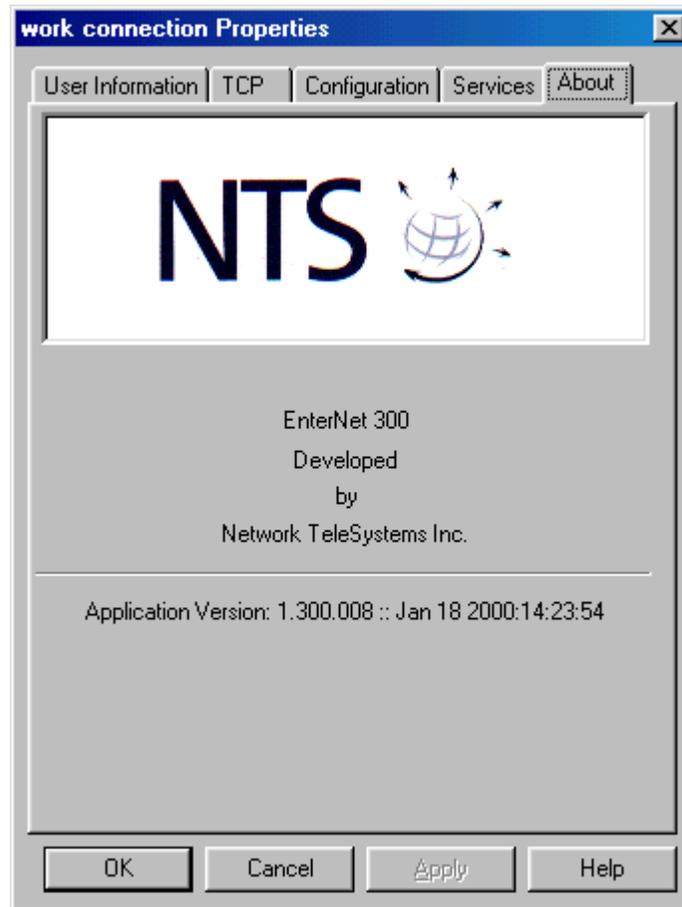
Application Settings Panel

The Application Settings panel can be invoked by selecting Application Settings from the system tray pop-up menu, or by selecting Settings from the Connections menu on the EnterNet folder.

The options and settings contained on this panel are global in nature and thus apply to all Connection Profiles. The following text provides a detailed description of each setting afforded herein.

Launch EnterNet at Windows Startup

Activating this option by marking its check-box will cause EnterNet to launch the Default Connection Profile at Windows start-up. Activating this option and the Auto-Connect option can provide the user with a simulated "always connected" Internet experience.

Auto-Connect

Mark this check-box if you want to eliminate the step of pressing the Connect button when you launch a Connection Profile. Marking this box and the "Launch EnterNet at Windows Startup" box results in a simulated "always connected" Internet experience.

Enable ToolTips

Many of the selections on the various EnterNet panels have ToolTips associated with them. If this check-box is marked, and if the user hovers the cursor over a ToolTip-equipped area of an EnterNet panel, a brief descriptive message will appear that provides helpful information about the section of the panel where the cursor is hovering.

Detailed Log

Marking this check-box will cause additional detail to appear in the Messages tab of the Advanced panel (accessible by right-clicking the EnterNet system tray icon after a Connection Profile has been launched.) This box should only be marked if the user is having trouble and the Support Technician requires additional diagnostics information.

Use a Unique URL for each Profile

EnterNet can be configured such that the default browser is launched and directed to a specific URL when a Connection Profile successfully connects to the network. Further, once the browser is launched, EnterNet can feed a target URL to the browser. These two functions – launching the browser on successful connection and feeding the browser a target URL – can either be configured globally for all Connection Profiles, or can be configured independently on a profile-by-profile basis. Placing a check-mark in the "Use a Unique URL for each Profile" box allows browser launch and URL feed to be controlled on a profile-by-profile basis, making the desired configuration choices appear within each Connection Profile's Properties panel. When the "Use a Unique URL for each Profile" check-box is not marked, thus providing global browser-launch control and global URL feed from the Application Settings panel, a check-box named "Launch default browser after connection" is displayed on the Application Settings panel, and a text field for specifying the target URL is displayed, below it.

Persistent Connections

With this check-box marked, when a connection is broken by means other than manually terminating the session, EnterNet will automatically attempt to re-establish the connection.

Show advertised services in the main folder

This check-box determines if EnterNet will display advertised services in the EnterNet folder, or if advertised services will only be visible from the Services tab of the Connection Profile Properties panel.

Packet Logging

Your ISP may have configured EnterNet with Packet Logging disabled, in which case Packet Logging won't be present on the Application Settings panel. If it is present, click in the Packet Logging check box to activate packet logging, which is accessible on the "Advanced" panel (see "The EnterNet "Advanced" Menu").

Time-out on connect

The selected value determines how long EnterNet will wait, after the Connect button is pushed on a Connection Profile, for a valid connection to be established before deciding that the attempt has failed.

Play Sound on Connection

If this check-box is marked, the Browse button to it's left can be used to browse to a .wav file that will be played when a connection is successfully established. The .wav file will be displayed in the window below the Browse button. The path to the .wav file may be entered directly into the display window.

Launch Default Browser after Connection

If this check-box is marked, the default browser will be launched after a connection is successfully established. A target URL may be manually entered into the text window below the check box. When EnterNet launches the browser it will feed this URL to the browser, overriding the "home page" defined within the browser's configuration. If no URL is entered in the text window, the browser will launch and will connect to the URL defined as its home page.
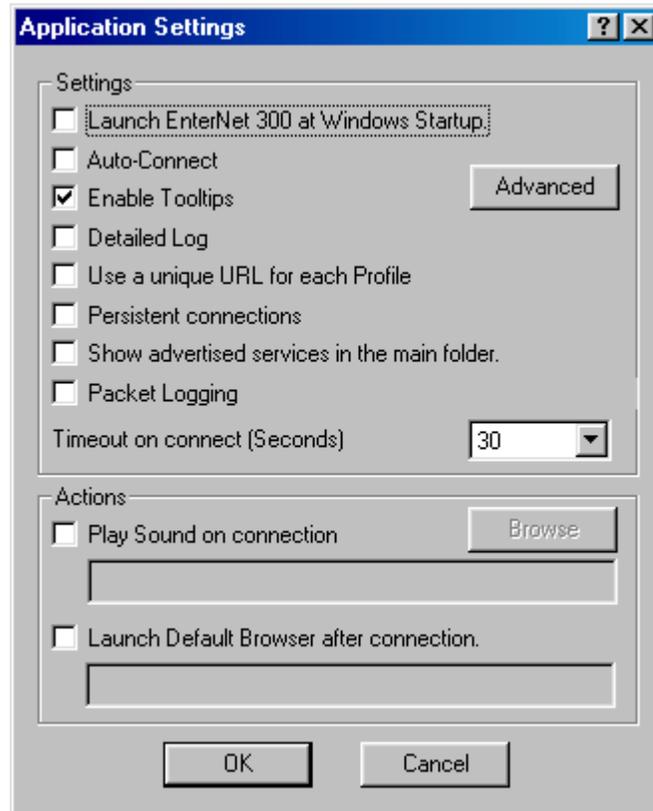
Advanced Settings Panel

You can reach the Advanced Settings Detail panel by clicking the Advanced tab on the Settings menu. The default settings should be used whenever possible.

The Advanced Settings Detail panel displays the following options:

IP Configuration

This allows you to select between two different internal TCP/IP configuration mechanisms, labeled "Private API" and DHCP. The Private API selection allows EnterNet to apply the received IP configuration parameters more quickly than does the DHCP mechanism. Because some 3rd party clients (such as products from Shiva and TimeStep, as well as Sybergen SyGate Internet connection sharing software) require the DHCP mechanism be employed, that mechanism remains optionally selectable in EnterNet.

Network Access

This option allows you to select the alternate packet driver. The default packet driver, referred to as the "Filter Driver," should be used whenever possible. The alternate packet driver, referred to as the "Protocol Driver", should be selected only when EnterNet is installed on a multi-processor machine. As the filter driver is auto-configured at install to be the default driver, users will wish to leave this setting unchanged in most cases.
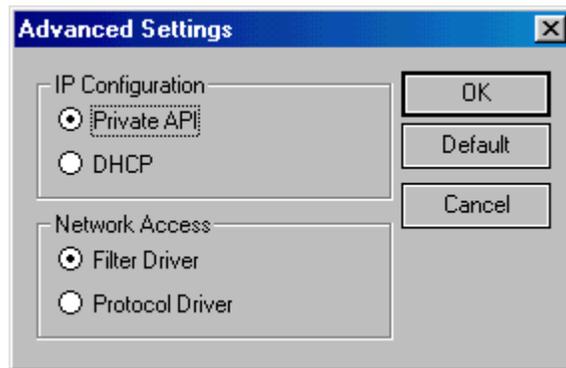
EnterNet Dial-on-Demand

About Dial-on-Demand

EnterNet's optional Dial-on-Demand feature eliminates the need for users to manually launch and "connect" EnterNet when network aware* applications require network access. Most modern network aware software, like browsers and FTP clients, can trigger EnterNet Dial-on-Demand.

Activating EnterNet's optional Dial-on-Demand feature requires one-time user intervention. Dial-on-Demand is a convenience feature that does not need to be active in order for EnterNet to function fully in all other respects. The user can safely elect to not activate EnterNet Dial-on-Demand.

NOTE: Activating Dial-on-Demand requires familiarity with Microsoft Dial-Up Networking, the Windows Connection Wizard, and in some cases Microsoft Virtual Private Networking.

Requirements

For Dial-on-Demand to function, your computer must have certain Microsoft software installed and configured in an certain manner. The specific Microsoft software EnterNet relies on to provide Dial-on-Demand are:

- Windows 9x, Windows Me, Windows NT4 (not supported on Windows 2000)

- Microsoft Dial-Up Networking version 1.2c or greater

- Microsoft Connection Wizard (as found within the "Internet" or "Internet Options" components of the Windows Control panel, and with newer versions of Internet Explorer)

Dial-on-Demand and MS DUN

EnterNet Dial-on-Demand requires that Microsoft Dial-Up Networking (DUN) version 1.2c or better be installed and configured on your computer.

All versions of Windows 98 and Windows Me ship with a version of MS DUN that is compatible with EnterNet Dial-on-Demand. Windows 95 and older versions of Windows NT 4 may have versions of MS DUN that are not compatible with EnterNet Dial-on-Demand. EnterNet's Dial-on-Demand feature is not compatible with Microsoft's Windows 2000 Operating System. By installing Internet Explorer version 5.x or newer on any supported Windows platform where Dial-Up Networking is already present, you will insure that an appropriate version of Dial-Up Networking is present on your system.

Configuring MS DUN for use with Dial-on-Demand

The best way to insure that you have the proper version of MS DUN is to fully install the most current version of Microsoft Internet Explorer on your computer. Optionally, if you have an older version of MS DUN you can download and run the file msdun13.exe from the Microsoft web page, which will upgrade your DUN version to 1.3. Simply go to www.microsoft.com and use the search utility to look for msdun13.exe.

Before EnterNet Dial-on-Demand can use MS DUN, you will need to fully configure DUN, to include the creation of at least one DUN profile. Creating a DUN profile requires that you first configure a DUN "device" to which DUN can associate DUN profiles. An internal dial modem is a good device choice. If you don't have a dial modem, you can simply install MS Virtual Private Networking (VPN) software from your Windows CD, which will allow you to create a "Microsoft VPN Adapter" device, to which DUN profiles can be associated. Follow the instructions provided by Windows to install and configure DUN and VPN, as necessary. If you must, create a "dummy" DUN profile using either an artificial phone number if the dummy profile will be associated with a modem device, or a private IP address (192.192.192.192 is usually a good choice) if the dummy

profile will be associated with the "Microsoft VPN Adapter". The dummy profile will never actually be used.

Activating Dial-on-Demand

EnterNet is typically purchased by ISPs for distribution to their end users customers. EnterNet has many time-of-installation options, including the option to either install – or to not install – the optional Dial-on-Demand feature. If, during EnterNet installation you were not asked if you want to activate the optional Dial-on-Demand feature, then your ISP set the EnterNet installer to not automatically activate EnterNet Dial-on-Demand, but they may have provided you the means to activate it manually. To determine if your ISP provided you the option to manually activate DoD, look for an "Activate DoD" item in the EnterNet folder on the Windows Start menu.

Once MS DUN version 1.2c or better is installed on your computer and you have created at least one DUN profile, you can then activate EnterNet's Dial-on-Demand feature. If EnterNet's Dial-on-Demand feature wasn't activated during EnterNet installation, and if your ISP provided you the means to activate it manually, you can activate it now by selecting Activate DoD from the EnterNet folder on the Windows Start menu. Clicking this button will result in no apparent activity. To confirm that Dial-on-Demand was activated, look in the MS DUN folder for a new entry named "EnterNet DoD".

Configuring the Windows Connection Wizard

Once MS DUN 1.2c or better is installed and configured for use with system and EnterNet has created a MS DUN profile named "EnterNet DoD", you can now configure the Windows Connection Wizard such that it will select EnterNet whenever an application asks it to establish a network connection.

To configure the Connection Wizard to use EnterNet when network connections are requested by applications. Follow the instructions below:

Launch the Control panel from the Settings folder of the Windows Start menu

1. Launch "Internet" or Internet Options"

2. Click the Connections tab

3. Look for a window titled Dial-up settings. If you have such a window, perform steps 5-8, below. If not, please skip forward to step 9.

4. In the Dial-up settings" window, click the entry labeled "EnterNet DoD"

5. Select the "Always dial my default connection" radio button (or the button that best approximates that meaning.)

6. Click the "Set Default" button.

7. Click OK. You can skip the rest of the following numbered steps.

8. If you do not see a window titled "Dial-up settings", select "Connect to the Internet using a modem".

9. Click the Settings button.

10. Select "EnterNet DoD" from the pop-up window.

11. Save your new settings and close all windows opened by this process.

Conclusion

You have now activated EnterNet's optional Dial-on-Demand feature. Whenever an Internet aware application such as a browser attempts to access the Internet while you are not connected, EnterNet will now automatically launch. If you have activated the Auto-Connect feature on

EnterNet's Settings panel, EnterNet will not only automatically launch, but it will also automatically establish a connection to the network.

NOTE: On Windows NT computers, not all network aware applications will activate Dial-on-Demand.

EnterNet and Windows "Internet Connection Sharing"

Internet Connection Sharing (ICS) is a feature of the Windows 98 Second Edition operating system. It is supported on W2K and Me as well. ICS allows all the computers on your home Ethernet network to share a single Internet access device. Beginning with version 1.31, EnterNet is compatible with ICS.

The instructions below will guide you through the process of correctly installing EnterNet and the version of ICS that comes with Windows 98 Second Edition. Before you begin, you should read the "Internet Connection Sharing Overview" section of the Windows Help system. To read it, launch Help from the Windows Start menu, click the Search button, enter "Internet Connection Sharing Overview" in the Keyword window, click the Show Topics button, and launch the topic from the Select Topic window. Once you've reviewed Windows Help, you will be better prepared to understand the concepts presented below.

In an ICS environment, EnterNet need only be installed on the Connection Sharing computer. When planning your network layout, keep in mind that the Connection Sharing computer must be running, and must be connected the Internet, before other computers on your home network can access the Internet. In most homes, this means one computer will be left on at all times.

Follow the steps below to install and activate EnterNet and ICS on your home network:

1. Install ICS before you install EnterNet on the machine that will become your Connection Sharing computer.

2. Once EnterNet is installed, you will need to change one of its Advanced Settings parameters in order to support ICS. You accomplish this as follows:

   I. From the Windows Start menu, navigate first to the Programs folder, then onward to the Efficient Networks EnterNet 300 folder. Select and launch EnterNet 300.

   II. On the EnterNet application, click the Connections menu, then select Settings.

   III. The Application Settings panel will appear. Click the Advanced button.

   IV. The Advanced Settings panel will appear. In the IP Configuration box, click the radio button to the left of DHCP. Next click OK to close the Advanced Settings panel. Click OK again to close the Application Settings panel.

3. Add the Microsoft Internet Connection Sharing (ICS) utility to your Connection Sharing computer, as follows:

I.   From the Windows Start menu, navigate to the Settings folder and launch the Control Panel.

II. From the Control Panel folder, launch Add/Remove Programs.

III. Click the Windows Setup tab on the Add/Remove Program Properties panel.

IV. Select Internet Tools in the Components window, and click the Details button.

V.   Click in the selection box to the left of Internet Connection Sharing, then click the OK button, and click the OK button on the resulting panel, as well.

VI. Follow the on-screen instructions. You will probably need your Windows CD.

VII. When asked "What type of connection do you use to access the Internet?", select "High-speed connection", then click the Next button.

VIII. The next panel will ask you to "Select the network adapter...". Select "Network TeleSystems PPPoE adapter" from the list of adapters in the "Network adapters" window, then click the Next button.

   IMPORTANT NOTE: You must have EnterNet version 1.31 or later if you wish to use ICS. If you see an EnterNet adapter in the list that contains "PPPoE" without periods (.) following each letter (i.e., P.P.P.o.E.), then your version of EnterNet is earlier than version 1.31, and will not support ICS. We recommend that you upgrade to the most current EnterNet release."

IX. The ICS Wizard will notify you that it is about to create a Client Configuration Disk. Click the Next button to proceed. Once the ICS Wizard has finished creating the disk, it will continue configuring your system, after you click the Finish button. A system re-boot will be required to complete the ICS installation process.

4. Follow the steps below at each of the computers that will share your Internet access device (excluding the Connection Sharing computer):

I.   Insert the Client Configuration Disk into the floppy drive.

II. From the Windows Start menu, navigate to the Programs folder and launch Windows Explorer. Select your floppy drive in the Folders window, then launch the file named ICSCLSET.EXE.

III. The Browser Connection Setup Wizard will appear. Click the Next button. You will be presented with an information panel that tells you the Wizard is about to check and, if necessary, change your browser settings. Click Next.

IV. The next panel advises you that the Wizard has completed its work. Click the Finish button.

V. Repeat steps I through IV above, at each computer on your network, except the Connection Sharing computer.

EnterNet and ICS are now ready to provide Internet access to every computer on your home network. Be sure the Connection Sharing computer is connected to your service provider before you attempt to access the Internet from any of the other computers.

Important note: Computers that share your Internet access device through ICS will not be able to activate EnterNet's Dial-on-Demand feature. You must manually establish an EnterNet connection between your Connection Sharing computer and your service provider before the other computers on your network will be able to access the Internet. For more information about Dial-on-Demand, see "EnterNet Dial-on-Demand", elsewhere in this document.

The EnterNet "Advanced" Menu

EnterNet 300 is equipped with a comprehensive suite of diagnostics tools to aid the advanced user and the service desk technician to better understand the IP configuration and overall behavior of EnterNet and its relationship with the network to which it is attached.

The layperson can do no harm by accessing, viewing and manipulating the features present on EnterNet's Advanced menu. However, it is beyond the scope of this User's Guide to provide detailed information about the information presented therein.

The Advanced menu is access by launching an EnterNet profile, then right-clicking on the EnterNet system tray icon. Selecting Advanced from the resulting menu will result in the appearance of the Advanced panel, which contains the following seven tabs:

- Diagnostics
- Route Table
- IP
- Drivers
- Messages
- Tap Information
- Packet Log

Note: Some tabs may not be present unless an active PPPoE session exists. The Packet Log tab is only present if Packet Logging is enabled on the Application Settings panel.

Diagnostics Tab

The Diagnostics panel is used to test the response time of your network name servers. The results of this test are called "Network Health" within this User's Guide.

In the left-hand pane of this panel you will see a Windows Explorer-like tree, with "Network" being at the root of the tree. As with Windows Explorer, clicking the "+" symbol to the left of the Network item will result in the tree's expansion, thus showing each branch of the tree. If the symbol being presented is a "-", clicking it will cause the tree to collapse, this showing only the root of the tree (the Network item), with the branches hidden.

Each branch of this tree represents a different name server identified to EnterNet while negotiating the current PPPoE session with your service provider's network. Two kinds of name servers can appear in the tree" DNS, and NBNS (knows as WINS in Microsoft jargon).

When you launch the Advanced Diagnostics panel, EnterNet pings each of the servers in the tree. If the server responds to the ping in a reasonable period, the name server will be represented by a green icon. If the server responds slowly, it will be represented by a yellow icon. If it does not respond at all, it will be represented by a red icon.

The color of the root icon, labeled Network, reflects the overall health – or responsiveness – of the name servers known to EnterNet. If all known name servers are presently responding quickly, the Network icon will be represented in green. If one or more of the name servers is responding slowly, the Network icon will be represented in yellow. If all of the name servers are not responding at all, the Network icon will be represented in red. The color of the Network icon is also represented in real-time on the horizontal bar at the base of the EnterNet system tray icon (see "System Tray", earlier in this document).

You can perform independent ping tests of each name server by clicking on the name server you wish to test in the left pane, then clicking the Test button to the right of the right pane. Test results will appear in the right pane and will be represented with the color that correlates to the

responsiveness of the server being tested. Clicking the Clear button will clear the right pane in preparation for the next test.

Selecting the Network icon from the left pane then clicking the Test button will cause EnterNet to test each name server in the tree.
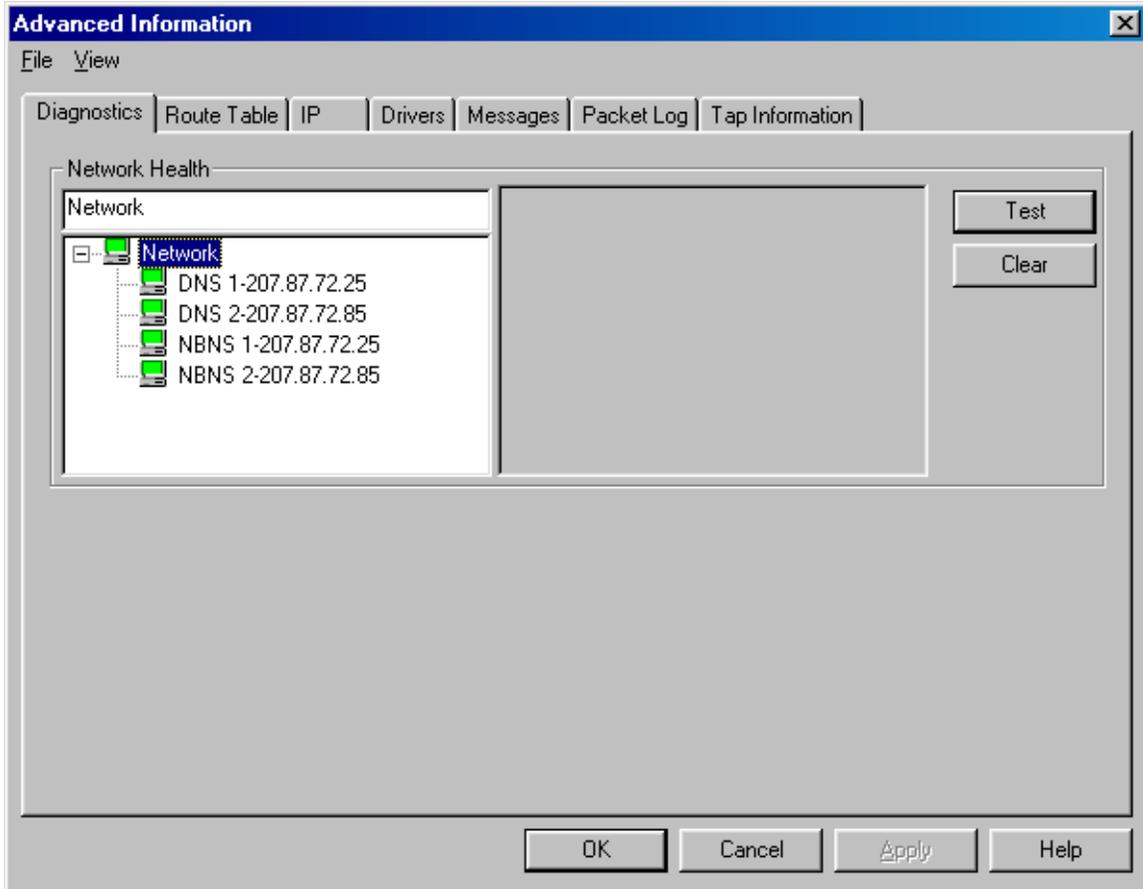
Route Table Tab

The Route Table tab can be reached by selecting **Advanced Menu>Route Table** from the system tray pop-up menu. The IP Routing Table displays a scrollable list of every IP address configured for your current session.

Advanced Information ✕

File   View

| Diagnostics | Route Table | IP | Drivers | Messages | Packet Log | Tap Information |

MS TCP Loopback interface

Network Address	Netmask	Gateway Address	Interface	Metric
255.255.255.255	255.255.255.255	207.87.72.213	0.0.0.0	1
224.0.0.0	224.0.0.0	207.87.72.213	207.87.72.213	1
224.0.0.0	224.0.0.0	207.87.72.148	207.87.72.148	1
207.87.72.255	255.255.255.255	207.87.72.213	207.87.72.213	1
207.87.72.213	255.255.255.255	127.0.0.1	127.0.0.1	1
207.87.72.148	255.255.255.255	127.0.0.1	127.0.0.1	1
207.87.72.0	255.255.255.0	207.87.72.148	207.87.72.148	1
207.87.72.0	255.255.254.0	207.87.72.213	207.87.72.213	2
127.0.0.0	255.0.0.0	127.0.0.1	127.0.0.1	1
0.0.0.0	0.0.0.0	207.87.73.20	207.87.72.213	1000
0.0.0.0	0.0.0.0	207.87.73.1	207.87.72.213	-24
0.0.0.0	0.0.0.0	207.87.72.6	207.87.72.213	1000
0.0.0.0	0.0.0.0	207.87.72.148	207.87.72.148	1
0.0.0.0	0.0.0.0	207.87.72.1	207.87.72.213	2

☐ Color

| OK | Cancel | Apply | Help |

IP Tab

The IP tab can be reached by selecting Advanced Menu>Route Table from the system tray pop-up menu. It provides a detailed, packet-level look into the Internet Protocol (IP) statistics pertinent to the current session. This information is useful to support personnel attempting to resolve problems with your system, or with their network. It is beyond the scope of this User's Guide to provide detailed information about this panel.

Advanced Information

File   View

Diagnostics | Route Table | IP | Drivers | Messages | Packet Log | Tap Information

Description
MS TCP Loopback interface
PPP Adapter.
AOL Adapter
NTS PPPoE Adapter
Fast Ethernet Adapter

Identity
IP Address   127 . 0 . 0 . 1
Subnet Mask   255 . 0 . 0 . 0
Hardware Address 00-00-00-00-00-00
Interface Index   0x00000001

Received Packets		Sent Packets	
Octets	91872	Octets	91872
Unicast	3168	Unicast	3168
Non-Unicast	0	Non-Unicast	0
Discarded	0	Discarded	0
Error	0	Error	0
Unknown Protocol	0		

Details

Interface Type	Software Loopback	Administrative Status	1
MTU	276	Operational Status	1
Speed	10000000	Output Queue Length	0

OK   Cancel   Apply   Help

Drivers Tab

The Driver tab can be reached by selecting **Advanced Menu>Drivers** from the system tray pop-up menu. The Drivers tab displays a list of the adapters configured for your session, as well as their protocol, MAC and tap names, and current status.
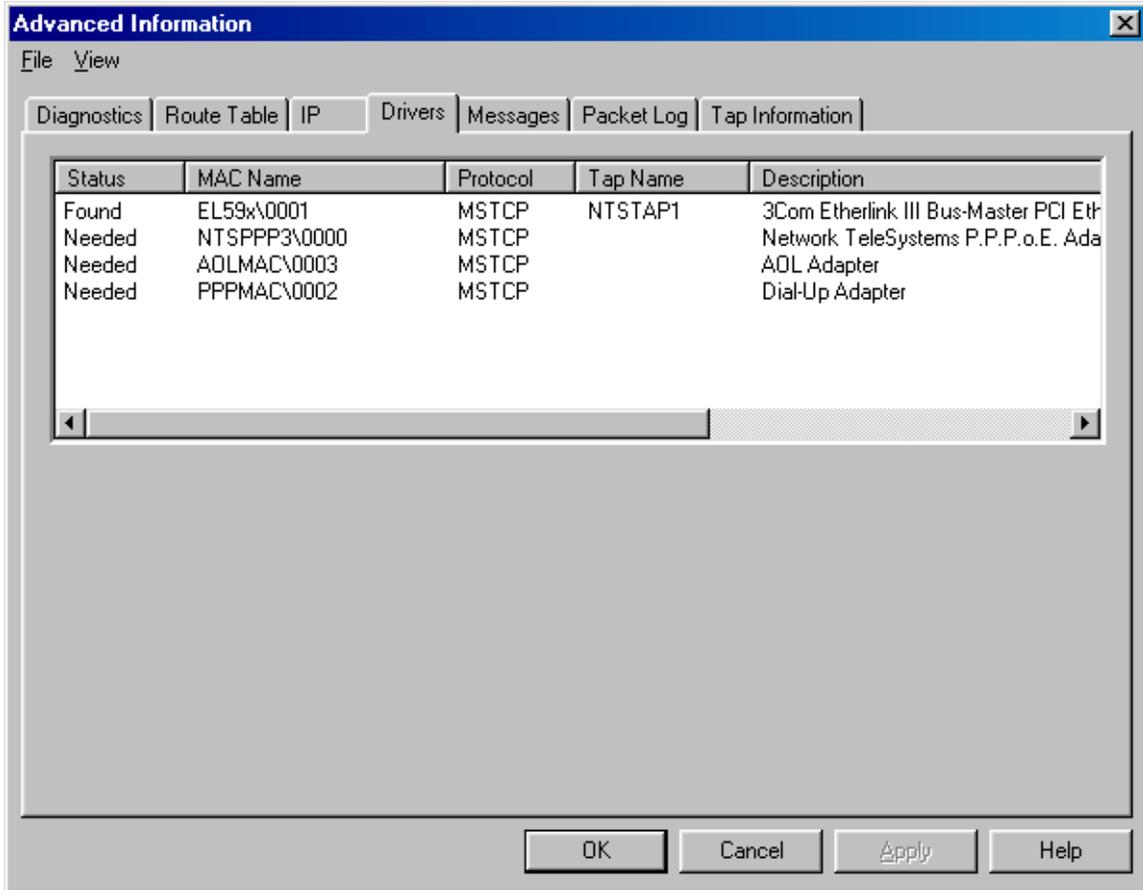
Messages Tab

The Advanced Messages Table can be reached by selecting **Advanced Menu>Messages** tab from the system tray pop-up menu. The Messages Tab of the Advanced panel displays information which can be used to trace protocol errors with the server should any occur during your session.
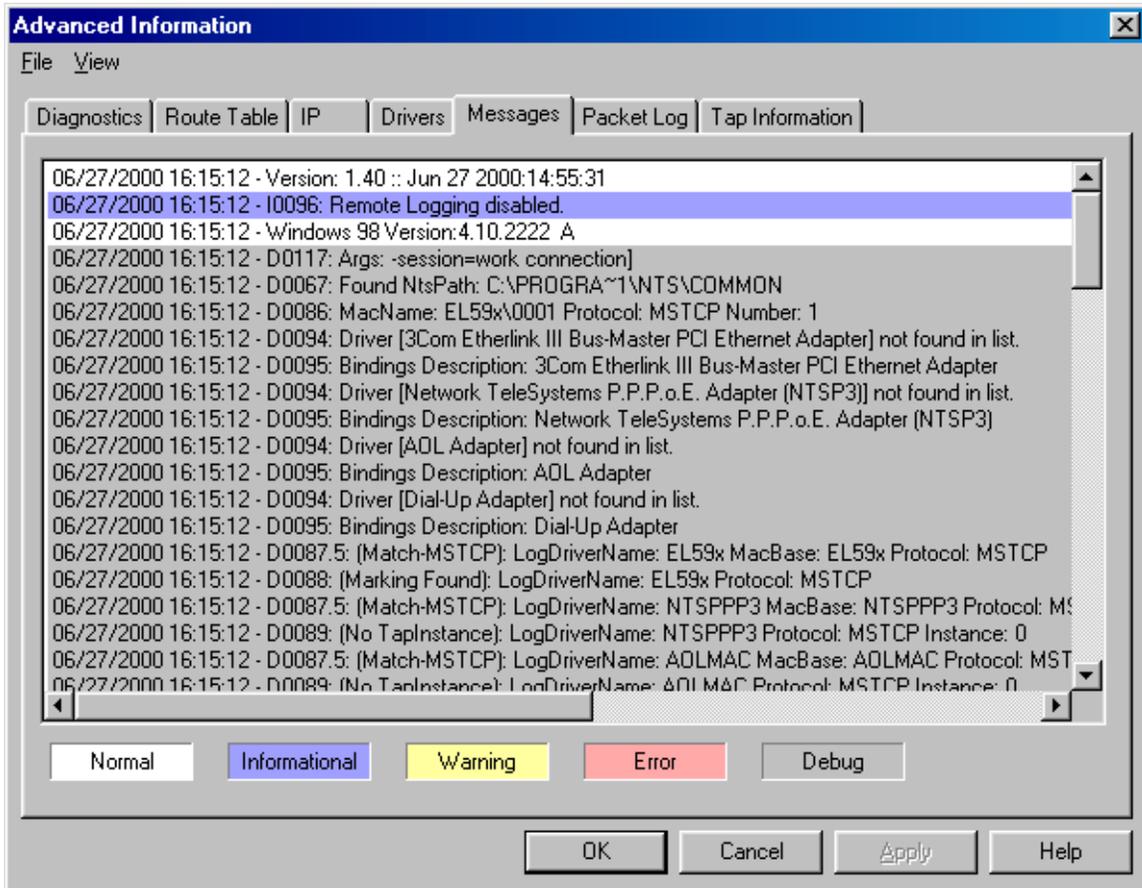
Packet Log Tab

The EnterNet Packet Log is a powerful diagnostics tool that helps advanced technical support personnel identify problems that may occur with the user login process. The tool captures, stores and displays the Ethernet packets (also known as "frames") that are sent and received during the initial moments of a user's attempt to connect to their ISP. The captured packets are stored in a non-scrolling buffer. Once the buffer is full, no new packets will be captured or displayed. The buffer size is user definable via a drop-down list box on the Packet Log Configuration panel. The contents of the buffer are cleared when the EnterNet application is closed. The buffer is also cleared when the Connect button is pressed. The Packet log tab is not displayed unless Packet Logging is enabled on the EnterNet Application Settings panel. Because it causes EnterNet to run slower than normal, Packet Logging should only be enabled if necessary.

This view can be displayed by right-clicking the EnterNet system tray icon, selecting Advanced, then clicking the Packet Log tab.
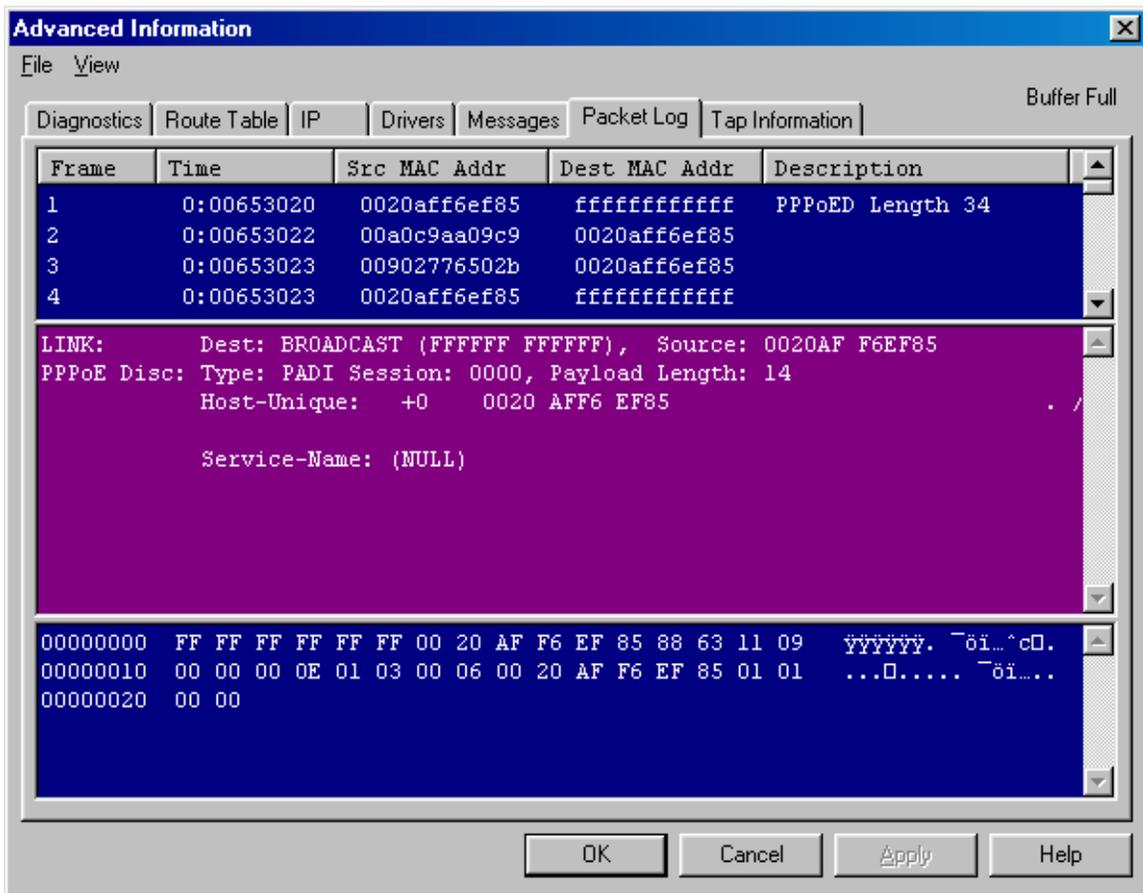
The Packet Log Displays

The packet Log screen is divided into three vertically aligned displays. The top "Summary" display provides a single row of general information about each packet. The middle "Details" display provides a multi-line, detailed analysis of the packet that is currently selected in the Summary

display. The bottom "Hex Dump" display shows the hexadecimal value of each byte within the packet that is selected in the Summary display.

The Summary Display

The display is divided into five columns of information.

- **Frame:** The Ethernet frame number. The first packet seen (sent or received) after the Connect button is clicked is designated as Frame 00000001. each subsequent packet is incremented by 1.

- **Time:** The number of milliseconds that have lapsed between the time Windows was last started and the time the packet was seen by the packet log utility.

- **Src MAC Addr:** The hardware (Mac) address of the device that sent the packet log utility.

- **Dest MAC Addr:** The MAC address of the device to which the packet was sent.

- **Description:** The packet type (TCP, ARP, UDP, ICMP, etc.) The length of the packet (in bytes) is also provided, where appropriate.

Each column has a rectangular title bar that reflects the column name. Clicking on the title bar causes the packets to be sorted in ascending order, based on the value presented in the selected column. Clicking the title bar a second time causes the data to be sorted in descending order.

The Details Display

A functional analysis of each packet payload is provided in this display. This display provides a plain English description of embedded protocols and their purpose (e.g., PPPoE PADO, PAP authenticate request, LCP echo reply, etc.), and varying levels of additional detail, as appropriate. When the packet contains TCP data, the data is presented in hexadecimal format. The information presented in the details display is an analysis of the packet that is currently selected in the Summary display.

The "Hex Dump" Display

This display provides three columns of information about the packet that is currently selected in the Summary display. The data provided in each column is directly related to the data provided on the corresponding row in each of the other two columns.

The center column provides a hexadecimal offset of the first byte that is displayed in the center column. The first byte in a packet has hexadecimal offset of 00000000. The sixteenth byte in a packet has a hexadecimal offset of 0000000F. The seventeenth byte, which appears as the first hexadecimal value on the second row of the center column, has a hexadecimal offset of 00000010. The right-most column provides the ASCII representation of the data in the center column.

Changing the Appearance of Displays

The appearance of the three displays can be customized to suit the needs of the user. By double-clicking anywhere on the Summary display, the user can launch the Packet Log Configuration utility. This utility allows the user to customize - for each display - the foreground and background color, the font face, and the font size. It also allows the user to cause EnterNet to display a warning if Packet Logging is active when the user tries to connect to their service provider.

Changing the Packet Log Buffer Size

The size of the packet log buffer is user selectable in predefined values ranging from 15k bytes to 1024k bytes. To view or change the value, launch the Packet Log Configuration utility by double-clicking anywhere in the Summary display. The Log Buffer section of the utility contains a drop-down list box from which the user can select the desired buffer size.

Tap Information Tab

The Tap Information tab can be reached by selecting **Advanced Menu>Tap Information** from the system tray pop-up menu. Tap information may be useful to support personnel in the event of diagnostics problems during your session.

Troubleshooting EnterNet

Installation Errors

The most commonly occurring Set-Up error is "Unable to Connect to Server." In this case, it may be necessary to uninstall EnterNet in order to verify the connectivity of your TCP/IP stack over the Ethernet.

Connection Errors

Below is a list of the error messages you might receive during connection establishment, along with an accompanying explanation:

PPP Negotiate Timeout

- Ethernet cable or modem not responding.

- IP Addresses not exchanged from Server.

Authentication Failed

- User Name or Password not configured at server or enabled for dial-in access.

- When connecting into NT RAS, include NT Domain Name in front of the password.

Connection Cancelled by User

- Cancel button while establishing a connection.

Help Screens Don't Match Program

EnterNet is a highly customizable program marketed primarily to Internet Service Providers (ISPs) who in turn re-distribute it to their end-user customers. It is possible that this Help utility will display information about features that your EnterNet provider elected not to activate. Some features that may be discussed in this Help utility may not be present or active in the software as delivered to you.

EnterNet not Displaying Discovered Server/Services

In order for the EnterNet folder to display icons for discovered Servers and Services, the "Show advertised services in the main folder" check-box must be selected in the Application Settings panel. If this selection is already made and Servers or Services are still not being displayed, click the Refresh button on the EnterNet folder Toolbar.

NOTE: Your computer's network interface card must be installed, properly configured for use by EnterNet, and connected to a live PPPoE network, and EnterNet must be fully installed and configured, before Server and Service discovery will occur.

NOTE: Every functional PPPoE network should return at least one Server when the Refresh button is clicked. However, Services are not necessarily present on any PPPoE network and you should not be concerned if no advertised services appear.

Uninstalling EnterNet

To uninstall EnterNet, click on **Start>Programs>EnterNet>Uninstall EnterNet** and follow the on screen prompts. Note that EnterNet must not be running at the time of removal. A system restart will be necessary after EnterNet has been removed from your system.

During the un-installation process, the uninstaller may present a "Remove Shared File?" panel. This panel is presented to allow you to decide if you want the uninstaller to remove - or not to remove - a special file (typically a Dynamic Link Library, or DLL) that was installed during the EnterNet installation process. DLLs are special because they are of a nature that makes them usable by multiple programs. When a program wants to use a DLL, it is supposed to "register" with Windows its desire to do so. When the uninstaller presents the "Remove Shared File?" panel, it is telling you that no other programs have registered a desire to use a particular special file that was installed by EnterNet, and it is asking your permission to remove it. It is usually safe to answer "Yes to All", but it will is also safe to answer "No to All". If you answer yes, and there is an application using the DLL that did not register for it, that application may not work correctly. If you answer no, EnterNet will leave files on your computer that are likely not being used by any other programs, thereby wasting a small amount of hard drive space.

If uninstall should fail, go to the original EnterNet installation files and click the application RemoveEnternet.bat to do a complete uninstall.

Note: On Windows the 2000 platform, no restart is necessary after uninstalling EnterNet 300. However, certain files will not be deleted from your system until a restart has taken place.