

TAC I/NET

Seven

Getting Started

TAC I/NET *Seven* System

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1 Before You Begin

This guide provides instructions on installing and configuring TAC I/NET Seven. It also includes information on system requirements and upgrade procedures.

Take a moment to read the introductory material in this chapter before you install TAC I/NET Seven.

TAC I/NET Seven Documentation

The following manuals are available in Adobe® Acrobat® PDF format on the TAC I/NET Seven CD-ROM. Optionally, you may order printed manuals.

- ❖ TCON298, *TAC I/NET Seven System Getting Started*
- ❖ TCON299, *TAC I/NET Seven System Operator Guide*
- ❖ TCON300, *TAC I/NET Seven System Technical Reference Guide*
- ❖ TCON301, *TAC I/NET Seven Database Connectivity and Reporting*

Workstation Minimum Requirements

Following is the *recommended* minimum configuration for a workstation running TAC I/NET Seven:

- ◆ Pentium III (500 MHz).
- ◆ 256 MB RAM for a standalone workstation or equalized client.
512 MB RAM for a filemaster.

- ◆ 3 GB of available hard drive space.
Note: The use of Image Verification, AMT Archiving, Microsoft® SQL 2000 Server, or Microsoft SQL 2005 Server, or Microsoft SQL 2008 Server will require additional disk space.
- ◆ CD-ROM drive.
- ◆ Video display of 800 × 600.
- ◆ Microsoft Windows Server 2003, Windows XP Professional (32-bit), Windows Vista Enterprise (32-bit), and Windows 7 Professional (32-bit).
Refer to TCON301, *TAC I/NET Seven Database Connectivity and Reporting*, for more information about the Windows OS.

Notes: *TAC I/NET Seven will **not** run on a Windows workstation that is configured as a Domain Controller.*

*You **must** have administrative privileges in order to install programs on a Windows workstation.*

*Your Windows system **must** be configured to use NTFS in order to support electronic file encryption (EFS).*

- ◆ Any of the following SQL servers:
 - ◇ Microsoft SQL Server 2000 Standard or Enterprise Edition (*purchased seperately*)
 - ◇ Microsoft SQL Server 2000 Desktop Engine (*included on the TAC I/NET Seven CD*)
 - ◇ Microsoft SQL Server 2005 Standard and Enterprise Edition (*purchased seperately*)
 - ◇ Microsoft SQL Server 2005 Express Edition (*included on the TAC I/NET Seven CD*)
 - ◇ Microsoft SQL Server 2008 Standard Edition (*purchased seperately*)
 - ◇ Microsoft SQL Server 2008 Express Edition (*included on the TAC I/NET Seven CD*)

Refer to TCON301, *TAC I/NET Seven Database Connectivity and Reporting*, for more information about the SQL server.

- ◆ Sound card and speakers (*required for AMT audible alarms*)

- ◆ While not required, an uninterruptable power supply (UPS) is highly recommended.

If you plan to use TAC I/NET with an Ethernet LAN, you must also have a valid LAN connection that includes the following:

- ◆ Microsoft® TCP/IP
- ◆ Properly assigned static IP address
- ◆ IP Mask
- ◆ Gateway IP address

If you plan to print event action messages from your workstation, you must also have the following:

- ◆ A printer capable of printing single lines of text without ejecting the page between each line. Dot-matrix printers typically support this single line feed capability and are recommended for use as the event printer.

Please contact your network system administrator if you have any questions on these requirements.

Caution: *The database server should **not** be shut down while TAC I/NET is running. Shutting down the database server drops all existing connections to the database, and can result in corrupted data displays. (Only users with administrative privileges on the workstation can stop or start the database server.)*

Installation Requirements

The TAC I/NET Seven software requires approximately 150 MB of hard disk space. Make sure you have enough space **before** you install TAC I/NET Seven. You will need to allocate additional hard drive space for data files.

If you want to use an Ethernet LAN, make sure you have a valid LAN connection. Refer to [“Workstation Minimum Requirements” on page 1-1](#) for the definition of a valid LAN connection.

SQL Services

Several editions of Microsoft SQL Server are compatible with TAC I/NET Seven. For a description of these SQL engines and information on how to choose an appropriate edition, refer to TCON301, *TAC I/NET Seven Database Connectivity and Reporting*.

Reinstalling or Upgrading TAC I/NET Software

Note: *When upgrading a filemaster, if you enter a CD Key that is different than the previously used CD Key, the station must be subsequently demoted and re-promoted back to a filemaster. This will allow the filemaster to generate a new snapshot based on the new CD key. Refer to “[Editing Configuration Profiles](#)” on page 3-11 for instructions.*

Changing the Software CD Key

If you reinstall or upgrade your TAC I/NET Seven software using a CD Key that differs from the previously used CD key, you *must* allow DbCreate to run at the end of the installation process so that the database can be upgraded. Otherwise, TAC I/NET Seven will not successfully initialize when it launches. If you have already reinstalled or upgraded TAC I/NET Seven and did not allow DbCreate to upgrade the database, you can manually launch DbCreate and perform the upgrade. Refer to “[Upgrading the TAC I/NET Seven Database](#)” in Chapter 4, *DbCreate*, for instructions.

Using a Named Instance of SQL Server

While reinstalling or upgrading your TAC I/NET Seven software, you can specify an instance of SQL Server to be used as the server for TAC I/NET’s database. The Setup program allows you to install a default instance or select an existing instance of SQL server.

The reports that are included with SevenReports, and the ODBC connection that IDWorks uses to communicate with TAC I/NET Seven, are preconfigured to use the *default instance* of SQL Server. If you use any other instance of SQL Server for TAC I/NET’s data-

base, you will be required to make manual configuration changes to your system in order for the included reports to work properly, or for IDWorks to communicate properly with TAC I/NET Seven.

Refer to “[Instances of SQL Server](#)” in [Chapter 2](#) of TCON301, *TAC I/NET Seven Database Connectivity and Reporting*.

Upgrading from TAC I/NET 2000 version 1.x or earlier

If you are upgrading from a TAC I/NET 2000 version 1.x or earlier system, please refer to the *UpgradeSeven.TXT* file located on your TAC I/NET Seven installation CD for detailed instructions.

Conversion utilities for upgrading from previous systems are included on the TAC I/NET Seven CD. The information in this section is *only* applicable to TAC I/NET 2000 version 2.x system upgrades.

Previous versions of TAC I/NET Seven stored database information in separate files. For example, access control data existed in AC* files (i.e., *ACTENANT*, *ACGxxx*, *ACPxxx*, *ACOPTNS*, etc.). TAC I/NET Seven stores information in tables within a single SQL database. ***The SQL database for TAC I/NET Seven is not compatible with any previous version of I/NET.*** You must import the data files from TAC I/NET 2000 into the TAC I/NET Seven SQL database in order to upgrade your system. Once the workstation is upgraded, do *NOT* run TAC I/NET Seven, Configure, or the IO Server until all host workstations that equalize files have also been upgraded.

Preparing to Upgrade

TAC I/NET Seven requires the Windows Server 2003, Windows XP Professional, Windows Vista Enterprise, or Windows 7 Professional operating system. However, the TAC I/NET 2000 system that you are currently using is not supported under these newer versions of Windows. Therefore, in order to transition from your TAC I/NET 2000 system to TAC I/NET Seven, you must either upgrade the host workstation’s operating system before installing TAC I/NET Seven, or you must install TAC I/NET Seven onto another PC configured with Windows Server 2003, Windows XP Professional, Windows Vista Enterprise, or Windows 7 Professional.

In order to migrate data to TAC I/NET Seven, you will be asked to browse to the TAC I/NET 2000 root directory. If TAC I/NET 2000 is installed on the workstation, you will simply locate the TAC I/NET 2000 root directory on your local drive. Otherwise, you must access your TAC I/NET 2000 system files through some other means, such as from a network connection to another workstation, a copy on a removable drive, etc.

Backup the files on your TAC I/NET 2000 host workstation. We recommend that you backup all files in the TAC I/NET 2000 installation directory and all of its subdirectories. However, the minimum files recommended for backup are listed in [Table 1-1](#).

Table 1-1. Recommended Files for Backup

Function	File(s) to Backup
Host PC configuration	INETIOSRV*.*
Network Configuration	INET2000\DATA\NETCON INET2000\DATA\ATSDIR INET2000\DATA\ATSDATA
Alarms, Messages, Transactions (AMT)	INET2000\MSG\INETAMT.DAT INET2000\INETAMT.MDB
Access Control	INET2000\DATA\ACFILTER INET2000\DATA\ACFLOORS INET2000\DATA\ACOPTNS INET2000\DATA\ACTRANS INET2000\DATA\ACTENANT INET2000\DATA\ACDOORS INET2000\DATA\ACN*.* INET2000\DATA\ACG*.* INET2000\DATA\ACP*.*
Host Passwords	INET2000\DATA\PWDATA INET2000\DATA\PWDCU
Docutrend Online Data	INET2000\RW\RWONLN
Docutrend Archived Data	INET2000\RW\RWARCH INET\ARCH\YYMMDDNN.HH
Docutrend Reports	INET2000\RW\RWDEDIR INET2000\RW\RWDEMAC INET2000\RW\RWLTDIR INET2000\RW\RWLTMAC INET2000\RW\RWDIR INET2000\RW\RWRMAC INET2000\RW\RWGEN

Table 1-1. Recommended Files for Backup (Continued)

Function	File(s) to Backup
Docutrend-to-DIF	INET2000\RWAUTODIF
Graphic System Pages	INET2000\DATA*.PAG (I/NET 4.3 pages) INET2000\DATA*.GPG INET2000\DATA\HOMEPAGE
Graphic Library Symbols	INET2000\SYMBOLS*.BOL (I/NET 4.3 Symbols) INET2000\SYMBOLS*.GLS INET2000\SYMBOLS*.BMP
DCU Save Files	INET2000\SAV*.SAV
Exporter/Reporter Reports	INET2000\UTILS\REPORTER\REPORTS*.RPT

Remember that in order to assure that the DCU save files are most up to date, connect to each controller and perform a Station Save.

The Upgrade Process

Note: *TAC I/NET Seven ships with Microsoft MSDE 2000, SQL Server 2005 Express Edition, and SQL Server 2008 Express Edition on the install CD. Any one of these free scaled-down SQL engines can be used with TAC I/NET Seven. If you require the ability to manually administer your SQL data, or if your application exceeds the capabilities of the scaled-down SQL engine, then you must purchase and install the Standard or Enterprise edition of Microsoft SQL Server.*

1. Copy the TAC I/NET 2000 directory to a drive that will be accessible during the TAC I/NET Seven upgrade process.
2. Perform the system upgrade using the appropriate instructions below.

Installing TAC I/NET Seven on an Existing TAC I/NET 2000 Workstation

Use the following procedure to upgrade an existing TAC I/NET 2000 system workstation to a TAC I/NET Seven workstation:

Note: *If your system uses file equalization, begin the system upgrade with the workstation that will be used as the filemaster.*

1. Shutdown TAC I/NET 2000 and/or Configure, if running.

2. If necessary, shutdown I/O server. (Depending on the settings in your configuration profile, I/O server may shut down automatically.)

Note: *If your system configuration uses file equalization, it is important that the I/O server be shut down, and remain shut down, until ALL host machines have been upgraded and the appropriate files have been converted to the new format.*

3. Install Windows Server 2003 (upgrade), Windows XP Professional (upgrade), Windows Vista Enterprise (upgrade), or Windows 7 Professional (upgrade) on the workstation. Follow the Microsoft® instructions for performing the operating system upgrade.
4. Install TAC I/NET Seven using the installation instructions detailed in [Chapter 2, Installing TAC I/NET Seven](#). If possible, use the default installation directory names.
5. At the end of the TAC I/NET Seven install, Setup automatically launches DbCreate. Use DbCreate to import the data files from TAC I/NET 2000 into the new SQL database. Refer to [Chapter 4, DbCreate](#), for more information about this utility.

Caution: *If your system uses file equalization, do NOT perform the following step until all host machines have been upgraded, and the files have been converted to the new format.*

6. Complete the TAC I/NET Seven configuration process as detailed in [Chapter 3, TAC I/NET Seven Configuration](#).

Installing TAC I/NET Seven on a Separate Windows PC

Note: *Since your previous TAC I/NET 2000 system required the Windows 98 or Windows NT operating system, it is assumed that TAC I/NET 2000 is not installed on the PC described in the following procedure.*

Use the following procedure to install TAC I/NET Seven on a PC that is already configured with the Windows Server 2003, Windows XP Professional, Windows Vista Enterprise, or Windows 7 Professional operating system.

1. Ensure that you can access your current TAC I/NET 2000 system files from this PC either from a locally-stored copy or through a network connection. If a network connection to the TAC I/NET 2000 workstation is not available, copy the TAC I/NET 2000 system to transferable media such as a removable drive or CD-ROM. You can then copy the TAC I/NET 2000 system onto your local hard drive, or simply access it from its transferable media location. You will be required to browse to the TAC I/NET 2000 system root directory in order to migrate data to the new TAC I/NET Seven system.
2. Install [TAC I/NET Seven](#) using the installation instructions detailed in [Chapter 2, Installing TAC I/NET Seven](#). If possible, use the default installation directory names.
3. Use DbCreate to import the data files from TAC I/NET 2000 into the new SQL database. During this process, locate the TAC I/NET 2000 system root directory on the network drive, removable drive, local drive, or CD-ROM established in [Step 1](#). Refer to [Chapter 4, DbCreate](#), for more information about this utility.

Caution: *If your system uses file equalization, do NOT perform the following step until all host machines have been upgraded, and the files have been converted to the new format.*

4. Complete the [TAC I/NET Seven](#) configuration process as detailed in [Chapter 3, TAC I/NET Seven Configuration](#).

Completing the Upgrade

Complete the upgrade process by performing the following steps:

1. Copy TAC I/NET 2000 revision 2.xx DCU save files, library symbols, and graphic pages to the appropriate TAC I/NET Seven directory folders (i.e., the SAV, SYMBOLS, and GRAPHIC PAGES directories).

- To take advantage of the full functionality of this version of TAC I/NET, download the updated TAC I/NET Seven BIN files to the appropriate devices. This release includes updated BIN files for the following devices:

Taps:

◆ 7801	◆ 78041	◆ 7810
◆ 7802	◆ 78051	
◆ 7803	◆ 78061	

Controllers:

◆ 7700	◆ 7756	◆ 7793
◆ 7716	◆ 7760	◆ 7798/7798c
◆ 7718	◆ 7770	◆ NPR2000
◆ 7728	◆ 7780	◆ SCU _s

Note: *TAC I/NET Seven host software does **not** include controller BIN files for the 7791 DPI and the 7792 MCI. If you are upgrading a TAC I/NET system that uses 7791 and/or 7792 controllers, either reconfigure these controllers as a 7793, or copy their BIN files from the previous system.*

- After the controllers have been upgraded, perform Station Restores to restore the DCU save files to each controller.

Using ID Works with TAC I/NET Seven

This version of TAC I/NET Seven provides support for Datacard® ID Works® identification software. Using Microsoft's ODBC driver, TAC I/NET Seven provides a database view specifically designed for use with ID Works. This view contains tenant and individual data used by the ID Works Video Badging application. It allows you to add individuals, assign key/cards, edit individual parameters, or even delete individuals, all from within the ID Works interface.

For instructions on how to integrate ID Works with TAC I/NET Seven, refer to TCON301, *TAC I/NET Seven Database Connectivity and Reporting*.

Using Pelco CCTV with TAC I/NET Seven

This version of TAC I/NET Seven includes features that allow you to integrate a Pelco CCTV system with TAC I/NET Seven running under the Windows XP Professional operating system. Using these features, you can review recorded video, view live video, associate a camera with a TAC I/NET point, and integrate CCTV system features with TAC I/NET graphic pages.

For instructions on how to integrate digital CCTV with TAC I/NET Seven, refer to TCON301, *TAC I/NET Seven Database Connectivity and Reporting*.

TAC I/NET Seven provides an automated installation program to simplify the initial setup requirements. You can use the Setup program to:

- ◆ Install the full TAC I/NET Seven program, or
- ◆ Install selected TAC I/NET Seven components.

The Setup program copies the TAC I/NET Seven application files and supporting files to your hard drive and configures certain components to operate correctly.

Note: *If you are reinstalling TAC I/NET Seven or upgrading from a previous version, please review the information in “Reinstalling or Upgrading TAC I/NET Software” on page 1-4 before beginning the installation program.*

When upgrading a filemaster, if you enter a CD Key that is different than the previously used CD Key, the station must be subsequently demoted and re-promoted back to a filemaster. This will allow the filemaster to generate a new snapshot based on the new CD key.

The Setup Program

Follow the procedures below to run the Setup program and install TAC I/NET Seven.

1. Close all other applications running on your system, including virus-checking software.
2. Insert the TAC I/NET Seven CD-ROM into your CD-ROM drive.
3. If your system supports AutoStart, the Setup program launches automatically and you can proceed to the next step. Otherwise, continue as follows:

- a. If your system does not support AutoStart, click the **Start** button and then select “**Run ...**”.
 - b. Type **d:setup** (where *d* is the letter designation of your CD-ROM drive) in the **Open** field of the Run dialog box. Press **Enter**.
4. Setup begins installing temporary files (see [Figure 2-1](#)). These files are automatically removed at the end of the installation.

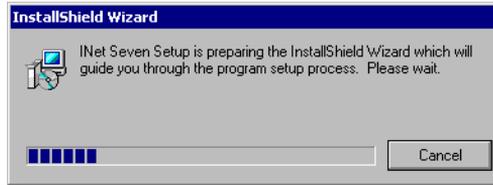


Figure 2-1. Preparing for the Install

5. Setup launches the Windows Installer (see [Figure 2-2](#)).

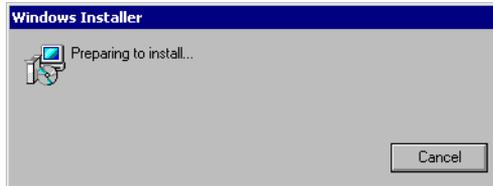


Figure 2-2. Launching the Windows Installer

Select **Yes** to continue, or select **No** to stop the installation process.

- The TAC I/NET Seven Welcome screen appears (see Figure 2-3). Review the information and click **Next** to continue.

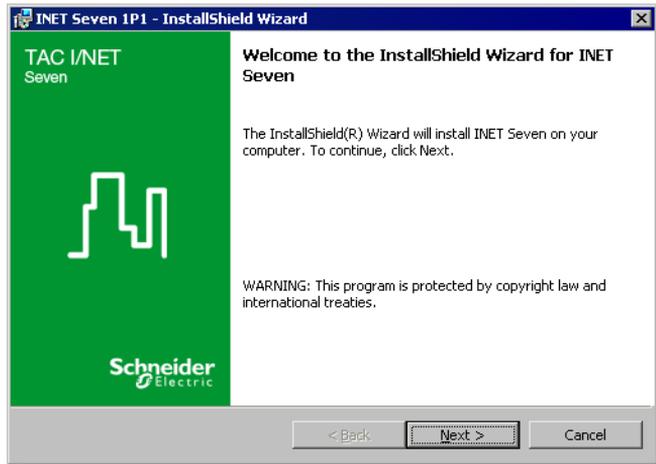


Figure 2-3. Welcome Screen

- Setup displays the Registration Information dialog box (see Figure 2-4).

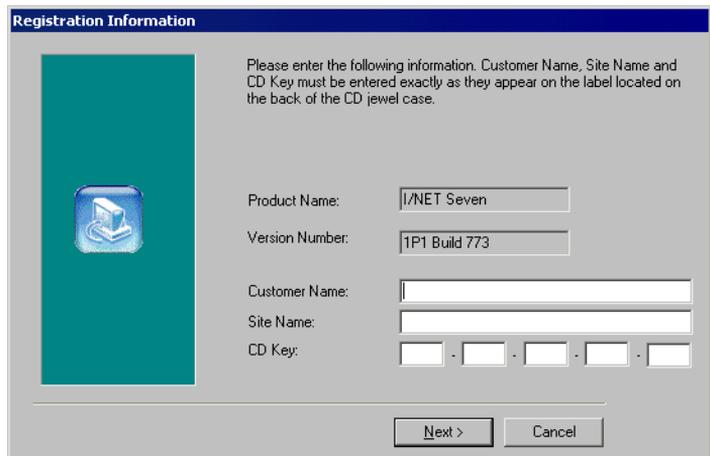


Figure 2-4. Registration Information Dialog Box

- The registration data is on a label located on the back of the CD-ROM jewel case.
- a. Enter the **Customer Name**. If this is an upgrade installation, this information will be filled in automatically.
 - b. Enter the **Site Name**. If this is an upgrade installation, this information will be filled in automatically.
 - c. Enter the **CD Key**.
 - d. Click **Next**.
8. If Setup detects that TAC I/NET Seven is already installed on your system, it automatically displays the contents of the *UpgradeSeven.txt* file. This file explains the steps that are necessary to upgrade a previous version of TAC I/NET to a newer version. After viewing this file, close it to continue.
 9. Setup automatically displays the contents of the *Read-meSeven.txt* file. You should review this file to obtain up-to-date information and advice. After reading this file, close it to continue.
 10. The next screen provides the Software License Agreement (see [Figure 2-5](#)).



Figure 2-5. Software License Agreement Screen

Please review the terms of the agreement. To accept them and continue the installation, click “I accept the terms of the license agreement” option and select **Next**.

Note: *If you choose not to accept the terms of the agreement, the Setup program will terminate.*

11. Setup displays the Database Engine dialog box (see Figure 2-6).

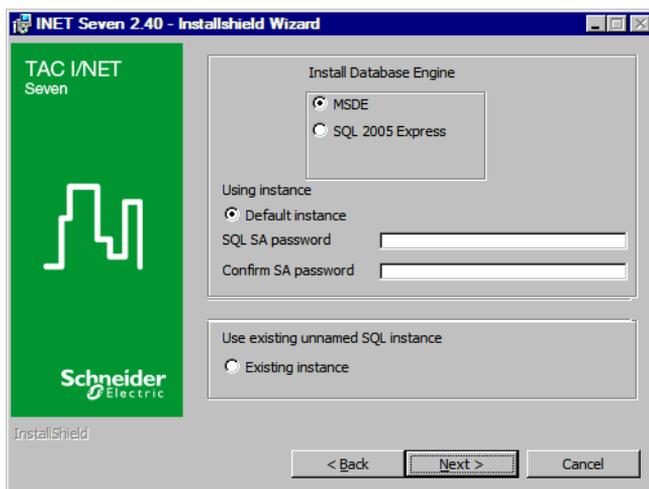


Figure 2-6. Database Engine Dialog Box

Note: *The reports that are included with SevenReports and the ODBC connection that IDWorks uses to communicate with TAC I/NET Seven are preconfigured to use the **default instance** of SQL Server. If you choose any other instance and you intend to use the included reports and/or ID Works, you will be required to make manual adjustments to the reports and/or ODBC data source.*

Use the Database Engine dialog box to specify the instance of SQL server to be used for TAC I/NET Seven's database. The following options are available:

- **Default instance** (*recommended*) – This option is only available if *no* default instance of SQL Server already exists on the PC. Otherwise, this option will be greyed out.

Choose this option to install a new default instance of a free scaled-down version of SQL Server from TAC I/NET Seven's installation CD. This is the recommended setting.

On a Windows 2003 Server or Windows XP workstation, you can use the radio buttons near the top of the dialog box to choose which version of SQL server to install, either MSDE or SQL Server 2005 Express edition.

On a Windows Vista Enterprise or Windows 7 Professional workstation, only SQL Server 2005 Express can be installed. In this case, the radio buttons near the top of the dialog box are greyed out.

Note: *The TAC I/NET Seven installation CD also includes SQL Server 2008 Express. This SQL server is compatible with the Windows Vista and Windows 7 operating systems. If you wish to use SQL Server 2008 Express, you must manually install it on your PC before installing TAC I/NET Seven. Read the "SQL2008 Expr Install Inst.pdf" file in the **SQLExpress** folder on the TAC I/NET Seven installation CD for instructions on manually installing SQL Server 2008 Express.*

Use the **SQL SA password** and **Confirm SA password** fields to set the SQL Server administrator password. Any user that attempts to use DbCreate to affect I/NET's database, must first login to DbCreate with SQL administrative privileges.

Note: *Some versions of SQL Server require that you define a strong password. Refer to Microsoft's SQL Server documentation for more information.*

- **Existing instance** – Choose this option to use an instance of SQL server that already exists on the PC.

TCON301, *TAC I/NET Seven Database Connectivity and Reporting*, describes TAC I/NET Seven's support for various versions of SQL Server. You may find the information helpful when trying to determine which version of SQL Server to install on your TAC I/NET Seven workstation.

Click **Next** to continue.

12. If Setup needs to install SQL server on your PC, a message will appear informing you that the chosen SQL server is about to be installed. Select **OK** to continue.

Depending on which version of SQL server is being installed, other Microsoft components, such as .NET Framework 2.0, may also have to be installed. A message will appear as each component is about to be installed. For any such messages, click **OK** and follow the onscreen prompts to complete the component's installation.

The installation of the SQL server and other Microsoft components may cause the computer to reboot. Following the reboot, TAC I/NET Seven Setup will automatically resume.

Note: The Windows "Administrators" group is given "sa" rights to the SQL server. This means that any user with Windows Administrator rights can launch DbCreate and log into the SQL server using Windows Authentication rather than entering an SQL login name and password.

13. If you chose to use MSDE in Step 11 and Setup detects that MSDE 2000 service pack 3 or earlier is running on your workstation, it displays a message asking if you would like to upgrade to service pack 4 (see [Figure 2-7](#)). While this upgrade

is not required by TAC I/NET Seven, it does provide security enhancements that can help to protect the data that gets stored in your SQL database.

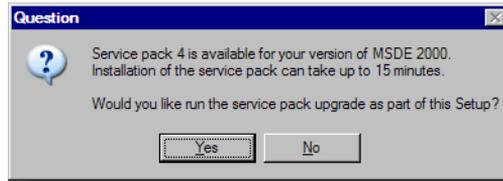


Figure 2-7. MSDE Service Pack 4 Message

Select **Yes** to allow the MSDE 2000 upgrade to occur during the TAC I/NET Seven installation, or select **No** to skip the upgrade.

14. If during Step 13 you selected **Yes** to allow Setup to upgrade MSDE 2000, the upgrade process will now begin.

The MSDE 2000 upgrade process can take up to 15 minutes to complete. Please allow the upgrade to complete without interruption. Proceed with the MSDE 2000 upgrade as follows:

- a. In order for Setup to upgrade MSDE 2000, it must first copy the service pack installer onto your workstation's hard drive. During this process, the message in Figure 2-8 is displayed.

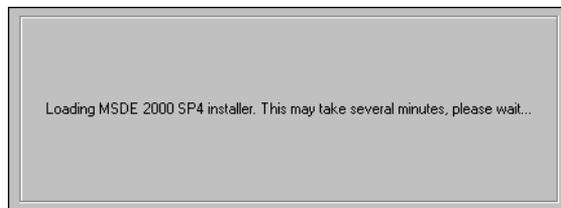


Figure 2-8. Loading MSDE 2000 Service Pack Installer

- b. After the installer has been copied to your local drive, the upgrade begins. A progress bar shows the status of the upgrade process (see [Figure 2-9](#)).

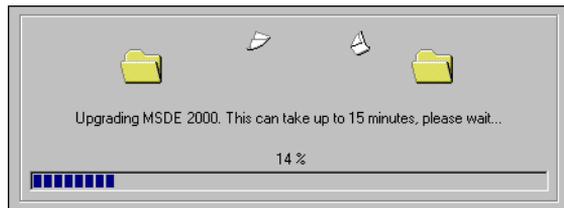


Figure 2-9. Upgrade Status

- c. When the upgrade is complete, a message will inform you that your workstation must reboot (see [Figure 2-10](#)).

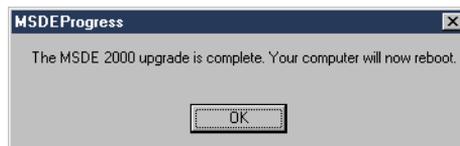


Figure 2-10. MSDE 2000 Upgrade Complete

Select **OK** to reboot the workstation. Upon returning to Windows, Setup resumes automatically.

15. Setup displays the Data File Root Folder screen (see [Figure 2-12](#)). Use this screen to choose a storage location for TAC I/NET Seven's data files.

You can accept the default location or click the **Change...** button to choose another location.

Click **Next** to continue.

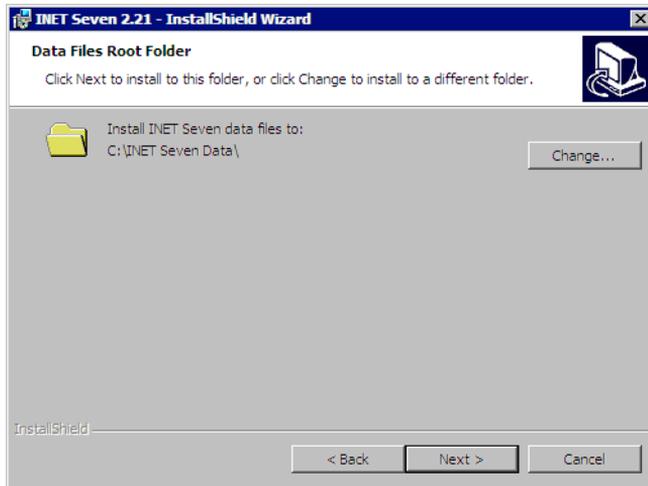


Figure 2-11. Setup Type Dialog Box

16. The Setup Type screen, shown in Figure 2-12, provides two installation options.

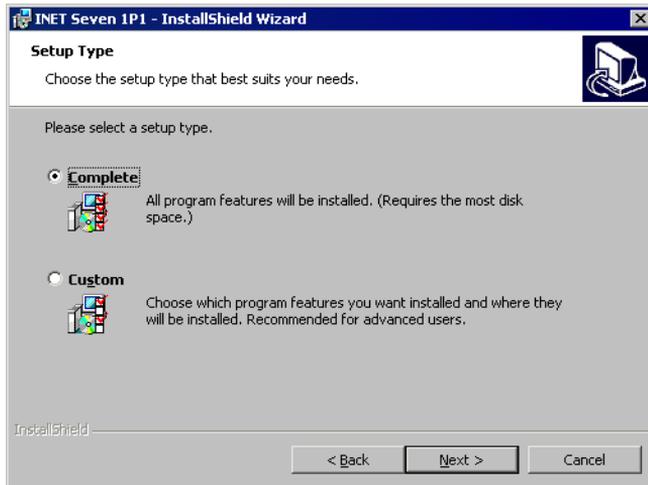


Figure 2-12. Setup Type Dialog Box

- ❖ **Complete** - installs all TAC I/NET Seven application files and optional components. The full installation requires approximately 50 MB of hard disk space.
- ❖ **Custom** - Use this option when you need to install only a certain component, or to define a specific installation directory for TAC I/NET Seven.

Choose an option and select **Next** to continue. If you chose the **Complete** option, you can skip the next step and proceed to [Step 18](#). For the **Custom** option, continue with the next step.

17. If you selected *Custom* in [Step 16](#), Setup displays the Custom Setup dialog box shown in [Figure 2-13](#).

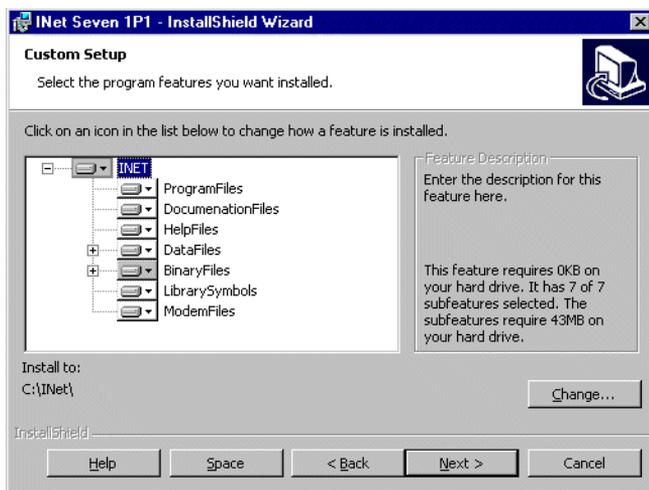


Figure 2-13. Select Components Dialog Box

To change the installation directory of any component, highlight the item's icon and click the **Change...** button. Use the resulting dialog to specify a new location.

Two components, *DataFiles* and *BinaryFiles*, have sub-components as indicated by a plus sign (⊕) to the left of the component. To view these, click the plus sign and the sub-

components become visible (see Figure 2-14). A minus sign (⊖) replaces the plus sign to indicate that you can hide the sub-components with a subsequent click.

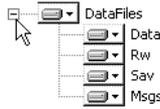


Figure 2-14. Viewing Sub-components

When you click on a component’s icon, you are presented with a popup menu of options that allow you to specify how the component should be installed, if at all. Choose the appropriate option for each component that you select, then click **Next** to continue.

18. Setup is now ready to install TAC I/NET Seven (see Figure 2-15). Click **Install** to begin the installation.

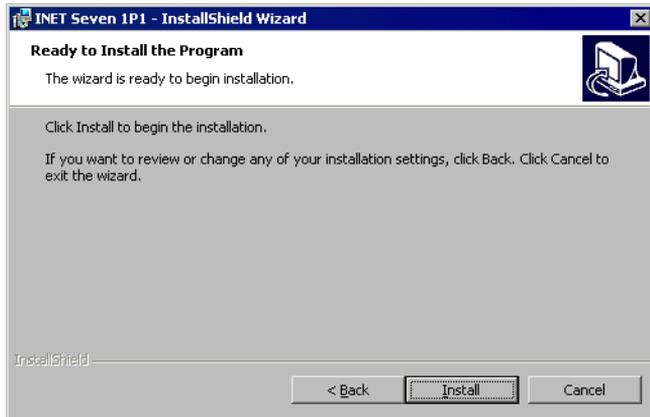


Figure 2-15. Ready to Install TAC I/NET Seven

19. Setup begins installing TAC I/NET Seven. A progress bar shows the status of the installation process (see Figure 2-16).

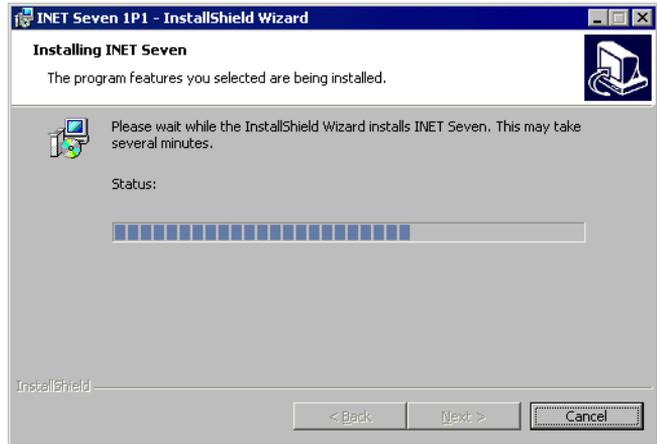


Figure 2-16. Installing TAC I/NET Seven

20. Setup notifies you when the installation is complete (see Figure 2-17). Select **Finish** to close the Setup program.

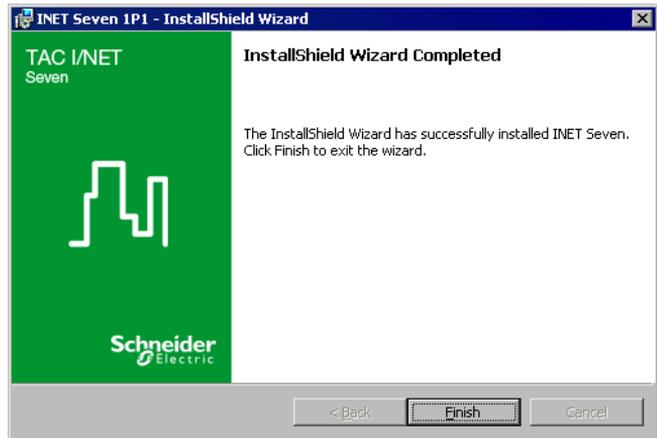


Figure 2-17. Finished Installing TAC I/NET Seven

21. DbCreate automatically launches and prompts you to log into the appropriate SQL server (see [Figure 2-18](#)).



Figure 2-18. SQL System Administrator Login

Use this dialog box as follows:

- a. The **SQL Server** field allows you to point DbCreate to the proper instance of SQL server. By default, this field will point to the same instance of SQL server that you chose in [Step 11 on page 2-5](#). If you specify any other instance of SQL server, you will have to use the I/NET Configuration editor to instruct TAC I/NET Seven to connect to this other instance's database.

This parameter is expressed as:

`COMPUTER_NAME\INSTANCE_NAME`

- + `COMPUTER_NAME` – The computer name is the name assigned to your local workstation.
 - + `INSTANCE_NAME` – The instance name can be any named instance of the SQL server that exists on the local workstation. *This portion of the parameter will be omitted for any unnamed instance of SQL Server on the local workstation.*
- b. If your Windows user account provides you with “Administrator” privileges for the computer specified in the **SQL Server** field, you can select the **Windows authentication** option and skip to [Step d](#).

- c. To manually log onto the SQL server, select the **SQL Server authentication** option and perform the following tasks:
 - ✦ Type the proper system administrator **Login Name**.
 - ✦ Type the appropriate **Password**. For security reasons, an asterisk (*) will appear for each character you type.
 - d. Select **OK** to continue.
22. DbCreate displays an editor for setting up the accounts for the TAC I/NET Seven SQL database (see [Figure 2-19](#)).

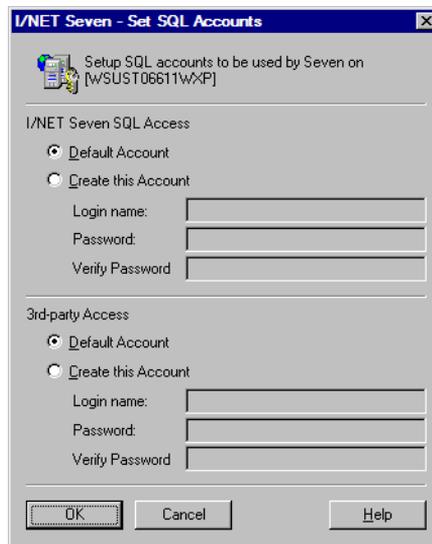


Figure 2-19. Set SQL Accounts

In the **I/NET Seven SQL Access** section, perform the following steps:

- a. To assign a TAC I/NET Seven-generated default login name and password to the TAC I/NET Seven database, select the **Default Account** option.
- b. To manually define a login name and password, select **Create this Account**.

- c. If you chose to manually define the account, define a **Login name** and **Password**. Retype the password in the **Verify Password** field.

Repeat the steps above for **3rd-party Access**.

Select **OK**.

23. DbCreate begins building the initial TAC I/NET Seven SQL database (see [Figure 2-20](#)).

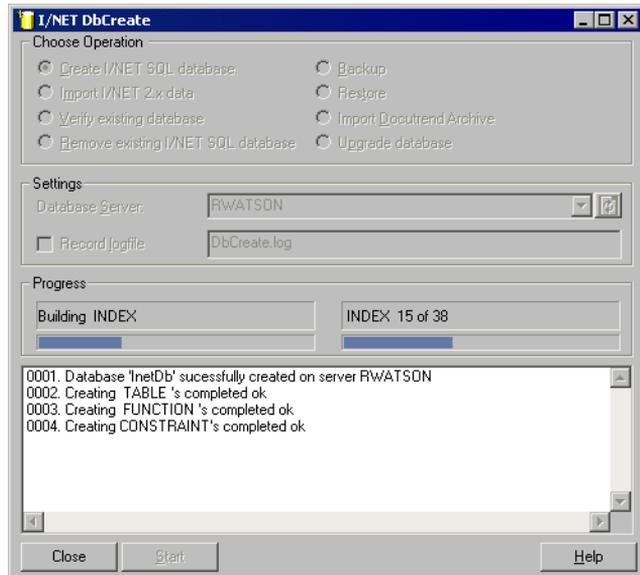


Figure 2-20. DbCreate Builds a TAC I/NET Seven Database

24. When the database is done being built, DbCreate asks if you would like to migrate TAC I/NET 2000 data into the TAC I/NET Seven database (see [Figure 2-21](#)).

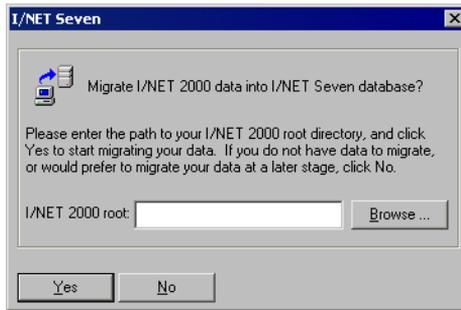


Figure 2-21. Preparing to Migrate TAC I/NET 2000 Data

If you do *not* need to migrate a TAC I/NET 2000 system to TAC I/NET Seven, select **No** to complete the TAC I/NET Seven install. In this case, you can proceed to [Step 25](#).

Otherwise, perform the following procedures to migrate TAC I/NET 2000 data to TAC I/NET Seven:

- a. Use the **Browse...** button to locate the TAC I/NET 2000 root directory (see [Figure 2-22](#)).

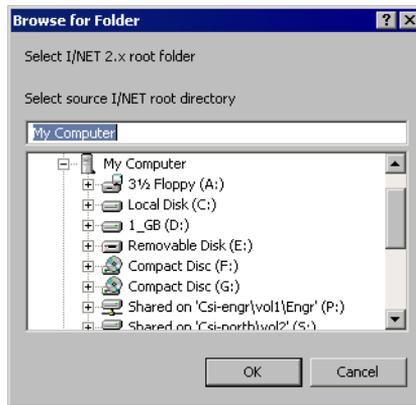


Figure 2-22. Browsing for the TAC I/NET 2000 Root Directory

- b. Highlight the TAC I/NET 2000 root directory and select **OK** to close the Browse dialog.
 - c. Select **Yes** to migrate TAC I/NET 2000 data to TAC I/NET Seven. After the data has been migrated, close DbCreate to complete the TAC I/NET Seven installation process.
25. Now that the TAC I/NET Seven installation process is complete, you can proceed with the following tasks:
 - ✧ Install Crystal Reports support files that will allow the SevenReports application to operate. Refer to [“Installing Crystal Reports XI Support Files”](#), on the next page.
 - ✧ Use the Configure program to specify how TAC I/NET Seven will use this workstation’s resources (i.e., serial ports, TCP/IP, printers, etc.).

The Configure program allows you to enable or disable access control, setup file equalization or client/server networking, define reference hosts, etc. Refer to [Chapter 3, TAC I/NET Seven Configuration](#), for information on the Configure program.
 - ✧ Modify, repair, or remove TAC I/NET Seven if necessary. Refer to [“Modifying, Repairing, or Removing TAC I/NET Seven”](#) on page 2-21 for instructions.

Note: *If you have just reinstalled or upgraded TAC I/NET Seven and created a new instance of SQL Server during the install, you must update TAC I/NET Seven’s active configuration profile to connect to the proper instance of SQL. Refer to [“Reinstalling or Upgrading TAC I/NET Software”](#) on page 1-4 for more information.*

Installing Crystal Reports XI Support Files

Beginning with TAC I/NET Seven version 2.21, the SevenReports application uses Crystal Reports XI as the reporting engine. In order to create and run reports using SevenReports, you must first install Crystal Reports XI support files onto your PC. An installation program named *SetupCrystalReportsXI.exe* is included on TAC I/NET Seven's installation disk for this purpose. When you execute this file, Microsoft Installer will launch and the necessary support files will be loaded onto your PC.

We recommend that you install Crystal Reports XI support files immediately after completing the TAC I/NET Seven host software installation. If you forget to install the support files, you will receive the following message when you launch SevenReports:

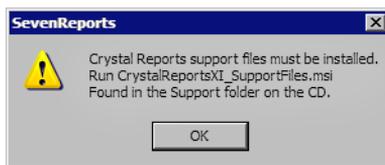


Figure 2-23. *SevenReports Message*

If you see this message, click **OK** and install the support files from TAC I/NET Seven's installation disk. Installation instructions are described below.

To install Crystal Reports XI support files

1. Prepare to install the support files as follows:
 - a. Close all other applications running on your system, including virus-checking software.
 - b. Insert the TAC I/NET Seven CD-ROM into your CD-ROM drive.
 - c. If TAC I/NET Seven's Setup program automatically launches, cancel it at the first screen that offers a **Cancel** button.

2. Explore the CD-ROM and locate the following folder:

d:\Support\SevenReports\CR_XI

(where *d*: is the letter designation of your CD-ROM drive)

3. Within this folder, execute the following file:

SetupCrystalReportsXI.exe

This causes Microsoft Installer to launch and begin installing the support files.

4. Follow the onscreen prompts to complete the installation process.

Modifying, Repairing, or Removing TAC I/NET Seven

TAC I/NET Seven Setup provides options that allow you to modify, repair, or remove a currently installed TAC I/NET Seven system. These options become available when you activate the Add/Remove Programs function in the Windows Control Panel, highlight the “TAC I/NET Seven” entry, and select **Change** or **Remove**.

Initially, a TAC I/NET Seven welcome dialog is displayed. When you select **Next**, the dialog shown in Figure 2-24 is displayed.

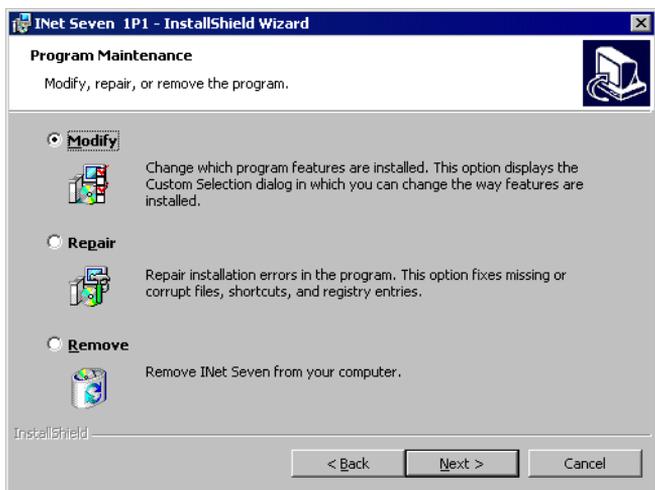


Figure 2-24. Program Maintenance

Use the Program Maintenance dialog to perform the following tasks:

- ◆ **Modify** – Use this option to add or remove TAC I/NET Seven components. This is similar to choosing the Custom option during the TAC I/NET Seven installation (refer to [Step 16 on page 2-10](#) for a description of the Custom option).
- ◆ **Repair** – Use this option to restore TAC I/NET Seven system files that may have been accidentally deleted or become corrupt. This option restores *most* files in the TAC I/NET

Seven root directory and in the *DATA* directory. However, this option does *not* restore entries in the Windows registry, nor does it affect the TAC I/NET Seven database. Therefore, this option is *not* the same as reinstalling TAC I/NET Seven.

- ◆ Remove – Use this option to remove the currently installed TAC I/NET Seven system from your workstation. This function does *not* restore the system to a previously installed version of TAC I/NET. Also, this option does *not* remove files that were created during the use of TAC I/NET Seven (i.e., system pages, access control database files, etc.).

Note: *Before removing TAC I/NET Seven from your system, you should manually remove TAC I/NET Seven’s database by running DbCreate and using the **Remove existing I/NET SQL Database** option. Otherwise, a subsequent attempt to reinstall TAC I/NET Seven will fail when DbCreate attempts to create a new TAC I/NET Seven database and discovers that one already exists. Refer to “[Removing an Existing TAC I/NET SQL Database](#)” on page 4-13 for instructions. You may also wish to read “[Manually Removing a Detached TAC I/NET Database](#)” on page 4-20 for more information.*

3 TAC I/NET Seven Configuration

Note: *You must have Windows Administrator rights in order to activate an inactive configuration profile or to make any changes to your TAC I/NET Seven configuration that will affect file equalization.*

After installing TAC I/NET Seven, you must configure it to communicate properly with external devices. This chapter describes the procedures necessary to configure TAC I/NET Seven.

You will need to provide information on any TAC I/NET devices connected to your serial port(s), on your TCP/IP connection, and specify a printer port. Instructions are also provided to change TAC I/NET Seven's default directory structure, set up a filtering system for messages, and configure NetPlus Routers (NPRs) and Xenta 527/527-NPRs.

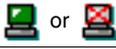
Overview

TAC I/NET Seven uses two different programs to handle communication and system configuration. *I/O Server* handles all communication between your workstation and other TAC I/NET Seven hosts, NPRs, and Xenta 527/527-NPRs. *Configure* is responsible for defining communication parameters and certain system parameters.

I/O Server must be running in order for TAC I/NET Seven to communicate, and is started automatically every time you start TAC I/NET Seven. When *I/O Server* is running, one of several icons, shown in [Table 3-1](#), will be loaded into your system tray.

Note: *Although I/O Server is not required for the Configure program, some options in Configure will not be available unless I/O Server is running.*

Table 3-1. I/O Server System Tray Icons

Icon	Description
	Standalone host workstation or remote client
	Standalone host workstation with a Tap
	Filemaster. The icon color indicates status as follows: <ul style="list-style-type: none"> ◆ Grey – Idle ◆ Yellow – Busy ◆ Cyan – Snapshot in progress ◆ Red – Snapshot process has failed or a client’s replication agent has failed or is retrying.
	Filemaster with a Tap. The colors described above are also true for this icon.
	Equalized client online or offline, respectively.
	Equalized client with a Tap online or offline, respectively.

Within the Configure program you can set up serial port and TCP/IP communication parameters, select a printer port, and alter TAC I/NET Seven’s default directory structure. You also use Configure to setup NPRs and Xenta 527/527-NPRs, and define host masking for message routing requirements from other host workstations, NPRs, and Xenta 527/527-NPRs.

You may create multiple I/O Server configuration profiles. This feature is useful if you work with several different TAC I/NET Seven environments, because you can change system parameters simply by selecting a different profile.

Note: *Prior to configuring TAC I/NET Seven, review the Read-meSeven.TXT file for up-to-date information.*

Starting the Configure Program

Note: Although I/O Server is not required for the Configure program, some options in Configure will not be available unless I/O Server is running.

Certain modifications to your existing profile, or the selection of an alternate profile, require the I/O Server to shut down and be re-started before they can take effect. Where this is the case, a dialog box will warn you to shut down the I/O Server.

To manually start the Configure program, select **Start ▶ Programs ▶ INET ▶ INET Configuration**. Alternatively, if the I/O Server is running and you are already logged in, you can right-click on the I/O Server icon in the system tray and select **Configure** from the resulting context menu.

The first editor presented by the Configure program displays a summary of all currently defined configuration profiles (see Figure 3-1).

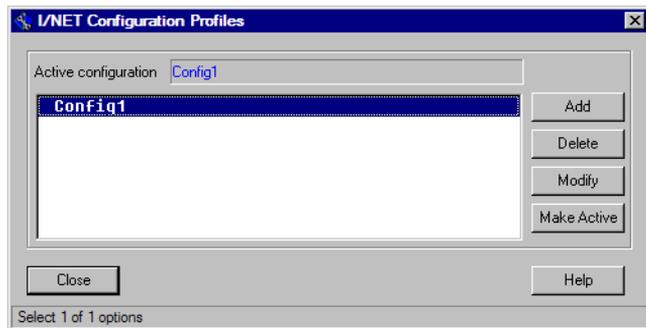


Figure 3-1. I/NET Configuration Profiles Summary

Managing Configuration Profiles

The **Active Configuration** field at the top of the I/NET Configuration Profiles Summary displays the name of the configuration profile that TAC I/NET Seven is currently using.

The list box in this editor contains all of the currently defined I/NET configuration profiles.

You can select another configuration profile to use, add a new profile, delete a profile, or modify a profile.

Activating a Configuration Profile

Note: *You must have Windows Administrator rights in order to activate an inactive configuration profile.*

If you want I/O Server and TAC I/NET Seven to use an alternate configuration profile:

1. Select the new configuration profile in the I/NET Configuration Profiles dialog box and click **Make Active**.
2. The selected profile will display in the Active configuration field at the top of the dialog box.

Note: *Certain modifications to your existing profile, or the selection of an alternate profile, require the I/O Server to shut down and be re-started before they can take effect. Where this is the case, a dialog box will advise you to shut down the I/O Server.*

To shut down the I/O Server:

1. Make sure that all TAC I/NET Seven software is closed, including the Configure program.
2. Right-click on the I/O Server icon in the system tray.
3. Select **Exit** from the resulting context menu.

Adding a New Configuration Profile

To add a new configuration profile:

1. Select **Add** from the I/NET Configuration Profiles summary (see [Figure 3-1 on page 3-3](#)). The Add Configuration Profile dialog box displays, as shown in [Figure 3-2](#).

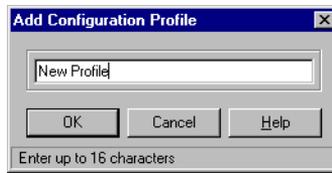


Figure 3-2. Add Configuration Profile

2. Type the name of the new profile and click **OK**.
If I/O Server is currently *not* running, the Authentication editor opens. You must successfully login to the TAC I/NET Seven database before you can setup the configuration profile. Refer to “[User Authentication](#)” on page 3-6 for instructions on using this editor.
If I/O Server is already running when you click **OK**, or if you have successfully logged in using the Authentication editor, the Configuration Profiles editor displays.
3. Use the procedures provided in “[Editing Configuration Profiles](#)” on page 3-11, to define the new profile.

Deleting a Configuration Profile

To delete a configuration profile:

1. Select the configuration profile in the I/NET Configuration Profiles dialog box.
2. Click **Delete**.
3. The system asks you to confirm that you want to delete the configuration profile. Click **Yes** to delete the profile or click **No** to cancel.

Modifying a Configuration Profile

To modify a configuration profile:

1. Select the configuration profile in the I/NET Configuration Profiles dialog box.
2. Click **Modify**.

If I/O Server is currently *not* running, the Authentication editor opens. You must successfully login to the TAC I/NET Seven database before you can modify the configuration profile. Refer to “User Authentication”, below, for instructions on using this editor.

If I/O Server is already running when you click **Modify**, or if you have successfully logged in using the Authentication editor, the Configuration Profiles editor displays. Refer to “Editing Configuration Profiles” on page 3-11 for instruction on how to configure the profile.

User Authentication

TAC I/NET Seven displays an Authentication editor (Figure 3-3) under the following circumstances:

- ◆ When you initially attempt to connect to a TAC I/NET Seven SQL database.
- ◆ When you attempt to add or modify a configuration profile while the I/O Server is *not* running.
- ◆ When you change the setting of the Workstation Type parameter in the Configuration Profile Editor (see Figure 3-4 on page 3-12).
- ◆ When you click the **Connection** button in the Configuration Profiles Editor in order to change the way the workstation connects to the SQL database.

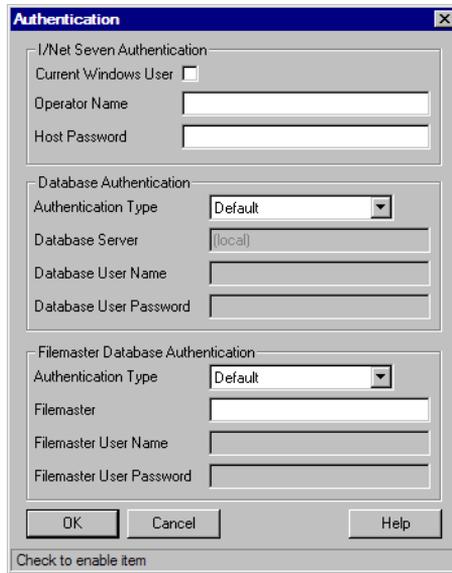


Figure 3-3. Authentication Editor

The Authentication editor is divided into sections as follows:

- ◆ I/NET Seven Authentication — This section is used to authenticate you as a valid TAC I/NET Seven user and to verify that the “Configuration” system tray function is enabled for your password.

If you are configuring a standalone workstation, this authentication is for the local TAC I/NET Seven SQL database. Otherwise, this authentication is for the TAC I/NET Seven SQL database on the filemaster or server workstation to which this workstation will connect.

- ◆ Database Authentication — This section is used to authenticate you as a valid administrator of the TAC I/NET Seven SQL database. The login you provide must enable “public” and “db_owner” roles for TAC I/NET Seven’s database.

If you are configuring a remote client workstation, this authentication is for the TAC I/NET Seven SQL database on the server. Otherwise, this authentication is for the local TAC I/NET Seven SQL database on your workstation.

- ◆ Filemaster Database Authentication — This section is only present when you are configuring an equalized client workstation. It is used to authenticate you as a valid administrator of the TAC I/NET Seven SQL database located on the filemaster. The login you provide must enable “public” and “db_owner” roles for TAC I/NET Seven’s database on the filemaster.

Use the Authentication editor as follows:

1. In the **I/NET Seven Authentication** section, perform the following steps:
 - a. If your Windows user account has already been added to TAC I/NET Seven's passwords *on the workstation to which you are connecting*, you can activate () the **Current Windows User** checkbox. In this case, you can skip the following sub-steps and proceed to [Step 2](#).

Refer to “Configuring I/NET Seven to Accept a User’s Windows Logon” in *TCON299, TAC I/NET Seven System Operator Guide*, for more information about this feature.

- b. Type your **Operator Name**. This name can contain up to 30 characters. The following characters cannot be used within the Operator Name: " / \ [] ; | = , + * ? < >

The default operator name is “tac”. If the system has just been installed and no operator names have been assigned, this default name should still be available. After operator names have been defined, you may wish to remove the default operator name to prevent unauthorized users from gaining access.

- c. Type your password at the prompt. This password can contain up to 127 characters. All keyboard characters are valid for use within this password. The system displays an asterisk for each character you type.

The default system password is “dacs”. If the system has just been installed and no other host passwords have been assigned, this default password should still be available. After host passwords have been assigned to all

authorized users, you may wish to remove the default password to prevent unauthorized users from gaining access.

2. In the **Database Authentication** section, perform the following steps:
 - a. Choose an **Authentication Type** from the drop-down list. The following options are available:
 - ✦ **Default** – This option will use a TAC I/NET Seven-generated default username and password to connect to the TAC I/NET Seven database on the database server. Use this option when the TAC I/NET Seven database to which you are connecting was created using the “Default Account” option in DbCreate.
 - ✦ **Current Windows User** – This option is intended for use on large TAC I/NET Seven installations where user permissions will be administered using Enterprise Manager. This option allows the Windows account of the currently logged in user to also be used as the login for the TAC I/NET Seven database. This option will only work if the Windows user account is that of a system administrator on the database server, or it has been properly configured in Enterprise Manager.
 - ✦ **Manual** – Selecting this option causes the **Database User Name** and **Database User Password** fields to become active, allowing you to manually log into a database server.
 - b. Use the **Database Server** field to choose the computer name, and in some cases the SQL instance name, of the database server.

This parameter is expressed as:

COMPUTER_NAME\INSTANCE_NAME

The computer name can be your local workstation or any TAC I/NET Seven workstation that is *not* configured as a Remote Client and is connected to the Ethernet.

The instance name can be any named instance of the SQL server that exists on the selected computer. This portion of the parameter will be omitted for any unnamed instance of SQL Server on the selected computer.

3. If you are configuring this workstation to be an equalized client (that is, you set the **Workstation Type** parameter in the Configuration Profile Editor to “Equalized Client”), a **Filemaster Database Authentication** section will be visible. In this case, perform the following steps:
 - a. Choose an **Authentication Type** from the drop-down list. The following options are available:
 - ✦ **Default** – This option will use a TAC I/NET Seven-generated default username and password to connect to the TAC I/NET Seven filemaster. Use this option when the filemaster to which you are connecting was created using the “Default” option in its User Authentication dialog.
 - ✦ **Current Windows User** – This option is intended for use on large TAC I/NET Seven installations where user permissions will be administered using Enterprise Manager. This option allows the Windows account of the currently logged in user to also be used as the login for the TAC I/NET Seven filemaster. This option will only work if the Windows user account is that of a system administrator on the filemaster, or it has been properly configured in Enterprise Manager.
 - ✦ **Manual** – Selecting this option causes the **Filemaster User Name** and **Filemaster User Password** fields to become active, allowing you to manually log into the filemaster.
 - b. Use the **Filemaster** field to specify the computer name of the filemaster.
4. Select **OK** to continue.

Caution: *The database server should not be shut down while TAC I/NET Seven is running. Shutting down the database server drops all existing connections to the database, and can result in corrupted data*

displays. (Only users with administrative privileges on the workstation can stop or start the database server.)

Editing Configuration Profiles

One Configuration Profile, *Config1*, is predefined. The majority of TAC I/NET Seven workstations require only one profile. In this case, you can modify *Config1* to reflect the appropriate system settings. If you will be using the workstation to initially configure an NPR or Xenta 527/527-NPR, you may want to establish a separate profile for that purpose.

To modify “*Config1*”, or any other existing profile, select the profile in the Configurations list and click **Modify**. If I/O server is running, the Configuration Profile editor ([Figure 3-4](#)) displays.

If I/O server is *not* running when you click **Modify**, the Authentication editor (see [Figure 3-3](#)) opens allowing you to login to TAC I/NET Seven and choose a database. After authentication, the Configuration Profile editor opens.

The Configuration Profile editor is divided into six sections:

- ◆ Serial Port
- ◆ TCP/IP
- ◆ Workstation Options
- ◆ Directories
- ◆ I/O Server With No Clients
- ◆ Peripherals

Information on each of these categories is provided in the following sections. Use these details to customize your profile.

See Also: [“Managing Configuration Profiles” on page 3-4](#)

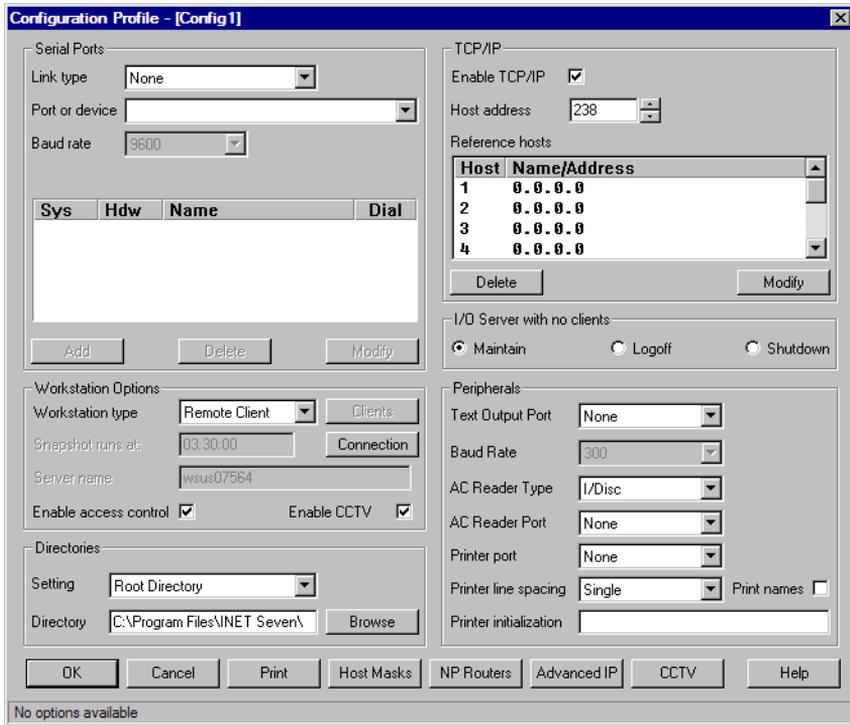


Figure 3-4. Configuration Profile Editor

Serial Port

The Serial Ports (Figure 3-5) panel allows you to define your serial port or communication device. Because TAC I/NET Seven communicates with only one serial port at a time, you can only define one device per configuration profile. If you need to define additional devices, use a separate configuration profile.

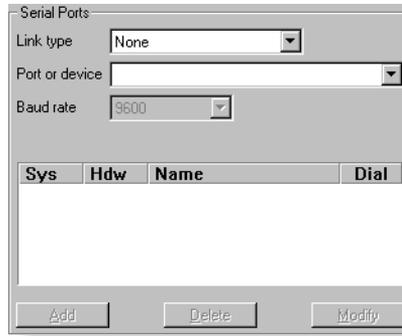


Figure 3-5. Serial Ports Panel

Link type specifies the type of device TAC I/NET Seven will communicate with and affects how link information is processed. You may choose one of the following options:

- ◆ **None** - Select if you will not be using any serial port devices.
- ◆ **Direct** - Select if a Host Tap, or a controller emulating a Host Tap, is connected to the serial port. Taps allow the workstation to connect directly, or remotely, to the TAC I/NET system at the host or controller LAN levels.
- ◆ **NetPlus Router** - Select if an NPR or Xenta 527/527-NPR is connected to the serial port. These devices allow the host workstation to connect to multiple networks of TAC I/NET controllers over a TCP/IP Ethernet LAN.
- ◆ **Embedded 4.x Dial** - Select this option if the serial port is connected to a modem used to communicate with 7806x Dial Taps. This setting causes TAC I/NET Seven to **emulate** a 7804x Dial Tap and allows the host workstation to initiate outgoing calls and answer incoming calls. If you are connecting an **actual** 7804x Dial Tap, use the *Direct* setting.

- ◆ **Integrated dial** - Select this option if the serial port is connected to a modem used to initiate calls to a host LAN or controller LAN. Each host LAN or controller LAN must have a 78010 Tap and modem to complete the connection. The Integrated Dial function supports outgoing calls only; it does not allow the workstation to answer incoming calls.
- ◆ **Integrated NPR Dial** - Select this option if the serial port is connected to a modem that will initiate calls to an NPR or Xenta 527/527-NPR. The NPR or Xenta 527/527-NPR must have a modem in order to complete the connection. This function supports outgoing calls only; it does not allow the workstation to answer incoming calls.

Refer to the appropriate heading, below, to specify the remaining serial port parameters.

Link Type is None

This workstation does not have any devices connected to, or that use, the serial port. Proceed to “TCP/IP Parameters” on page 3-18.

Link Type is Direct

1. Set the **Link type** to *Direct*.
2. Select the serial port from the **Port or device** drop-down list. Only available serial ports are displayed.
3. Select the **Baud rate** from the drop-down list. This rate must be supported by both the serial port and the connected device.
4. The Link summary (see Figure 3-6) defines each hardware link available through the serial port. You may have up to 16 links (0–15).

System	Hardware	Name	Dial
11	11	KCH	-

Figure 3-6. Hardware Link/System Link Summary

Click **Add** to access the Link Configuration editor displayed in Figure 3-7.

Enter a **Hardware address** using the following guidelines:

- a. If the connected device is a 7801x Host Tap connecting to a host LAN, you must define each link that is available on the host LAN (i.e., 7802x or 7805x Tap). The hardware address must be the address (0–15), set by DIP switches, on the associated 7802x or 7805x Tap.
- b. Otherwise, enter a **Hardware address** of 0.

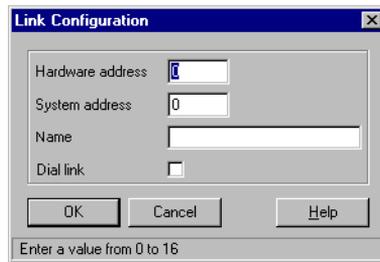


Figure 3-7. Link Configuration Editor

Note: Before performing the following step, consider the following: If the link device is a 7802x or 7805x Tap, you can configure each workstation on the host LAN to directly access the link. In this case, we recommend that each workstation use the same system address to access the link. This is especially important if you intend to assign a Restore Host to the link. Refer to “Automatic DPU Restore” in Chapter 5 of TCON300, TAC I/NET Seven System Technical Reference Guide, for more information about assigning Restore Hosts to links.

5. Enter a number (0–99) for the **System Address**. This number must be unique for each device in the system.
6. Enter a name in the **Name** field.

7. If the link device is a 7805x Tap, activate () the **Dial link** parameter. You may also set multiple links for the same 7805x Tap. This ability is termed “multi-link dial.” Refer to the “Communication” chapter in *TCON300, TAC I/NET Seven System Technical Reference Guide*.
8. Select **OK** to return to the Configuration editor.
9. The link you defined displays in the list box. Repeat this procedure for each link you wish to define (up to 16).

If necessary, you can delete the link definitions. To do so, select the appropriate link in the list box and click **Delete**.

Link Type is NetPlus Router

NPRs and Xenta 527/527-NPRs can be directly connected to a PC to set their initial configuration.

1. Set the **Link type** to *NetPlus Router*.
2. Select the serial port to which the NetPlus Router is connected from the **Port or device** drop-down box.
3. NetPlus Routers communicate at 19200 baud. Accordingly, the **Baud rate** parameter is automatically set to 19200 and cannot be changed.
4. The Link Summary, TCP/IP parameters, and Workstation Options are not applicable to this Link type. Skip to “Directories” on page 3-24.

Link Type is Embedded 4.x Dial

Note: Refer to the “Communication” chapter in *TCON300, TAC I/NET Seven System Technical Reference Guide*, for additional information on *Embedded 4.x Dial*.

Embedded 4.x Dial allows the host workstation to emulate the 78041 Tap. You must have a modem installed under Windows.

1. Set the **Link type** to *Embedded 4x Dial*.
2. Select the modem from the list of available TAPI devices in the **Port or devices** drop-down list.

3. Since the baud rate is controlled by Windows, the **Baud rate** parameter is not applicable.
4. **Add** a link in the Link summary:
 - a. Set the **Hardware address** to 0.
 - b. Set the **System address** to a number from 0–99. This address must be unique for each link within the system.
 - c. Enter a **Name** for the link.
 - d. The **Dial link** checkbox is activated automatically.
 - e. Click **OK**.
5. The Embedded 4.x Dial function supports “multi-link dial.” Repeat [Step 4](#) to define additional links. Refer to the “Communication” chapter in *TCON300, TAC I/NET Seven System Technical Reference Guide*, for information on multi-link dial.
6. Proceed to “TCP/IP Parameters” on page 3-18.

Link Type is Integrated Dial or Integrated NPR Dial.

Note: Refer to the “Communication” chapter in *TCON300, TAC I/NET Seven System Technical Reference Guide*, for additional information on *Integrated Dial*.

The only difference between *Integrated Dial* and *Integrated NPR Dial* is that *Integrated NPR Dial* is used to call an NPR or Xenta 527/527-NPR. The parameter settings are the same. Ensure that you have installed a modem under Windows prior to choosing either of these settings.

1. Set the **Link type** to *Integrated Dial* or *Integrated NPR Dial*.
2. Select a modem from the **Port or device** drop-down list.
3. Since the baud rate is controlled by Windows, the **Baud rate** parameter is not applicable.
4. **Add** a link in the link summary as follows:

- a. Set the **Hardware address** to a value from 0–15. If you are dialing into a host LAN, this address should match the value assigned to the link device (i.e., 7802x or 7805x TAP). If you are dialing into a controller LAN, set the hardware address to 0.
 - b. Set the **System address** to a number from 0–99. This address must be unique for each link within the system.
 - c. Enter a **Name** for the link.
 - d. If the link is to a 7805x Tap, activate the **Dial link** checkbox. Otherwise, make sure the **Dial link** checkbox is *deactivated*.
 - e. Click **OK**.
5. The TCP/IP parameters and Workstation Options are not applicable to the Link type. Proceed to “[Directories](#)” on page 3-24.

TCP/IP Parameters

The TCP/IP section, shown in [Figure 3-8](#), defines the parameters TAC I/NET Seven requires when the host workstation is a LAN host (i.e., connects to an Ethernet LAN).

Note: This section is not applicable if your **Link type** is “*NetPlus Router*,” “*Integrated Dial*” or “*Integrated NPR Dial*.” (See “[Serial Port](#)” on page 3-13.)

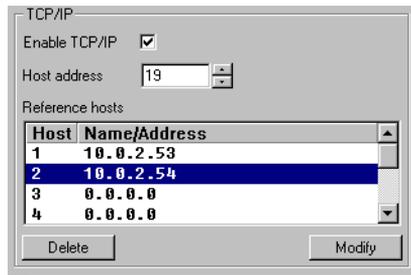


Figure 3-8. TCP/IP Parameters

1. Click in the checkbox to activate () or deactivate () the **Enable TCP/IP** option. When activated, TAC I/NET Seven will communicate over the Ethernet LAN.
2. Enter a unique **Host Address** (1–250) for the workstation.
3. A **Reference Host** is any TAC I/NET workstation, NPR, or Xenta 527/527-NPR that will serve as a source of IP addresses. Any of these devices attached to an Ethernet LAN can be used as a Reference Host.

Each time I/O Server is started on a workstation, it provides the workstation's IP address to each remote host designated as a Reference Host. I/O Server also requests and receives a list of all host IP addresses that are known to the remote host at that time. I/O Server must be running on the remote host for this address exchange to occur. I/O Server compiles and maintains a list of all the remote hosts that it learns about. Ultimately, all hosts in the network will know the IP addresses of all the other hosts.

In order for your workstation to take advantage of TCP/IP communication within TAC I/NET Seven, either one of the following requirements must be met:

✧ Your workstation must reference at least one Reference Host

– OR –

✧ Your workstation must be defined as a Reference Host on at least one other workstation.

Your workstation can reference up to eight Reference Hosts.

Note: Refer to the System Configuration chapter in *TCON300, TAC I/NET Seven System Technical Reference Guide*, for information on system and network configuration.

To define a reference host:

- a. Select an entry in the Reference Hosts list box and double-click, or click **Modify**. The Host Name/Address dialog box, shown in [Figure 3-9](#), displays.

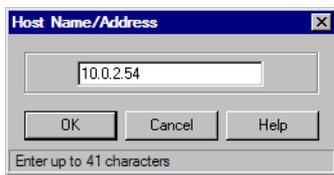


Figure 3-9. Host Name/Address Dialog Box

- b. Enter the IP address or Host Name of the reference host and click **OK**. If you enter a Host Name, TAC I/NET Seven must resolve the Host Name to an IP address. This requires that your network be configured to use DNS.
- c. Repeat these steps for each reference host (maximum of eight) you wish to declare.
- d. To delete a reference host, select it in the list box and click **Delete**.

Workstation Options

Note: You must have Windows Administrator rights in order to make any changes to your TAC I/NET Seven configuration that will effect file equalization.

The Workstation Options panel (Figure 3-10) allows you to set file equalization, client/server, and operating mode parameters. When used, file equalization ensures that the contents of the TAC I/NET Seven database is the same on every workstation.

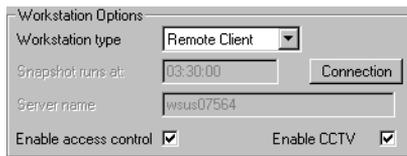


Figure 3-10. Workstation Options

Note: File equalization is not available on the workstation if your Link type is "NetPlus Router," "Integrated Dial," or "Integrated NPR Dial." Refer to "Serial Port" on page 3-13, for information on these Link types.

1. Specify a **Workstation type** setting for this workstation. The following options are available:
 - **Standalone** — Select this option if this workstation will not use file equalization.

This setting also allows the workstation to be used as the server in a client/server infrastructure. Refer to [“Using a Client/Server Configuration” on page 3-59](#) for more information about client/server configurations.
 - **Equalized Client** — Select this option if this workstation will have its files equalized by a filemaster. This setting also allows the workstation to be used as the server in a client/server infrastructure.

Refer to [“Using File Equalization” on page 3-52](#) for more information about file equalization. Refer to [“Using a Client/Server Configuration” on page 3-59](#) for more information about client/server operation.
 - **Filemaster** — Select this option if this workstation will be used to equalize files on other workstations. Refer to [“Using File Equalization” on page 3-52](#) for more information about file equalization.

This setting also allows the workstation to be used as the server in a client/server infrastructure; however, this type of configuration has had only limited testing. Refer to [“Using a Client/Server Configuration” on page 3-59](#) for more information about client/server operation.

Typically, TAC I/NET Seven will not allow you to demote a filemaster (that is, change the Workstation Type from “Filemaster” to any other setting) if equalized client workstations are currently referencing it as their filemaster (all equalized client workstations must be demoted to standalone workstations before you can demote the filemaster). However, immediately after you perform a restore or upgrade of the filemaster database, you can demote and re-promote the filemaster prior to upgrading each client workstation. Refer to [“Restoring an SQL Database” on page 4-15](#) for more information.

 - **Remote Client** (only available if IO Server is **not** running) — Select this option if this workstation will be used as a client in a client/server configuration and will *not* route

trend and AMT data to the TAC I/NET Seven database on the server. Refer to “[Remote Clients](#)” on page 3-62 for more information about this type of client.

- **Remote Client w/IO** (*only available if IO Server is not running*) — Select this option if this workstation will be used as a client in a client/server configuration and will route trend and AMT data to the TAC I/NET Seven database on the server. Refer to “[Remote Clients](#)” on page 3-62 for more information about this type of client.
2. If you changed the Workstation Type parameter from its original setting, an Authentication dialog will open. In this case, perform the steps described in “[User Authentication](#)” on page 3-6 and then proceed to the step below.
 3. If you designated the workstation as a filemaster in [Step 1](#), you can use the **Snapshot runs at** parameter to specify the time of day when the workstation will create an updated snapshot of the TAC I/NET Seven database.

Typically, the process of creating a snapshot is quick (i.e., less than a minute). However, the more edits that have been made to your system since the last snapshot, the longer the snapshot will take to create. Therefore, you may wish to specify a time of day when system usage is low.

4. If you designated the workstation as a filemaster in [Step 1](#), a **Clients** button becomes active. This button will not actually function until you have closed the I/NET Configuration Profiles editor (and any other TAC I/NET Seven clients that are currently running on this workstation) and restart I/O server to finish promoting the workstation. You can then return to this editor and use the **Client** button. Refer to “[Viewing the Filemaster’s Equalized Clients](#)” on page 3-56 for more information.
5. If you set the **Workstation type** to “Equalized Client”, define the **Filemaster name**. If you leave this field blank, no file equalization will occur on this host workstation.

When entering a filemaster name, you *must* use the Windows computer name assigned to the filemaster workstation. Locate this name *on the filemaster workstation*, by selecting **Start** ▶

Settings ▶ Control Panel. Select the **Network** option and then the **Identification** tab. The name is displayed in the **Computer name** field.

You can demote an equalized client by changing the **Workstation type** from “Equalized Client” to “Standalone” and selecting **OK** to close the editor. The workstation will become a standalone workstation and will no longer receive equalized data

6. Click the **Connection** button to configure how this workstation connects to the data server (that is, the local TAC I/NET Seven database, a filemaster, or a server workstation). This will cause a user Authentication editor to open. Refer to “[User Authentication](#)” on page 3-6 for more information.
7. If this workstation will be used for access control, activate () the **Enable access control** option. Access control editors are not available within TAC I/NET Seven unless you enable access control here.

Note: If TAC I/NET Seven is running and the only change you make to the active configuration is to activate or de-activate the **Enable access control** option, then you do **not** need to shutdown and restart the I/O Server. You can activate this change simply by logging off of TAC I/NET Seven and then logging back on.

8. If this workstation will be used to integrate TAC I/NET Seven with an Integral Digital CCTV system, activate () the **Enable CCTV** option. CCTV-related functions within TAC I/NET Seven are disabled until you activate this option.

With the **Enable CCTV** option activated, each function's availability is controlled by the permissions assigned to the user's host password. For more information about assigning functions to host passwords, refer to TCON299, *TAC I/NET Seven System Operator Guide* or TCON300, *TAC I/NET Seven System Technical Reference Guide*.

For instructions on how to integrate digital CCTV with TAC I/NET Seven, refer to TCON301, *TAC I/NET Seven Database Connectivity and Reporting*.

Directories

TAC I/NET Seven establishes default Directories under the root directory specified during Setup. Table 3-2 lists the default directories and the type of data contained within them.

Table 3-2. TAC I/NET Seven Directories

Directory	Data
Root	Stores the main TAC I/NET Seven executable files and the DLLs.
Data	Stores controller binary load (.BIN and .UPD) files. May also contain graphic pages. (Note: library symbols and bitmaps are stored in the Symbols directory.)
Message	Stores files containing message data.
Save	Stores station save and NetPlus Router (.SAV and .NPR) files.
Archive	Stores archived data.

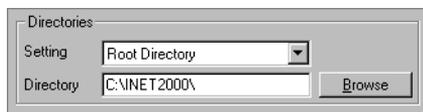


Figure 3-11. Directories Options

To change a directory setting:

1. Click on the down arrow at the right of the **Setting** field and select the directory you want to change.
2. The current name and path are displayed in the **Directory** field. To change the directory, you can either:
 - ❖ Delete the current contents of the field and type in the name and path of an existing directory.
 - OR —
 - ❖ Click **Browse** to scroll through the available directories and select another folder.

Note: The “Archive Directory” in the Configuration Profile Editor and the “Archive Device” in the Event Archive Configuration editor are the same parameter. Changing the path in one editor will cause a change in both editors. However, the “Archive Device” parameter in the Trend Archive Configuration editor is unique and is unaffected by changes in the other editors.

Refer to [Chapter 6, System Messages](#), of TCON299, TAC I/NET Seven System Operator Guide, for more information about configuring event archives.

I/O Server With No Clients

I/O Server handles all communication functions for TAC I/NET Seven, AMT, and some portions of Configure. TAC I/NET Seven and AMT are I/O Server clients and require I/O Server to be running. These client applications automatically launch I/O Server, if it is not already running, when they are started. For most TAC I/NET Seven applications, you will want I/O Server to continue to run when the client applications are shut down. This allows you to receive messages, and equalize files, even when TAC I/NET Seven is not running.

Use the options in this section to control how the TAC I/NET Seven I/O Server operates on this host workstation after you close the host software application.



Figure 3-12. System Services Option

Note: If you have TCP/IP enabled and have also defined a 7804x or 7805x Dial Tap as one of your serial port links, it is possible for other hosts to use your link. For this reason, we recommend that you enable the “**Maintain**” option described below. This prevents the workstation from hanging up while another host is communicating through one of your workstation's Dial links.

- ◆ **Maintain** – Enable this option to allow the TAC I/NET Seven I/O Server to continue running in the background, even when no TAC I/NET Seven client is currently active. In this case, you will remain logged into the TAC I/NET Seven system.
- ◆ **Logoff** – Enable this option to be automatically logged off of TAC I/NET Seven when you shutdown the host software application. The TAC I/NET Seven I/O Server will continue running in the background, even when no TAC I/NET Seven client is currently active.
- ◆ **Shutdown** – Enable this option to shutdown the I/O Server after all TAC I/NET Seven clients have been shutdown.

Note: *If all the client applications are closed, you can manually close I/O Server by right-clicking on the I/O Server icon, in the system tray (see Table 3-1) and selecting **Exit** from the resulting menu.*

Warning: *If I/O Server is shut down, unsolicited messages may be lost.*

Peripherals

This section allows you to specify any peripheral devices attached to the host workstation.

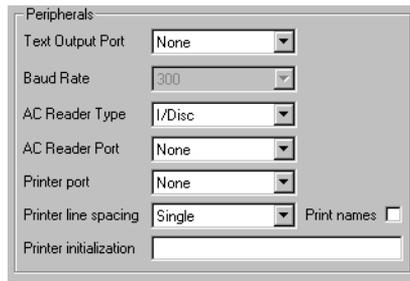


Figure 3-13. Workstation Peripherals

1. Select the **Text Output** port. The serial (COM) port may be used to attach an optional third-party device that accepts a text string input, such as a CCTV camera. You *cannot* specify a serial port that is already in use by the Serial Port section, the AC Reader Port, or the Printer port.

2. Select the **Baud Rate** for the text output device. This field is only available if you selected a text output port in [Step 1](#).
3. Enter the **AC Reader Type**, if any. You may attach an optional access control reader to your workstation's serial port. TAC I/NET Seven will use the reader for the following purposes:
 - ✧ If you have defined a Card/I-Disc number for an operator in the Host Password Editor, the operator can log onto the TAC I/NET Seven system by swiping their card or I/DISC.
 - ✧ The reader is used by TAC I/NET Seven's Access Control system to read the serial number of the access control device.

Supported reader types are listed below.

- ✧ **I/Disc** — The I/DISC Wand is used to read the serial number of an I/DISC button.
 - ✧ **Weigand** — The Weigand card reader is used to read the serial number from an access card using the Weigand encoding protocol.
4. Specify the **AC Reader Port** used to attach the above device to the workstation. Select the serial port from the drop-down list. You *cannot* specify a serial port that is already in use by the Serial Port section, the Text Output port, or the Printer port. If you are not using an access control reader, select **None**.

Note: *The I/DISC Wand has an RJ11 connector and requires an adaptor. You must use Dallas Semiconductor's Universal 1-Wire Com Port Adapter (TAC Part No. 602072-0010).*

5. Select a **Printer port** from the drop-down list box. Only existing ports are listed within the drop-down list. You may configure only one printer port. You *cannot* specify a serial port that is already in use by the Serial Port section, the Text Output port, or the AC Reader Port.

This port will be used for printing event messages only. The printer used for printing events must be capable of supporting single line feeds. Therefore, it is recommended

that only a dot-matrix printer be used. Refer to the description of Event Actions in TCON300, “*TAC I/NET Seven System Technical Reference Guide*,” and in TCON299, “*TAC I/NET Seven System Operator Guide*,” for more information.

6. Select the **Printer line spacing** you prefer to be used for the event printer.
7. If necessary, activate () the **Print names** checkbox to include individual's first and last names in access control transaction events printed from the event printer.
Note: Leave this option deactivated () if you are integrating TAC I/NET Seven with an Emergin system.
8. If necessary, enter a **Printer Initialization** string for the event printer. This string will be sent to your printer by TAC I/NET Seven. Refer to your printer documentation for additional information.

Additional Configuration Features

The following buttons near the bottom of the Configuration Profile editor provide additional configuration features.

- ◆ **Print** – Click this button to create a printed summary of the configuration. Refer to “[Printing the Configuration Profile](#)” on page 3-30 for more information.
- ◆ **Hosts Masks** – This button is available only when I/O Server is running. Click this button to add, delete, or modify a message routing mask for a host workstation. Refer to “[Host Routing Masks](#)” on page 3-30 for more information.
- ◆ **NP Routers** – This button is available only when I/O Server is running. Click this button to configure your system to communicate with NetPlus Routers. Refer to “[Configuring NPRs and Xenta 527/527-NPRs](#)” on page 3-33 for more information.
- ◆ **Advanced IP** – This button is available only when I/O Server is running. Click this button to define TAC I/NET Seven's communication ports and to configure each TAC I/NET host to only see specific sections of the overall network. Refer to “[Setting-up Communications and Encryption](#)” on page 3-46 and to “[IP Filters](#)” on page 3-48 for more information.

- ◆ **CCTV** – This button is available only when I/O Server is running *and* the **Enable CCTV** option is enabled () in the active profile. Click this button to configure your system to communicate with a Pelco CCTV system.

For instructions on how to integrate digital CCTV with TAC I/NET Seven, refer to TCON301, *TAC I/NET Seven Database Connectivity and Reporting*.

Saving Configuration Profile Changes

When you finish editing a configuration profile, click **OK** to save the configuration and return to the I/NET Configuration Profiles dialog box.

This saves the changes to the data file that defines the configuration profile. However, the changes do not take effect immediately: **the settings in effect are always the settings for the active profile as it was defined when IO Server was launched.**

Whenever you change a configuration profile, particularly the active profile, you must do the following in order to start using the new settings:

1. Shutdown TAC I/NET Seven and/or Configure.
2. If necessary, shutdown I/O Server. Depending on your system configuration, I/O Server may shutdown automatically.
3. Start TAC I/NET Seven to relaunch I/O Server.

If you changed the Workstation Type parameter for the active profile, TAC I/NET Seven attempts to configure your workstation immediately after I/O server starts. As the workstation is being configured, various balloon-style messages appear near the I/O server system tray icon (see [Figure 3-14](#)). These messages provide information on the current status of the configuration process.

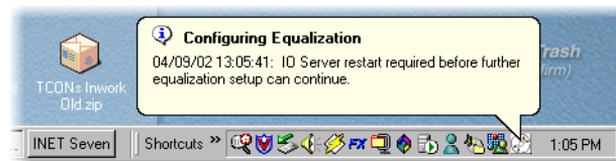


Figure 3-14. Balloon-style Messages

When the configuration process is complete, the I/O Server system tray icon will change. Refer to [Table 3-1 on page 3-2](#) to learn more about the I/O Server system tray icons and their meanings.

Printing the Configuration Profile

While you are in the I/NET Configuration Profiles editor, you can click **Print** to send a summary of the configuration to Windows default printer.

Host Routing Masks

TAC I/NET Seven has the capability to route messages, alarms, and SevenTrends data from remote hosts to your host. Masks are an integral part of this routing and filtering system. Host routing masks allow you to select the remote host(s) that can forward data to you and to define the type of data that is forwarded.

Host routing masks work in concert with the masking function in TAC I/NET Seven's Host Configuration editor and the AMT Configuration editor. Host routing masks determine whether a remote host (i.e., a TAC I/NET Seven workstation, NPR, or Xenta 527/527-NPR) will forward a message on to you. The masking functions defined in the Host Configuration editor determine what TAC I/NET Seven does with the data it receives.

Note: *Message routing functions are only available on hosts with the TCP/IP **Enabled** option activated in the I/NET Configuration Editor.*

To start the editor, select **Host Masks** from the I/NET Configuration Profiles editor. The Host Mask Device Summary, shown in [Figure 3-15](#), displays. This summary lists the TCP/IP addresses and names of the remote hosts that are available within your TAC I/NET Seven system. If this list is empty, you may need to define one or more Reference Hosts. (Refer to Step 3 on page 3-19) By default, your host workstation will not receive messages from any remote hosts.

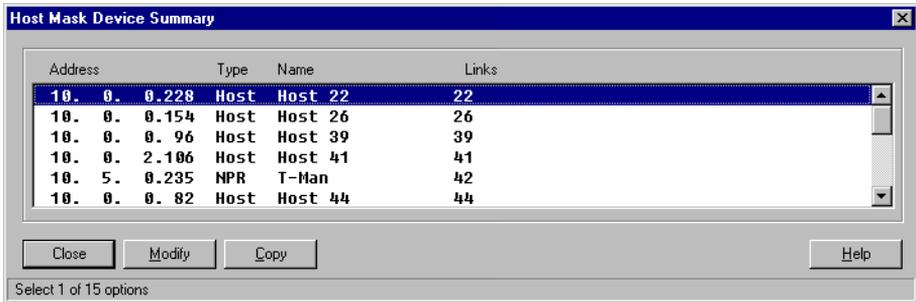


Figure 3-15. Host Mask Device Summary

Defining Host Masks

To define host masks:

1. Select the remote host from the list box and double-click, or click **Modify**. The Host Routing Mask editor (Figure 3-16) displays.

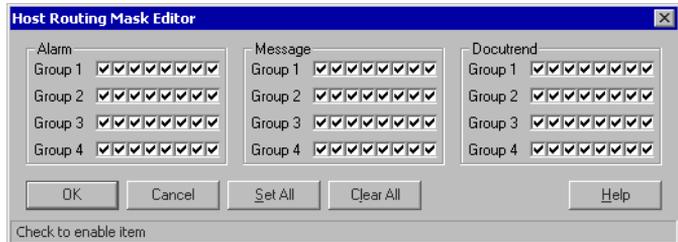


Figure 3-16. Host Routing Mask Editor

2. Specify the hours for this host in the Times section. Enter the hours in 24-hour format for each day of the week.

All message masks are assigned to one of four distribution groups. Both the active mask position and the distribution group must match before a message will be received from a remote host. Each mask is an eight position parameter, with each position either active () or inactive () .

Refer to TCON300, “TAC I/NET Seven System Technical Reference Guide,” for a complete discussion on message masking.

Note: You must also specify masking requirements in TAC I/NET Seven's Host Configuration Editor in order to receive SevenTrends messages from remote hosts, and in the AMT Configuration Editor in order to receive messages, alarms, and transactions from remote hosts.

3. Click on the mask position box to activate () or deactivate () a mask position. You can select **Set All** (activates all mask positions) or **Clear All** (deactivate all positions) to speed the mask definition process.
4. Select **OK** to return to the Host Mask Device Summary.
5. Repeat this procedure for each remote host, NPR, or Xenta 527/527-NPR that requires a message mask.

Copying Host Masks

After defining the host masks for one host, or NPR, you may copy the configuration to a second host or NPR. To do so:

1. From the Host Masks Device Summary (see [Figure 3-15](#)), select the host configuration you wish to copy.
2. Click **Copy**.
3. The Copy Mask dialog box displays a list of all available hosts,

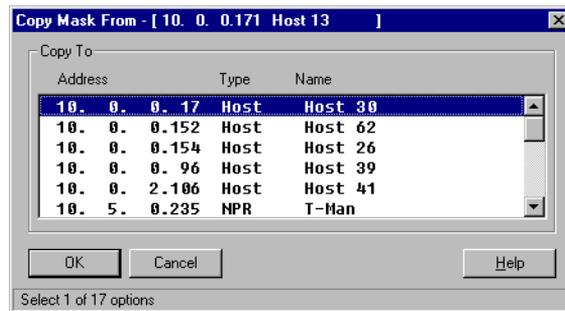


Figure 3-17. Copy Mask Dialog Box

NPRs, and Xenta 527/527-NPRs. Select the host address you wish to copy to.

- Click **OK** to execute the copy. You will be returned to the Host Masks Device Summary.

Configuring NPRs and Xenta 527/527-NPRs

This section outlines *only* the NetPlus Router (NPR) and Xenta 527/527-NPR configuration procedures that are performed with the Configure program. Refer to TCON184, *Series 2000 NetPlus Router Installation Guide*, for complete instructions on the installation and configuration of NetPlus Routers. Refer to *Engineering TAC Xenta Server - Xenta 527/527-NPR Supplement* on TAC's web site for complete instructions on configuring the TAC Xenta 527/527-NPR.

Selecting an NPR or Xenta 527/527-NPR

You can configure an NPR or Xenta 527/527-NPR connected locally or on the network. To select a device for configuration:

- Click the **NP Routers** button on the Configuration Profiles editor. The NetPlus Router Summary screen displays (Figure 3-18).

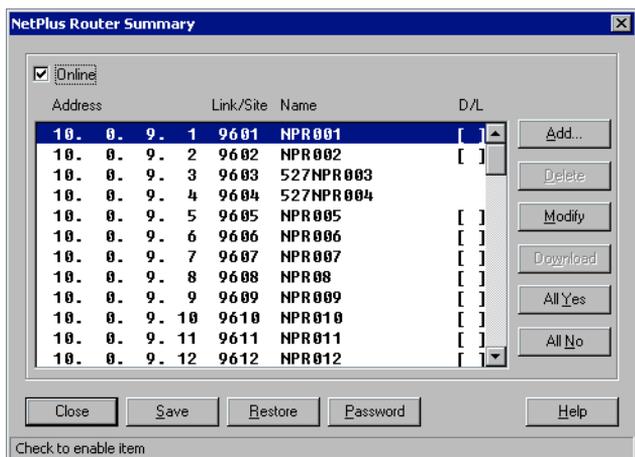


Figure 3-18. NetPlus Router Summary

2. If the device (NPR or Xenta 527/527-NPR) *is* currently connected, either directly or via a network, make sure the **Online** option is activated ().
 - a. If your configuration profile specifies a **Link Type** of NetPlus Router (refer to “[Serial Port](#)” on page 3-13) the NPR or Xenta 527/527-NPR connected to your serial port is listed. This is the required mode for the initial configuration of an NPR.
 - b. If your configuration profile specifies any other **Link Type**, all NPRs and Xenta 527/527-NPRs available on the network are listed.

Proceed to [Step 4](#).

3. If the NPR or Xenta 527/527-NPR *is not* currently connected, make sure the **Online** option is deactivated (). In this case, you will use the configuration files stored on disk (.NPR files) and the new configuration must later be downloaded to the device before it takes effect. Refer to “[Restoring Configurations](#)” on page 3-41.

If you are not online, the configuration filenames are listed.

4. Select the desired NPR, Xenta 527/527-NPR, or its corresponding filename, and click **Modify**.
5. If a password has been assigned, you will be prompted to enter the password. Enter it and click **OK**.

The NetPlus Router Configuration editor displays.

Configuring an NPR or Xenta 527/527-NPR

Prior to configuring the NPR or Xenta 527/527-NPR, you may need to obtain the following information from your network system administrator:

- ◆ NetPlus Router IP Address
- ◆ Subnet Mask for your facility
- ◆ Domain Name (internet or intranet)
- ◆ Gateway IP address
- ◆ SNMP Host IP address (optional)

NetPlus Router Configuration

TCP/IP

Name: 1stNPR

Address: 10 | 0 | 6 | 127

Subnet mask: 255 | 255 | 0 | 0

Domain name: tac.com

Gateway: 10 | 0 | 0 | 1

Reference Hosts

Host	Name/Address
1	0.0.0.0
2	0.0.0.0
3	0.0.0.0
4	0.0.0.0

DHCP:

SNMP name: NotUsed

SNMP: 10 | 10 | 10 | 10

DNS address: 0 | 0 | 0 | 0

I/NET Address

Link: 2 | Site: 13 | Controller LAN: 62

Controller LAN Speed: 19200 9600

Buttons: OK, Cancel, Print, Advanced, Help

Select 1 of 8 options

Figure 3-19. NetPlus Router Configuration Editor

◆ DNS Service Provider IP addresses (optional)

Follow the procedure below when you have the required information.

1. Enter the Machine **Name**, up to 15 characters. The name must be alpha-numeric. The only other character allowed is the dash (-).
2. Enter the NPR or Xenta 527/527-NPR IP **Address**. This field is not required if you have a stand-alone configuration with only a single NPR or Xenta 527/527-NPR (i.e., Ethernet communication is not being used).
3. Enter the **Subnet Mask**, if any. Use this mask to determine the subnet to which the IP address belongs. This allows you to divide the host part of the IP address into two or more subnets.
4. Enter your **Domain name**. All devices sharing a common part of the IP address are said to be in the same domain. An example of a domain name would be "mydomain.com".
5. Enter your LAN/WAN **Gateway** IP address. Gateways allow devices on different systems to communicate with each other.

6. Enter the address(es) for at least one, and a maximum of eight, **Reference Hosts**.

Refer to “TCP/IP Parameters” on page 3-18, for a brief explanation of reference hosts.

- a. Select an entry in the Reference Hosts list box and double-click, or click **Modify**.
 - b. Enter the IP address of the desired reference host and click **OK**.
 - c. To enter additional remote hosts, repeat Steps a and b.
7. If your network configuration uses DHCP to dynamically assign IP addresses to devices on the Ethernet, activate () the DHCP option.
 8. If your network is running Simple Network Management Protocol (SNMP), you may configure the NPR or Xenta 527 to send a block of information (a “trap”) to a specific machine (the “trap” host) when a specified event occurs. (*The Xenta 527-NPR does not provide SNMP features.*)
 - a. Enter the machine name of the SNMP trap host in the **SNMP Name** field.
 - b. Enter the IP address of the SNMP trap host in the **SNMP Address** field.
 9. If your network is configured to use DNS to resolve domain names to IP addresses, enter the IP address of the DNS server. Depending on how your network is configured, TAC I/NET Seven may automatically change this parameter’s setting based on detected network settings.
 10. Enter the NPR’s or Xenta 527/527-NPR’s I/NET **Link** (LL) address (0-99). This assigns a TAC I/NET system link number to the NPR’s or Xenta 527/527-NPR’s TCP/IP port.

Use the following guidelines when assigning the Link address:

- ◆ If the NPR’s or Xenta 527/527-NPR’s DLA feature will *not* be used, ensure that you define a link address that is unique to this device (i.e., no other device on the network can use the same link address).

- ◆ If necessary, you can use the same link address as one or more other NPRs or Xenta 527/527-NPR's on the network by enabling DLA in each device. In this case, use the **Site** parameter (described below) to enable DLA and assign each device a unique Site address.

Note: *Host workstations do **not** provide the same distributed link capabilities as DLA-enabled NPRs and Xenta 527/527-NPR's. You cannot duplicate a host workstation's link address in an NPR, Xenta 527/527-NPR, or any other device.*

11. If necessary, enable DLA for this NPR or Xenta 527/527-NPR by performing the following actions:
 - a. Activate () the **Site** option. The **Site** address spindial will become enabled.
 - b. Assign a **Site** address (0–63) to this NPR or Xenta 527/527-NPR. Ensure that this address is unique among all NPRs and Xenta 527/527-NPRs sharing the *same* Link address. An NPR or Xenta 527/527-NPR using a *different* Link address can duplicate this device's Site address without conflict.

Note: *If you disable DLA functionality (i.e., deactivate the **Site** option) in an NPR or Xenta 527/527-NPR that is using a distributed link address, ensure that you also change the device's **Link** address to a unique value. Duplicate link addresses are **not** supported in devices that have the DLA function disabled.*

12. Enter the NPR's or Xenta 527/527-NPR's I/NET **Controller LAN** (SS) address (0–63). This assigns a station address on the connected Controller LAN.

Use the following guidelines when assigning the Controller LAN address:

- ◆ Define a Controller LAN address that is unique among all other devices on *this* controller LAN (i.e., no two devices on a single controller LAN can use the same address).

- ◆ The Controller LAN address *can* be the same as that of a device attached to *another* controller LAN. For example, the NPR or Xenta 527/527-NPR at Site 2 of a distributed link can have the same Controller LAN address as *any* device at Site 1 of the distributed link.
13. Select the correct network Media connection, either **RJ45** or **AUI**.
 14. If necessary, you can change the NPR's or Xenta 527/527-NPR's communication port, or enable encryption as follows:

Caution: *If you change the communication port settings or enable encryption in any TAC I/NET Seven host (i.e., in any workstation, NPR, or Xenta 527/527-NPR), you must make the same changes to all other TAC I/NET Seven hosts within the same TAC I/NET network. Proper communications **cannot** be established between TAC I/NET Seven hosts with differing communication settings.*

- a. Click **Advanced**. The Advanced WAN Configuration editor opens (Figure 3-20).

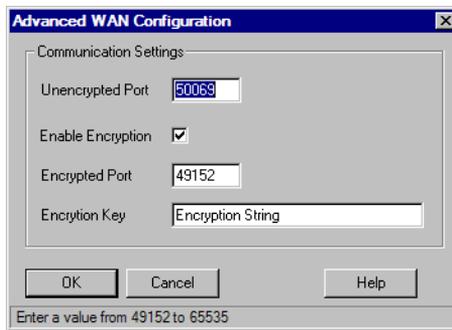


Figure 3-20. Advanced WAN Configuration

- b. Set the **Unencrypted Port** number to any value from 49152 to 65535. The default setting for this parameter is 50069. Communications over this port are *not* encrypted.

- c. If you wish to have the NPR or Xenta 527/527-NPR use encryption, activate () the **Enable Encryption** option. When you activate this option, the parameters described in the next two steps become available.
- d. If you activated the **Enable Encryption** option in the previous step, set the **Encrypted Port** number to any value from 49152 to 65535. The default setting for this parameter is 49152. Communications over this port are encrypted (128-bit) based on the encryption key you define in the next step.
- e. If you activated the **Enable Encryption** option in [Step c](#) above, define an **Encryption Key** of up to 25 alphanumeric characters. There are no restrictions on what characters you can use for this string; however, this string *is* case-sensitive (for example: “A” and “a” are *not* considered to be the same character).

The encryption key you define for this device must *exactly* match the encryption key defined for all other TAC I/NET Seven hosts that are using encrypted communications.

- f. Select **OK** to accept these settings and close the Advanced WAN Configuration editor.
15. If necessary, press the **Print** button to send this device's settings to Window's default printer.

Only this device's currently saved settings will be included in the printed output. Any setting changes made during the current edit session have not been saved and will not be reflected in the printed output.

16. Click **OK** to save the configuration and return to the NetPlus Router Summary dialog box.

For complete instructions on installing and configuring a NetPlus Router, please refer to TCON184, *Series 2000 NetPlus Router Installation Guide*. Installation instructions for the Xenta 527/527-NPR can be found on TAC's web site.

Managing NPR and Xenta 527/527-NPR Configurations

You must be connected, either through a serial port or an Ethernet LAN, to the NPR or Xenta 527/527-NPR to perform any of the following functions.

Setting a Password

You may set a password on the NPR or Xenta 527/527-NPR to protect it from unauthorized configuration changes. This password will be required before changing, saving, or restoring the configuration to the device.

1. Select the desired device from the NetPlus Router Summary dialog box.
2. Click the **Password** button to display the Password editor, shown in [Figure 3-21](#).

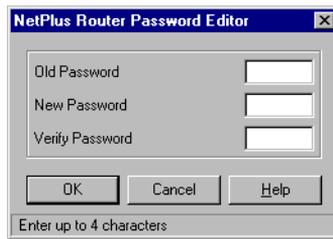


Figure 3-21. NetPlus Router Password Editor

3. If you wish to change an existing password, enter the original password in the **Old Password** field. If you are entering a password for the first time, leave this field blank.
4. Type the desired password in the **New Password** field, up to four characters.
5. Re-type the desired password in the **Verify Password** field. This entry must match the entry in the New Password field.

6. Click **OK** to accept the new password and return to the NetPlus Router Summary screen. You may click **Cancel** to close the Password editor without saving the changes.

Note: To remove a password, enter the Old Password, and leave the New Password and Verify Password fields blank.

Saving Configurations

You can save an NPR's or a Xenta 527/527-NPR's configuration on your hard drive. This will allow you to view the configuration information if the device is off-line, and provides a backup in case the configuration becomes corrupted.

1. Select the desired device from the NetPlus Router Summary dialog box and click **Save**.
2. You will be prompted for a password, if one has been assigned. Enter the password and click **OK**.

The configuration file will be saved to your Save directory. (The default is C:\Program Files\INET Seven\Sav.) The filename will be in the form of MACHINE.NPR, where MACHINE represents the machine name of the NPR or Xenta 527/527-NPR.

Restoring Configurations

If the NPR or Xenta 527/527-NPR configuration file becomes corrupted or was edited off-line, you can restore the saved configuration file (.NPR) from your hard drive to the device. The .NPR file restores the configuration settings and message routing masks.

Note: You must have previously saved the configuration file, as described above.

1. Select the desired device from the NetPlus Router Summary dialog box and click **Restore**.
2. You will be prompted for a password, if one has been assigned. Enter the password and click **OK**.

The configuration parameters are sent to the selected NPR or Xenta 527/527-NPR immediately.

Downloading Firmware to NPRs

Note: *You cannot download firmware from TAC I/NET Seven to a Xenta 527/527-NPR. This device is delivered from the factory with preloaded software. If the need should arise to reload this software, you can download it from TAC's website. Before installing downloaded software, review its release information to verify compatibility with your hardware.*

If you are upgrading your system from a previous version of TAC I/NET, you may wish to download DLA-compatible NPR .BIN files to all NPRs within your system. In order to enable and use DLA in even a single NPR, you must first download DLA-compatible firmware to *all* NPRs within your system. You must also properly configure the particular NPRs that will enable and use the DLA capabilities.

Note: *Before you upgrade an NPR from TAC I/NET 2000 to [TAC I/NET Seven](#) (i.e., before you download DLA-compatible binary firmware to an NPR), ensure that you first install [TAC I/NET Seven](#) on all host workstations in your system, **beginning with workstations that are being used as a Reference Host**. If necessary, refer to [Chapter 2, Installing TAC I/NET Seven](#), for installation instructions.*

This version of TAC I/NET Seven allows you to download binary firmware to NPRs without using the main TAC I/NET Seven host application. Use the I/NET Configure program to download the updated binary firmware and configure the NPRs.

1. Manually launch the Configure program by using the Windows **Start** button to select **Programs ▶ INET ▶ INET Configuration**. Alternatively, if TAC I/NET Seven is running, you can right-click on the I/O Server icon and select **Configure** from the context menu. The I/NET Configuration Profiles screen, shown in [Figure 3-1](#), displays.

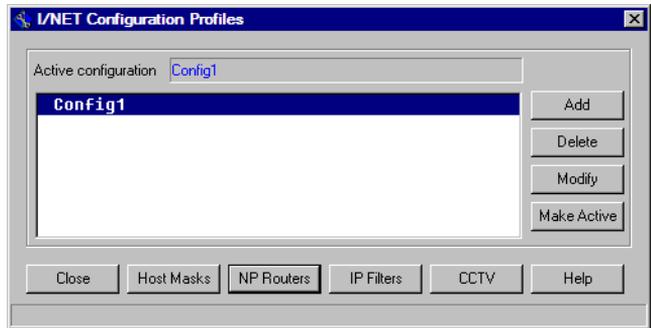


Figure 3-22. I/NET Configuration Profiles

- Click the **NP Routers** button on the I/NET Configuration Profiles dialog box. The NetPlus Router Summary screen displays (see Figure 3-23).

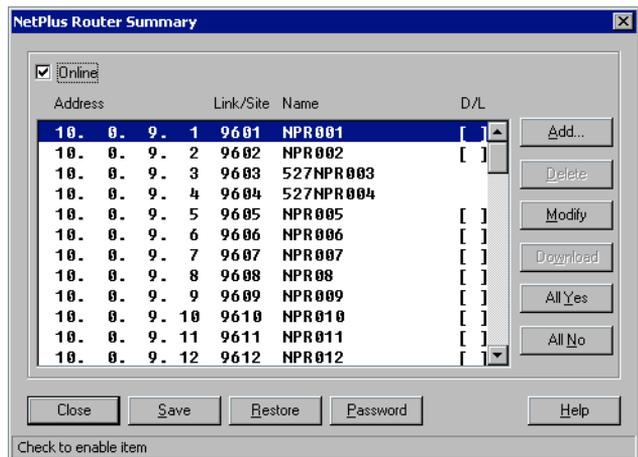


Figure 3-23. NetPlus Router Summary

- Ensure that the **Online** option is enabled (). In order to download firmware to NetPlus Routers, the NPRs must already be communicating with your host workstation over an ethernet or direct connection. Therefore, the **Download** button will only be available if the **Online** option is enabled.

4. Mark each NPR that you wish to receive updated firmware. Remember, if any one NPR within your system will utilize DLA functions, then all NPRs within the system must be updated with DLA-compatible firmware.

It is not possible to download software from TAC I/NET Seven to a Xenta 527/527-NPR. You can quickly identify Xenta devices in the NetPlus Router Summary by looking for the presence of square brackets ([]) in the **D/L** column. If a device has no square brackets, it is a Xenta 527 or Xenta 527-NPR (see the third and fourth device listed in [Figure 3-23](#) for an example).

Only NPRs marked with **[X]** in the **D/L** column will receive the software download. You can toggle the selection of NPRs by clicking on individual NPRs in the list. You can also use the **All Yes** and **All No** buttons to speed-up the selection process.

5. Initiate the firmware download to the marked NPRs by selecting **Download**. This option is available only when an NPR is marked with **[X]** in the **D/L** column. The system displays the NPR Binary Select dialog (see [Figure 3-24](#)).

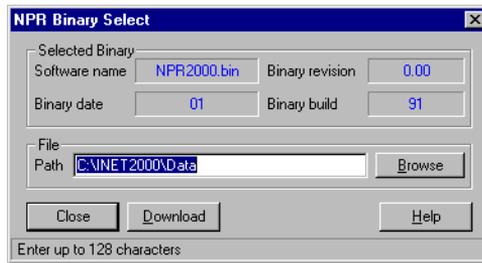


Figure 3-24. NPR Binary Select Dialog

6. Ensure that the **Path** field specifies the proper location of the updated NPR **.BIN** file. If necessary, use the **Browse** button to specify the proper location.
7. Select **Download** to begin downloading software to the selected NPRs. As the NPRs are being updated, a dialog displays the download status (see [Figure 3-25](#)).

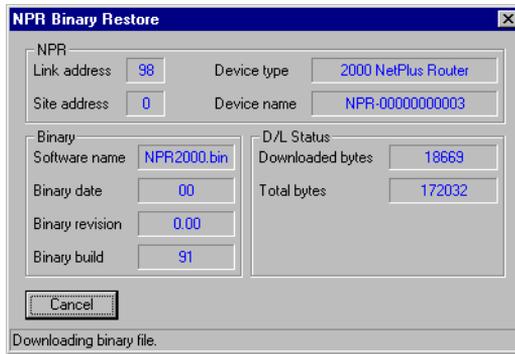


Figure 3-25. NPR Binary Restore Status

This status dialog closes automatically when the download process has completed. If the system was unable to download firmware to a selected NPR, the message dialog shown in [Figure 3-26](#) will appear. Use this dialog to either retry or cancel the remaining downloads.



Figure 3-26. Error Message

8. When you are finished downloading software to the NPRs, select **Close** to close the NetPlus Router Summary and return to the I/NET Configuration Profiles dialog.

At this point, you can (if necessary) enable DLA within one or more NPRs and set configuration parameters by proceeding to the next section. If your NPRs have already been configured and DLA functionality is not currently required, or if you have already enabled DLA within your system, you can exit the Configure program by selecting **Close** from the I/NET Configuration Profiles dialog.

Setting-up Communications and Encryption

If necessary, you can change the TAC I/NET Seven host's communication port, or enable encryption as follows:

Caution: *If you change the communication port settings or enable encryption in any TAC I/NET host (i.e., in any workstation, NPR, or Xenta 527/527-NPR), you must make the same changes to all other TAC I/NET hosts within the same TAC I/NET network. Proper communications **cannot** be established between TAC I/NET hosts with differing communication settings.*

Note: *The **Advanced IP** button described in the following step is available only when the I/O Server is running.*

1. In the Configuration Profile editor, click **Advanced IP**. The Advanced WAN Configuration editor opens (Figure 3-27).

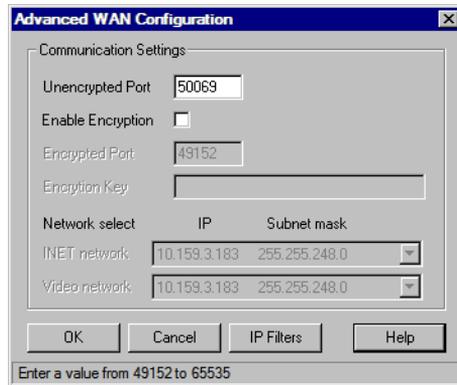


Figure 3-27. Advanced WAN Configuration

2. For normal unencrypted TAC I/NET communications, set the **Unencrypted Port** number to any value from 49152 to 65535. The default setting for this parameter is 50069.

3. If you wish to use encrypted communications between the hosts, NPRs, and Xenta 527/527-NPRs in your TAC I/NET system, activate () the **Enable Encryption** option. When you activate this option, the parameters described in the next two steps become available.
 - a. Set the **Encrypted Port** number to any value from 49152 to 65535. The default setting for this parameter is 49152. Communications over this port are encrypted (128-bit) based on the encryption key you define in the next step.
 - b. Define an **Encryption Key** of up to 25 alpha-numeric characters. There are no restrictions on what characters you can use for this string; however, this string *is* case-sensitive (for example: “A” and “a” are *not* the same character).

The encryption key you define for this host must *exactly* match the encryption key defined in all other TAC I/NET hosts, NPRs, and Xenta 527/527-NPRs that will communicate with this host.

4. If your PC is configured with multiple network cards, the following drop-down lists will be active:
 - **INET network**
 - **Video network**Use the drop-downs to select a network card for each network. You can use the same card for both networks, or you can use a unique card for each network. By using two networks, you can separate I/NET traffic from video traffic and conserve bandwidth on each network.
5. If necessary, use the **IP Filters** button to setup communication filters. Refer to “IP Filters”, below, for more information.
6. Select **OK** to accept these settings and close the Advanced WAN Configuration editor.

IP Filters

Using IP filtering, you can configure each TAC I/NET host to only see specific sections of the overall network. This allows you to create segmented networks that can be secured from outside access.

Create IP Filters for TAC I/NET hosts as follows:

1. From the Advanced WAN Configuration editor described above, select **IP Filters** to display the Device Filter Summary (Figure 3-28). This summary lists each TAC I/NET host that is currently communicating with this host workstation.

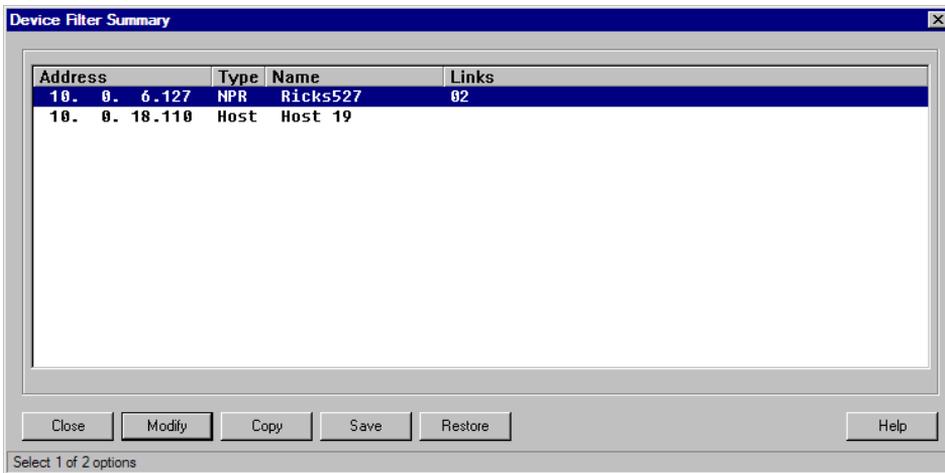


Figure 3-28. Device Filter Summary

- Highlight the device for which you will define IP filtering and select **Modify**. The system displays the Device Filter dialog (Figure 3-29).

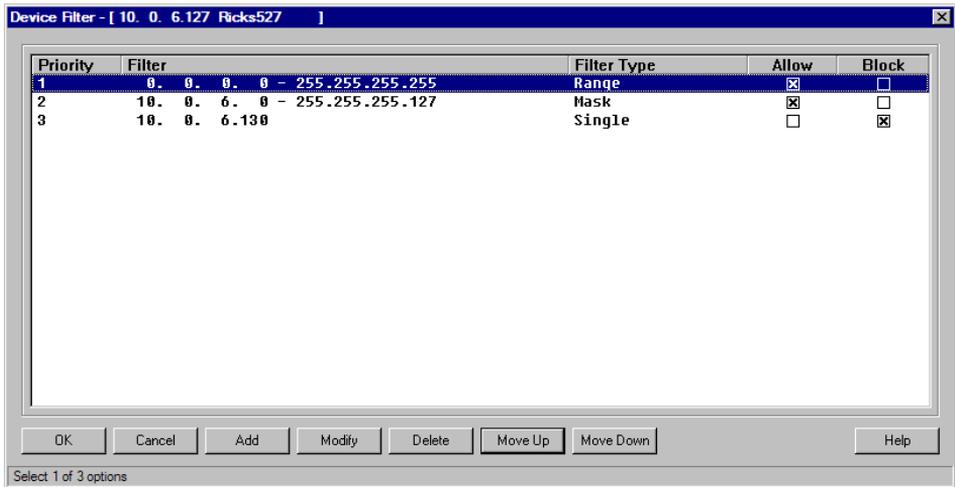


Figure 3-29. Device Filter

Caution: When configuring IP filtering, be careful not to remove all entries from the selected device. This would leave the device inaccessible.

The Device Filter dialog lists the individual IP Filter entries that currently define the selected device's overall filtering scheme. By default, a device will have a single IP Filter entry that allows the device to communicate without restriction.

The following information is provided for each IP filter entry:

- ✧ **Priority** – When a device attempts to communicate with a particular IP address, TAC I/NET refers to the device's IP filter entries in order of their priority. The highest priority entry that encompasses the particular IP address will determine whether or not communication will be allowed.
- ✧ **Filter** – This column shows the single IP address, range of IP addresses, or base IP address and mask defined for the IP filter entry.

- ❖ **Filter Type** – This column indicates whether the IP filter entry represents a single IP address, a range of IP addresses, or a mask.
 - ❖ **Allow** – An appearing in this column indicates that communications are allowed with the IP address(es) encompassed by the entry.
 - ❖ **Block** – An appearing in this column indicates that communications are *not* allowed with the IP address(es) encompassed by the entry.
3. Add a new entry by selecting **Add**, or modify an existing entry by highlighting it and selecting **Modify**. The Device Filter Configuration editor opens (Figure 3-30).

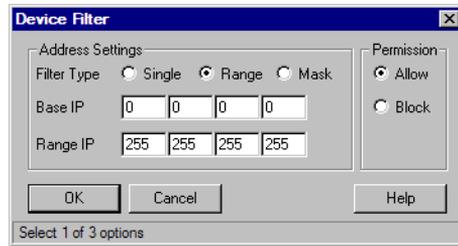


Figure 3-30. Device Filter Configuration

Single IP Address

For a single IP address, use the Device Filter Configuration editor as follows:

- a. Select a **Filter Type** of **Single**.
- b. Type the **IP Address**.
- c. Assign a **Permission** to **Allow** or **Block** communications with this IP address.
- d. Select **OK** to accept these settings and close this editor.

Range of IP Addresses

For a range of IP addresses, use the Device Filter Configuration editor as follows:

- a. Select a **Filter Type** of **Range**.
- b. Type the **Base IP** address. This is the lowest IP address affected by this filter entry.
- c. Type the **Range IP** address. This is the highest IP address affected by this filter entry.
- d. Assign a **Permission** to **Allow** or **Block** communications with the IP addresses encompassed by this filter entry.
- e. Select **OK** to accept these settings and close this editor.

Mask

This option filters IP addresses based on a base IP address and a mask. The mask identifies the portion of the Base IP address that defines a network or subnet.

Use this filter as follows:

- a. Select a **Filter Type** of **Mask**.
 - b. Type a **Base IP** address.
 - c. Type a **Mask**. Type 255 for each octet of the Base IP address that represents a portion of the network address or subnet address. For example: if the Base IP address defines a class B network, define a mask of 255.255.0.0. If the base IP address defines a subnet or Class C network, set the mask to 255.255.255.0.
 - d. Assign a **Permission** to **Allow** or **Block** communications with the IP addresses encompassed by this filter entry.
 - e. Select **OK** to accept these settings and close this editor.
4. Select **OK** to accept these setting and close the Device Filter Configuration editor.

Using File Equalization

Caution: *Before upgrading a TAC I/NET Seven filemaster or an equalized client to a newer host software build, ensure that you first demote the workstation back to standalone status. Otherwise, you risk corrupting database contents among all equalized workstations.*

Note: *You must have Windows Administrator rights in order to make any changes to your TAC I/NET Seven configuration that will effect file equalization.*

File equalization is not available on the workstation if your Link type is “NetPlus Router,” “Integrated Dial,” or “Integrated NPR Dial.” Refer to “Serial Port” on page 3-13, for information on these Link types.

If your PC uses SQL Server 2005/2008 Express as the server for TAC I/NET Seven’s database, refer to “Registering INetEqzMerge as a Windows Service” in Chapter 1 of TCON299, “TAC I/NET Seven System Operator Guide,” before making your PC an equalized client.

File equalization is essential in TAC I/NET Seven systems where multiple host workstations will be used to manage access control or TAC I/NET Seven’s network configuration. It allows host workstations connected to an Ethernet LAN to share certain database information while still maintaining their own TAC I/NET Seven database.

File equalization is a function of the SQL server that is installed on TAC I/NET Seven workstations. The SQL server ensures that each individual workstation has up-to-date copies of equalized information. The equalized information includes:

- ◆ NETCON (network configuration)
- ◆ Host passwords
- ◆ Controller passwords
- ◆ Tenant data
- ◆ User-defined tenant field labels
- ◆ Individual records

- ◆ Group door assignments
- ◆ Elevator floor assignments
- ◆ Trend plot data

The Filemaster

Note: *Microsoft SQL Server 2005 Express Edition does **not** provide the replication services that are required on the filemaster. Ensure that you configure TAC I/NET Seven on the filemaster to use an edition of SQL server other than SQL Server 2005 Express Edition.*

The filemaster and all equalized clients must use matching versions of SQL Server, either 2000 or 2005.

In an equalized TAC I/NET Seven system, one host workstation is designated as the filemaster. This designation is performed in the TAC I/NET Seven's Configuration Profile editor and is maintained in the configuration profile. When you set the **Workstation type** to "Filemaster", TAC I/NET Seven automatically completes the **Filemaster name** field with the Computer name (found in the Identification tab under Windows' Network settings). The **Filemaster name** field is read-only *on the filemaster station* and cannot be changed.

It is important that the workstation designated as the filemaster be constantly powered and that its SQL service be running. The SQL service will dock an icon in the system tray to indicate it is active.

Caution: *If the filemaster workstation is powered off, or if SQL services are not available, file equalization cannot occur. It is recommended that the filemaster workstation be powered by a uninterruptable power supply (UPS).*

Access-protecting the Filemaster

To help create a secure equalized data environment, TAC I/NET Seven employs user authentication. As you configure the workstation to be a filemaster, you will be asked to supply proper authentication for TAC I/NET Seven and the workstation's local SQL database server. As other workstations are being promoted to equalized clients, they must supply the correct user authentica-

tion: for TAC I/NET Seven *on the filemaster*, for their *local* SQL database server, and for the *filemaster's* SQL database server. If a workstation does not provide the proper authentication, it will not be promoted and will not receive equalized data.

When you set the **Workstation Type** parameter in the Configuration Profiles editor to “Filemaster”, the system displays the User Authentication dialog shown in [Figure 3-31](#).

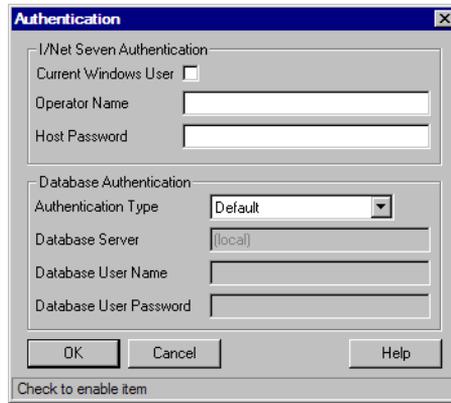


Figure 3-31. User Authentication on the Filemaster

The upper section of the User Authentication dialog is used to authenticate you as an authorized TAC I/NET Seven user with rights to configure the TAC I/NET system. The lower portion of the dialog is used to authenticate you as an authorized administrator of the local TAC I/NET Seven SQL database.

Authenticate yourself on the filemaster by performing the steps described in “[User Authentication](#)” on [page 3-6](#). When you are finished with the User Authentication dialog, close it, close the Configuration Profiles editor, and then close the Configuration Profiles summary.

Immediately after you close the Configuration Profiles summary, TAC I/NET Seven begins configuring your workstation as a filemaster. You may also receive a message explaining that the I/O server must be shutdown and restarted before your workstation can become a filemaster (see [Figure 3-32](#)). In you receive this

message, shutdown all TAC I/NET Seven clients and I/O server and restart TAC I/NET Seven.



Figure 3-32. I/O Server Restart Message

As the workstation is being configured, various balloon-style messages appear near the I/O server system tray icon (see Figure 3-33). These messages provide information on the current status of the configuration process.

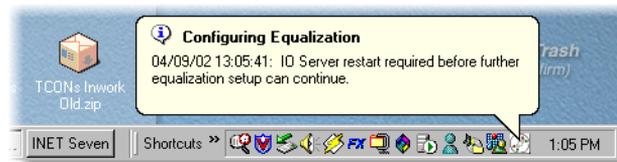


Figure 3-33. Balloon-style Messages

When the configuration process is complete, the I/O Server system tray icon will change, indicating that your workstation is now a file-master. Refer to Table 3-1 to learn more about the I/O Server system tray icons and their meanings.

Creating a Snapshot of the TAC I/NET Seven Database

The system automatically creates a “snapshot” of this workstation’s current database as soon as it finishes configuring itself as a file-master. This snapshot, along with any changes that may have occurred since the snapshot was created, will be sent to other workstations as they are being promoted from a standalone workstation to an equalized client.

Note: *While the database snapshot is being created, no equalized clients will receive updated information from the filemaster. During this time, the I/O Server icon in the filemaster system tray changes to a cyan color, indicating that the server is busy.*

Viewing the Filemaster's Equalized Clients

If there are client workstations that are equalized by your filemaster, you can view them from within the filemaster's Configuration Profile editor as follows:

1. Select the **Clients** button to open the File Equalization Clients dialog (see Figure 3-34). This button is only available after the process of promoting the workstation to filemaster is complete.

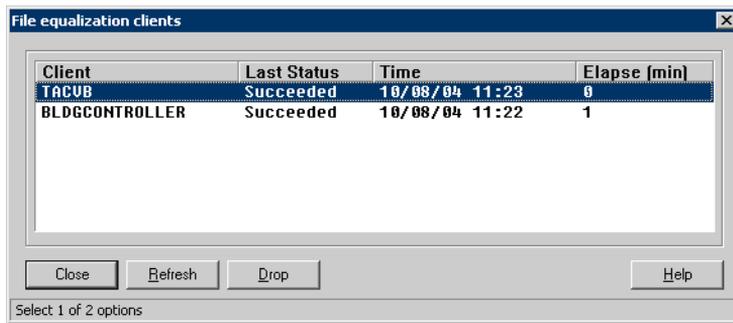


Figure 3-34. File Equalization Clients Dialog

The File Equalization Clients editor lists all equalization clients that reference this workstation as their filemaster. The following information is displayed for each client appearing in the list:

- **Client** – This is the computer name assigned to the client workstation.
 - **Last Status** – This is the result of the last successful communication between the filemaster and client.
 - **Time** – This is the time of the last successful communication between the filemaster and client.
 - **Elapse (min)** – This is the number of minutes that have elapsed since the last time the filemaster and client successfully communicated with each other.
2. You can use the **Refresh** button at any time to update the display of clients.

3. If necessary, you can highlight a client in the list and use the **Drop** command to prohibit the selected client from receiving further updates from this filemaster.

Dropping a client is not the same thing as demoting the client to a standalone workstation. However, if you wish to re-establish equalization between the filemaster and the dropped client, you will have to demote the client to a standalone workstation, and then promote it back to a client workstation.

Promoting a Standalone Workstation to Equalized Client

Caution: *Before upgrading a TAC I/NET Seven filemaster or client to a newer host software build, ensure that you first demote the workstation back to standalone status. Otherwise, you risk corrupting database contents among all equalized workstations.*

Note: *You must have Windows Administrator rights in order to make any changes to your TAC I/NET Seven configuration that will effect file equalization.*

The filemaster and all equalized clients must use matching versions of SQL Server, either 2000 or 2005.

If you are promoting your workstation to be an equalized client (that is, you have set the **Workstation type** to “Equalized client”), the system displays the Authentication editor (see [Figure 3-31 on page 3-54](#)).

Use this editor to supply the correct user authentication for TAC I/NET Seven on the filemaster, for your local TAC I/NET Seven SQL database, and for the filemaster’s TAC I/NET Seven SQL database. If you do not provide the proper authentication, your workstation will *not* be promoted and will *not* receive equalized data. Refer to “User Authentication” on [page 3-6](#) for complete instructions.

When you are finished with the User Authentication dialog, close it, close the Configuration Profiles editor, and then close the Configuration Profiles summary.

If I/O server is running, TAC I/NET Seven begins configuring your workstation as an equalized client immediately after you close the Configuration Profiles summary. Otherwise, TAC I/NET Seven begins configuring your workstation as an equalized client the next time I/O server starts.

As the workstation is being configured, various balloon-style messages appear near the I/O server system tray icon (see [Figure 3-33 on page 3-55](#)). These messages provide information on the current status of the configuration process. When the configuration process is complete, the I/O Server system tray icon will indicate your workstation's status (see [Table 3-1 on page 3-2](#)).

Multiple Access

TAC I/NET Seven allows operators from multiple workstations to edit equalized data. As operators make changes to equalized data, the changes are sent to the filemaster for processing. Changes sent to the filemaster are also saved in the equalized client's local SQL database.

As operators work concurrently within TAC I/NET Seven, it is possible that two or more operators may attempt to edit the same record at the same time. In this case, the last record processed is the version that will be saved in the filemaster's SQL database. TAC I/NET Seven will display a message if your edits could not be saved because of multiple access.

Using a Client/Server Configuration

Note: *You must have Windows Administrator rights in order to make any changes to your TAC I/NET configuration that will affect the client/server configuration.*

Client and server workstations must use matching versions of SQL Server, either 2000, 2005, or 2008.

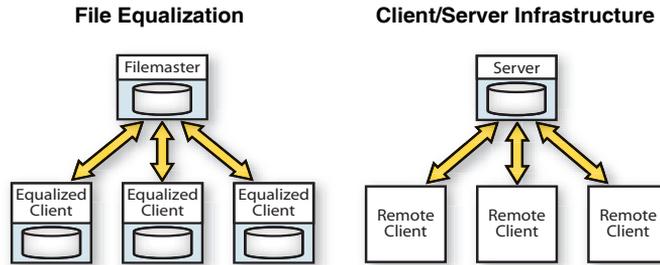
TAC I/NET's client/server configuration allows multiple workstations connected to an Ethernet LAN to share a single SQL database.

Much like file equalization, the client server infrastructure ensures that each participating workstation has up-to-date data concerning the following areas of TAC I/NET:

- ◆ NETCON (network configuration)
- ◆ Host passwords
- ◆ Controller passwords
- ◆ Tenant data
- ◆ User-defined tenant field labels
- ◆ Individual records
- ◆ Group door assignments
- ◆ Elevator floor assignments
- ◆ Trend plot data

Perhaps the biggest difference between the client/server infrastructure and file equalization is that in a client/server system, a single TAC I/NET database is being shared among multiple workstations. Remote clients do *not* maintain a local database.

The following illustration shows some of the key differences between file equalization and the client/server infrastructure:



Key points:

- ◆ Each workstation maintains its own SQL database.
- ◆ Each equalized client uses local system resources to maintain the local SQL database.
- ◆ If the filemaster goes offline, each equalized client can continue to operate.
- ◆ Inherent database redundancy lowers risk of data loss after a catastrophic system failure on the filemaster.

Key points:

- ◆ Only the server maintains an SQL database.
- ◆ Fewer system resources are required on each remote client since there is no local SQL database.
- ◆ Anytime the server is offline, no remote clients can run TAC I/NET Seven.
- ◆ The use of a single shared database raises the risk of data loss following a catastrophic system failure on the server.

The Server

Caution: *If the server workstation is powered off, disconnected from the Ethernet, or its SQL services are not available, TAC I/NET Seven on remote clients cannot operate. It is recommended that the server workstation be powered by a uninterruptible power supply (UPS).*

Note: *Client and server workstations must use matching versions of SQL Server, either 2000, 2005, or 2008.*

Server Configurations

The server in a client/server configuration can be another TAC I/NET Seven host workstation or it can be a computer that simply has SQL services installed and running. Each type of server configuration is described below.

Server *with* TAC I/NET Seven Installed

Note: *Do not use a Filemaster as the server in a client/server configuration. Doing so may cause the Filemaster to change to a standalone workstation, thus dropping its equalized clients.*

Any TAC I/NET Seven workstation on the Ethernet that is configured as “Standalone” can be used as a server in a client/server network.

The workstation being used as the server will not only manage and maintain the I/NET database, but it will also be responsible for collecting and storing trend and AMT data. This will require that the routing masks on the server be configured to allow collection of trend and AMT data. No remote clients should be configured to collect trend and AMT data.

When a TAC I/NET Seven workstation is used as the server, all remote clients must be configured as “Remote Client”. Refer to “Remote Clients” on page 3-62 for more information.

Server *without* TAC I/NET Seven Installed

The server in a client/server network is *not* required to run TAC I/NET Seven. The server must be on the Ethernet, provide SQL services, allow authorized clients to connect, and have an I/NET database. You can create the initial I/NET database on the server remotely from a TAC I/NET Seven host workstation. Refer to [Chapter 4, DbCreate](#), for instructions.

Because the server does not run TAC I/NET Seven, it will be the responsibility of a remote client workstation to write trend and AMT data to the I/NET database. Only one remote client should have this ability. This client must be configured as “Remote Client w/IO” and its routing mask settings must allow for collection of

trend and AMT data. All other clients must be configured as “Remote Client”. Refer to “Remote Clients” on page 3-62 for more information.

Maintaining Availability of the Server

Because remote clients rely heavily on the server’s database for their operability, it is imperative that the server always remain powered up and online. If the server goes offline, TAC I/NET Seven on remote client workstations will stop responding until the server comes back online or until TAC I/NET Seven times out.

Remote Clients

Note: *You must have Windows Administrator rights in order to configure a workstation to be a remote client.*

Client and server workstations must use matching versions of SQL Server, either 2000, 2005, or 2008.

All TAC I/NET workstations configured as a remote client must connect to a server. These workstations will rely completely on the server’s SQL database engine and its I/NET database. Therefore, remote client workstations do not require a local I/NET database.

You can configure a workstation to be a remote client by setting the **Workstation type** to either of the following:

- ◆ **Remote client** – This type of remote client is incapable of routing trend data or AMT messages to the I/NET database. This client relies on the routing capabilities of another TAC I/NET Seven workstation (either the server itself or a remote client w/IO) to route trend and AMT data to the database. If all remote clients are configured as “remote client”, then the PC being used as the SQL server must also run TAC I/NET Seven and be configured to provide routing of trend and AMT data.
- ◆ **Remote client w/IO** – This type of remote client *can* route trend data and AMT messages to the I/NET database. By configuring one remote client this way, the PC being used as the SQL server is not required to run TAC I/NET Seven. In fact, the server *should not* have TAC I/NET Seven installed to

avoid the possibility of duplicate data being written into the I/NET database. No more than one remote client in a client/server configuration should be configured as “Remote client w/IO” (i.e., all other remote clients should use the “Remote client” setting described above).

When you configure the workstation as a remote client, TAC I/NET Seven will attempt to verify that you are a valid TAC I/NET Seven user on the server workstation, and that the “Configuration” system tray function is enabled for your password. This helps to ensure that no data on the server gets accessed by unauthorized remote clients. Refer to “[User Authentication](#)” on page 3-6 for more information.

Configuring a Workstation as a Remote Client

In order to configure a workstation as a Remote client, you must:

1. Set the **Workstation Type** to “Remote client” or “Remote client w/IO”.
2. The system will display the Authentication editor, allowing you to login and connect to the database server. Refer to “[User Authentication](#)” on page 3-6 for more information.
3. Select **OK** to close the Configuration Profiles editor.

When the workstation is configured as a remote client, it will no longer maintain its own SQL database. Instead, the workstation will share the server’s SQL database.

Limitations to TAC I/NET Seven on Remote Clients

Remote clients configured as “Remote client w/IO” have access to TAC I/NET Seven’s full functionality. Remote clients configured as “Remote client” do *not* have access to the following TAC I/NET Seven features:

- ◆ Network functions
- ◆ Automatic DPU restore
- ◆ Trends and multi-point trend
- ◆ Archiving
- ◆ Dial after edit

Additionally, for any client configured as a “Remote client”, the mask settings in the AMT Configuration editor and Host Configuration editor are ignored. Only the mask settings on the server or on the client configured as “Remote client w/IO” will control what messages are received in AMT and what data is stored for trends. You can, however, use unique filter settings at each remote client to control what AMT messages are displayed.

Multiple Access

TAC I/NET’s client/server infrastructure allows multiple operators to edit the database. Thus, it is possible that two or more operators may be attempting to edit the same record at the same time.

Each time a record change is saved, it is stored in the database by the SQL server on the server workstation. So, in the case of multiple edits, the last one processed by the SQL server is the version that will then be stored in the database.

TAC I/NET Seven includes a utility called DbCreate that provides you with basic database and migration tools (see Figure 4-1).

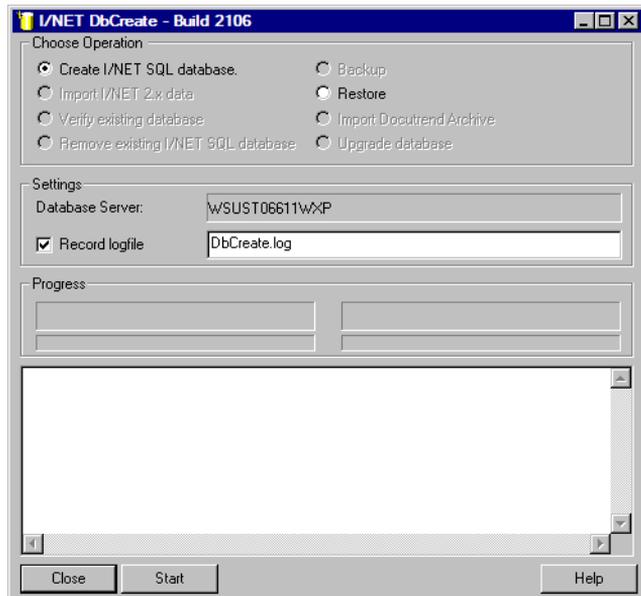


Figure 4-1. DbCreate Utility

DbCreate's first task will be to create an empty database for your newly installed TAC I/NET Seven system. Although you can use DbCreate to manually create an empty database, it creates the initial TAC I/NET Seven database automatically during the TAC I/NET Seven install process. Besides creating an empty database, you may find other uses for the DbCreate utility. For example, you may wish to use DbCreate to import data from a previously installed TAC I/NET 2000 version 2.x system in order to upgrade to TAC I/NET Seven.

Use DbCreate to perform any of the following tasks:

- ◆ Create an empty database
- ◆ Import 2.x data
- ◆ Import a Docutrend Archive
- ◆ Verify the schema of an existing SQL database
- ◆ Remove an existing TAC I/NET Seven SQL database
- ◆ Backup an SQL database
- ◆ Restore an SQL database
- ◆ Upgrade the database
- ◆ View SQL version information

Recording a Log File

Regardless of the task being performed, you can have DbCreate record a log file of its activities. When you activate () the **Record logfile** option, DbCreate will record a log file. The path and file-name may be specified. If no path is specified, the file is created in the current directory. Also, if the path specified is invalid, the current directory is used.

There are two levels of logging: normal and verbose. By default only significant events are logged. When you run DbCreate using the `-V` (verbose) command line argument, other informational events are also logged.

Monitoring Progress

Once an operation has started, its progress can be monitored in the lower half of the DbCreate dialog. Side-by-side progress bars show the overall progress of the operation (left progress bar) and of the individual task being performed (right progress bar).

If you have chosen to import TAC I/NET 2000 2.x data, the **Start** button changes to **Abort**, and all other controls are disabled. Pressing **Abort** will attempt to stop the operation in progress. When the database creation process is interrupted in this manner, the database will be removed. When a migration process is interrupted, the database will be rolled back to the state before migration started.

Launching DbCreate

DbCreate gets installed into the route directory of TAC I/NET Seven during installation. The Install program creates a shortcut to the DbCreate executable and adds it to the **INET** program group in the Windows Start menu.

DbCreate *cannot* run while IO Server is running. If you attempt to run DbCreate while IO Server is running, the following message will appear on your screen:

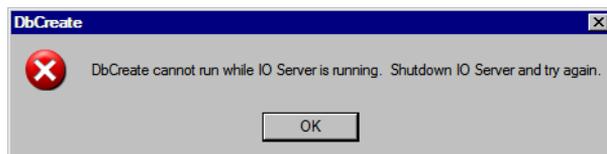


Figure 4-2. DbCreate Message

Depending on how IO Server is configured on your system, you may be required to manually stop the IO Server. For instructions, refer to “[Manually Shutting Down IO Server](#)” in [Chapter 1](#), of TCON299, *TAC I/NET Seven System Operator Guide*.

To launch DbCreate:

- ◆ From the Windows Start menu, select **All programs**, expand the **INET** program group and select **DbCreate**.

Logging In

When you start DbCreate, a login editor opens (see [Figure 4-3](#)). You must log into the SQL server as the system administrator before you can make changes to TAC I/NET Seven's underlying database.

To login:

1. The **SQL Server** field allows you to point DbCreate to the proper instance of SQL server.

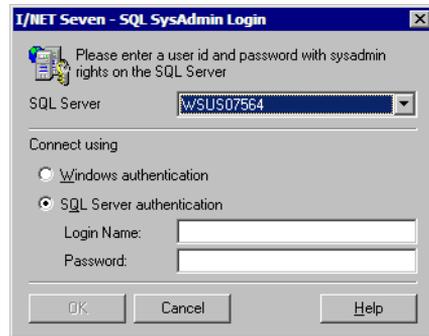


Figure 4-3. Login Editor

If your workstation has multiple instances of SQL server, or if TAC I/NET Seven’s database is located on another computer, use the **SQL Server** field to choose the database you wish to affect with DbCreate.

This parameter is expressed as:

COMPUTER_NAME\INSTANCE_NAME

- ❖ *COMPUTER_NAME* – By default, the computer name is the name assigned to your local workstation. If you wish to use DbCreate to affect the TAC I/NET Seven database on another computer, type the name of the other computer.
 - ❖ *INSTANCE_NAME* – The instance name can be any instance of the SQL server that exists on the local workstation or the remote computer. *This portion of the parameter will be omitted for any unnamed instance of SQL Server.*
2. If your Windows user account provides you with “Administrator” privileges for the computer specified in the **SQL Server** field, you can select the **Windows authentication** option and skip to [Step 4](#).
 3. To manually log onto the SQL server, select the **SQL Server authentication** option and perform the following steps:
 - a. Type the proper system administrator **Login Name**.

- b. Type the appropriate password. For security reasons, an asterisk (*) will appear for each character you type.
4. Select **OK** to log into the SQL server. When you successfully login, the login editor closes.

Creating an Empty Database

To create a new SQL database:

1. Choose **Create I/NET SQL Database** in the “Choose Operation” frame.
2. You can keep a record of the DbCreate process by enabling () the **Record Logfile** option and defining a filename for the logfile.
3. Click **Start**.
4. As the database is being created, you are prompted to assign a login name and password to the accounts used for TAC I/NET Seven SQL access and for 3rd-party access (see [Figure 4-4](#)).



Figure 4-4. Set SQL Accounts

Setup the accounts as follows:

- a. In the **I/NET Seven SQL Access** section of the editor, perform the following steps:
 - ✦ To assign an I/NET-generated default login name and password to the TAC I/NET Seven database, select the **Default Account** option.
 - ✦ To manually define a login name and password, select **Create this Account**.
 - ✦ If you chose to manually define the account, define a **Login name** and **Password**. Retype the password in the **Verify Password** field.
- b. Repeat the steps above for **3rd-party Access**.
- c. Select **OK**.

Note: If you receive an error that the TAC I/NET Seven database cannot be created, you may already have a detached TAC I/NET Seven database (perhaps from a previously installed TAC I/NET Seven system). This can occur if you uninstall and then reinstall the SQL Server without first using DbCreate to remove your existing TAC I/NET Seven database. Refer to [“Manually Removing a Detached TAC I/NET Database”](#) on page 4-20 for instructions on how to recover.

Importing TAC I/NET 2000 Revision 2.x Data

Before you import data from a TAC I/NET 2000 workstation, ensure that its Docutrend events and access information (i.e., the RWONLINE file) is as up to date as possible. Online Docutrend data can be imported only once. If you perform a subsequent import of TAC I/NET 2000 data, the Docutrend events and access portion of the data will be ignored.

The import process can last just a few minutes, or may take an hour or more, depending on the size and complexity of your TAC I/NET 2000 database and the speed of your host workstation. Be sure to allot ample time for the import process to complete.

If your TAC I/NET Seven system is configured to use file equalization, ensure that you import TAC I/NET 2000 2.x data on the Filemaster workstation only. The Filemaster will then distribute the information to each client workstation as necessary.

The Import Process

To import TAC I/NET 2000 2.x data into an existing TAC I/NET Seven database:

1. On an equalized system, ensure that you are performing these steps from the Filemaster workstation. Otherwise, proceed with these steps on your standalone workstation.
2. Choose **Import I/NET 2.x data** in the “Choose Operation” frame.
3. Click **Start**. This button changes to **Abort**, allowing you to stop the import process at any time.
4. A new dialog opens allowing you to navigate to the TAC I/NET 2000 Rev. 2.x system root directory (see [Figure 4-5](#)). Highlight the directory and select **OK**.

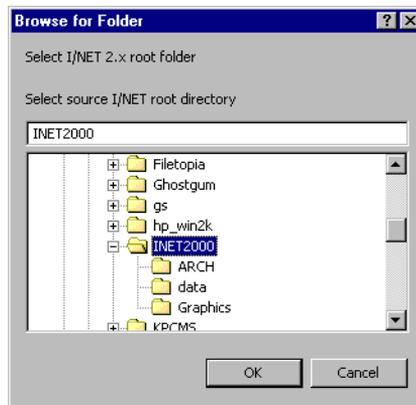


Figure 4-5. Browsing to the TAC I/NET 2000 Root Directory

5. The system now displays a dialog asking you to choose import options (see Figure 4-6).



Figure 4-6. Import Options

Choose the necessary options as follows.

- a. If you are importing a TAC I/NET 2000 system that was used in conjunction with Video Badging, specify the **Image path field** (i.e., the individual parameters field that stores the image path). Otherwise, leave this option at “None.”

Note: *During the import process, no Video Badging images are actually imported. Only the path to the image is stored. You must manually copy Video Badging images from your previous TAC I/NET system to your new TAC I/NET Seven system.*

- b. Specify how duplicate records are to be handled. They can automatically replace existing records, they can be ignored, or you can choose on a per case basis.
- c. During the process of importing TAC I/NET 2000 data, you can retain the key/card translation table records that exist in the TAC I/NET 2000 database, or you can have these records converted to the large key/card numbers that are supported by TAC I/NET Seven. If you wish to have these records converted, enable the **Convert trans-**

lation records to big card # option. Refer to “Converting Key/card Translation Records During Import” on page 4-11 for more information.

6. Select **OK**. The data import process now begins. You can select **Abort** at any time to stop the import process.
7. If you specified an image path field in **Step 5a** and a record containing a path is found, the system displays the dialog shown in **Figure 4-7**.

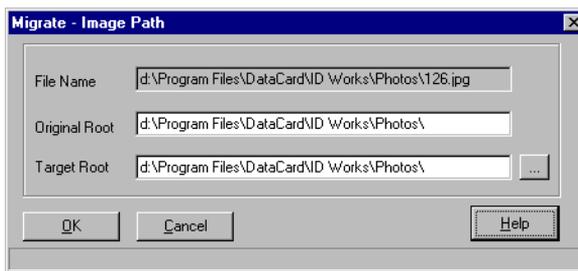


Figure 4-7. Image Path Dialog

The view-only **File Name** field shows the image path and file-name contained in the record being imported. The **Original Root** and **Target Root** fields also contain this image path (minus the filename). Since you are migrating to a new TAC I/NET Seven system, the path to your images may have changed. You can use the **Original Root** and **Target Root** fields to define an image path that is correct for your new system.

- a. Use the **Original Root** field to specify the portion of the image path that is common to all images on the previous system. For example, if you are importing data from a two-tenant system, then perhaps Tenant 1 images are located in `c:\images\t1\` and Tenant 2 images are located in `c:\images\t2\` on the previous system. In this case `c:\images\` is common for all images.

- b. In the **Target Root** field, specify the common path to images on the TAC I/NET Seven system. For example, if Tenant 1 images are now stored in **d:\pictures\t1** and Tenant 2 images are stored in **d:\pictures\t2**, then define the **Target Root** as **d:\pictures**.
- c. Select **OK** to continue. The data import process resumes.

As records containing an image path are imported, the portion of the path that matches the **Original Root** field will be replaced with the **Target Root** field setting.

Example:

Note: In the following example, specific drive designations are being used rather than UNC paths. The best practice in TAC I/NET Seven is to specify UNC path names. Refer to the discussion following this example for more information about using UNC paths.

If the image path in the imported record is:

c:\images\t1\pic001.jpg

The **Original Root** is:

c:\images

And the **Target Root** is:

d:\pictures

Then the image path stored for that record in TAC I/NET Seven will be:

d:\pictures\t1\pic001.jpg.

Using UNC Paths to Define Shared Image Locations

In a network, the Universal Naming Convention (UNC) is a way to identify a shared file without having to specify (or know) the storage device on which it resides. In the Windows operating system, the UNC name format is:

\\servername\sharename\path\filename

If the images on your TAC I/NET Seven system reside at a shared location (i.e., in a remote PC's shared folder, or a local folder that is being shared with other TAC I/NET Seven host workstations), ensure that you define a "UNC" path to the images. Otherwise, if

an operator at another TAC I/NET Seven host workstation double-clicks the image thumbnail, TAC I/NET Seven will be unable to locate and display the full-size image.

The import process provides you with an excellent opportunity to convert image paths to UNC-compliant paths. Using the **Original Root** and **Target Root** fields described above, you can convert mapped or local drive designations to a UNC path.

Example:

If the images on your TAC I/NET 2000 system were stored at:

c:\images\t1 (for tenant 1),

c:\images\t2 (for tenant 2), etc.

And images on your TAC I/NET Seven system are stored:

On a workstation named “MyComputer”

In a shared directory named “pictures”.

Then set the **Original Root** to:

c:\images

And the **Target Root** to:

\\MyComputer\pictures

An imported record containing an image path of:

c:\images\t1\pic001.jpg

Gets stored in TAC I/NET Seven as:

\\MyComputer\pictures\t1\pic001.jpg.

Converting Key/card Translation Records During Import

When using DbCreate to import TAC I/NET 2000 data, you now have the option of converting the records contained in key/card translation tables to the large key/card number format that is supported in TAC I/NET Seven. By using the large key/card number format, you can take advantage of DPU memory optimization features offered within the TAC I/NET Seven system. Refer to “[Large Number Support](#)” in [Chapter 9, Access Control](#), of the TAC I/NET Seven Technical Reference Guide for more information.

How Translated Key/cards Convert to Large Numbers

The translation table records from a TAC I/NET 2000 system contain Source and Target information for each key/card in a range. The Source information represents the original number assigned to the key/card. The Target information represents the translated key/card number that falls within the 1 to 24000 range supported in TAC I/NET 2000.

In order to convert the translated key/cards to the large number format, the Source information for each key/card is used to create the large key/card number. For example, if the Source value of the first key/card is 50000, and 100 key/cards are being translated, then the resulting converted key/cards will be numbered 50000, 50001, 50002, and so on until the last key/card record is converted to 50099.

Importing a Docutrend Archive

To import a Docutrend archive into the TAC I/NET Seven database:

1. Choose **Import Docutrend Archive** in the “Choose Operation” frame.
2. You can keep a record of the backup process by enabling () the **Record Logfile** option and defining a filename for the logfile.
3. Click **Start**. This button changes to **Abort**, allowing you to stop the import process at any time.
4. A new dialog opens allowing you to locate the Docutrend archive. Highlight the archive and select **Open**.
5. The import process now begins. You can select **Abort** at any time to stop the import process.

Verifying an Existing SQL Database

To verify an existing database schema:

1. Choose **Verify existing database** in the “Choose Operation” frame.
2. You can keep a record of the DbCreate process by enabling () the **Record Logfile** option and defining a filename for the logfile.
3. Click **Start**.

Removing an Existing TAC I/NET SQL Database

To remove a TAC I/NET SQL database:

1. Choose **Remove existing I/NET SQL Database** in the “Choose Operation” frame.
2. You can keep a record of the DbCreate process by enabling () the **Record Logfile** option and defining a filename for the logfile.
3. Click **Start**.

Backing Up an SQL Database

To backup a TAC I/NET SQL database:

1. Choose **Backup** in the “Choose Operation” frame.
2. You can keep a record of the backup process by enabling () the **Record Logfile** option and defining a filename for the logfile.
3. Click **Start**.
4. A new dialog is presented, allowing you to specify the name and location of the backup file that will be created.

If you specify the name of an existing backup file, the data from this backup will be appended to the existing file. If you were to restore this backup file, the restore process would only access the data from the last backup appended to the file. Therefore, in order to prevent your backup file(s) from becoming larger than necessary, specify a new backup file-name each time you perform a backup.

5. Select **OK**. The backup process now begins.

Detaching from the Database

Occasions may arise when you wish to restore an SQL database from a backup. This action requires that the TAC I/NET Seven system be detached from the SQL database.

To detach TAC I/NET Seven from the database:

1. First, stop the SQL Server by performing the following steps:
 - a. Right-click on the SQL Server icon () in the system tray. A context menu will appear at your mouse cursor position.
 - b. Select **MSSQLServer - Stop** from the context menu.
 - c. The SQL Server Service Manager displays a message asking you if you wish to stop the MSSQLSERVER service. Select **Yes**.
 - d. The SQL Server Service Manager displays another message warning you that the services dependent on MSSQLServer will also stop. Select **Yes**.
 - e. The MSSQLServer begins shutting down. The SQL Server icon changes () to indicate that the server has completely stopped.
2. Now restart the SQL Server as follows:
 - a. Right-click on the SQL Server icon () in the system tray. A context menu will appear at your mouse cursor position.

- b. Select **MSSQLServer - Start** from the context menu. The SQL Server begins to startup.
- c. The SQL Server icon changes () to indicate that the server has started and is running.

At this point it is safe to begin restoring an SQL database from a backup. Refer to “[Restoring an SQL Database](#)” below for instructions.

Restoring an SQL Database

Note: *If you are using file equalization, never perform a database restore on a client workstation. Only restore the database on the filemaster workstation.*

If you are restoring a backup file that contains multiple backups, only the most recent backup can be restored.

To restore a TAC I/NET SQL database:

1. Choose **Restore** in the “Choose Operation” frame.
2. You can keep a record of the restore process by enabling () the **Record Logfile** option and defining a filename for the logfile.
3. Click **Start**.
4. A new dialog box is presented, allowing you to specify the path to the backup database and the restored database.

Use this dialog box as follows:

- a. In the **Specify Backup Device** section of the dialog box, use the text field to define the path to the backup file. You can use the “...” button to locate the backup file.
- b. In the **Override database path** section of the dialog box, you can use the text field to define a location for where DbCreate should place the restored database. If you leave this field blank, the restored database will be placed in the

default location as defined in the SQL server. You can use the “...” button to choose a new location for the restored database.

- c. Select **OK**.
5. If you are restoring a filemaster workstation on an equalized system, a message is displayed explaining that file equalization must be shutdown. Select **Yes** to allow the filemaster to drop its client subscriptions, or select **No** to cancel the restore process. If you select **Yes**, the restore process begins.

Note: As the filemaster drops its client subscriptions, client workstations will no longer receive equalized data. The only indication of this at a client workstation is that the I/O server icon will change to the standalone workstation icon.

6. When the restore process completes, perform an upgrade to ensure that TAC I/NET Seven can properly use the newly restored database. Refer to [“Upgrading the TAC I/NET Seven Database” on page 4-17](#) for instructions.
7. Ensure that the database has been restored and upgraded successfully by performing a verification of the database. Refer to [“Verifying an Existing SQL Database” on page 4-13](#) for instructions.
8. If this is a standalone workstation, the restore process is now complete and you can close DbCreate.
9. On an equalized TAC I/NET Seven system, when you have finished restoring the filemaster, you must then re-establish file equalization as follows:
 - a. Perform the following tasks from the filemaster:
 - ✦ Close DbCreate.
 - ✦ If the restored backup file was created on another workstation, and that workstation uses a different TAC I/NET Seven CD key than this filemaster, you must demote the filemaster to a standalone workstation and then promote it back to filemaster. Use the **Equalization filemaster** option in the I/NET Config-

uration Editor to perform these tasks. Please note that anytime you change the setting of the **Equalization filemaster** option, you must exit and restart the I/O server in order for the change to take affect.

- ✦ Start TAC I/NET Seven. After approximately 30 seconds the filemaster begins to generate a snapshot. Allow the filemaster to complete this process.
- b. Perform the following tasks from each client workstation:
 - ✦ Perform an upgrade of the database. Refer to “Upgrading the TAC I/NET Seven Database” on page 4-17 for instructions. If a message informs you that the upgrade is not required, force the upgrade by selecting **Yes**.
 - ✦ Once the client workstation has been upgraded, close DbCreate and run TAC I/NET Seven. This will restore the client's subscription at the filemaster.
 - ✦ As file equalization is being established, the filemaster will send a snapshot to the client. Balloon-style temporary messages on the client workstation display the progress of this process and notify you when the process is complete.

Upgrading the TAC I/NET Seven Database

As changes and enhancements become available for TAC I/NET Seven, the structure of the TAC I/NET Seven database may also change.

To upgrade your TAC I/NET Seven database:

1. Choose **Upgrade database** in the “Choose Operation” frame.
2. You can keep a record of the backup process by enabling () the **Record Logfile** option and defining a filename for the logfile.
3. Click **Start** to begin the upgrade process.

4. If your database is already up-to-date, a message informs you that the upgrade is not required. This message shows the build number and the modified date and time.

You can either force the upgrade to continue by selecting **Yes**, or you can cancel the upgrade by selecting **No**.

5. As the database is being updated, you are prompted to assign a login name and password to the accounts used for TAC I/NET Seven SQL access and for 3rd-party access.

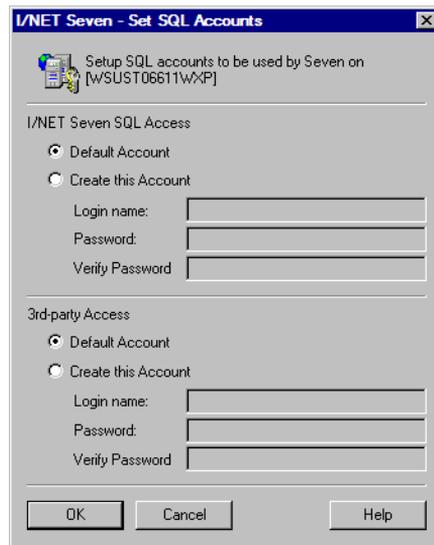


Figure 4-8. Set SQL Accounts

Setup the accounts as follows:

- a. In the **I/NET Seven SQL Access** section of the editor, perform the following steps:
 - ✦ To assign an I/NET-generated default login name and password to the TAC I/NET database, select the **Default Account** option.
 - ✦ To manually define a login name and password, select **Create this Account**.
 - ✦ If you chose to manually define the account, define a **Login name** and **Password**. Retype the password in the **Verify Password** field.
- b. Repeat the steps above for **3rd-party Access**.
- c. Select **OK**.

Viewing SQL Version Information

You can use DbCreate to view information about the version of the SQL server that is currently being used as the server for TAC I/NET Seven's database.

To view SQL version information:

1. Right-click on the titlebar of the DbCreate window and select **About** from the resulting popup menu.
2. In the lower portion of the resulting dialog box, view the SQL version information.
3. When you are finished, click **Close** to close the dialog box.

Manually Removing a Detached TAC I/NET Database

Caution: *In the following procedures, you are told to stop SQL Services on your workstation. Ensure that you follow these instructions exactly. Manually removing a TAC I/NET Seven database while SQL Services are running will cause **complete loss of TAC I/NET Seven data** and may also cause your workstation to lockup or crash.*

Perform the following procedures only in the rare occasion that your workstation has been left with a detached TAC I/NET Seven database that is preventing DbCreate from creating an empty database or from removing the existing database. Alternatively, if no other applications on your computer use the SQL server, you can uninstall TAC I/NET Seven and the Microsoft SQL Server Engine, delete the “C:\Program Files\Microsoft SQL Server” directory, and then reinstall TAC I/NET Seven.

Deleting the TAC I/NET Seven Database

The following procedures explain how you can manually delete a TAC I/NET Seven database from your system. Use these procedures only if your attempts at using DbCreate to create an empty database and to remove an existing database have failed.

To delete the TAC I/NET Seven database:

1. Stop SQL Services on your workstation as follows:
 - a. Right click on the SQL Server icon in the system tray. A popup menu appears.
 - b. Select **Open SQL Server Service Manager** from the popup menu. The SQL Server Service Manager dialog opens.
 - c. In the Services field, select “SQL Server.”
 - d. Click the **Stop** button.
 - e. A message appears asking you if you are sure you wish to stop the services. Select **Yes** to continue.

- f. Another message appears, explaining that other dependent services will also be stopped. Select **Yes** to continue.
 - g. The status bar at the bottom of the dialog shows that the services are stopping. When the status bar indicates that the services have “Stopped,” proceed to the next step.
2. Locate and delete the TAC I/NET Seven database as follows:
 - a. Locate the folder containing the TAC I/NET Seven database (“*INETDB.MDF*”) in the Microsoft SQL Server installation directory. Typically, the path will be “C:\Program Files\Microsoft SQL Server\MSSQL\Data.”
 - b. Delete the following two files:
 - + *INETDB.MDF*
 - + *INETDB.LDF*
3. Restart SQL Services on your workstation as follows:
 - a. Right click on the SQL Server icon in the system tray. A popup menu appears.
 - b. Select **Open SQL Server Service Manager** from the popup menu. The SQL Server Service Manager dialog opens.
 - c. In the Services field, select “SQL Server.”
 - d. Click the **Start/Continue** button. The status bar at the bottom of the dialog shows that the services are starting. When the status bar indicates that the services are “Running,” proceed to the next step.
 - e. In the Services field, select “SQL Server Agent.”
 - f. Click the **Start/Continue** button. The status bar at the bottom of the dialog shows that the services are starting. When the status bar indicates that the services are “Running,” proceed to the next step.
 - g. Close the SQL Server Service Manager dialog.

Creating a new TAC I/NET Seven database

Before you can run TAC I/NET Seven, you must use DbCreate to create an empty SQL database. Refer to [“Creating an Empty Database”](#) on page 4-5 for instructions.

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