Infor ERP FACTS

Installation Manual

Release 7.70.00

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Infor ERP FACTS

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PREFACE

Welcome to FACTS! With over 2,000 installations, FACTS is one of the leading accounting packages for the wholesale distribution market.

Its suite of highly integrated modules addresses the needs of distributors in the areas of Electronic Commerce, Asset Management, Financial Management and Customer Service.

FACTS ties together all of your business processes. Quotes convert easily into sales orders, while Purchasing gets automatic notification of any special order needs.

Key advantages

Flexible, easy-to-use interface. FACTS boasts an intuitive interface, easing the learning curve for new users. Consistency in program design across the application means users that know how to use one part of the system hardly need training on other areas.

Immediate access to information. You are not required to memorize codes to locate information in FACTS. Using the search feature, you can quickly find and select information from a list, no matter how long it is. A variety of sort orders, filter options and multiple keywords help you pinpoint the information you need.

Maximum value, low cost of ownership. FACTS carries the lowest overall total cost of ownership in the industry. Component-based architecture helps keep hardware costs down and make it cost effective to customize the system to your company's needs.

Local Sales and Service. FACTS is supported by direct offices in selected cities and an unbeatable network of Authorized Solution Partners located across the U.S. and Canada. With this team of more than 500 professionals dedicated to the success of FACTS in your business, we provide the best and most cost-effective local sales, service and support in the industry.

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About the FACTS Installation Manual

This manual is designed with the FACTS Channel Partner and FACTS Implementation Consultant in mind. *This is a technical manual*, and it is not intended for the end user.

About the format

The following is a brief explanation of each chapter provided in this manual.

Chapter 1 provides an overview of prerequisites and requirements for installation. It also provides information about where to find third-party installation instructions.

Chapter 2 provides instructions for installing FACTS on a UNIX host. It also provides instructions on Windows clients and printers.

Chapter 3 provides instructions for upgrading existing FACTS systems to the current version of FACTS on UNIX.

Chapter 4 provides instructions for installing FACTS on a Windows server and clients. It also provides information on printer configuration

Chapter 5 provides instructions on upgrading existing FACTS systems to the current version of FACTS on Windows.

Chapter 6 provides installation and configuration instructions for General Report Writer.

Chapter 7 provides installation and configuration instructions for Unform.

Chapter 8 provides installation and configuration instructions for VSI-FAX Server and clients software needed to run the FaxLink module.

Chapter 9 provides instructions on how to configure the ICVERIFY/FACTS integration.

Chapter 10 provides instructions on how to configure tools from ProvideX, including the ODBC Driver and Data Dictionary utilities in NOMADS, users can view and analyze FACTS data with any of the 32-bit ODBC-compliant data handling applications, such as MS-Access, MS-Query and Crystal Reports..

Chapter 11 provides instructions on how to configure ProvideX Application Server for FACTS.

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Conventions used in this manual

The following conventions are used throughout this manual. Make sure you are familiar with these conventions

➲	Indicates a statement or paragraph that is critical to the installation process.
bold items	When used in a set of instructions, bold type indicates items that need to be selected, such as directories, files, buttons, etc.
Start →Programs →WindX	Italicized words connected by arrows indicate a series of selections you need to make to reach a menu item either in FACTS or Windows.
[information in brackets]	Indicates information you need to enter that is specific to your installation, such as IP addresses or drive letters.
Boxed text in margins	Contain important background information, such as terminology or technical tips.
`Courier font`	Indicates code or UNIX commands

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CHAPTER 1

Introduction

Welcome to the FACTS 7.7 Installation Manual. This guide is provided to help you through the FACTS installation and configuration process.

Installation prerequisites

You must be familiar with UNIX and Windows operating systems to successfully install the FACTS system and you should know how to configure TCP/IP in the customer's chosen operating system.

You will also need a working knowledge of the BASIC language to run ProvideX conversion programs and utilities.

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Understanding the FACTS directory structure

Once installed on the server, FACTS resides in a straightforward, well-organized directory structure comprised of data files and program files.

The FACTS installation media is set up so that the installation process creates this structure in a FACTS subdirectory named **infor/facts77** in UNIX or **INFOR/FACTS77** in Windows, which becomes the main FACTS directory. Determine where on your server that main directory needs to reside and indicate that during the installation procedure.

For example, if you install FACTS in the root directory, the main FACTS directory becomes **/infor/facts77** in UNIX or **C:\INFOR\FACTS77** in Windows.

The following tables illustrate the main FACTS directory (infor/facts77) and its subdirectories as they appear on the UNIX installation media. The Windows directory structure is the same, except it uses backslashes.

Core Modules	FACTS Data Files	FACTS Programs	Other
Accounts Payable	infor/facts77/data/AP	infor/facts77/prog/AP	
Accounts Receivable	infor/facts77/data/AR	infor/facts77/prog/AR	
General Ledger	infor/facts77/data/GL	infor/facts77/prog/GL	
Inventory Control	infor/facts77/data/IC	infor/facts77/prog/IC	
Purchase Orders	infor/facts77/data/PO	infor/facts77/prog/PO	
Sales Analysis	infor/facts77/data/SA	infor/facts77/prog/SA	
System Management	infor/facts77/data/SM	infor/facts77/prog/SM	
Office Automation	infor/facts77/data/OA	infor/facts77/prog/OA	
Job Stream	infor/facts77/data/JS	infor/facts77/prog/JS	
Sales Orders	infor/facts77/data/SO	infor/facts77/prog/SO	
Add-on Modules	**FACTS Data Files**	**FACTS Programs**	**Other**
FaxLink*	infor/facts77/data/FL	infor/facts77/prog/FL	infor/facts77/faxlink
Job Cost	infor/facts77/data/JC	infor/facts77/prog/JC	
Manufacturing Control	infor/facts77/data/MC	infor/facts77/prog/MC	
Payroll	infor/facts77/data/PR	infor/facts77/prog/PR	
Service and Repair	infor/facts77/data/SR	infor/facts77/prog/SR	

Chart continued on next page

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Other	FACTS Data Files	FACTS Programs	Other
ProvideX			/infor/facts77/pvx/
WindX			\pvx
ODBC			/usr/pvxodbc (UNIX location)
Adobe Acrobat			\infor\facts77\Acrobat
Report Writer		infor/facts77/prog/RW	infor/facts77/gen6x
Unform			infor/facts77/unform
VSI-FAX			facts77/vsi-fax
Modification Support			infor/facts77/mods

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Understanding the FACTS Authorization Code Sheet

This is a confidential document Infor delivers with each new installation. It provides you with information that is critical to the installation process.

- FACTS serial number
- Number of users licensed for FACTS
- Primary company name
- Annual License Fee expiration date
- Modules purchased
- List of companies that will be set up in FACTS
- Serial numbers, activation keys, package Ids, and package activation keys for all ProvideX products purchased

➲ **If you did not receive an Authorization Code Sheet or if the information on the sheet is incorrect, contact your authorized solution partner.**

Because the order in which you enter this information is critical, please make sure you are familiar with the sheet's layout and its contents before you begin.

The document essentially consists of two parts. The top section contains FACTS authorization information. Beneath that, you'll find serial numbers and activation keys for ProvideX products.

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Understanding WindX and the pvxhost script

WindX can help improve performance on FACTS systems running on ProvideX by offering a thin-client solution.

The program is designed to run on a direct TCP/IP connection. TCP/IP is not the only connectivity solution for WindX clients, however.

Telnet is another option that offers greater security, but it may compromise speed.

To achieve maximum performance, the majority of WindX installations use direct TCP/IP connection by way of two programs – *NTHOST and *NTSLAVE – or the ProvideX Application Server to provide communications between WindX clients and hosts running ProvideX.

ProvideX Application Server

ProvideX offers a robust, secure solution for TCP/IP connectivity on either Windows or Unix systems. The Application Server allows the greatest flexibility and security of any of the WindX connectivity solutions.

Refer to the ProvideX manuals for information on installing, configuring and maintaining the Application Server.

*NTHOST and *NTSLAVE

*NTHOST is a server-side program that runs continuously in the background. It exists solely to monitor a particular TCP socket number – 10000 by default– and respond to calls from clients.

*NTSLAVE, on the other hand, is the client-side program that retains the server's TCP/IP address and the socket number the server monitors. It also tells ProvideX which program to run so that the FACTS Banner Screen is the first thing users see after they double-click the WindX desktop icon.

The process begins when a user double clicks on the WindX desktop icon and *NTSLAVE calls the server at the TCP/IP address and socket number provided.

When *NTHOST hears this call, it calculates the next open socket number on the server and spawns a new ProvideX session running the program indicated on the WindX command line, usually SSIWDX. It then instructs the WindX client to renegotiate a connection on a new socket where a new ProvideX session is running.

On Windows Server platforms, there is no *respawn* equivalent. The Windows server installation creates an NT HOST shortcut icon on the desktop.

If you need to restart the server, double click this icon to restart the NT Host script.

Pvxhost script (`UNIX installs only`)

The FACTS install script places *pvxhost* in the **infor/facts77** directory. This script runs *NTHOST on the server. During UNIX installations, a line must be added to end of **etc/inittab** to respawn *NTHOST.

The following is an example of what the pvxhost script looks like after installation.

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```
FHOMEDIR=/infor/facts77
PVXDIR=${FHOMEDIR}/pvx
MODS_DIR=${MODS_DIR:-"${FHOMEDIR}/mods"}
PVXLIB=${PVXDIR}/lib
# Note!  Uncomment the following line if you are installing on a Linux
machine.
#SSITERM=wy60

SSI_NO_OA=${SSI_NO_OA:-"N"}
# "N" - Check for unread OA messages in FACTS menu driver
# "Y" - Do not check OA for unread messages (speeds up FACTS menu driver)

UMSK=0
MEM=512

export FHOMEDIR
export PVXDIR
export MODS_DIR
export SSI_NO_OA
export PVXLIB
# Note!  Uncomment the following line if you are installing on a Linux
machine.
#export SSITERM

####### Set temporary TERM variable ##########################

if [ jjj$SSITERM != jjj ]
then
  OLDTERM=${TERM}
  TERM=${SSITERM}
  export TERM OLDTERM
fi

# If running VSI-FAX, uncomment the following line
# . /etc/vsifax3.sh

cd ${FHOMEDIR}

# NOTE! Max port goes between the '000' and '</dev...' on the following line

${FHOMEDIR}/pvx/pvx \*nthost -arg 10000 FACTS_user 000 10999
</dev/null>/dev/null 2>/dev/null
```

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Modifying pvxhost (UNIX installs only)

Notice that the last line contains the *NTHOST arguments.

10000 represents the **tcp_socket** number that the server monitors. *NTHOST defaults to 10000, but it is possible that this port is already assigned to another service. Check /etc/services to make sure socket 10000 is available and it is followed by a block of open sockets so that *NTHOST has room to assign new socket numbers. If not, find a socket that meets these requirements, but make sure the socket is greater than 5000. Anything less than the 5000 block is reserved for Internet services.

FACTS_user indicates the **user_id.** ProvideX switches to this user (*su*) when it starts new sessions. **Therefore**, **any permissions assigned to this user ID will be passed on to all WindX clients**. Do not assign **root** and make sure the user ID does not require a password.

000 is the **umask**.

10999 is the **max_port**. This argument is optional, but when it's used it tells *NTHOST the maximum port it is allowed to assign. Administrators may need to set this to keep WindX from interfering with other services.

</dev/null {space}>/dev/null {space}2>/dev/null prevents the activation key from becoming corrupt when *NTHOST is running in the background from /etc/inittab.

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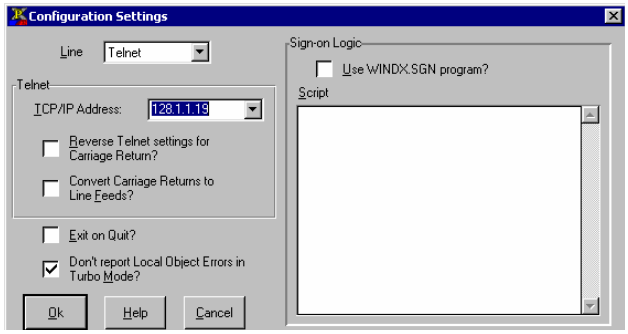
Technical Insight: Alternative WindX configurations

Telnet as an option

In general, the *NTHOST/*NTSLAVE solution provides the best performance for WindX users, but Telnet is another alternative.

In a Telnet configuration, WindX acts as a smart terminal emulator, logging into the UNIX server as if it were a terminal. But once ProvideX starts, WindX switches into thin-client mode, providing users with all the graphical functionality they would expect on a PC.



Because Telnet forces users to go through a UNIX prompt, it provides more security than the straight TCP/IP approach. However, according to ProvideX, transmission speeds may degrade to as much as a tenth of a direct client-server connection.

Configuration involves fewer steps, since Telnet connections don't use *NTHOST and all the setup happens client-side:

1. Start WindX and select *Settings* from the top menu bar. (The *Settings* option may not appear if you start WindX from a shortcut. Try opening WindX from the Start menu, i.e., *Start→Programs→WindX).*
2. In the Configuration Settings window, set Line to Telnet. Then enter the server's TCP/IP address and click OK.
3. Choose **Connect**.

Users should see a standard UNIX sign on prompt, at which they can enter their sign on and password. Once WindX sees the ProvideX session, it will switch into thin-client mode and users can operate in the FACTS graphical user interface.

After their initial sign on, users simply need to double-click the WindX icon, click **Connect** and enter their sign on and password.

*Using Multiple *NTHOST sessions on UNIX*

It is possible to run multiple *NTHOST sessions on a UNIX system so that several different groups can connect to the host – each signing on with different permissions. This option gives administrators more flexibility in the area of security.

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To do this:

1. Create two *NTHOST scripts. In the *NTHOST task of the first script, set

   a socket number

   a user ID with one set of permission levels

   and a maximum port so the first session doesn't step on the second session.

Then in the second script, set

a *different* socket number

the user ID with different set of permissions

and if needed, a new maximum port.

For example, the first script might end with

```
/infor/facts77/pvx/pvx \*nthost -arg 10000 Jim 000 12500 </dev/null >/dev/null 2>/dev/null
```

And at the end of the second script, the following might appear

```
/infor/facts77/pvx/pvx \*nthost -arg 13000 Richard 000 14500 </dev/null >/dev/null 2>/dev/null
```

Notice that the socket numbers are spread out over a large enough block to give *NTHOST room to assign socket numbers as clients connect.

2. Run both scripts from /etc/inittab to complete the server-side configuration.
3. Configure the clients by creating WindX desktop shortcuts for each client and, in the **Target**, enter the socket number in the *NTSLAVE statement that corresponds to the appropriate user ID with the appropriate permission level.

For example, clients that need server permissions associated with user_id Jim would see the following in the Target line of their WindX shortcuts

```
c:\pvx\pvxwin32.exe *ntslave -arg 151.2.11.34 SSIWDX 10000
```

Clients requiring server permissions associated with user_id Richard would see this Target line in their WindX shortcuts

```
c:\pvx\pvxwin32.exe *ntslave -arg 151.2.11.34 SSIWDX 13000
```

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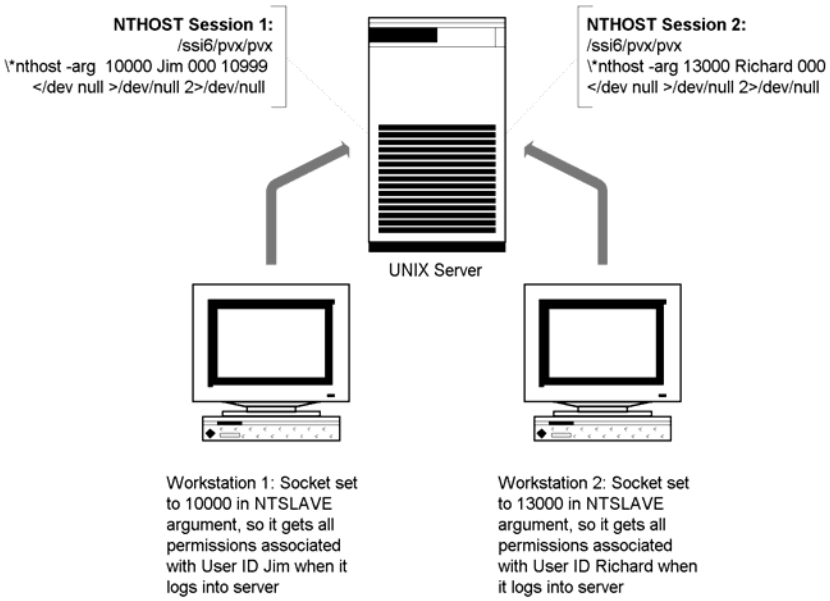
Multiple NTHOST Sessions



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Additional resources and documentation

The Installation CD contains installation and user documentation for the following third-party products:

ProvideX

ProvideX ODBC

WindX

General Report Writer

If you need additional information on these products, or you need installation documentation for other third-party products, review the following contact information.

For additional information on...	Go to...
ProvideX, WindX and ODBC	www.pvx.com
Electronic Data Interchange (EDI)	http://edialliance.com/
Archive, Document Delivery, Email, and Pro BI	www.earnestassoc.com
VSI-FAX (Esker)	www.esker.com
General Report Writer and Unform	www.synergetic-data.com
Adobe Acrobat Reader and PDF files	www.adobe.com

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Infor ERP FACTS

CHAPTER 2

Installing FACTS in UNIX Environments

These instructions work for the following UNIX operating systems:

IBM AIX v5.3

SCO OpenServer 6

Redhat Enterprise Linux 5

Things to know before you begin

- The Unix install of FACTS 7.7 must be done from a stand-alone WindX session.
- Install FACTS, ProvideX, and third-party products after normal business hours. All users are logged off the system.
- Read the section "Understanding SSI_BASE enviroment variable." Make sure you have the FACTS Authorization Code Sheet (see Chapter 1).
- Read the section "Understanding WindX and the Pvxhost script" in Chapter 1.
- Create a user ID with appropriate rights for WindX users, 'facts' for example. This user must not be *root*. If running pvxhost from inittab then the user ID does not require a password. *AIX users:* Make sure the nproc is set as high as possible so that WindX users don't run out of sessions.
- Make sure TCP/IP is set up and working. Test the connection by pinging the server from a client and visa versa. If you are not familiar with TCP/IP, do not procede with these instructions.
- FACTS 7.7 requires that the API Toolkit be running at all times users are running FACTS. At the conclusion of the installation, instructions for setting up and running the API Toolkit will follow.

FACTS customers typically should not attempt to perform their own installations. If you asked Infor to send media directly to a client's site, inform your contact that installation should not begin until an authorized Solution Partner is on site.

Incremenatal Update

Before proceeding, make sure you have the latest 7.7 incremental update. To do this log onto the Nexus, choose the Incremental updates link and download the incremental update files.

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Place the incremental files in a temporary location. Simply note the location of the files - do not do anything with them at this time. The automated installation process will apply the incremental update.

Installing FACTS

Process overview

1. **Install FACTS on the server.** The installation script installs the current Infor certified version of FACTS, ProvideX, and any third-party products if they have been purchased.
2. **Install FACTS client and WindX on all FACTS client PCs.** Use the FACTS Installation CD to install WindX client software on each client PCs that will be used to run FACTS. Assign one SSI_BASE value per client installation. *Instructions begin on 2-13.*
3. **Configure printers to run FACTS reports, prints and registers.** Make a list of the printers that FACTS users need to access. Create link files and modify drivers to produce the desired formats. *Installation instructions begin on page 2-19*
4. **Configure any third-party products purchased.**

   Refer to Chapter 6 for Report Writer.

   Refer to Chapter 7 for Unform.

   Refer to Chapter 8 for VSI-FAX and FaxLink.

   Refer to Chapter 11 for ODBC.
5. **Setup and run the FACTS API Toolkit.** The standard process involves setting up SMU954 as a cron job. An alternate process involves purchasing, configuring and running the ProvideX Web Server.

Server installation

IMPORTANT: FACTS 7.7 requires the Unix installation be performed through a Stand-alone WindX connection.

WindX

1. On a client, PC, install WindX: Place the FACTS Installation CD in the CD drive.
2. Wait for the InstallShield to start automatically or if autorun is not enabled on your computer, run FACTS77.exe from the CD.
3. Select *WindX.*
4. From the WindX screen, select *Standalone.*
5. Choose **Next** at the Welcome screen.
6. If you agree to the terms of the license agreement, select the appropriate statement, and choose **Next**.

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7. Enter Customer Information, and choose **Next**.
8. If prompted, select the appropriate installation type.

   Upgrade:

   a) Choose the appropriate version you wish to upgrade, and click **Next**.

   b) Continue with step 10

   New Install:

   a) Continue with next step.

9. On the Destination Folder screen, **make sure the destination directory is C:\infor\facts77\pvx, not C:\Program Files\Sage Software\WindX V8.30** (assuming you installed FACTS on the C: drive).

   Choose **Change** to change directories. Type the destination directory in the **Folder name** field or navigate to it using the Directory list box. Choose **OK** to return to the Destination Folder screen.

   Choose **Next** to continue with the installation.

10. Choose **Install** to begin the installation.
11. Enter the Main Company name in the Registered User Name field. This is not case sensitive.

    Enter the WindX Serial Number and Activation information from the FACTS Authorization Code Sheet in the ProvideX Activation screen.

    Enter one of the WindX serial numbers from the PVX Serial # column on the FACTS Authorization Code sheet. The system adds a leading zero to the serial number after you enter it. **Do not use this serial number on any other client installations.**

    Enter **1** in the Max. Number of Users field.

    Remove the date in the Expiration Date field if one appears.

    Enter a WindX Activation Key. **This field is case sensitive. Do not assign this activation key on any other client installations.**

    Click Record to continue with the installation.

12. Click **Finish**.
13. Start WindX by selecting Start -> Programs -> Sage Software -> WindX v8.30 -> WindX v8.30
14. Select settings tab. Connect via Telnet, enter the server's IP address, and click **OK**.
15. Click **Connect**.

Server Installation

1. Start WindX and connect to the server via a telnet connection.
2. Sign on to the server as root and make sure TERM is set correctly.

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3. Place the CD-ROM in the drive, and mount the drive. Refer to your current operating system documentation for instructions on drive mounting. We recommend that you name the drive **cd_drive**.

   NOTE: The install script is written to read the contents of the CD as **lower case**. Use the appropriate operating system parameter to mount the CD-ROM as lower case.

4. Change directories to the directory the CD is mounted on (e.g. cd /cd_drive).
5. Type **./install.sh** to launch the installation script. The installation script automatically sets umask to 0.
6. Hit **Enter** past the banner screen.
7. If you agree, hit **Enter** to accept the FACTS license agreement.
8. Choose the operating system running on the server.
9. Select the type of setup you prefer.

   - New Install:

     Installs a FACTS 7.7 release.

     a) Enter the destination directory. **/infor/facts77** is the recommended default. Enter another destination directory if necessary. You also have the option of checking disk space on this screen before you continue with the installation.

     b) Enter the location of the latest incremental update. If there is not an incremental then hit enter to continue.

   - Express Upgrade:

     Installs a new FACTS 7.7 release, and performs an automated upgrade from a previous release using recommended default values.

     a) Enter the FACTS release you are upgrading from.

     b) Enter the path to the home directory of the FACTS version you are upgrading from.

     c) Enter the destination directory. **/infor/facts77** is the recommended default. Enter another destination directory if necessary. You also have the option of checking disk space on this screen before you continue with the installation.

     Important: the destination directory cannot be the same location as the FACTS version you are upgrading from.

     d) Enter the location of the latest incremental update. If there is not an incremental then hit enter to continue.

   - Custom Upgrade:

     Installs a new FACTS 7.7 release, and performs an automated upgrade from a previous release using values entered from the user.

     a) Enter the FACTS release you are upgrading from.

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b) Enter the location of the FACTS version you are upgrading from.

c) Enter the destination directory. **/infor/facts77** is the recommended default. Enter another destination directory if necessary. You also have the option of checking disk space on this screen before you continue with the installation.

Important: the destination directory cannot be the same location as the FACTS version you are upgrading from.

d) Enter the location of the latest incremental update. If there is not an incremental then hit enter to continue.

e) SMFLUP Information:

The generation of SMFLUP will compare the .SSI and the .MOD versions from the source system, and write the net changes, if any, to the SMFLUP file.

Answering these questions will determine the steps it needs to follow in order to properly update the meta-data files.

I. *Do you want the current meta-data files to be copied to have .MOD extensions prior to generating SMFLUP? (Y/N)*

It is **required** that this always be answered **'Y'** to ensure the .MOD files contain the latest modifications. Answering 'N' will use the .MOD files already in place to generate the SMFLUP file.

II. *Do you want all .NEW files to be copied to have both no extension and a .SSI extension after SMFLUP has been generated? (Y/N)*

It is **required** that this always be answered **'Y'**. This will eliminate all manual renaming of files, and ensures that you continue to work with the new meta-data files.

III. *If you have entered Modification IDs in your meta-data, you can enter the IDs you want SMFLUP to contain.*

It is **required** that this be left blank to accept all mods.

IV. *Do you want custom note categories to be included in SMFLUP? (Y/N) A*nswer Y to bring the custom note types forward. Answer N to eliminate them. It is highly recommended that you answer this question Y.

f) Merge SMFLUP:

If entries are made to the SMFLUP file, these questions will determine how those entries are applied to the meta-data files.

I. *Automatically recreate the .MOD files after the mods are applied? (Y/N)*

It is recommended this always be answered 'N'. Recreating the .MOD versions will automatically erase the current .MOD files and copy the final merged version of the metadata files with all of the modifications applied to .MOD files. This is unnecessary if you always answer 'Y'

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to the question, "*Do you want the current meta-data files to be copied to have .MOD extensions prior to generating SMFLUP?*".

II. Enter modification IDs to merge from SMFLUP

It is **required** that this be left blank to accept all mods. Entering values here could cause some modifications to be left behind.

III. Merge SMFLUP changes for files without Mod IDs

Note: This question is omitted if no Mod IDs were entered. This should always be answered Y.

IV. Apply modifications by:

- Run continuous – changes are applied automatically with no user interaction.
- Stop on exceptions only – only potential problems are presented to the user during the merge process.
- Stop on everything – each change is presented to the user for approval.

Regardless of which method you choose, exceptions will be recorded in the file exceptions.txt, and all changes will be recorded in changes.txt.

- Manual Setup:

  Installs a FACTS 7.7 release, and allows the user to perform the upgrade process manually by following the steps found in Chapter 3.

  a) Enter the destination directory. **/infor/facts77** is the recommended default. Enter another destination directory if necessary. You also have the option of checking disk space on this screen before you continue with the installation.

  IMPORTANT: The destination directory CAN NOT be the same location as the FACTS version you are upgrading from.

  b) Enter the location of the latest incremental update. If there is not an incremental then hit enter to continue.

10. Enter the path the CD is mounted on (ex. /cd_drive).
11. Type **Y** to install FACTS 7.7. Press Enter.
12. Type **Y** to install ProvideX. Press Enter.
13. Indicate if you want to install Report Writer Server.
14. Indicate if you want to install ODBC Client/Server.
15. Enter the **TCP/IP socket** that you want *NTHOST to monitor. The default is 10000. Enter a different socket if another service is running on 10000. See "Understanding WindX and pvxhost script" in Chapter 1 for more information about WindX, TCP/IP services and socket number assignments.

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16. Enter the **maxport** or the highest socket number WindX can use. Multiply the number of FACTS users by nine to determine the range of sockets you need for WindX.
17. Enter the user id previously created with appropriate rights for WindX users. Refer back to the note under '**Things to know before you begin**' if necessary. This should not be *root*. The default is 'facts'.
18. Review the Installation Overview screen, and type **Y** to begin copying files and installing the software. Type **Q** to quit the installation script, if needed, and begin again at Step 4.
19. Enter the ProvideX Serial Number and Activation information from the FACTS Authorization Code Sheet.

    Enter the Main Company name in the Registered User Name field. This is not case sensitive.

    Enter the ProvideX Serial Number from the PVX Serial # column on the Authorization Code sheet. The system adds a leading zero to the serial number after you enter it.

    Enter the Max. Number of Users indicated for ProvideX on the Authorization Code Sheet.

    Remove the date in the Expiration Date field, if one appears.

    Enter the ProvideX Activation Key. **This field is case sensitive.**

    FACTS 7.7 utilizes a second activation key or package# in addition to the standard activation key. The Package# is 774, and you will find its activation key on your FACTS authorization sheet.

    Enter 'P' to activate package# 774.

    Enter 'Q' to save changes and proceed with the installation.
20. The script installs any third-party products selected.
    - ➲ General Report Writer (refer to Chapter 6 for additional instructions)
    - ➲ ODBC Client Server (refer to Chapter 11 for additional instructions)
21. Type **Y** to view the log for any possible errors during the file copy process.
22. If you are performing a manual upgrade, exit this procedure now, and continue with the steps found in Chapter 3.
23. If you are performing an Express or Custom upgrade, the automated upgrade process will begin now. When the script finishes, exit this procedure and continue with the steps found in Chapter 3.
24. Set SSI_BASE according to guidelines in "Understanding the SSI_BASE Environment Variable" in Chapter 1.
25. Add a line to the end of **etc/inittab** that will respawn *NTHOST.

    Example: `apm7:234:respawn:/infor/facts77/pvxhost`

    See "Understanding WindX and pvxhost."
26. Run **./FACTS7,** and begin setting up the INSTALL menu programs.

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Setting up INSTALL menu programs

The FACTS Install Menu enables you to set up the minimum amount of information necessary to get the system operational.

Make sure you have the FACTS Authorization Code Sheet. You may also want to print the System Management File Maintenance chapter (Chapter 10) from the PDF Documentation Library CD so you have a full description of these file maintenances.

For more information about programs on the INSTALL menu, see Chapter 11 in the *System Management* manual.

Edit the programs in the order that they appear.

- Generate SMFLUP
- System Control F/M
- Company F/M
- Company Control F/M
- Terminal F/M
- Printer Maintenance

The following are only used to upgrade from earlier versions of FACTS.

- Merge SMFLUP
- Install FACTS Update

I. For new installations only, at the FACTS INSTALL menu, run Generate SMFLUP.

NOTICE: The generation of SMFLUP is **REQUIRED** to properly establish the structure of all meta-data files. DO NOT SKIP THIS STEP.

This program will compare the .SSI and the .MOD versions from the source system, and write the net changes, if any, to the SMFLUP file.

Running UTR999 (Generate SMFLUP) will ask you several questions to determine the steps it needs to follow in order to properly update the meta-data files.

1. *Do you want the current meta-data files to be copied to have .MOD extensions prior to generating SMFLUP? (Y/N)*

   It is **required** that this always be answered **'Y'** to ensure the .MOD files contain the latest modifications.

2. *Do you want all .NEW files to be copied to have both no extension and a .SSI extension after SMFLUP has been generated? (Y/N)*

   It is **required** that this always be answered **'Y'**. This will eliminate all manual renaming of files, and ensures that you continue to work with the new meta-data files.

3. *If you have entered Modification IDs in your meta-data, you can enter the IDs you want SMFLUP to contain.*

   It is **required** that this be left blank to accept all mods.

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4. *Do you want custom note categories to be included in SMFLUP? (Y/N)* Answer Y to bring the custom note types forward (for instance, if you are upgrading a customer). Answer N to eliminate them. It is highly recommended that you answer this question Y.

NOTE: If .SSI files are missing, you will receive a message. Hit Enter to continue.

NOTE: If you restart UTR999 for any reason, you should restore the data directories to their original state first.

II. Select System Control F/M to begin entering Authorization Code information and other system control settings.

1. Enter the FACTS **Serial Number** *exactly* as it appears on the Authorization Code Sheet.
2. Enter the **Main Company Name** *exactly as it appears* on the FACTS Authorization Code Sheet — character for character. **This field is case sensitive**. Failure to enter an exact match will prevent you from accessing the rest of the system.
3. Accept the current **FACTS Level** —7.6.
4. From the Authorization Code Sheet, enter the Max FACTS Users in the **Maximum Terminals** field. **This must match the Authorization Code Sheet.**
5. Enter the **ALF expiration date** found on the Authorization sheet.
6. Enter the **Affiliate Name** (up to 30 characters).
7. Enter the **Affiliate Phone Number**, including area code.
8. From the Modules Tab, select the **Purchased Modules** that appear on the Authorization Code Sheet.
9. Enter the number of **IC Verify** licenses purchased, if any.
10. Enter the number of CUI and GUI users for General 6+.
11. Enter the full path to the FACTS API Polling and Output directories. NOTE: These directories must be created before they can be entered here! (ex. Polling: /infor/facts77/api/in Output: /infor/facts77/api/out)
12. From the Security Tab, leave the **Use User Tracking** flag set to **N**. Further details pertaining to User Tracking can be found in the System Management Documentation within on-line help or on the documentation CD.
13. Set the number of minutes you want to allow for **Menu Timeout**. You can set the Menu Timeout feature from **1** to **99** minutes.
    - ➲ If you don't want menus to timeout at all, enter 0 in this field.
14. Save all entries made to System Control F/M and exit the program. At the INSTALL menu, an **OK** should appear next to System Control F/M to show that it has been completed.

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III. Select Company F/M from the menu to set up companies in FACTS.

1. Enter the **Company** code (up to two characters) exactly as it appears on the Authorization Code Sheet, for example 01. Failure to enter an exact match will prevent you from accessing the rest of the system.
2. Enter the Company **Name** (up to 30 characters) exactly as it appears on the Authorization Code Sheet. **This field is case sensitive.** Failure to enter an exact match will prevent you from accessing the rest of the system.
3. Enter the company street address (up to 30 characters) in the **Address 1** field. Use **Address 2** and **Address 3** fields for city, state, ZIP and other information.
4. Enter the company **Phone Number** (up to 17 characters), including area code and dashes.
5. Enter the **Authorization Code** assigned to this company. Make sure you enter the code exactly as it appears on the sheet. **This field is case sensitive.** Failure to enter an exact will prevent you from accessing the rest of the system.

   Repeat Steps 1-5 for additional companies.
6. Save the entries made in Company F/M and exit the program. At the INSTALL menu, an **OK** should appear next to Company F/M to show that it has been completed.

IV. Select Company Control F/M to establish company-specific parameters.

Most of this information should have been discussed with the client during personalization interviews.

General Tab

Enter GL number information, item number padding, number of fiscal periods per year, commission and gross margin bases, system date format mask and system override password.

Modules Tab

The Modules Used default to what you entered in Company F/M.

Security Tab

Enter a security code (0-9, A-Z, a-z) that FACTS users will need to enter to set system templates in FACTS reports.

Enter a security code (0-9, A-Z, a-z) that FACTS users will need to enter to export data from FACTS searches.

Repeat the entries for additional companies.

Save all entries and exit the program. An **OK** should appear next to this option to show that it has been completed.

API Publish Tab

If you are using the API Toolkit to publish custom XML to external (i.e. non-FACTS) consumers, set **External Publish Options** -> Publish To- to the proper destination for these external transactions. Otherwise, select N-Not Used.

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If you are using the ProvideX WebServer to receive API transactions (e.g. as with the Storefront integration), you can set the **Internal Publish Options** to either of the available options. If you are not using the ProvideX Webserver you must select **D - API Polling Directories** from System Control F/M. You may use a combination of the WebServer for Storefront and the Polling Directories for FACTS internal transactions. In either case, if you select **D - API Polling Directories** you must start the polling program (SMU954) as described in the API Toolkit Runtime Requirement topic of Security, Chapter 6, of the System Management Users Guide.

V. Select Terminal F/M from the INSTALL menu to set up the T0 record. The T0 record serves as the template for all other terminal records created as users sign into the system.

The Terminal Code field is case sensitive.

For this record and all other Terminal ID records, the security system automatically creates the ID, description and base. It derives the values from the SSI_BASE environment variable you set during the CD installation.

Set **Terminal Colors** and **Special Function** keys as you want them to appear in the rest of the terminal IDs.

Tip: The more defaults you can set in the T0 record *before* users begin to sign in, the better. This means you may want prevent users — or restrict the number of users — that sign into the system before you finish setting up the programs on the System Installation menu (*System Management→System Installation*), specifically, Branch F/M, Department F/M and Warehouse F/M.

For more information about terminal records and how they are created, see "Understanding FACTS Security" in Chapter 1.

Save all entries and exit the program when you are done. An **OK** should appear next to Terminal F/M to show that it has been completed.

VI. Select Printer F/M from the INSTALL menu to set up FACTS printers.

➲ If you have not already created drivers and link files, create at least one dummy printer and refer to the section in this chapter on "Printers, drivers and link files," page *2-19.*

This concludes the FACTS server installation.

Test the installation by signing into FACTS.

Type **./FACTS7** at a UNIX prompt.

When the Banner Screen appears, sign in with the following information:

Login: IN4

Password: IN4

Company number: 01

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If you can successfully sign into FACTS, begin configuring terminals and installing FACTS on PC clients.

Terminal configuration

ProvideX ships with a set of standard terminal drivers and keyboard configuration files. They may not work with every terminal, however. As a result, some keyboards may not respond after initial installation, and some terminals may not display information properly.

Resolving keyboard issues

You may need to set navigation and special function keys after loading the FACTS software. These keys are set in one of two places: the ProvideX keyboard configuration utility (*uck) and on the Keys tab located in Terminal F/M (*System Management→File Maintenances→Terminal F/M)*.

Creating keyboard maps:

1. From the operating system, echo the $TERM variable.

   Example: `echo $TERM`

2. Run "*ufv" and view *kybrd.std. Check to see if a key exists for the $TERM returned from the OS.

3. If a key does not exist for the terminal in question, copy one that is similar and add it to *kybrd.cfg. Rename it to match $TERM. For example,

   ```
   →Open (1) "pvx/lib/_kybrd.cfg"
   →Read record (1,key="wyse60")A$
   →Write record (1,key="wyse50")A$
   →Close (1)
   ```

4. Create the keyboard definitions for this terminal by running "*uck."

5. At the top of the screen, the following message appears: "Keyboard definition utility for [the terminal emulation]. Is this specific to the user?"

   Answer **No**. **Do not** create user-specific keyboard configurations.

6. The first hotkey entry in the main window – F1 – should be highlighted. Use the arrow keys or the U, D, L and R keys to navigate to the fields you want to edit.

   To change an entry, press **Enter** and then press the key or combination of keys that will serve as the hotkey.

   To completely remove an entry (so the key is not mapped), tab to field, press **Enter** and press the **Space Bar**. The field should now be blank.

7. Press **Q** to quit the utility when all the keys are set.

   ➲ Consider disabling PVX-related keyboard shortcuts so users cannot accidentally access ProvideX utilities.

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Disadvantages of user-specific keyboard configuration files. In short, user-specific keyboard configuration files create more work. ProvideX first looks for the user-specific .cfg file, then the system-wide .cfg file and then the .std file corresponding to the terminal in use.

If a user-specific .cfg file exists, ProvideX uses that file and stops looking. It will use the settings in that file and ignore the system-wide .cfg and terminal specific .std files.

As a result, ProvideX ignores any changes made to the system-wide .cfg files and the terminal-specific .std files. Which means you have to edit *each* user's file so that each user will see the changes when user-specific keyboard configuration files are used.

Looking for and removing user-specific keyboard configuration files

Run *ufv to look at *kybrd.cfg for any user-specific entries for the terminal in question. Use *ufu to delete them.

Special function keys trigger the wrong function?

If a hotkey triggers a different function than expected, check the special function keys set in Terminal F/M (*System Management→File Maintenances→Terminal F/M*). If the key or key sequence is already set in Terminal F/M, either change the Terminal F/M special function key setting or use another key sequence in the ProvideX keyboard mapping utility.

Installing WindX on PC clients

Things to know before you begin

- You will need to restart the client workstation to set the SSI_BASE value.
- Verify that TCP/IP is set up on the server and it is running. You should be able to *ping* the server.
- Make sure you have the list of SSI_BASE values you created before server installation. You will assign a value as you install each client. Note: If the PC already has an SSI_BASE value in it's autoexec.bat file, the install will use this value instead of asking for one.
- Make a note of the server's TCP/IP address. You will need it to modify the Shortcut Properties Target line for each client.

  To find the TCP/IP address, look at /etc/hosts using the 'more' or 'pg' command from a unix prompt.
- Locate an open socket on the server. WindX defaults to the 10000 port. If this is occupied by another TCP/IP service, the WindX client cannot communicate with the server.

  Using the command 'more' or 'pg', view the /etc/services file to determine which ports are currently in use.

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Make sure the socket you select has a block of free sockets above it so WindX has room to assign a port for each session of FACTS users need to run.

Tip: Multiply the number of FACTS users by the number of sessions you expect each user to run. The socket you select needs to have at least this many ports above it so users don't receive errors when they try to open multiple sessions of FACTS.

➲ To take advantage of the full text search and indexing features in the PDF Documentation Library, install the version of the Adobe Acrobat Reader included on this FACTS Installation CD. Other versions of the Reader may not necessarily support this feature. Make sure you uninstall any existing versions of the Reader before you begin.

Client Installation

1. Make sure you close any open applications.
2. Place the FACTS Installation CD in the CD drive.
3. Wait for the InstallShield to start automatically or if autorun is not enabled on your computer, run FACTS77.exe from the CD.
4. Select FACTS.
5. Select **Yes** to install FACTS.
6. Choose **Next** at the Welcome screen.
8. If you agree, select **Yes** to accept the FACTS license agreement.
9. Select **Client** as your setup type, and choose **Next.**
10. The destination directory defaults to C:\infor\facts77. Click **Browse** to change drives or directories. Click **Next** when you are ready to continue.
11. If prompted, enter a unique SSI_BASE value for this client, for example the Windows login or the PCs Network ID. If the machine already has an SSI_BASE value assigned to it, the InstallShield will use its value and skip this prompt. See the page *4-1* for more information. Note that the SSI_BASE value should contain no spaces. Choose **Next** to continue.
14. Choose **Next** to accept the default Program Folder name.
15. Review the selections made in the previous screens. Choose **Back** if you need to make any corrections. Otherwise, click **Next** to begin copying files.
16. When all files are copied, choose **Finish**.

Important!

Do not choose the **Server Install** option during client PC installations

The client install only places a small number of files needed for the thin client to operate.

The server installs a full version of the FACTS application.

Installing the WindX thin client

1. From the FACTS Installation CD, select *WindX.*
2. From the WindX screen, select *Standalone.*
3. Choose **Next** at the Welcome screen.
4. If you agree to the terms of the license agreement, select the appropriate statement, and choose **Next**.

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5. Choose **Next** to accept the Customer Information.
6. On the Destination Folder screen, **make sure the destination directory is C:\infor\facts77\pvx, not C:\Program Files\Sage Software\WindX V8.30 Standalone** (assuming you installed FACTS on the C: drive).

   Choose **Change** to change directories. Type the destination directory in the **Folder name** field or navigate to it using the Directory list box. Choose **OK** to return to the Destination Folder screen.

   Choose **Next** to continue with the installation.

7. Select the Standalone version of WindX.

   Standalone:

   Choose **Complete** setup type, and click **Next**.

8. Check the box stating that you understand and accept the Disclaimer Agreement, and click **Install**.
9. Click **OK** at the Demonstration Activation Complete! message.
10. Enter the WindX Serial Number and Activation information from the FACTS Authorization Code Sheet in the ProvideX Activation screen.

    Enter the Main Company name in the Registered User Name field. This is not case sensitive.

    Enter one of the WindX serial numbers from the PVX Serial # column on the FACTS Authorization Code sheet. The system adds a leading zero to the serial number after you enter it. **Do not use this serial number on any other client installations.**

    Enter **1** in the Max. Number of Users field.

    Remove the date in the Expiration Date field if one appears.

    Enter a WindX Activation Key. **This field is case sensitive. Do not assign this activation key on any other client installations.**

    Click Record to continue with the installation.

11. Click **Finish.**

If you get an authorization error when you try to sign into FACTS, you can return to this screen by choosing *Start→Programs→Sage Software→WindX→Activation.*

Verify the serial number and activation key entered.

Setting up and installing the API Toolkit

These instructions address the installation and configuration of the Polling Directory option for the API Toolkit only. For instructions on installing and configuring the ProvideX Web Server for use with the API Toolkit, refer to the *FACTS eCommerce Catalog Integration and Setup* manual.

These instructions assume you understand how to setup a ProvideX program to run as a service.

FACTS 7.7 requires that the API Toolkit be running at all times. There are transactions which FACTS uses to communicate internally, which are processed by the API Toolkit, and the functions within FACTS that rely on those transactions will fail if the Toolkit is not operational.

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The API Toolkit will process these required transactions even if the Toolkit has not been purchased. If you wish to use the API Toolkit for other purposes, you must license it by purchasing the AT module.

Once the API Toolkit is installed and running, you must enter the API Publish key code in API Key Code Entry (SME007). This step also helps prevent unauthorized access to the API by providing a password that is required for access to the Subscribe APIs. The key must be setup as follows:

Key Code: [API-Publ]
Description: API Publish
Password: any value as long as it isn't left blank
Default Co: leave blank
Catalog Requests: No
Send Namespace: No
Date Format: leave blank
Do not enter any valid companies.

The Polling program: SMU954

SMU954 monitors the API Polling directory as setup in System Control F/M for XML transactions. When one is received, it processes it and returns a response (if requested) to the Response directory indicated in System Control F/M.

APIstart script (`UNIX installs only`)

The FACTS install script places *apistart* in the **infor/facts77** directory. This script runs prog/SM/SMU954 on the server. During UNIX installations, a line must be added to end of **etc/inittab** to respawn apistart.

The following is an example of what the apistart script looks like after installation.

```
FHOMEDIR=/infor/facts77
PVXDIR=${FHOMEDIR}/pvx
MODS_DIR=${MODS_DIR:-"${FHOMEDIR}/mods"}
PVXLIB=${PVXDIR}/lib
# Note!  Uncomment the following line if you are installing on a Linux machine.
#SSITERM=wy60

SSI_NO_OA=${SSI_NO_OA:-"N"}
# "N" - Check for unread OA messages in FACTS menu driver
# "Y" - Do not check OA for unread messages (speeds up FACTS menu driver)

UMSK=0
MEM=512

export FHOMEDIR
export PVXDIR
export MODS_DIR
```

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```
export SSI_NO_OA
export PVXLIB
# Note!  Uncomment the following line if you are installing on a Linux
machine.
#export SSITERM

####### Set temporary TERM variable ##########################

if [ jjj$SSITERM != jjj ]
then
  OLDTERM=${TERM}
  TERM=${SSITERM}
  export TERM OLDTERM
fi

# If running VSI-FAX, uncomment the following line
# . /etc/vsifax3.sh

cd ${FHOMEDIR}

# NOTE! Max port goes between the '000' and '</dev...' on the following
line

${FHOMEDIR}/pvx/pvx prog/SM/SMU954 </dev/null>/dev/null
2>/dev/null
```

Configuring the Desktop Icon

1. Right click on the *FACTS 7.7 Client* icon, select Properties and choose the Shortcut tab in the Properties window.

   Assuming you installed FACTS to the C: drive, you should see the following in the **Target field**.

   ```
   C:\infor\facts77\pvx\pvxwin32.exe *ntslave -id=[NAME] -arg [TCP/IP] SSIWDX
   [SOCKET]
   ```

   Enter the client's **id name,** the server's **TCP/IP address** and the **socket** number that the server monitors. Make sure you remove the brackets [ ] Note that the client id name and id=[NAME] portion in the target line information should not contain spaces.

   For example:

   ```
   C:\infor\facts77\pvx\pvxwin32.exe *ntslave -id=Iron -arg 128.1.1.27 SSIWDX 15000
   ```

   → The **-id** argument enables you to see which client workstations are running from the server side.

   → The **TCP/IP address** tells WindX where to contact the server.

   → The **socket number** indicates the port on which the client should connect. **Make sure this matches the socket number entered in the target line of NT Host shortcut icon.**

2. Make sure the **Start in** directory is C:\infor\facts77, assuming you installed FACTS on the C: drive.
3. Click **OK** in the FACTS 7.7 Client Properties window to set the properties.
4. Restart the client workstation to set the SSI_BASE value.
5. Double click the *FACTS 7.7 Client* icon to launch FACTS.

WindX Installation and Configuration Complete

This completes the WindX installation on a FACTS client. You are now ready to begin configuring printers, after which you can enter *PIA Personalization Sheet* data into FACTS by signing into FACTS and accessing the **System Installation** menu (*System Management →System Installation*).

Finally, configure third-party packages according to the instructions provided in this manual and/or the manufacturers' installation manuals located in the 'Third Party Doc' folder on the installation CD.

If any errors occur when you try to sign into FACTS from a client workstation, refer to the troubleshooting tips on page *4-23*.

Bitmap Synchronization:

With FACTS 7.7, when new or updated bitmaps are released, they will automatically be copied to the client's workstation. Each time the user signs on, FACTS checks the server's version file against the version file on the client's PC. If the server's version ID cannot be found in the client's version file, the program copies all the bitmaps and updates the client's version file. While the copy is taking place, "Synchronizing Bitmaps—Please Wait" is displayed.

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Printers, drivers and link files

There are essentially four steps to setting up printers for FACTS.

1. Make a list of required printers.
2. Create a device driver for each printer.
3. Create a link file to associate the driver with the appropriate device.
4. Set up the printer in Printer F/M. This enables users to select printers from menus in reports registers, updates and searches.

FACTS printers refer to output devices users can access from within FACTS.

Logical printers refer to output devices that are based on driver formatting. Multiple logical printers can output to one physical printer.

Physical printers refer to the hardware devices, for instance, an HP Laser Jet 4000 or Genicom dot-matrix printer.

Make a list of required printers

Printer setup in ProvideX and FACTS starts with the PIA manual. Begin by using the FACTS Printer Configuration Worksheet to help you make a list of the printers that need to be configured. We recommend you do this prior to installation.

In our example below, an IC is configuring two physical printers for FACTS. Within FACTS, however, these two printers will appear as four separate printers, called *logical* printers.

Printer ID in FACTS	Description/ characteristics	Device driver	Physical driver	Link file/ alias
0	Genicom			
1	HP 4000 Portrait, 10 cpi			
2	HP 4000 Landscape, 17 cpi			
3	HP 4000 Portrait, 17 cpi			

Most dot-matrix printers can link to one printer driver — std_prtr. This driver accommodates most output formats users need to print from FACTS.

However, Windows-compatible printers, such as laser printers, require that you create different drivers to accommodate different outputs. This is why one HP Laserjet 4000 appears as three different printers in FACTS.

Once you know the different types of outputs the customer needs, you're ready to build device drivers.

Creating device drivers

ProvideX ships with a standard device driver — std_prtr— that handles most dot-matrix printers. It also ships with several generic printer drivers for HP Laser and Epson printers. Drivers are located in the *DEV directory (\PVX\LIB_DEV).

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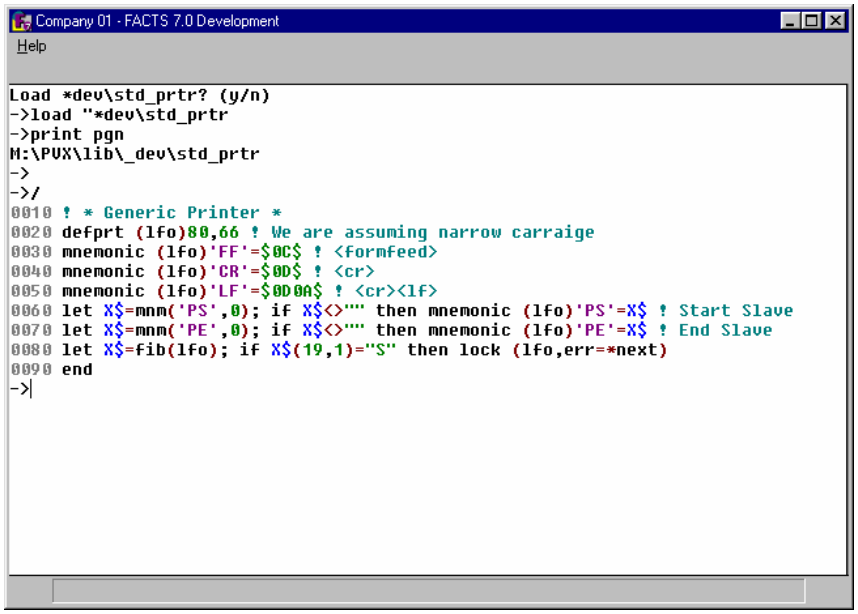
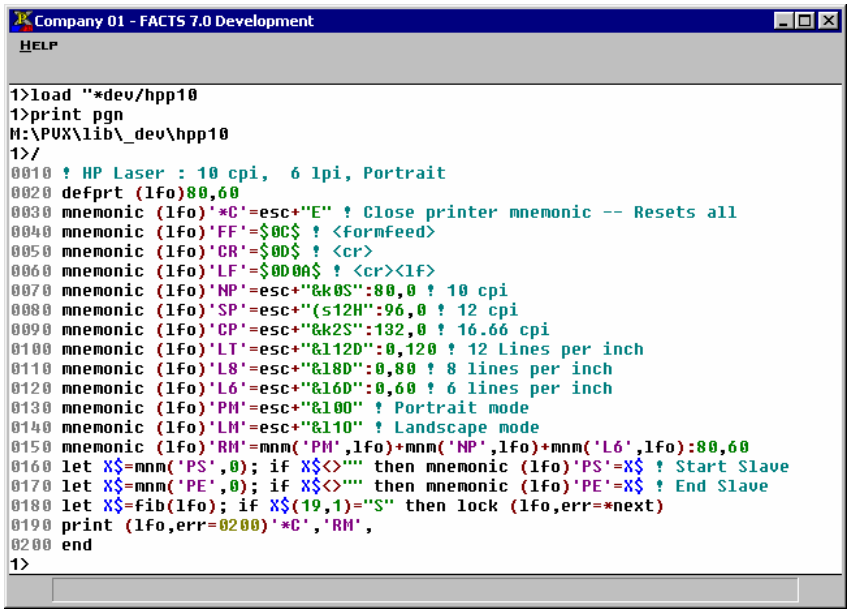
The std_prtr driver that supports most dot-matrix printers appears as follows:



The following shows the standard hplaser driver. This supports outputs to an HP Laser print in 10 cpi Portrait:



Important note Printer device driver names cannot be longer than 13 characters. If they exceed this limit, they will cause an Error 100 (No driver for terminal type of library missing.)

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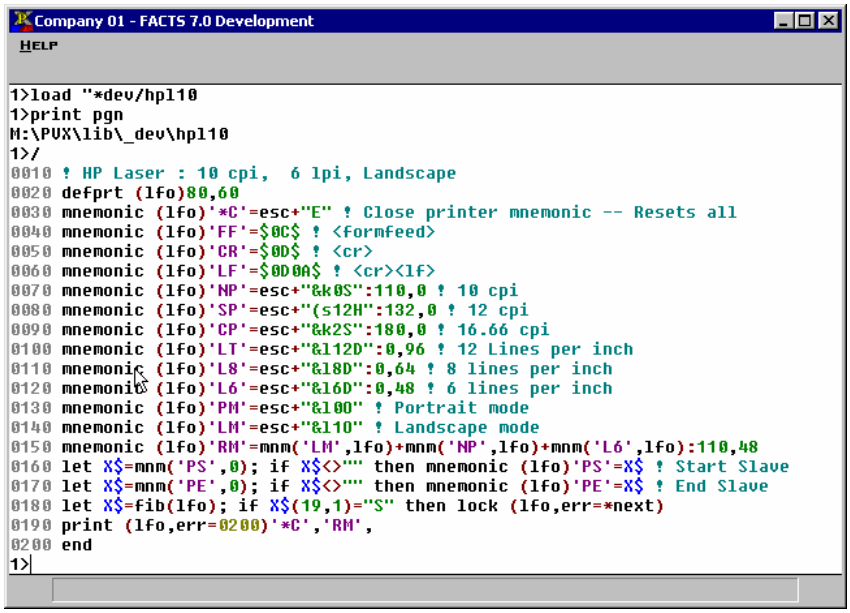
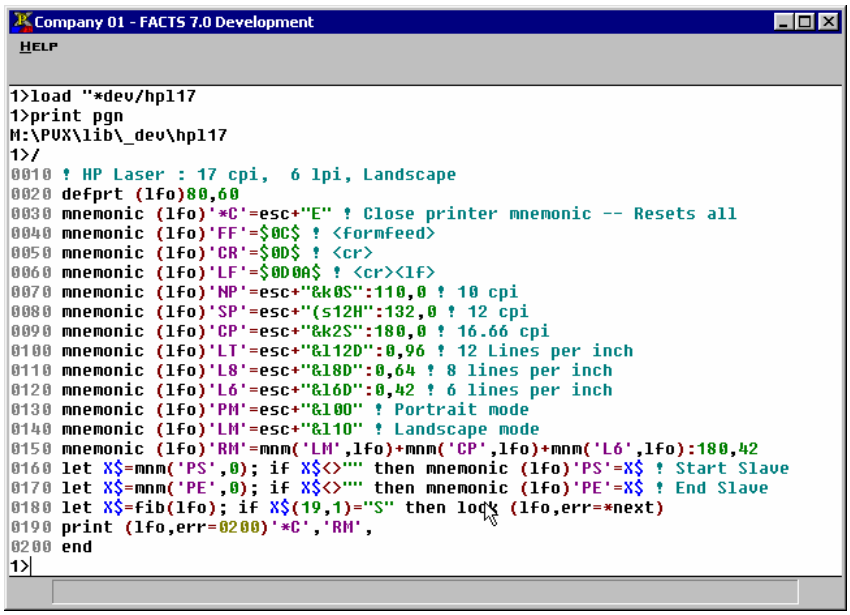
The following shows the same driver renamed and modified so that it supports outputs in 10 cpi Landscape. Since the printer needs to output to paper 11 inches wide and roughly 8 inches deep, the NP, SP, CP and RM mnemonics change to accommodate that size.



This final screen shot shows the hplaser driver renamed and modified to support the 17 cpi Landscape format. Notice the changes to the NP, SP, CP and RM mnemonics.



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Once you have created all the device drivers you need, make a note of them on the Printer Configuration Worksheet.

Printer ID in FACTS	Description/ characteristics	Device driver	Physical driver	Link file/ alias
0	Genicom	std_prtr		
1	HP 4000 Portrait, 10 cpi	Hplaser		
2	HP 4000 Landscape, 17 cpi	Hpl17		
3	HP 4000 Landscape, 10 cpi	Hpp10		

Creating link files

Link files are simple flat files that associate an output device with its corresponding driver. They essentially become a single alias for the device and its driver.

Do not use *WINDEV, *WINPRT, *VIEWER*, UNC or LPT when specifying physical devices in UNIX.

These are special device files specific to Windows printer configuration.

The easiest way to create link files is to use the ProvideX *UCL utility. Simply answer the questions and the utility builds the file from this information. Link files need to be kept in **infor/facts77/link**.

Access the link file directory from a ProvideX prompt. If you're in FACTS, press **Ctrl+Break**. If you are at the Sign-in Screen, click the Infor logo and type **Basic**.

At the prompt, type *run*ucl*. Answer the following questions.

1. Name of link file?

Enter *link/[up to ten characters]*, for example **link/P1**. Prefacing the name with *link/* ensures that the file gets created in **infor/facts77/link**. Make sure the link file name is ten characters or less.

As you create the link file name, make a note of the link file on the Printer Configuration Worksheet; it serves as the printer designation in the FACTS Printer F/M.

Answer **Yes** to the message "File xxxx does not exist. Create?"

2. "xxx" links to …

Enter the physical device, in this case the printer, to which you're linking. If the printer in question is a spooled printer, your entry should look something like:

```
>lp -s -d[printer name according the spooler] 2>/dev/null
```

If you are linking to a non-spooled printer, your entry should look like:

```
/dev/tty[value]
```

3. What type of link is "xxxx"?

Select **Printer.** The utility then asks *Is this printer connected via a Terminal Auxiliary Port?* Select **Yes** only if you are setting up a slave printer.

Select the appropriate printer driver from the popup list.

If you setting up a link file for the HP Portrait, 10 cpi printer in the example below, you would select the **hpp10** driver.

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FACTS Printer ID	Description/ characteristics	Device driver	Physical driver	Link file/ alias
0	Genicom	std_prtr	>lp -s -d Genicom2> /dev/null	P1
1	HP 4000 Port., 10 cpi	hplaser	>lp -s -d HP4000> /dev/null	P2
2	HP 4000 Land., 17 cpi	hpl17	>lp -s -d HP4000> /dev/null	P3
3	HP 4000 Land., 10 cpi	hpp10	>lp -s -d HP4000> /dev/null	P4

SMF940: Setting up Printer Maintenance in FACTS

Refer to the Printer Configuration Worksheet and enter the appropriate information into the following prompts:

1. Printer ID. Starting with the first printer on your sheet, enter the printer ID you assigned (up to 4 characters). If you haven't assigned printer IDs, assign **0** to the first printer and work up from there.

2. Link File. Enter the name of the link file created for this printer. Since the link file is an alias for the physical device and its driver, both pieces of information are tied into this prompt.

3. Printer Description. Enter the Description of Output information from the configuration worksheet. Make sure the description gives users some indication of the printer being used and the format that will be produced. For example, Genicom line, HP Port 10, HP Land 17. Descriptions can be up to 25 characters long.

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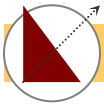

Technical Insight: Troubleshooting printer issues in UNIX

Handling non-spooled printers in UNIX

In this environment, ProvideX must take on the role of the spooler and act as the traffic cop for print jobs. However, ProvideX only handles its own jobs. Any documents sent to the printer from the operating system or from another program outside of ProvideX may conflict with the ProvideX print jobs. This is true even if the non-ProvideX applications are running through a spooler.

When printing to non-spooled printers from within ProvideX, users will receive "Error 0-Printer Not Available" messages when the printer is processing another print job. They may also get this message when printing very large reports. Depending on the amount of traffic and the size of the report, users may perceive that they are continually getting Error 0 messages. In reality, other print jobs may keep beating them to the printer or the printer may not be able to keep up with the system processing the report.

As a result, we recommend that administrators use spooled printers whenever possible. If they do need to bypass spoolers, they need to edit the printer driver so when users attempt to open a printer, the device driver can handle the following behind the scenes:

1. Check to see if a lock file exists. If the drive finds a lock file (which indicates the printer is in use), it issues an Error 0. If the driver does not find a lock file (indicating the printer is available), it creates a lock file to notify the next user that the printer is occupied.
2. Define the *C mnemonic, which is responsible for removing the lock file when the printer is closed.

The following is an example of what this code should look like:

```
0010 ! * Generic Printer - Non spooled *
0020 ! Save channel number printer is open on and fid (name) of printer
0030 let X=lfo,X$=fid(lfo)
0040 ! see if lock file exists
0050 let Y=hfn; open (Y,err=*next)"sample_lock"; close (Y); goto ERROR_ZERO
0060 ! create lock file to prevent others from using the printer
0070 serial "sample_lock",err=ERROR_ZERO
0080 ! close the printer channel (if it was open to /dev/null)
0090 close (X)
0100 ! open the true destination of the report on printer channel (if
necessary)
0110 open (X)"/dev/tty15"
0120 ! set fid of the channel back to what it started out as (if the
channel was closed and reopened)
0130 setfid (X)X$
0140 ! define appropriate mnemonics and printer settings
0150 defprt (X)80,66 ! We are assuming narrow carriage
0160 mnemonic (X)'FF'=$0C$ ! <formfeed>
0170 mnemonic (X)'CR'=$0D$ ! <cr>
0180 mnemonic (X)'LF'=$0D0A$ ! <cr><lf>
0190 ! set the *r mnemonic - operating system command to execute on close
channel
0200 mnemonic (X)'*R'="rm sample_lock"
0210 end
0220 ERROR_ZERO:
0230 ! issue an error to the open statement
```

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```
0240 exit 1
```

Handling slave printer issues

Slave printing or transparent printing configurations involve the printer driver and the terminal driver.

All of the ProvideX standard printer drivers include a Start Slave, End Slave mnemonic (always 'PS' and 'PE', respectively). These are required to switch on the terminal auxiliary port for printing and switch it back off on when the print job ends.

Setting up a generic link file for various terminals to print only to their own auxiliary port printer
Run the link file utility program.

1. Enter the name of the link file.
2. Enter /dev/tty as the name of the device. (/dev/tty is a generic device in UNIX)
3. Select *Printer* when the utility asks "What type of link is [link file name]."
4. Select *Yes* when the utility asks "Is this printer connected via a Terminal Aux Port?"
5. Specify the printer driver.

In the printer device driver, make sure that 'PS' and 'PE' mnemonics are included. For example,

```
0160 let X$=mnm('PS',0); if X$<>""then mnemonic (lfo)'PS'=X$ ! Start Slave
0170 let X$=mnm('PE',0); if X$<>""then mnemonic (lfo)'PE'=X$ ! End Slave
```

Also, make sure the escape code sequences for "PS" and "PE" are defined in the terminal driver. For instance:

```
0160 mnemonic (lfo)'PS'=$1B6423$ ! START SLAVE
0170 mnemonic (lfo)'PE'=$14$ ! END SLAVE
```

The escape code sequences should be available in the terminal's user manual.

Setting up a printer attached to a specific terminal so everyone has access to it
In this case, the escape sequences for the 'PS' and 'PE' mnemonics need to be defined in the printer driver, not the terminal drivers.

Use the following steps to create the link file for this configuration:

1. Run the ProvideX link file utility.
2. Enter the name of the link file.
3. Enter /dev/tty[*xx*] as the device name.
4. Select *Printer* when the utility asks "What type of link is [link file name]."
5. Select *Yes* when the utility asks "Is this printer connected via a Terminal Aux Port?"
6. Specify a device driver.

In the printer driver, make sure 'PS' and 'PE' are set appropriately for whatever type of terminal the printer is attached to. For example,

```
0160 mnemonic (lfo)'PS'=$1B6423$ ! START SLAVE
0170 mnemonic (lfo)'PE'=$14$ ! END SLAVE
```

→ In addition, move the *C (close printer) mnemonic from the beginning of the driver to just after the PE line. This ensures that 'PS' and 'PE' have been defined before you use them.

→ Delete the original *C line.

→ Modify the new *C line and put the END SLAVE mnemonic at the end of the close printer line to:

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```
0175 mnemonic (lfo)'*C'=esc+"E"+mnm('PE',lfo) ! Close printer mnemonic –
Resets all
```

This ensures that the End Slave mnemonic is the last piece of information sent the printer from this line.

→ Finally, put the Start Slave mnemonic at the beginning of the printer line:

```
0190 print (lfo,err=0200)'PS','RM'
```

Administrators may also want to add lock file logic to the driver to handle Error 0s.

Printing to a file

The following outlines a sample driver that administrators can use to set up print-to-file capabilities. In addition to creating this driver, set up a directory called fileprt in **infor/facts77**. This is where the flat files will be created. This sample driver will name the files file1 through file99, but administrators can modify lines 40 through 80 to print any kind of file name they want. They can also set up the driver so that it prompts users to name their own files.

```
0010 ! FILEPRT - Print to file
0020 let X=lfo,X$=fid(X)
0030 close (X)
0040 for I=1 to 99
0050 open (X,err=*next)"./fileprt/file"+str(I); close (X); goto 0080
0060 serial lwd+"/fileprt/file"+str(I)
0070 open (X)"./fileprt/file"+str(I); exitto 0100
0080 next I
0090 erase "./fileprt/file1"; open (X)"./fileprt/file1"
0100 setfid (X)X$
0110 defprt (X)200,66 ! We are assuming narrow carraige
0120 mnemonic (X)'FF'=" " ! <formfeed>
0130 mnemonic (X)'CR'=$0D$ ! <cr>
0140 mnemonic (X)'LF'=$0D0A$ ! <cr><lf>
0150 let X$=fib(X); if X$(19,1)="S" then lock (X,err=*next)
0160 end
```

Troubleshooting other printer problems

This is by no means an exhaustive list of possible printer problems, but it covers some of the most commonly reported problems. They usually fall into two categories: The job doesn't print at all or the job doesn't format correctly.

Print job no-shows. When documents don't output at all, make sure the device can print from the operating system.

The link file may be accessing the wrong device. You can check by navigating to **infor/facts77/link** and opening the link file in Word Pad.

Error messages. If hard errors occur when someone tries to print, it may indicate that ProvideX is having trouble locating the link file or the physical device indicated in the link file.

1. Check permissions. Was the link file created by an administrator? Is it possible those administrator's rights were passed on to the link file?
2. Make sure the link file resides in **infor/facts77/link.** In *UCL, **enter link/[file name]**.

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3. Check case. Does the link file appear in ./link in one case and Printer Maintenance link file in another?

Output is totally skewed. Text printing off the page, several characters printing leaving the rest of the page blank and other drastic formatting problems suggest the link file is associating the wrong driver to the specified device. This is especially true if a laser printer driver get associated to a dot-matrix printer or visa versa.

Driver specifies compressed print, but report doesn't output in compressed print. Check the CP mnemonic definition in the printer driver. Also check the defprt setting. It's possible that the number of columns specified for the default page setting is wide enough that it wouldn't trigger compressed print.

Random users report formatting errors on laser printers. If you've ruled out user error, it's possible that the printer isn't resetting after each job. Check that the driver has a *C mnemonic, which defines how the printer resets after each print job. If the mnemonic is there, make sure it's defined according to manufacturer recommendations.

Random formatting problems could also be tied to randomly deleted escape sequences.

Even printers that do support RAW passthrough may randomly delete escape sequences from the data stream. HP printers are particularly guilty of this.

Unfortunately, no one can provide a list of which printers delete which escape sequences because it changes with each manufacturer, printer driver and *version* of the printer driver.

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CHAPTER 3

Upgrading FACTS on UNIX

The install CD contains all programs and files required to upgrade systems to the current version of FACTS.

The first section of this chapter outlines the conversion/upgrade procedures for users who are upgrading from FACTS 6.06 running on BBx or Vpro5.

The second section outlines upgrade procedures for users upgrading from FACTS 6.07.

The third section outlines upgrade procedures for users upgrading from FACTS 7.0 or greater.

IMPORTANT NOTE:

The installation instructions have changed with either new steps or old steps removed. It is *EXTREMELY* important that you read this process carefully to ensure a proper and successful upgrade.

Note: FACTS 7.7 no longer supports dumb terminals or terminal emulators. The character-based interface is no longer available.

Note: The installation procedures for FACTS 7.7 on UNIX require the use of Stand-alone WindX as your terminal emulator.

Troubleshooting

- Should something happen during the installation before performing the update programs that requires a restart of the installation process, remove the entire destination directory and re-run the install.sh script from the CD.
- Should an error occur while performing the update programs and you are unable to resolve the problem and continue, restart the auto update process

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by following the manual instructions below under the heading 'Auto-Update Process'.

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Upgrading from FACTS 6.06

Before you begin

- Run all registers and update before conversion.
- All invoices must be posted to Sales Analysis before conversion.
- **Back up your data.**
- Your current FACTS data must at least be in the BBx4 file format. In most cases, you can complete the entire conversion without having a working copy of the BBx4 of PRO/5 language. In the unlikely event that a problem is encountered with cv-nobbx, be prepared with a working copy of BBx4 or PRO/5 and that you can start it from the command line.
- Make sure you have adequate disk space to run the conversion. We recommend that the server have enough disk space to accommodate **three** additional copies of the original FACTS data. At a minimum, there must be enough disk space to accommodate 2 copies of the data.
- Make sure all PC stations are running 32-bit or higher versions of Microsoft Windows. FACTS 7.7 does not support 16-bit operating systems.
- Document any custom changes made to SMNAME, SMNAMZ, SMSLCT, SMFILE, and JSJOBS that the customer wants to carry over. They will be lost during the upgrade.

Installation Procedures

The upgrade process now has three installation options: Express, Custom and Manual. These options are detailed in Chapter 2 "Installing FACTS in UNIX Environments."

Complete the full process in Chapter 2 for your chosen upgrade option, then continue with the remaining instructions below.

Notice: If you chose the Express setup or Custom setup option proceed to step 20. Steps 1 through 19 are the manual upgrade instructions to be executed following the completion of the steps in chapter 2.

1. Log in as root.
2. Make sure TERM is set correctly.
3. Create a new folder under Infor called data66. This is the directory where you will place your 6.06 data.

   Example: /infor/facts77/data66

The SM terminal records will be deleted and automatically rebuilt by the new security system.

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4. Copy your 6.06 data into /infor/facts77/data66.
5. Delete the following from the /infor/facts77/data66 directory (if they exist).
   - → the CL directory
   - → the DO directory
   - → the HELP directory
   - → the SU directory
   - → the TF directory
   - → the VF directory
   - → all .NEW files from the SM directory
   - → ACNAME, ACNAMZ, ACSLCT
   - → ARHOLD, ARPAYS
   - → JCHOLD
   - → ICALPX, ICCLSX, ICMVCX, ICVNDX
   - → SMEOPL.empty, SMFILE, SMGCTL, SMGLD*, SMMODS
   - → SMNAME, SMNAMZ, SMSLCT, SMUHLP, SMUSED
   - → SOHOLD
   - → SRHOLD
6. Convert your data to ProvideX file format.
   - → Create a temporary directory to hold the newly converted data file. You may want to *chmod* 777 to set permissions.

     Example: /infor/facts77/data.conv
   - → Remember or write down where the FACTS 6.06 data files are located

     Example: /infor/facts77/data66
   - → Start ProvideX using the full path: **/infor/facts77/pvx/pvx**
   - → Change your current directory to the pvx/lib/_conv.bbx directory:

     Example: cwdir "/infor/facts77/pvx/lib/_conv.bbx"
   - → Start the conversion program by running **cv-nobbx** and answering the questions as follows:
     - ✓ Checkout Only: **No**
     - ✓ Variable Length Record files: **Yes**
     - ✓ Eliminate Max Record Counts: **Yes**
     - ✓ Input File/Directory: **Path and file name for the BBx data** (e.g., /infor/facts77/data66)

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- ✓ Output File/Directory: **Path and file name for the temporary location** (e.g., /infor/facts77/data.conv)
- ✓ Conversion Log file name: **Path and file name to hold warnings/error information**
- ✓ Log Errors Only: **No**

This starts the conversion process. After the directory scan, press **Enter** to continue. NOTE: The conversion will proceed automatically after about ten seconds.

When it finishes, the **infor/facts77/data.conv** directory should be populated with the ProvideX data files.

Review the Log file for any errors which might have occurred during the BBx to ProvideX conversion.

7. **IMPORTANT:**

   Remove ALL .SSI files from infor/facts77/data/DO & data/SM

8. **MODS NOTE:**

   If data modifications exist and they are required for FACTS 7.7, take appropriate steps to bring these forward.

9. Copy **infor/facts77/data.conv** to **infor/facts77/data**. This overwrites the FACTS 7.7 data files created during installation with your converted source data files.

   Note: You may want to keep the infor/facts77/data.conv dataset as a backup copy.

10. Type **./FACTS7**

11. At the FACTS Sign-on Screen, click on the Infor logo and type **install**.

12. From the install menu, run **Generate SMFLUP**.

    NOTICE: The generation of SMFLUP is **REQUIRED** to properly establish the structure of all meta-data files. **DO NOT SKIP THIS STEP.**

    This program will compare the .SSI and the .MOD versions from the source FACTS system and write the net changes, if any, to the SMFLUP file.

    Running UTR999 (Generate SMFLUP) will ask you several questions to determine the steps it needs to follow in order to properly update the meta-data files.

    I. *Do you want the current meta-data files to be copied to have .MOD extensions prior to generating SMFLUP? (Y/N)*

    It is **required** that this always be answered **'Y'** to ensure the .MOD files contain the latest modifications. Answering 'N' will use the .MOD files already in place to generate the SMFLUP file.

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II. *Do you want all .NEW files to be copied to have both no extension and a .SSI extension after SMFLUP has been generated? (Y/N)*

It is **required** that this always be answered **'Y'**. This will eliminate all manual renaming of files, and ensures that you continue to work with the new meta-data files.

III. *If you have entered Modification IDs in your meta-data, you can enter the IDs you want SMFLUP to contain.*

It is **required** that this be left blank to accept all mods.

IV. *Do you want custom note categories to be included in SMFLUP? (Y/N)*
Answer Y to bring the custom note types forward. Answer N to eliminate them. It is highly recommended that you answer this Y.

NOTE: If .SSI files are missing, you will receive a message. Hit Enter to continue.

NOTE: If you restart UTR999 for any reason, you should restore the data directories to their original state first.

Auto-Update Process

13. At the FACTS Sign-on Screen, click the Infor logo and type install.
14. Select **Install FACTS Update** from the Install menu.
15. Press **F1-Auto Update**.
16. Press **CR-Continue** at the next window.
17. Select **6.07 Update.**
18. Accept the defaults in the Parameters box, type **Yes** to continue with the update.
19. When the update is complete, press **F3-End**.
20. Select System Control F/M from the menu and enter the ALF expiration date and make any other changes from your authorization code sheet.
21. Select Company F/M from the menu and enter the FACTS 7.7 authorization codes.
22. Exit ProvideX and restart FACTS 7.7.
23. Make sure you can successfully log into FACTS 7.7.
24. Before you begin testing the system, complete the instructions below for Setting up and installing the API Toolkit. Then, test the system.

Setting up and installing the API Toolkit

These instructions address the installation and configuration of the Polling Directory option for the API Toolkit only. For instructions on installing and configuring the ProvideX Web Server for use with the API Toolkit, refer to the *FACTS eCommerce Catalog Integration and Setup* manual.

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These instructions assume you understand how to setup a ProvideX program to run as a service.

FACTS 7.7 requires that the API Toolkit be running at all times. There are transactions which FACTS uses to communicate internally, which are processed by the API Toolkit, and the functions within FACTS that rely on those transactions will fail if the Toolkit is not operational.

The API Toolkit will process these required transactions even if the Toolkit has not been purchased. If you wish to use the API Toolkit for other purposes, you must license it by purchasing the AT module.

Once the API Toolkit is installed and running, you must enter the API Publish key code in API Key Code Entry (SME007). This step also helps prevent unauthorized access to the API by providing a password that is required for access to the Subscribe APIs. The key must be setup as follows:

Key Code: [API-Publ]

Description: API Publish

Password: any value as long as it isn't left blank

Default Co: leave blank

Catalog Requests: No

Send Namespace: No

Date Format: leave blank

Do not enter any valid companies.

The Polling program: SMU954

SMU954 monitors the API Polling directory as setup in System Control F/M for XML transactions. When one is received, it processes it and returns a response (if requested) to the Response directory indicated in System Control F/M.

APIstart script (`UNIX installs only`)

The FACTS install script places *apistart* in the **infor/facts77** directory. This script runs prog/SM/SMU954 on the server. During UNIX installations, a line must be added to end of **etc/inittab** to respawn apistart.

The following is an example of what the apistart script looks like after installation.

FHOMEDIR=/infor/facts77

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```
PVXDIR=${FHOMEDIR}/pvx
MODS_DIR=${MODS_DIR:-"${FHOMEDIR}/mods"}
PVXLIB=${PVXDIR}/lib
# Note!  Uncomment the following line if you are installing on a Linux
machine.
#SSITERM=wy60

SSI_NO_OA=${SSI_NO_OA:-"N"}
# "N" - Check for unread OA messages in FACTS menu driver
# "Y" - Do not check OA for unread messages (speeds up FACTS menu
driver)

UMSK=0
MEM=512

export FHOMEDIR
export PVXDIR
export MODS_DIR
export SSI_NO_OA
export PVXLIB
# Note!  Uncomment the following line if you are installing on a Linux
machine.
#export SSITERM

####### Set temporary TERM variable ##########################

if [ jjj$SSITERM != jjj ]
then
  OLDTERM=${TERM}
  TERM=${SSITERM}
  export TERM OLDTERM
fi

# If running VSI-FAX, uncomment the following line
# . /etc/vsifax3.sh

cd ${FHOMEDIR}

${FHOMEDIR}/pvx/pvx prog/SM/SMU954 </dev/null>/dev/null
2>/dev/null
```

Before you allow users to sign into FACTS

If you chose either the automated upgrade or the custom upgrade, review the file cnv_err.log for any errors that may have occurred during the BBX to ProvideX file conversion.

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Review the Colors tab in Terminal F/M (*System Management→File Maintenances→Terminal F/M*) for the T0 record. Make sure all the colors correspond to numbers, not letters.

Modification Review

If you chose either the automated upgrade or the custom upgrade, review the change and exception log files, changes.txt and exceptions.txt, and resolve any issues with the metadata.

Archive Update

If you are running Archive, you **must** sign into FACTS to set global variables, break to a ProvideX prompt and run "prog/AC/ACNSTALL". For further information, refer to the Archive documentation in the Third Party Doc folder on the installation CD.

Sales Order and Purchase Order Entry Options

For new FACTS 7.7 installs, a default record for all entry program types is included for both the Sales Order Entry Options F/M, Purchase Order Entry Options F/M and Transfer Entry Options F/M for company 01 only.

For upgrades to FACTS 7.7, a default record for all entry types is added for the Purchase Order Entry Options F/M and Transfer Entry Options F/M for all companies, but only a default record for quotes is included for Sales Order Entry Options F/M for all companies.

Bitmap Synchronization

With FACTS 7.7, when new or updated bitmaps are released, they will automatically be copied to the client's workstation. Each time the user signs on, FACTS checks the server's version file against the version file on the client's PC. If the server's version ID can not be found in the client's version file, the program copies all the bitmaps and updates the client's version file. While the copy is taking place, "Synchronizing Bitmaps—Please Wait" is displayed.

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Upgrading from FACTS 6.07

Before you begin

- Run all registers and update before conversion.
- All invoices must be posted to Sales Analysis before conversion.
- **Back up your data.**
- Make sure you have adequate disk space to run the conversion. We recommend that the server have enough disk space to accommodate **three** additional copies of the original FACTS data. At a minimum, there must be enough disk space to accommodate 1.5 copies of the data.
- Make sure all PC stations are running 32-bit or higher versions of Microsoft Windows. FACTS 7.7 does not support 16-bit operating systems.
- Document any custom changes made to SMNAME, SMNAMZ, SMSLCT, SMFILE, and JSJOBS that the customer wants to carry over. They will be lost during the upgrade.
- Suggested PO and Transfer duplications are no longer handled by the Suggested Entry programs. For your reference, DELSUG.LOG is created listing deleted records.

IMPORTANT:

- **If you made any modifications to DOFILB, DOFILH, DOVARI, SMFMFM, SMGCTL or SMPRMT in FACTS 6.07, make sure you have the original unmodified versions of these files with .SSI extensions.**

Installation Procedures

The upgrade process now has three installation options: Express, Custom and Manual. These options are detailed in Chapter 2 "Installing FACTS in UNIX Environments."

Complete the full process in Chapter 2 for your chosen upgrade option, then continue with the remaining instructions below.

Notice: If you chose the Express setup or Custom setup option proceed to step 20. Steps 1 through 19 are the manual upgrade instructions to be executed following the completion of the steps in chapter 2.

1. Log into UNIX as root.
2. Make sure TERM is set correctly.

The SM terminal records will be deleted and auto-matically rebuilt by the new security system.

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3. Create a new directory under /infor/facts77 called **data67**. This is the directory where you will place your 6.07 data.

   Example: /infor/facts77/data67

4. Copy 6.07 data into **infor/facts77/data67**.
5. Delete the following from the infor/facts77/data67 directory if they exist:
   - → the CL directory
   - → the DO directory
   - → the HELP directory
   - → the SU directory
   - → the TF directory
   - → the VF directory
   - → all .NEW files from the DO and SM directories
   - → ACNAME, ACNAMZ, ACSLCT
   - → ARHOLD, ARPAYS
   - → JCHOLD
   - → ICALPX, ICCLSX, ICMVCX, ICVNDX
   - → SANSTK
   - → SMEOPL.empty, SMFIDS, SMFILE, SMFLUP, SMGLD*
   - → SMHELP, SMHLPR, SMINQC, SMLOCK, SMMODS, SMMSGS, SMMSGS.SSI
   - → SMNAME, SMNAMZ, SMSLCT, SMUHLP, SMUSED, SMWPRF
   - → SOHOLD
   - → SRHOLD
6. **IMPORTANT:**

   Remove any .SSI files from infor/data/DO & data/SM.

7. **MODS NOTE:**

   If data modifications exist and they are required for FACTS 7.7, take appropriate steps to bring these forward.

8. It is recommended to copy infor/facts77/data to infor/facts77/data77 in case a restart is needed. (optional)
9. Copy **infor/facts77/data67** to **infor/facts77/data**. This overwrites the FACTS 7.7 data files created during installation with your source data files.

   NOTE: You can now delete the **infor/facts77/data67** directory or you can keep it so you have a backup of the source data.

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10. Type **./FACTS7** to run FACTS
11. At the FACTS Sign-on Screen, click the Infor logo and type **install**.
12. From the install menu, run **Generate SMFLUP**.

NOTICE: The generation of SMFLUP is **REQUIRED** to properly establish the structure of all meta-data files. **DO NOT SKIP THIS STEP.**

This program will compare the .SSI and the .MOD versions from the source data, and write the net changes, if any, to the SMFLUP file.

Running UTR999 (Generate SMFLUP) will ask you several questions to determine the steps it needs to follow in order to properly update the meta-data files.

I. *Do you want the current meta-data files to be copied to have .MOD extensions prior to generating SMFLUP? (Y/N)*

It is **required** that this always be answered **'Y'** to ensure the .MOD files contain the latest modifications. Answering 'N' will use the .MOD files already in place to generate the SMFLUP file.

II. *Do you want all .NEW files to be copied to have both no extension and a .SSI extension after SMFLUP has been generated? (Y/N)*

It is **required** that this always be answered **'Y'**. This will eliminate all manual renaming of files, and ensures that you continue to work with the new meta-data files.

III. *If you have entered Modification IDs in your meta-data, you can enter the IDs you want SMFLUP to contain.*

It is **required** that this be left blank to accept all mods.

IV. *Do you want custom note categories to be included in SMFLUP? (Y/N)*
Answer Y to bring the custom note types forward (for instance, if you are upgrading a customer). Answer N to eliminate them. It is highly recommended that you answer this question Y.

NOTE: If .SSI files are missing, you will receive a message. Hit Enter to continue.

NOTE: If you restart UTR999 for any reason, you should restore the data directories to their original state first.

IMPORTANT!!!

If modifications were found, wait until AFTER the file updates are complete before merging SMFLUP (step 20).

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Auto-Update Process

13. If you are at the FACTS Sign-on Screen, click the Infor logo and type **install**.
14. Select **Install Update/Add-on Module** from the Install menu.
15. Press **F1-AutoUpdate**.
16. At the next window, press CR to Continue.
17. Select **7.0 Update** from the pick list. Press CR to continue.
18. Accept the defaults at the Parameters box, and type **Yes** to continue with the update.
19. Once the update is complete, press **F3-End.**
20. If modifications were found during the generation of SMFLUP, at the FACTS Sign-on Screen, click the Infor logo, type install and from the Install Menu run **Merge SMFLUP**.

    You are given the option to update the files with the changes identified. You are given the option to "Automatically recreate the .MOD files after the mods are applied". It is recommended this always be answered 'N'. Recreating the .MOD versions will automatically erase the current .MOD files and copy the final merged version of the metadata files with all of the modifications applied to .MOD versions. This is unnecessary if you always answer 'Y' to the question, "Do you want the current meta-data files to be copied to have .MOD extensions prior to generating SMFLUP?" in the Generate SMFLUP program.

    I. Enter filenames (.txt) that are used to create the Exceptions and Changes files.

    II. After completion, review the Exceptions and Changes files.

    III. Run the string template generator if prompted.
21. If not already at the Install Menu, at the FACTS Sign-on Screen, click the Infor logo and type install.
22. Select System Control F/M from the menu and enter the ALF expiration date, and make any other changes from your authorization code sheet.
23. From Company F/M, enter the FACTS 7.7 authorization code.
24. Exit ProvideX and restart FACTS 7.7.
25. Make sure you can successfully log into FACTS 7.7.
26. Before you begin testing the system, complete the instructions below for Setting up and installing the API Toolkit. Then, test the system.

Setting up and installing the API Toolkit

These instructions address the installation and configuration of the Polling Directory option for the API Toolkit only. For instructions on installing

and configuring the ProvideX Web Server for use with the API Toolkit, refer to the *FACTS eCommerce Catalog Integration and Setup* manual.

These instructions assume you understand how to setup a ProvideX program to run as a service.

FACTS 7.7 requires that the API Toolkit be running at all times. There are transactions which FACTS uses to communicate internally, which are processed by the API Toolkit, and the functions within FACTS that rely on those transactions will fail if the Toolkit is not operational.

The API Toolkit will process these required transactions even if the Toolkit has not been purchased. If you wish to use the API Toolkit for other purposes, you must license it by purchasing the AT module.

Once the API Toolkit is installed and running, you must enter the API Publish key code in API Key Code Entry (SME007). This step also helps prevent unauthorized access to the API by providing a password that is required for access to the Subscribe APIs. The key must be setup as follows

Key Code: [API-Publ]

Description: API Publish

Password: any value as long as it isn't left blank

Default Co: leave blank

Catalog Requests: No

Send Namespace: No

Date Format: leave blank

Do not enter any valid companies.

The Polling program: SMU954

SMU954 monitors the API Polling directory as setup in System Control F/M for XML transactions. When one is received, it processes it and returns a response (if requested) to the Response directory indicated in System Control F/M.

APIstart script

The FACTS install script places *apistart* in the **infor/facts77** directory. This script runs prog/SM/SMU954 on the server. During UNIX installations, a line must be added to end of **etc/inittab** to respawn apistart.

The following is an example of what the apistart script looks like after installation.

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```
FHOMEDIR=/infor/facts77
PVXDIR=${FHOMEDIR}/pvx
MODS_DIR=${MODS_DIR:-"${FHOMEDIR}/mods"}
PVXLIB=${PVXDIR}/lib
# Note!  Uncomment the following line if you are installing on a Linux
machine.
#SSITERM=wy60

SSI_NO_OA=${SSI_NO_OA:-"N"}
# "N" - Check for unread OA messages in FACTS menu driver
# "Y" - Do not check OA for unread messages (speeds up FACTS menu
driver)

UMSK=0
MEM=512

export FHOMEDIR
export PVXDIR
export MODS_DIR
export SSI_NO_OA
export PVXLIB
# Note!  Uncomment the following line if you are installing on a Linux
machine.
#export SSITERM

####### Set temporary TERM variable ##########################

if [ jjj$SSITERM != jjj ]
then
  OLDTERM=${TERM}
  TERM=${SSITERM}
  export TERM OLDTERM
fi

# If running VSI-FAX, uncomment the following line
# . /etc/vsifax3.sh

cd ${FHOMEDIR}

${FHOMEDIR}/pvx/pvx prog/SM/SMU954 </dev/null>/dev/null
2>/dev/null
```

Upgrade Notice

If upgrading from FACTS 6.7 and the current system contains any one-character item numbers, those item numbers must be run through the Item Changer F/M. FACTS v7.0 and greater does not support one-character item numbers.

Modification Review

If you chose the automated upgrade or the custom upgrade, review the change and exception log files, changes.txt and exceptions.txt, and resolve any issues with the metadata.

Archive Update

If you are running Archive, you **must** sign into FACTS to set global variables, break to a ProvideX prompt and run "prog/AC/ACNSTALL". For further information, refer to the Archive documentation in the Third Party Doc folder on the installation CD.

Sales Order and Purchase Order Entry Options

For new FACTS 7.7 installs, a default record for all entry program types is included for both the Sales Order Entry Options F/M, Purchase Order Entry Options F/M and Transfer Entry Options F/M for company 01 only.

For upgrades to FACTS 7.7, a default record for all entry types is added for the Purchase Order Entry Options F/M and Transfer Entry Options F/M for all companies, but only a default record for quotes is included for Sales Order Entry Options F/M for all companies.

Bitmap Synchronization

With FACTS 7.7, when new or updated bitmaps are released, they will automatically be copied to the client's workstation. Each time the user signs on, FACTS checks the server's version file against the version file on the client's PC. If the server's version ID can not be found in the client's version file, the program copies all the bitmaps and updates the client's version file. While the copy is taking place, "Synchronizing Bitmaps—Please Wait" is displayed.

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Upgrading from FACTS 7.0 or greater

Before you begin

- **Back up your data.**
- All invoices must be posted to Sales Analysis before conversion
- Make sure you have adequate disk space to run the conversion. We recommend that the server have enough disk space to accommodate one additional copy of the original FACTS 7.x data.
- Make sure all PC stations are running 32-bit or higher versions of Microsoft Windows. FACTS 7.7 does not support 16-bit operating systems.
- If upgrading from 7.0 through 7.6, document any custom changes made to SMNAME, SMNAMZ, SMSLCT and SMFILE that the customer wants to carry over. They will be lost during the upgrade.
- Job Streams for reports or updates that have been converted to the new architecture since the FACTS version being converted from will be deleted during the upgrade. The upgrade will build a list of them in JSJOBS.OUT. Be prepared to review this file and reenter those Job Streams lines after the upgrade is completed.
- Suggested PO and Transfer duplications are no longer handled by the Suggested Entry programs. For your reference, DELSUG.LOG is created listing deleted records.
- If your system is running the API Toolkit (either SMU954 or the ProvideX Web Server), stop all of those processes before continuing.

IMPORTANT:

- **If you made any modifications to the FACTS 7.x metadata files, make sure you have the ORIGINAL UNMODIFIED version of these with .SSI extensions.**

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Installation Procedures

The upgrade process now has three installation options: Express, Custom and Manual. These options are detailed in Chapter 2 "Installing FACTS in UNIX Environments."

Complete the full process in Chapter 2 for your chosen upgrade option, then continue with the remaining instructions below.

Notice: If you chose the Express setup or Custom setup option proceed to step 23. Steps 1 through 22 are the manual upgrade instructions to be executed following the completion of the steps in chapter 2.

The SM terminal records will be deleted and automatically rebuilt by the new security system.

1. Log into UNIX as root.
2. Make sure TERM is set correctly.
3. Navigate to where you installed FACTS 7.7.
4. Create a new directory under /infor/facts77 called data7x. This is the directory where you will place your 7.x data.

   Example: /infor/facts77/data7x
5. Copy your 7.x data into infor/facts77/data7x.
6. Delete the following from the infor/facts77/data7x directory:
   - the CL directory
   - the DO directory
   - the HELP directory
   - the SU directory
   - the TF directory
   - the VF directory
   - all .NEW files from the DO, RM and SM directories
   - ACNAME, ACNAMZ, ACSLCT
   - ARHOLD, ARPAYS
   - EMBATH, EMBATL
   - ICALPX, ICCLSX, ICMVCX, ICVNDX
   - JCHOLD
   - RMEVWTDF, RMQRYHDF, RMQRYLDF, RMQFLD
   - RMDMAP.STD, RMDSET.STD
   - SANSTK

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- SMEOPL.empty, SMFIDS, SMFILE, SMFLUP, SMFREE
- SMGLD*, SMHELP, SMHLPR, SMINQC, SMLOCK, SMMODS
- SMNAME, SMNAMZ, SMSLCT, SMTHLP, SMUHLP
- SMUSED, SMUSRL, SMWPRF
- SOHOLD, SOHSOH, SOHSOL
- SRHOLD

9. **IMPORTANT:**

   Remove all .SSI files from infor/facts77/data/DO & data/SM.

10. MODS NOTE:

    If data modifications exist and they are required for FACTS 7.7, take appropriate steps to bring these forward.

11. It is recommended to copy infor/facts77/data to infor/facts77/data77 in case a restart is neeed. (optional)

12. Copy **infor/facts77/data7x** to **infor/facts77/data**. This overwrites the FACTS 7.7 data files created during installation with your source data files.

    NOTE: You can now delete the **infor/facts77/data7x** directory or you can keep it so you have a backup of the source data.

13. Type **./FACTS7** to run FACTS

14. At the FACTS Sign-on Screen, click on the Infor logo and type **install**.

15. From the install menu, run **Generate SMFLUP**.

    NOTICE: The generation of SMFLUP is **REQUIRED** to properly establish the structure of all meta-data files. **DO NOT SKIP THIS STEP.**

    This program will compare the .SSI and the .MOD versions from the source data, and write the net changes, if any, to the SMFLUP file.

    Running UTR999 (Generate SMFLUP) will ask you several questions to determine the steps it needs to follow in order to properly update the meta-data files.

    I. *Do you want the current meta-data files to be copied to have .MOD extensions prior to generating SMFLUP? (Y/N)*

    It is **required** that this always be answered **'Y'** to ensure the .MOD files contain the latest modifications. Answering 'N' will use the .MOD files already in place to generate the SMFLUP file.

    II. *Do you want all .NEW files to be copied to have both no extension and a .SSI extension after SMFLUP has been generated? (Y/N)*

    It is **required** that this always be answered **'Y'**. This will eliminate all manual renaming of files, and ensures that you continue to work with the new meta-data files.

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III. *If you have entered Modification IDs in your meta-data, you can enter the IDs you want SMFLUP to contain.*

It is **required** that this be left blank to accept all mods.

IV. *Do you want custom note categories to be included in SMFLUP? (Y/N)* Answer Y to bring the custom note types forward (for instance, if you are upgrading a customer). Answer N to eliminate them. It is highly recommended that you answer this question Y.

NOTE: If .SSI files are missing, you will receive a message. Hit Enter to continue.

NOTE: If you restart UTR999 for any reason, you should restore the data directories to their original state first.

IMPORTANT!!!

If modifications were found, wait until AFTER the file updates are complete before merging SMFLUP (step 23).

Auto-Update Process

16. At the FACTS Sign-on Screen, click the Infor logo and type **install**.
17. Select **Install Update/Add-on Module** from the Install menu.
18. Press **F1-AutoUpdate**.
19. At the next window, press CR to Continue.
20. Select the release level **AFTER** the version you are currently on.

    Ex. If upgrading from v7.0, then select **7.1 Update** from the pick list

    If upgrading from v7.1 then select **7.2 Update** from the pick list

    Press CR to Continue.
21. Accept the defaults at the Parameters box, and type **Yes** to continue with the update.
22. Once the update is complete, press **F3-End.**
23. If modifications were found during the generation of SMFLUP, from the FACTS Sign-on Screen, click the Infor logo, type **install**, and from the Install menu run **Merge SMFLUP**.

    You are given the option to update the files with the changes identified.

    You are given the option to "Automatically recreate the .MOD files after the mods are applied". It is recommended this always be answered 'N'. Recreating the .MOD versions will automatically erase the current.MOD files and copy the final merged version of the metadata files with all of the

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modifications applied to .MOD versions. This is unnecessary if you always answer 'Y' to the question, "Do you want the current meta-data files to be copied to have .MOD extensions prior to generating SMFLUP?" in the Generate SMFLUP program.

I. Enter filenames (.txt) that are used to create the Exceptions and Changes files

II. After completion, review the Exceptions and Changes files.

III. Run the string template generator if prompted.

24. At the FACTS Sign-on Screen, click the Infor logo and type **install**.
25. Select System Control F/M from the menu and enter the ALF expiration date, and make any other changes from your authorization code sheet.
26. From Company F/M, enter the FACTS 7.7 authorization code.
27. Exit ProvideX and restart FACTS 7.7.
28. Make sure you can successfully log into FACTS 7.7.
29. Be sure to review the JSJOBS.OUT file located in your infor/facts77/ directory which lists any Job Stream entries that must be re-entered.
30. Before you begin testing the system, complete the instructions below for Setting up and installing the API Toolkit. Then, test the system.

Setting up and installing the API Toolkit

These instructions address the installation and configuration of the Polling Directory option for the API Toolkit only. For instructions on installing and configuring the ProvideX Web Server for use with the API Toolkit, refer to the *FACTS eCommerce Catalog Integration and Setup* manual.

These instructions assume you understand how to setup a ProvideX program to run as a service.

FACTS 7.7 requires that the API Toolkit be running at all times. There are transactions which FACTS uses to communicate internally, which are processed by the API Toolkit, and the functions within FACTS that rely on those transactions will fail if the Toolkit is not operational.

The API Toolkit will process these required transactions even if the Toolkit has not been purchased. If you wish to use the API Toolkit for other purposes, you must license it by purchasing the AT module.

Once the API Toolkit is installed and running, you must enter the API Publish key code in API Key Code Entry (SME007). This step also helps prevent unauthorized access to the API by providing a password that is required for access to the Subscribe APIs. The key must be setup as follows:

Key Code: [API-Publ]

Description: API Publish

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Password: any value as long as it isn't left blank

Default Co: leave blank

Catalog Requests: No

Send Namespace: No

Date Format: leave blank

Do not enter any valid companies.

The Polling program: SMU954

SMU954 monitors the API Polling directory as setup in System Control F/M for XML transactions. When one is received, it processes it and returns a response (if requested) to the Response directory indicated in System Control F/M.

APIstart script

The FACTS install script places *apistart* in the **infor/facts77** directory. This script runs prog/SM/SMU954 on the server. During UNIX installations, a line must be added to end of **etc/inittab** to respawn apistart.

The following is an example of what the apistart script looks like after installation.

```
FHOMEDIR=/infor/facts77
PVXDIR=${FHOMEDIR}/pvx
MODS_DIR=${MODS_DIR:-"${FHOMEDIR}/mods"}
PVXLIB=${PVXDIR}/lib
# Note!  Uncomment the following line if you are installing on a Linux machine.
#SSITERM=wy60

SSI_NO_OA=${SSI_NO_OA:-"N"}
# "N" - Check for unread OA messages in FACTS menu driver
# "Y" - Do not check OA for unread messages (speeds up FACTS menu driver)

UMSK=0
MEM=512

export FHOMEDIR
export PVXDIR
export MODS_DIR
export SSI_NO_OA
```

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```
export PVXLIB
# Note!  Uncomment the following line if you are installing on a Linux
machine.
#export SSITERM

####### Set temporary TERM variable ##########################

if [ jjj$SSITERM != jjj ]
then
  OLDTERM=${TERM}
  TERM=${SSITERM}
  export TERM OLDTERM
fi

# If running VSI-FAX, uncomment the following line
# . /etc/vsifax3.sh

cd ${FHOMEDIR}

${FHOMEDIR}/pvx/pvx prog/SM/SMU954 </dev/null>/dev/null
2>/dev/null
```

Modification Review

If you chose the automated upgrade or the custom upgrade, review the change and exception log files, changes.txt and exceptions.txt, and resolve any issues with the metadata.

Archive Update

If you are running Archive, you **must** sign into FACTS to set global variables, break to a ProvideX prompt and run "prog/AC/ACNSTALL". For further information, refer to the Archive documentation in the Third Party Doc folder on the installation CD.

Sales Order and Purchase Order Entry Options

For new FACTS 7.7 installs, a default record for all entry program types is included for both the Sales Order Entry Options F/M, Purchase Order Entry Options F/M and Transfer Entry Options F/M for company 01 only.

For upgrades to FACTS 7.7, a default record for all entry types is added for the Purchase Order Entry Options F/M and Transfer Entry Options F/M for all companies, but only a default record for quotes is included for Sales Order Entry Options F/M for all companies.

Bitmap Synchronization

With FACTS 7.7, when new or updated bitmaps are released, they will automatically be copied to the client's workstation. Each time the user signs on, FACTS checks the server's version file against the version file on the client's PC. If the server's version ID can not be found in the client's version file, the program copies all the bitmaps and updates the client's version file. While the copy is taking place, "Synchronizing Bitmaps—Please Wait" is displayed.

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Infor ERP FACTS

CHAPTER 4

Installing FACTS on Windows Servers

These instructions work for the following configurations:

Windows 2003/2008 Server networked with Windows 2000, Windows XP and Windows 7 clients on direct TCP/IP connection.

Things to know before you begin

- FACTS does not support 16-bit operating systems. Make sure you perform the necessary upgrades to Windows before installing FACTS.
- We advise that you install FACTS and all other software components after normal business hours to ensure that all users are logged off the system.
- Make a list of the unique SSI_BASE values that you will use during server and client installations — one for the server and one for each FACTS client. Make sure all IDs are 20 characters or less and contain no spaces.

  Decide on whether you want to use Windows user login names or PC Network IDs, the latter of which you can find by selecting *Start→Settings→Control Panel→Network*. Select the Identification tab and look at the **Computer name**.

  User logins and network IDs both provide unique SSI_BASE values; however PC Network IDs may make post-installation easier when users leave the company, switch departments or get new computers since the SSI_BASE value travels with the computer and not the user.
- Make sure TCP/IP is set up and working on the server. You should be able to *ping* the server from a networked workstation and vice versa.

  If TCP/IP is not set up and you are not familiar with this procedure, do not proceed with this installation. Seek assistance from a qualified Windows Administrator.

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- ➲ Check that you have your FACTS Authorization Code Sheet. If you have any questions about the sheet, refer to Chapter 1.
- ➲ To take advantage of the full text search and indexing features in the PDF Documentation Library, install the version of the Adobe Acrobat Reader included on this FACTS Installation CD. Other versions of the Reader may not necessarily support this feature. Make sure you uninstall any existing versions of the Reader before you begin.
- ➲ FACTS 7.7 requires that the API Toolkit be running at all times users are running FACTS. At the conclusion of the installation, instructions for setting up and running the API Toolkit will follow.

Incremental Update

Before proceeding, make sure you have the latest 7.7 incremental update. To do this log onto the Nexus, choose the Incremental updates link and download the incremental update files.

Place the incremental files in a temporary location, and execute the 77xinc.exe file to unzip the InstallShield files. Simply note the location of the files - do not run setup.exe. The automated installation process will apply the incremental update.

Installing FACTS

Process overview

1. **Install FACTS and ProvideX on the server.** The FACTS Installation CD installs the current Infor certified version of FACTS, ProvideX, and any third-party products if they have been purchased.

   ➲ The installation procedure requires that you restart the server after the installation is complete so that you can begin configuring the INSTALL menu.

2. **Install FACTS client and WindX on all FACTS client PCs.** Use the FACTS Installation CD to install WindX client software on each client PC that will be used to run FACTS. Assign one SSI_BASE value per client installation. *Instructions begin on 4-12.*

3. **Configure printers to run FACTS reports, prints and registers.** Make a list of the printers that FACTS users need to access. Create link files and modify drivers to produce the desired formats. *Instructions begin on 4-18.*

4. **Configure any third-party products purchased.**

   Refer to Chapter 6 for Report Writer.

   Refer to Chapter 7 for Unform.

   Refer to Chapter 8 for VSI-FAX and FaxLink.

   Refer to Chapter 11 for ODBC.

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5. **Setup and run the FACTS API Toolkit.** The standard process involves setting up SMU954 as a service. An alternate process involves purchasing, configuring and running the ProvideX Web Server.

Server Installation

1. Make sure you close any open applications.
2. Place the FACTS Installation CD in the CD drive.
3. Wait for the InstallShield to start automatically or if autorun is not enabled on your computer, run FACTS77.exe from the CD.
4. Select *FACTS*.
5. From the FACTS screen, select FACTS v7.7.
6. Select **Yes** to install FACTS.
7. Choose **Next** at the Welcome screen.
8. If you agree, select **Yes** to accept the FACTS license agreement.
9. Select the type of install or upgrade you prefer, and choose **Next**:
   - New Install Setup:

     Installs a new FACTS 7.7 release.

     a) The destination directory defaults to C:\infor\facts77. Choose **Browse** to change drives or directories. Choose **Next** to accept the default.

   - Client Setup:

     Installs a client version of the FACTS 7.7 release.

     a) The destination directory defaults to C:\infor\facts77. Choose **Browse** to change drives or directories. Choose **Next** to accept the default.

   - Express Upgrade Setup:

     Installs a new FACTS 7.7 release, and performs an automated upgrade from a previous release using the recommended default values.

     a) From the drop down list, select the FACTS version you are upgrading from.

     b) Enter the path to the home directory of the FACTS version you are upgrading from. Choose **Browse** to change drives or directories.

     c) The destination directory defaults to C:\infor\facts77. Choose **Browse** to change drives or directories. Choose **Next** to continue.

     IMPORTANT: The destination directory CAN NOT be the same location as the FACTS version you are upgrading from.

   - Custom Upgrade Setup:

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Installs a new FACTS 7.7 release, and performs an automated upgrade from a previous release using values entered from the user.

a) From the drop down list, select the FACTS version you are upgrading from.

b) Enter the location of the FACTS version you are upgrading from. Choose **Browse** to change drives or directories.

c) The destination directory defaults to C:\infor\facts77. Choose **Browse** to change drives or directories. Choose **Next** to continue.

IMPORTANT: The destination directory CANNOT be the same location as the FACTS version you are upgrading from.

d) Generate SMFLUP:

The generation of SMFLUP will compare the .SSI and the .MOD versions from the source FACTS system, and write the net changes, if any, to the SMFLUP file.

Answering these questions will determine the steps the SMFLUP generation process should follow to properly update the meta-data files.

I. *Do you want the current meta-data files to be copied to have .MOD extensions prior to generating SMFLUP? (Y/N)*

It is **required** that this be answered **'Y'** to ensure the .MOD files contain the latest modifications. Answering 'N' will use the .MOD files already in place (which may be out dated) to generate the SMFLUP file.

II. *Do you want all .NEW files to be copied to have both no extension and an .SSI extension after SMFLUP has been generated? (Y/N)*

It is **required** that this be answered **'Y'**. This will eliminate all manual renaming of files, and it ensures that you continue to work with the new meta-data files.

III. *Do you want custom note categories to be included in SMFLUP? (Y/N)*

Answer Y to bring the custom note types forward from the source FACTS system.

Answer **'N'** to eliminate them. It is highly recommended that you answer **'Y'** to this question.

IV. *If you have entered Modification IDs in your meta-data, you can enter the IDs you want SMFLUP to contain.*

It is **required** that this be left blank to accept all mods. Entering values here could cause some modifications to be left behind.

e) Merge SMFLUP:

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If modifications are found during the generate SMFLUP process, these questions will determine how those modifications are applied to the new 7.7 metadata files.

I. *Automatically recreate the .MOD files after the mods are applied? (Y/N)*

It is recommended this always be answered 'N'.

Answering 'Y' will automatically erase the current .MOD files and copy the final merged versions of the metadata files with all of the modifications applied to .MOD files. This is unnecessary if you always answer 'Y' to the question, "*Do you want the current meta-data files to be copied to have .MOD extensions prior to generating SMFLUP?*".

II. Enter modification IDs to merge from SMFLUP

It is **required** that this be left blank to accept all mods. Entering values here could cause some modifications to be left behind.

III. Merge SMFLUP changes for files without Mod IDs

Note: This question is skipped if no Mod IDs were entered. When presented, this should always be answered **'Y'**.

IV. Apply modifications by:

- Run continuous – changes are applied automatically with no user interaction.
- Stop on exceptions only - only potential problems are presented to the user during the merge process.
- Stop on everything – each change is presented to the user for approval.

Regardless of which method you choose, exceptions will be recorded in the file exceptions.txt, and all changes will be recorded in changes.txt.

If you get a ProvideX activation error when you try to sign into FACTS, you can return the ProvideX Activation screen by choosing *Start→Programs→Sage Software →ProvideX V8.30→Activation.* Verify the serial number and activation key entered.

- Manual Upgrade Setup:

Installs a new FACTS 7.7 release and allows the user to perform the upgrade process manually by following the steps found in Chapter 5.

a) The destination directory defaults to C:\infor\facts77. Choose **Browse** to change drives or directories. Choose **Next** to accept the default.

IMPORTANT: The destination directory CANNOT be the same location as the FACTS version you are upgrading from.

10. Enter the location of the latest 7.7 incremental update. Choose **Browse** to change drives or directories. If no incremental has been released, leave this blank, otherwise, you should have already downloaded the incremental and extracted the setup files into a temporary directory as explained above, under "Incremental

Update".

11. If prompted, enter the server's SSI_BASE value (up to 20 characters and no spaces). If the machine already has an SSI_BASE value assigned to it, the InstallShield will use its value and skip this prompt. Refer to the previous page for more information. Choose **Next** to continue.
12. Click **Next** to accept the default Program Folder name.
13. Review the selections made in the previous screens. Choose **Back** to make changes to previous screens. Choose **Next** to begin copying files.
14. Continue with the installation of ProvideX below. FACTS 7.7 requires ProvideX version 8.3.

Installing ProvideX

Note: If you are installing ProvideX as a part of the FACTS installation process above, continue with step 2.

a. To manually start the installation of ProvideX, from any screen within the CD browser, select ProvideX.

b. Choose **Next** at the Welcome screen.

c. Accept the terms of the license agreement, and click **Next**.

d. Select the appropriate installation type.

Upgrade:

a) Choose the appropriate version you wish to upgrade, and click **Next**.

b) Continue with step 7

New Install:

a) Continue with next step.

e. Provide your customer information, and click **Next**.

f. At the Destination Folder screen**, make sure the destination directory is set to install in C:\infor\facts77\pvx, not C:\Program Files\Sage Software\ProvideX V8.30** (assuming FACTS was installed to drive C:\ in the default directory – otherwise, select your chosen directory with a sub-directory of pvx).

If necessary, click **Change** to change the directory. Either type the folder name or navigate to the infor\facts77\pvx folder. Click **OK** to return to the Destination Folder Screen.

g. Choose **Next** to continue with the ProvideX installation.

h. Choose **Complete** setup type and click **Next**.

i. Click **Install** to begin the installation.

j. Click **OK** at the Demo Activation Complete message.

k. Enter the ProvideX Serial Number and Activation information from the FACTS Authorization Code Sheet.

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Enter the Main Company name in the Registered User Name field. This is not case sensitive.

Enter the ProvideX Serial Number from the PVX Serial # column on the Authorization Code sheet. The system adds a leading zero to the serial number after you enter it.

Enter the Max. Number of Users indicated for ProvideX on the Authorization Code Sheet.

Remove the date in the Expiration Date field, if one appears.

Enter the ProvideX Activation Key. **This field is case sensitive.**

> **FACTS utilizes a second activation key or package#, accessed through the Package button, in addition to the standard activation key.**

The Package# is 774. You will find its activation key on your FACTS authorization sheet. Leave the expiration date field blank. Click **OK**.

Click **Record** to continue with the installation.

l. Click **Finish**.

15. If upgrading from a previous version using either the Express or Custom setup method, the automated upgrade process will begin now. When this update process is complete, you will be returned to the final Install Shield screen.
16. Click **Finish** to complete the installation.
17. If there is no need to install another application, select **Exit** from the FACTS Installation CD to exit the installation. If other applications are needed refer to the appropriate 3rd Party chapters.
18. **If you are performing a manual upgrade, exit this procedure now, and continue with the steps found in Chapter 5.**
19. Continue with the configuration of NThost

Double-click the NT Host icon to restart the service each time you restart the server. WindX clients will not be able to start FACTS until NT Host is launched.

Configuring NThost Process

20. Right click on the NT Host icon. Select *Properties* from the popup menu and select the Shortcut tab in the Properties window.

    Make sure the Target line includes the path to **pvxwin32.exe** and, if necessary, change the TCP/IP socket number and maxport. This is only necessary if other services are currently assigned to the default socket number and maxport.

    Sample target line:

    C:\infor\facts77\pvx\pvxwin32.exe *nthost -arg 10000 10999

    See "Understanding WindX and the pvxhost script" in Chapter 1 for more information.

21. Make sure the Start In line indicates the path to the **Infor** directory.

    Example: C:\infor\facts77

22. Choose **OK**.
23. **Restart the server to set SSI_BASE.**
24. Double click the NT Host icon to launch the NT Host script.
25. Double click the FACTS 7.7 Server icon to access the FACTS INSTALL menu.

    NOTE: Due to the screen resolution, the FACTS window may require some resizing.

3rd Party Installation

26. If you are installing a 3rd party application and you installed FACTS in a different directory or drive other than the FACTS default, be sure to change the 3rd party destination directory to the same directory in which you installed FACTS7.7. Refer to the appropriate chapter for 3rd party installation instructions.

Setting up INSTALL menu programs

27. The FACTS Install Menu enables you to set up the minimum amount of information necessary to get the system operational.

    Make sure you have the FACTS Authorization Code Sheet. You may also want to print the System Management File Maintenance chapter (Chapter 10) from the PDF Documentation Library CD so you have a full description of these file maintenances.

Run these programs in the order that they appear.

- Generate SMFLUP
- System Control F/M
- Company F/M
- Company Control F/M
- Terminal F/M
- Printer F/M

The following are only used to upgrade from earlier versions of FACTS.

- Merge SMFLUP
- Install Update/Add-on Modules

I. For new installations only, at the FACTS INSTALL menu, run Generate SMFLUP.

NOTICE: The generation of SMFLUP is **REQUIRED** to properly establish the structure of all meta-data files. DO NOT SKIP THIS STEP.

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This program will compare the .SSI and the .MOD source versions, and write the net changes, if any, to the SMFLUP file.

Running UTR999 (Generate SMFLUP) will ask you several questions to determine the steps it needs to follow in order to properly update the meta-data files.

1. *Do you want the current meta-data files to be copied to have .MOD extensions prior to generating SMFLUP? (Y/N)*

   It is **required** that this always be answered **'Y'** to ensure the .MOD files contain the latest modifications. Answering 'N' will use the .MOD files already in place (which may be out dated) to generate the SMFLUP file.

2. *Do you want all .NEW files to be copied to have both no extension and a .SSI extension after SMFLUP has been generated? (Y/N)*

   It is **required** that this always be answered **'Y'**. This will eliminate all manual renaming of files, and ensures that you continue to work with the new meta-data files.

3. *If you have entered Modification IDs in your meta-data, you can enter the IDs you want SMFLUP to contain.*

   It is **required** that this be left blank to accept all mods. Entering values here could cause some modifications to be left behind.

4. *Do you want custom note categories to be included in SMFLUP? (Y/N)*

   Answer Y to bring the custom note types forward (for instance, if you are upgrading a customer). Answer N to eliminate them from the source FACTS system. It is highly recommended that you answer this question Y.

NOTE: If .SSI files are missing, you will receive a message. Hit Enter to continue.

NOTE: If you restart UTR999 for any reason, you should restore the metadata files to their state prior to starting the Generate SMFLUP program.

II. Select System Control F/M to begin entering Authorization Code information and other system control settings.

1. Enter the FACTS **Serial Number** *exactly* as it appears on the Authorization Code Sheet.
2. Enter the **Main Company Name** *exactly as it appears* on the FACTS Authorization Code Sheet — character for character. **This field is case sensitive**. Failure to enter an exact match will prevent you from accessing the rest of the system.
3. Accept the current **FACTS Level** — 7.7
4. From the Authorization Code Sheet, enter the Max FACTS Users in the **Maximum Terminal**s field.

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5. Enter all of the remaining information from the FACTS Authorization Code Sheet other than the individual company numbers and names. All of this information must be recorded accurately for FACTS to function.
6. Enter the **Affiliate Name** (up to 30 characters).
7. Enter the **Affiliate Phone Number**, including area code.
8. Enter the number of **IC Verify** licenses purchased, if any.
9. Enter the full path to the FACTS API Polling and Output directories. NOTE: These directories must be created before they can be entered here! (ex. Polling: \infor\facts77\api\in Output: \infor\facts77\api\out)
10. From the Security Tab, leave the **Use User Tracking** flag set to **N**. Further details pertaining to User Tracking can be found in the System Management Documentation within on-line help or on the documentation CD.
11. Set the number of minutes you want to allow for **Menu Timeout**. You can set the Menu Timeout feature from **1** to **99** minutes.

    ➲ If you don't want menus to timeout at all, enter 0 in this field.
12. Save all entries made to System Control F/M and exit the program. At the INSTALL menu, an **OK** should appear next to System Control F/M to show that it has been completed.

III. Select Company F/M from the menu to set up companies in FACTS.

1. Enter the **Company** code (up to two characters) exactly as it appears on the Authorization Code Sheet, for example 01. Failure to enter an exact match will prevent you from accessing the rest of the system.
2. Enter the Company **Name** (up to 30 characters) exactly as it appears on the Authorization Code Sheet. **This field is case sensitive.** Failure to enter an exact match will prevent you from accessing the rest of the system.
3. Enter the company street address (up to 30 characters) in the **Address 1** field. Use **Address 2** and **Address 3** fields for city, state, ZIP and other information.
4. Enter the company **Phone Number** (up to 17 characters), including area code and dashes.
5. Enter the **Authorization Code** assigned to this company. Make sure you enter the code exactly as it appears on the sheet. **This field is case sensitive.** Failure to enter an exact will prevent you from accessing the rest of the system.

   Repeat Steps 1-5 for all companies listed on the FACTS Authorization Code Sheet.
6. Save the entries made in Company F/M and exit the program. At the INSTALL menu, an **OK** should appear next to Company F/M to show that it has been completed.

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IV. Select Company Control F/M to establish company-specific parameters.

Most of this information should have been discussed with the client during personalization interviews.

General Tab

Enter GL number information, item number padding, number of fiscal periods per year, commission and gross margin bases, system date format mask and system override password.

Modules Tabs

The Modules Used default to what you entered in Company F/M.

Security Tab

Define a security code (0-9, A-Z, a-z) for system-wide template creation in reports. Assign this code in User Code F/M to authorize a user to create system-wide report templates.

Define a security code (0-9, A-Z, a-z) for search exports. Assign this code in User Code F/M to authorize a user to export search results to ASCII or Excel files.

Repeat the entries for additional companies.

Save all entries and exit the program. An **OK** should appear next to this option to show that it has been completed.

API Publish Tab

If you are using the API Toolkit to publish custom XML to external (i.e. non-FACTS) consumers, set **External Publish Options** -> Publish To- to the proper destination for these external transactions. Otherwise, select N-Not Used.

If you are using the ProvideX WebServer to receive API transactions (e.g. as with the Storefront integration), you can set the **Internal Publish Options** to either of the available options. If you are not using the ProvideX Webserver you must select **D - API Polling Directories** from System Control F/M. You may use a combination of the WebServerfor Storefront and the Polling Directories for FACTS internal transactions. In either case, if you select **D - API Polling Directories** you must start the polling program (SMU954) as described in the API Toolkit Runtime Requirement topic of Security, Chapter 6, of the System Management Users Guide.

V. Select Terminal F/M from the INSTALL menu to set up the T0 record. The T0 record serves as the template for all other terminal records created as users sign into the system.

The terminal code field is case sensitive.

For this record and all other Terminal ID records, the security system automatically creates the ID, description and base. It derives the values from the SSI_BASE environment variable you set during the CD installation.

Set **Terminal Colors** and **Special Function** keys as you want them to appear in the rest of the terminal IDs.

For more information about terminal records and how they are created, see "Understanding FACTS Security" in Chapter 1.

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Save all entries and exit the program when you are done. An **OK** should appear next to Terminal F/M to show that it has been completed.

VI. Select Printer F/M from the INSTALL menu to set up FACTS printers.
If you have not already created drivers and link files, create at least one dummy printer.

Refer to the section in this chapter on "Printers, drivers and link files," page *4-18* for printer configuration instructions.

This concludes the FACTS server installation.

Test the installation by signing into FACTS.

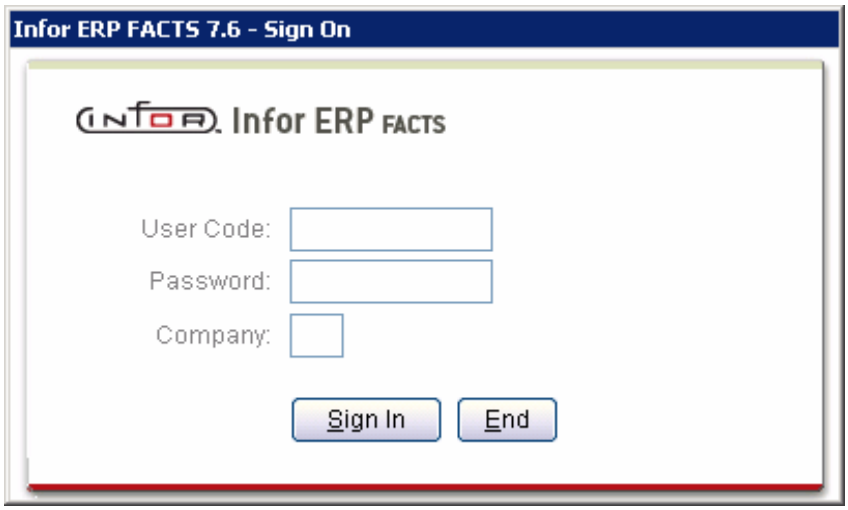
Double click the FACTS 7.7 Server icon on the desktop.

Enter the following information:

Login: IN4

Password: IN4

Company number: 01



➲ If a ProvideX Activation key error appears, choose *Start → All Programs →Sage Software →ProvideX V8.30 →Activation* and check the information entered in that screen against the FACTS Authorization Code Sheet.

If you can sign into FACTS, you can begin FACTS client installations.

Installing WindX on PC clients

Things to know before you begin

➲ You will need to restart the client workstation to set the SSI_BASE value.

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- Verify that TCP/IP is set up on the server and it is running. You should be able to *ping* the server.
- Make sure you have the list of SSI_BASE values you created before server installation. You will assign a value as you install each client. Note: If the PC already has an SSI_BASE value in it's autoexec.bat file, the install will use this value instead of asking for one.
- Make a note of the server's TCP/IP address. You will need it to modify the Shortcut Properties Target line for each client.

  To find the TCP/IP address, go to the server and choose *Start→Settings→Control Panel.* Select Network and in the Network dialog box, select the Protocols tab. Double click the TCP/IP Protocol.
- Locate an open socket on the server. WindX defaults to the 10000 port. If this is occupied by another TCP/IP service, the WindX client cannot communicate with the server.

  In Windows Explorer, navigate to WinNT\System32\drivers\etc. Double click on the **services** file and open it in Word Pad. This is a list of services and the sockets they use.

  Make sure the socket you select has a block of free sockets above it so WindX has room to assign a port for each session of FACTS users need to run.

  Tip: Multiply the number of FACTS users by the average number of sessions you expect the users to run. The socket you select needs to have at least this many ports above it so users don't receive errors when they try to open multiple sessions of FACTS.
- To take advantage of the full text search and indexing features in the PDF Documentation Library, install the version of the Adobe Acrobat Reader included on this FACTS Installation CD. Other versions of the Reader may not necessarily support this feature. Make sure you uninstall any existing versions of the Reader before you begin.

Client Installation

1. Make sure you close any open applications.
2. Place the FACTS Installation CD in the CD drive.
3. Wait for the InstallShield to start automatically or if autorun is not enabled on your computer, run FACTS77.exe from the CD.
4. Select *FACTS*.
5. Select **Yes** to install FACTS.
6. Choose **Next** at the Welcome screen.
7. If you agree, select **Yes** to accept the FACTS license agreement.
8. Select **Client** as your setup type, and choose **Next.**
9. The destination directory defaults to C:\infor\facts77. Click **Browse** to change drives or directories. Click **Next** when you are ready to continue.

Important!

Do not choose the **Server Install** option during client PC installations

The client install only places a small number of files needed for the thin client to operate.

The server installs a full version of the FACTS application.

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10. If prompted, enter a unique SSI_BASE value for this client, for example the Windows login or the PCs Network ID. If the machine already has an SSI_BASE value assigned to it, the InstallShield will use its value and skip this prompt. See the page *4-1* for more information. Note that the SSI_BASE value should contain no spaces. Choose **Next** to continue.
11. Choose **Next** to accept the default Program Folder name.
12. Review the selections made in the previous screens. Choose **Back** if you need to make any corrections. Otherwise, click **Next** to begin copying files.
13. When all files are copied, choose **Finish**.

Installing the WindX thin-client

1. From the FACTS Installation CD, select *WindX.*
2. From the WindX screen, select *Standalone.*
3. Choose **Next** at the Welcome screen.
4. If you agree to the terms of the license agreement, select the appropriate statement, and choose **Next**.
5. Select the appropriate installation type.

   Upgrade:

   a) Choose the appropriate version you wish to upgrade, and click **Next**.

   b) Continue with step 7

   New Install:

   a) Continue with next step.
6. Provide your customer information, and click **Next**.
7. On the Destination Folder screen, **make sure the destination directory is C:\infor\facts77\pvx, not C:\Program Files\Sage Software\WindX V8.30 Standalone** (assuming you installed FACTS on the C: drive).

   Choose **Change** to change directories. Type the destination directory in the **Folder name** field or navigate to it using the Directory list box. Choose **OK** to return to the Destination Folder screen.

   Choose **Next** to continue with the installation.
8. Select the standalone version of WindX.

   Choose **Complete** setup type, and click **Next**.
9. Check the box stating that you understand and accept the Disclaimer Agreement, and click **Install**.
10. Click **OK** at the Demonstration Activation Complete! message.
11. Enter the WindX Serial Number and Activation information from the FACTS Authorization Code Sheet in the ProvideX Activation screen.

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Enter the Main Company name in the Registered User Name field. This is not case sensitive.

Enter one of the WindX serial numbers from the PVX Serial # column on the FACTS Authorization Code sheet. The system adds a leading zero to the serial number after you enter it. **Do not use this serial number on any other client installations.**

Enter **1** in the Max. Number of Users field.

Remove the date in the Expiration Date field if one appears.

Enter a WindX Activation Key. **This field is case sensitive. Do not assign this activation key on any other client installations.**

Click Record to continue with the installation.

12. Click **Finish.**
13. If there is no need to install another application, select **Exit** from the FACTS Installation CD.

Setting up and installing the API Toolkit

These instructions address the installation and configuration of the Polling Directory option for the API Toolkit only. For instructions on installing and configuring the ProvideX Web Server for use with the API Toolkit, refer to the *FACTS eCommerce Catalog Integration and Setup* manual.

These instructions assume you understand how to setup a ProvideX program to run as a service.

FACTS 7.7 requires that the API Toolkit be running at all times. There are transactions which FACTS uses to communicate internally, which are processed by the API Toolkit, and the functions within FACTS that rely on those transactions will fail if the Toolkit is not operational.

The API Toolkit will process these required transactions even if the Toolkit has not been purchased. If you wish to use the API Toolkit for other purposes, you must license it by purchasing the AT module.

Once the API Toolkit is installed and running, you must enter the API Publish key code in API Key Code Entry (SME007). This step also helps prevent unauthorized access to the API by providing a password that is required for access to the Subscribe APIs. The key must be setup as follows:

Key Code: [API-Publ]

Description: API Publish

Password: any value as long as it isn't left blank

Default Co: leave blank

Catalog Requests: No

Send Namespace: No

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Date Format: leave blank

Do not enter any valid companies.

The Polling program: SMU954

SMU954 monitors the API Polling directory as setup in System Control F/M for XML transactions. When one is received, it processes it and returns a response (if requested) to the Response directory indicated in System Control F/M.

Windows Systems

SMU954 only requires that its Start-In directory be the main directory FACTS is installed in (by default, c:\infor\facts77). The command line should refer to the ProvideX installed for FACTS 7.7, and should look like this:

C:\infor\facts77\pvx\pvxwin32.exe prog/SM/SMU954

Following the instructions for setting up *nthost as a service, set this up as a service as well.

As many copies of SMU954 may be started as needed, based on volume.

Configuring the desktop icon

1. Right click on the *FACTS 7.7 Client* icon, select Properties and choose the Shortcut tab in the Properties window.

   Assuming you installed FACTS to the C: drive, you should see the following in the **Target field**.

   C:\infor\facts77\pvx\pvxwin32.exe *ntslave -id=[NAME] -arg [TCP/IP] SSIWDX [SOCKET]

   Enter the client's **id name,** the server's **TCP/IP address** and the **socket** number that the server monitors. Make sure you remove the brackets [ ].

   For example:

   C:\infor\facts77\pvx\pvxwin32.exe *ntslave -id=Iron -arg 128.1.1.27 SSIWDX 15000

   → The **-id** argument enables you to see which client workstations are running.

   → The **TCP/IP address** tells WindX where to contact the server.

   → The **socket number** indicates the port on which the client should connect. **Make sure this matches the socket number entered in the target line of NT Host shortcut icon.**

2. Make sure the **Start in** directory is C:\infor\facts77, assuming you installed the FACTS Client on the C: drive.
3. Click **OK** in the FACTS 7.7 Client Properties window to set the properties.
4. Restart the client workstation to the set the SSI_BASE value.

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5. Double click the *FACTS 7.7 Client* icon to launch FACTS.
6. This completes the WindX installation on a FACTS client. You are now ready to begin configuring printers, after which you can enter *PIA Personalization Sheet* data into FACTS by signing into FACTS and accessing the **System Installation** menu (*System Management→System Installation*).

   Finally, configure third-party packages according to the instructions provided in this manual and/or the manufacturers' installation manuals.

   If any errors occur when you try to sign into FACTS from a client workstation, refer to the troubleshooting tips on page *4-23*.

   Bitmap Synchronization:

   With FACTS 7.7, when new or updated bitmaps are released, they will automatically be copied to the client's workstation. Each time the user signs on, FACTS checks the server's version file against the version file on the client's PC. If the server's version ID can not be found in the client's version file, the program copies all the bitmaps and updates the client's version file. While the copy is taking place, "Synchronizing Bitmaps—Please Wait" is displayed.

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Printers, drivers and link files

FACTS printer configuration essentially involves four steps.

1. Make a list of required printers.
2. Create a device driver for each logical printer. We'll explain the difference between logical and physical printers shortly.
3. Create a link file to associate the driver with the appropriate device.
4. Set up the printers in Printer F/M. This program enables users to select printers from menus in FACTS reports, registers, updates and searches.

FACTS printers refers to output devices users can access from within FACTS.

Logical printers refers to output devices that are based on driver formatting. Multiple logical printers can output to one physical printer.

Physical printers refers to the hardware devices, for instance, an HP Laser Jet 4000 or Genicom dot-matrix printer.

Make a list of required printers

Printer setup in ProvideX and FACTS starts with the PIA manual. Begin by using the FACTS Printer Configuration Worksheet to help you make a list of the printers that need to be configured. We recommend you do this prior to installation.

In our example below, an IC is configuring two physical printers for FACTS. Within FACTS, however, these two printers will appear as four separate printers, called *logical* printers.

Printer ID in FACTS	Description/ characteristics	Device driver	Physical driver	Link file/ alias
0	Genicom			
1	HP 4000 Portrait, 10 cpi			
2	HP 4000 Landscape, 17 cpi			
3	HP 4000 Portrait, 17 cpi			

Most dot-matrix printers can link to one printer driver — std_prtr. This driver accommodates most output formats users need to print from FACTS.

However, Windows-compatible printers, such as laser printers, require that you create different drivers to accommodate different outputs. This is why one HP Laserjet 4000 appears as three different printers in FACTS.

Once you know the different types of outputs the customer needs, you're ready to build device drivers.

Creating device drivers

ProvideX ships with a standard device driver — std_prtr— that handles most dot-matrix printers. It also ships with several generic printer drivers for HP Laser and Epson printers. Drivers are located in the *DEV directory (.\PVX\LIB_DEV).

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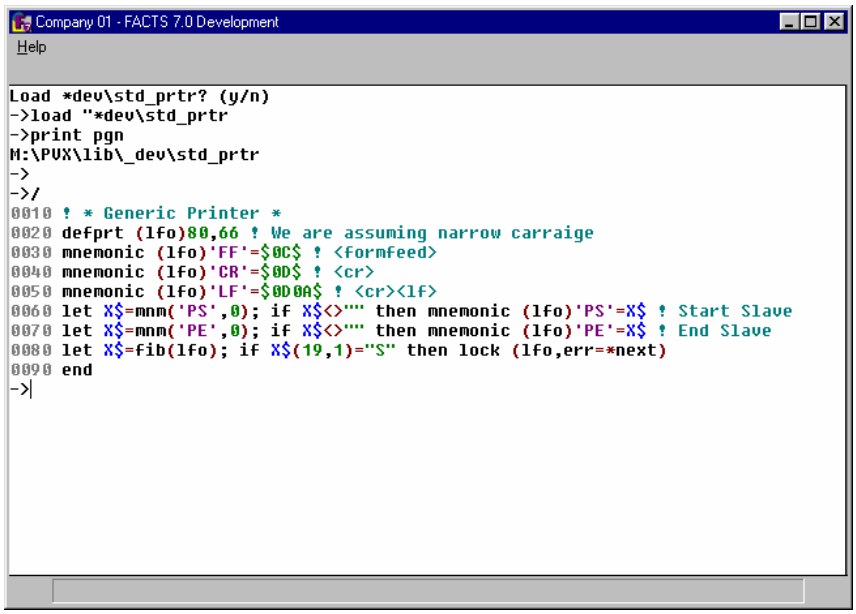
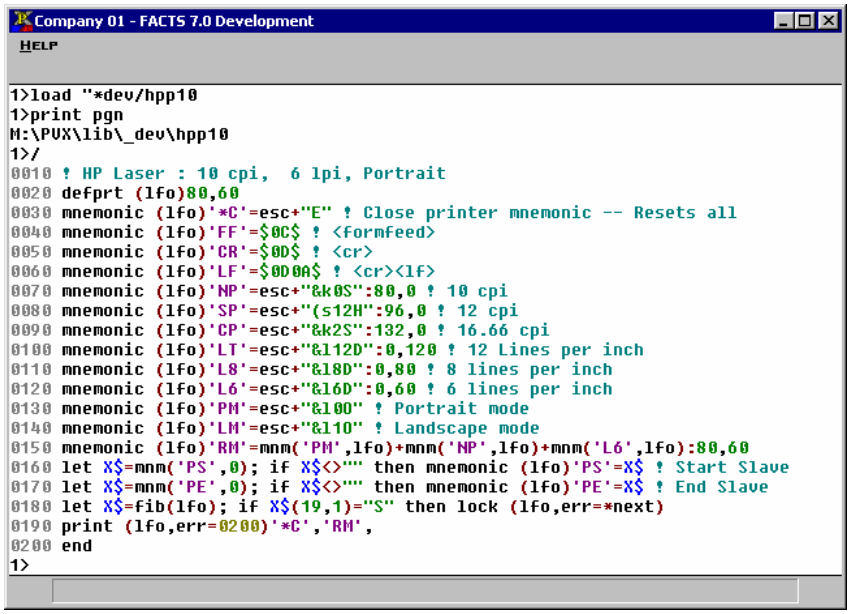
➲ Before you modify one of the standard ProvideX drivers, check with FACTS Technical Support. The FACTS Technical Support Team periodically uploads new drivers as they are created. One may already be available that meets your needs.

The std_prtr driver that supports most dot-matrix printers appears as follows:

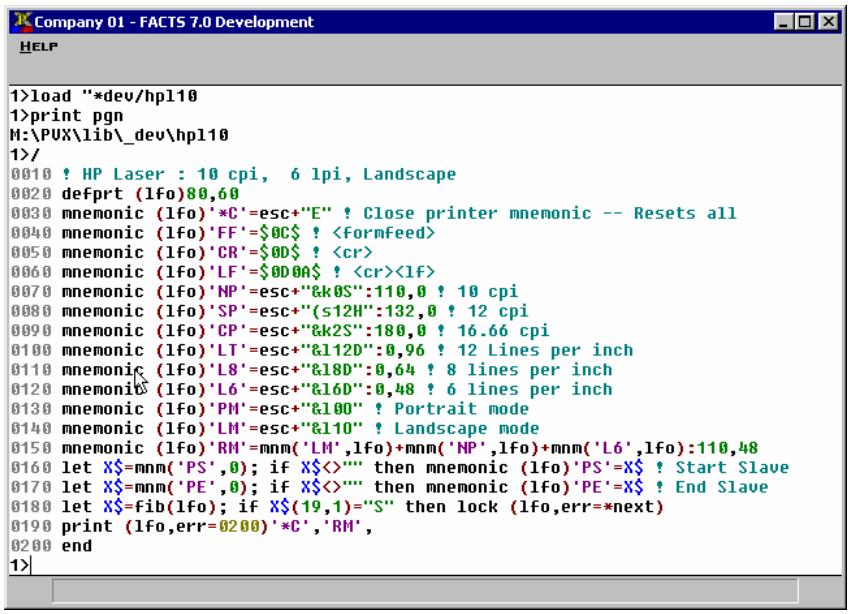


The following shows the standard hplaser driver. This supports outputs to an HP Laser print in 10 cpi Portrait:

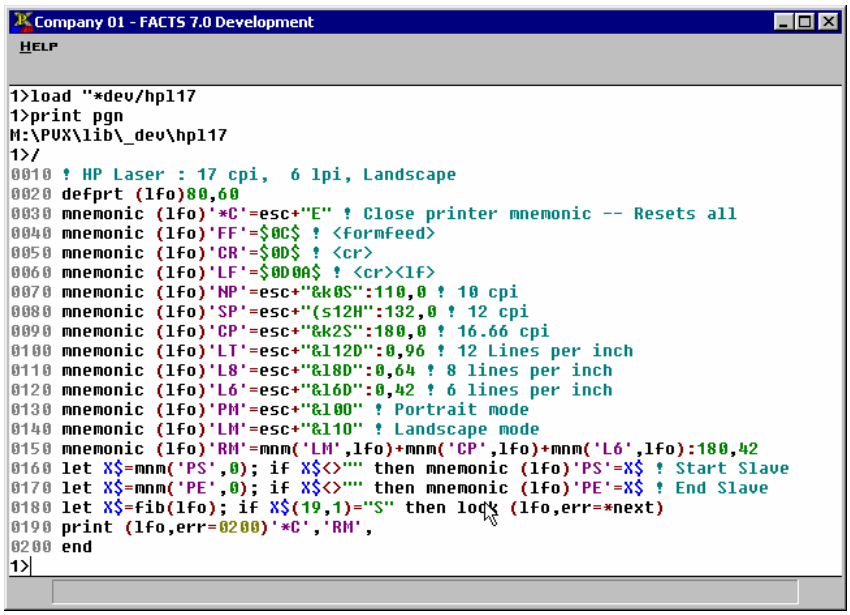


Important note Printer device driver names cannot be longer than 13 characters. If they exceed this limit, they will cause an Error 100 (No driver for terminal type of library missing.)

The following shows the same driver renamed and modified so that it supports outputs in 10 cpi Landscape. Since the printer needs to output to paper 11 inches wide and roughly 8 inches deep, the NP, SP, CP and RM mnemonics change to accommodate that size.



This final screen shot shows the hplaser driver renamed and modified to support the 17 cpi Landscape format. Notice the changes to the NP, SP, CP and RM mnemonics.



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Once you have created all the device drivers you need, make a note of them on the Printer Configuration Worksheet.

Printer ID in FACTS	Description/ characteristics	Device driver	Physical driver	Link file/ alias
0	Genicom	std_prtr		
1	HP 4000 Portrait, 10 cpi	hplaser		
2	HP 4000 Landscape, 17 cpi	hpl17		
3	HP 4000 Landscape, 10 cpi	hpp10		

Creating link files

Link files are simple flat files that associate an output device with its corresponding driver. They essentially become a single alias for the device and its driver.

The easiest way to create link files is to use the ProvideX *UCL utility. Answer the questions and the utility builds the file from this information. Link files need to be kept in **infor\facts77\link**.

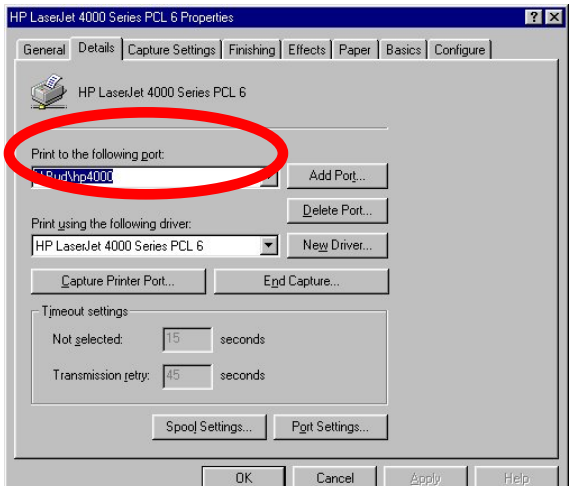
Access the link file utility from the FACTS menu by typing UT and selecting Run Utilities. From the menus, select *Utilities*→*Configuration*→*Linkfiles*.

1. Name of link file?

Enter *link\[three characters]*. Prefacing the name with *link* ensures that the file gets created in the **infor\facts77\link** directory. Also, make a note of the link file on the Printer Configuration Worksheet; it will be entered in FACTS Printer Maintenance.

Answer **Yes** to the message "File xxxx does not exist. Create?"

2. "xxx" links to …



If it's set up on the network, use the **Universal Naming Convention** (\\Machine_Name\Resource).

If you're not sure of the printer's UNC, go to *Start*→*Printers*→*Settings* and right click on the printer icon. Select *Properties* from the menu and click on the Details tab. The Universal Naming Convention appears in the **Print to following port** prompt.

→If your network doesn't use the Universal Naming Convention, use *WINDEV*;printer name.

A number of other considerations come into play at this step. Refer to "*Technical Insight: Accessing Windows Printers*" if you feel you need more information about UNC or *WINDEV* or what to do if the physical device is relative to a WindX station.

3. What type of link is "xxxx"?

Select **Printer** and enter **No** when the utility asks *Is this printer connected via a Terminal Auxiliary Port?* Select the appropriate printer driver from the popup list.

If you are setting up a link file for the Portrait, 10 cpi printer in the example below, you would select the **hpp10** driver.

Printer ID in FACTS	Description/ characteristics	Device driver	Physical driver	Link file/ alias
0	Genicom	std_prtr	>lp -s -d Genicom2> /dev/null	P1
1	HP 4000 Port., 10 cpi	hplaser	>lp -s -d HP4000> /dev/null	P2
2	HP 4000 Land., 17 cpi	hpl17	>lp -s -d HP4000> /dev/null	P3
3	HP 4000 Land., 10 cpi	hpp10	>lp -s -d HP4000> /dev/null	P4

SME940: Setting up Printer Maintenance in FACTS

Refer to the Printer Configuration Worksheet and enter the appropriate information into the following prompts:

1. Printer ID. Starting with the first printer on your sheet, enter the printer ID you assigned.

2. Link File. Enter the name of the link file created for this printer. Since the link file is an alias for the physical device and its driver, both pieces of information are tied into this prompt.

3. Printer Description. Enter the Description of Output information from the configuration worksheet. Make sure the description gives users some indication of the printer being used and the format that will be produced.

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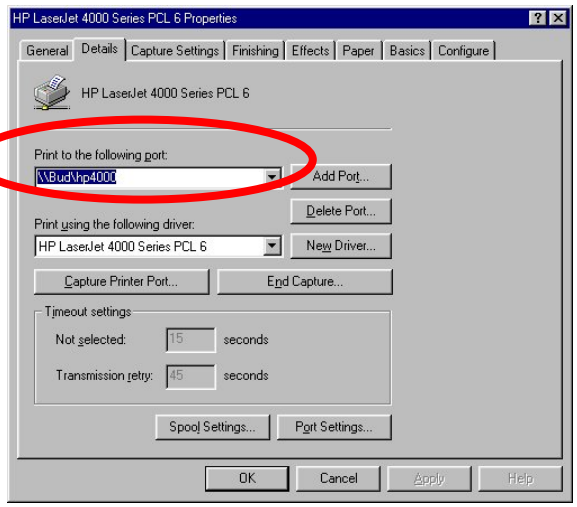
Technical Insight: Accessing Windows printers in ProvideX

If Universal Naming Conventions are in place, this is the best method of accessing Windows printers. Most Windows networks use this method to access printers. It allows Windows to transfer jobs around the network to the specified destination, bypassing the Windows print drivers and spoolers, and injects print jobs — along with all mnemonics —directly to the printer queue.

The UNC opens any shared resource, which is specified as \\Machine_name\Shared Resource. (This is the same information entered in the Properties window for each printer when you specify a port.)



➲ If your system includes one of the "Windows only" printers, such as inkjets and deskjets, the UNC access method will not work. These types of printer cannot handle raw escape sequences. As a result, FACTS does not support these types of printers.

WINDEV Alternative

If UNCs aren't in place, use ***WINDEV*** to access printers. This method provides direct access to the Windows dialog box and permits ProvideX to send raw escape sequences to the printer.

WINDEV uses a Windows API technique called RAW or PASSthrough to send data, including escape sequences, through a ProvideX printer driver. The output then goes to the Windows spooling system and finally to the printer specified. It does not support graphical printing, so when the Windows dialog box appears, graphical settings, such as Landscape and Copies, are not available.

When you create a link file, you can simply specify *WINDEV* as the physical device without specifying a printer. For example,

```
Link file: LP
Device: *WINDEV*
```

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```
Driver: hpp10
```

This requires less front-end work on the administrator's part because it allows each user to select a printer from the Windows Print dialog box. However, this may introduce user-created errors since it gives users the opportunity to select a different printer in the Windows dialog box than the one they selected in FACTS.

To eliminate this problem, identify a specific printer after *WINDEV*.

WINDEV;HP Laserjet 4000

This has same effect as the UNC method. It bypasses the Windows drivers and the Windows spooler so the operating system will not pop the Print dialog box.

However, this requires more administrative work on the front-end.

The physical printer specified after *WINDEV* must be entered exactly as it appears in the Windows Printers folder. If several users need to access this printer, the printer must appear the same way in each of their Windows Printers folders. If the printer is spelled differently in one user's Printers folder, that user will get an Error 12 when he or she tries to print.

WINDEV and WindX

One of the advantages of using the UNC method, if it's available, is that administrators are not required to do anything differently for WindX users than for non-WindX users.

WINDEV opens a printer relative to the server unless it is told to do otherwise, and as a result, WindX users may experience printing errors.

Say, for instance, that WindX users select a printer using the following link file:

```
Link file name: link\P1
Device: *WINDEV*;HP Laserjet 4000
Driver: hpp10
```

ProvideX will route these jobs to the server. If there is an HP Laserjet 4000 set up on the server, the print jobs will output from that printer, which users may find confusing. If an HP Laserjet 4000 doesn't exit on the server, users receive Error 12s, which means ProvideX could not find the device.

To redirect printing to the client, administrators can create another link file for WindX users (using the same driver and physical device) and preface the device name with [wdx].

```
Device: [wdx] *WINDEV*;HP Laserjet 4000
```

This means that you also have to create another logical printer in FACTS and assign it a different printer number. When you enter the printer description in Printer F/M, make sure you clearly differentiate the two, and inform users which printer they need to select from the FACTS menu.

If you are concerned about using additional printer numbers in FACTS or users selecting the wrong printer, you can build an intelligent driver by adding four lines of code to the beginning of the printer driver and specifying a NUL device in the link file.

At the top of the printer driver, add

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```
X$=fid(lfo)
close (lfo)
open (lfo) %wdx$+"*WINDEV*;HP Laserjet 4000"
setfid (lfo) X$
```

This code enables the driver to determine whether the station uses WindX or not and then directs the print job accordingly.

Other options

Even though ProvideX offers these alternate access methods, they are not used in FACTS printer configuration.

WINPRT provides direct access to the Windows Printer Dialog box, using standard Windows print API calls. *WINPRT* supports both character and graphical mode printing. It also supports all graphic mnemonics, such as 'Font', 'Text' and 'Picture'.

***WINPRT* does not support raw escape sequences,** which is why it cannot be used in FACTS printer configurations. Any escape sequences added to a Windows printer driver go unnoticed because ProvideX contains a series of predefined escape sequences hardcoded into the language, which pass directly to the Windows drivers when you specify *WINPRT* in a link file.

Data sent to the *WINPRT* device is first interpreted by the device driver for the printer selected and then the driver's output is sent to the Windows spooling system so that it can be transmitted to the selected printer. Data travels from the spooling system to the printer via UNC for network printers or PORT for local printers.

VIEWER is the special device file for the ProvideX graphical viewer. Infor pre-configures the viewer so it's ready to go at installation.

Troubleshooting printer problems

This is by no means an exhaustive list of possible printer problems, but it covers some of the most commonly reported problems. They usually fall into two categories: The job doesn't print at all or the job doesn't format correctly.

Print job no-shows. When documents don't output at all, make sure the device can print from the operating system. When you set up a printer in Windows, run a test page or print a document from another application.

If you can successfully print in Windows, something might be wrong with the link file.

Try opening the printer from a ProvideX prompt. Example:

```
→Open (1)"*WINDEV*;HP Laserjet 4000"
→print (1)"Hi there"
→end
```

If a page with the text "Hi there" prints on the printer you specified, then the link file may be accessing the wrong device. You can check by navigating to **infor\facts77\link** and opening the link file in Word Pad.

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Error messages. If hard errors occur when someone tries to print, it may indicate that ProvideX is having trouble locating the link file or the physical device indicated in the link file.

1. Check permissions. Was the link file created by an administrator? Is it possible those administrator's rights were passed on to the link file?
2. Make sure the link file resides in **infor\facts77\link.** In *UCL, **enter link\[file name]**.
3. If you indicated a specific printer in the link file, make sure it's spelled the way it appears in the Windows Printers folder. If several users access this printer, make sure the printer is spelled the same way in each user's Printers folder.

Output is totally skewed. Text printing off the page, several characters printing leaving the rest of the page blank and other drastic formatting problems suggest the link file is associating the wrong driver to the specified device. This is especially true if a laser printer driver get associated to a dot-matrix printer or visa versa.

Driver specifies compressed print, but report doesn't output in compressed print. Check the CP mnemonic definition in the printer driver. Also check the defprt setting. It's possible that the number of columns specified for the default page setting is wide enough that it wouldn't trigger compressed print.

Random users report formatting errors on laser printers. If you've ruled out user error, it's possible that the printer isn't resetting after each job. Check that the driver has a *C mnemonic, which defines how the printer resets after each print job. If the mnemonic is there, make sure it's defined according to manufacturer recommendations.

A laser printer isn't feeding out the last page of each document. Check the *C mnemonic. Make sure it uses the manufacturer's recommended hex code for printer reset.

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Troubleshooting tips

Error message	Cause	Fix
Illegal pathname	Information in the target line of the FACTS 7.7 Client shortcut properties is incomplete or wrong.	Make sure you entered the TCP/IP and socket numbers correctly and you removed all brackets [ ] from the line.
TCP/IP address not found	Server may be down; NT Host is not running on the server; incorrect TCP/IP address entered on Target line of FACTS 7.7 Client shortcut properties.	Restart server; double click the NT Host icon on the server to kick off the service; check the server's TCP/IP address and make sure it was entered correctly in the Properties
Did not find C:\pvx\lib	The path C:\infor\facts77\pvx was not specified during the ProvideX or WindX installations.	Uninstall FACTS and ProvideX/WindX software and reinstall the software.
VSI-FAX Server cannot install	Installing the VSI-FAX Server software on Windows 95 or 98	VSI-FAX server must be installed on a supported Windows operating system.

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Infor ERP FACTS

CHAPTER 5

Upgrading FACTS on a Windows Server

The install CD contains all programs and files required to upgrade systems to the current version of FACTS.

The first section of this chapter outlines the conversion/upgrade procedures for users who are upgrading from FACTS 6.06 running on BBx or Vpro5.

The second section outlines upgrade procedures for users upgrading from FACTS 6.07.

The third section outlines upgrade procedures for users upgrading from FACTS 7.0 or greater.

IMPORTANT NOTE:

The installation instructions have changed with either new steps or old steps removed. It is *EXTREMELY* important that you read this process carefully to ensure a proper and successful upgrade.

Troubleshooting

- Should something happen during the installation requiring a restart of the installation process, it is **imperative** that you first remove the ProvideX and FACTS installations through Add/Remove Programs in the Windows Control Panel. This process will properly and fully uninstall the applications.

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- Should an error occur while performing the update programs, and you are unable to resolve the problem and continue, you can restart the auto update process by following the manual upgrade instructions below beginning with the heading 'Auto-Update Process'.

Upgrading from FACTS 6.06

Before you begin

- Run all registers and update before conversion.
- All invoices must be posted to Sales Analysis before the conversion.
- **Back up your data.**
- Your current FACTS data must at least be in the BBx4 file format. In most cases, you can complete the entire conversion without having a working copy of the BBx4 of PRO/5 language. In the unlikely event that a problem is encountered with cv-nobbx, be prepared with a working copy of BBx4 or PRO/5 and ensure that you can start it from the command line.
- Make sure the server and all PC stations are running 32-bit or higher versions of Microsoft Windows. FACTS does not support 16-bit operating systems.
- Make sure you have adequate disk space to run the conversion. We recommend that the server have enough disk space to accommodate **three** additional copies of the original FACTS data. At a minimum, there must be enough disk space to accommodate 2 copies of the data.
- Document any custom changes made to SMNAME, SMNAMZ, SMSLCT, SMFILE, and JSJOBS that the customer wants to carry over. They will be lost during the upgrade.
- Suggested PO and Transfer duplications are no longer handled by the Suggested Entry programs. For your reference, DELSUG.LOG is created listing deleted records.

Installation Procedures

The upgrade process now has three installation options: Express, Custom and Manual. These options are detailed in Chapter 4 "Installing FACTS on a Windows Server."

Complete the full process in Chapter 4 for your chosen upgrade option, then continue with the remaining instructions below.

The SM terminal records will be deleted and automatically rebuilt by the new security system.

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Notice: If you chose the Express setup or Custom setup option, proceed to step 20. Steps 1 through 19 are the Manual upgrade instructions, to be executed following completion of the steps in Chapter 4.

1. Open Windows Explorer and navigate to where you installed FACTS 7.7.
2. Create a new folder under infor\facts77 called data66. This is the directory where you will place your 6.06 data.

   Example: C:\infor\facts77\data66
3. Copy your 6.06 data into infor\facts77\data66.
4. Delete the following from the infor\facts77\data66 directory if they exist:
   - → the CL directory
   - → the DO directory
   - → the HELP directory
   - → the SU directory
   - → the TF directory
   - → the VF directory
   - → all .NEW files from the SM directory
   - → ACNAME, ACNAMZ, ACSLCT
   - → ARHOLD, ARPAYS
   - → JCHOLD
   - → ICALPX, ICCLSX, ICMVCX, ICVNDX
   - → SMEOPL.empty, SMFILE, SMGCTL, SMGLD*, SMMODS
   - → SMNAME, SMNAMZ, SMSLCT, SMUHLP, SMUSED
   - → SOHOLD
   - → SRHOLD
5. Convert your data to ProvideX file format.
   - → Create a temporary directory to hold the converted data files

     Example: C:\infor\facts77\data.conv
   - → Remember or write down where the FACTS 6.06 data files are located

     Example: **C:\infor\facts77**data66
   - → Start ProvideX: C:\infor\facts77\pvx\pvxwin32.exe
   - → Change your current directory to pvx\lib\ _conv.bbx

     Example:

     cwdir "C:\infor\facts77\pvx\lib_conv.bbx"

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→ Start the conversion program by running **cv-nobbx** and answering the questions as follows:

- ✓ Checkout Only: **No**
- ✓ Variable Length Record files: **Yes**
- ✓ Eliminate Max Record Counts: **Yes**
- ✓ Input File/Directory: **Path and file name for the BBx data** (e.g., /infor/facts77/data66)
- ✓ Output File/Directory: **Path and file name for the temporary location** (e.g., /infor/facts77/data.conv)
- ✓ Conversion Log file name: **Path and Name for file to hold warnings/error information**
- ✓ Log Errors Only: **No**

This starts the conversion process. After the directory scan, press **Enter** to continue. NOTE: The conversion will proceed automatically after about ten seconds.

When it finishes, the C:\infor\facts77**data.conv** directory should be populated with the ProvideX data files.

Review the Log file for any errors which might have occurred during the BBx to ProvideX conversion.

6. **IMPORTANT:**

   Remove any .SSI files from Infor\facts77\data\DO & data\SM.

7. **MODS NOTE:**

   If data modifications exist and they are required for FACTS 7.7, take appropriate steps to bring these forward.

8. Copy **infor\facts77\data.conv** into **infor\facts77\data**. This overwrites the FACTS 7.7 data files created during installation with your converted source data files.

   Note: You may want to keep the infor\facts77\data.conv dataset for the purpose of maintaining a backup copy.

9. Double click on the FACTS 7.7 Server shortcut icon on the desktop.
10. At the FACTS Banner Screen, click on the Infor logo and type **install**.
11. From the install menu, run **Generate SMFLUP**.

    NOTICE: The generation of SMFLUP is **REQUIRED** to properly establish the structure of all meta-data files. **DO NOT SKIP THIS STEP**

    This program will compare the .SSI and the .MOD versions from the source data, and write the net changes, if any, to the SMFLUP file.

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Running UTR999 (Generate SMFLUP) will ask you several questions to determine the steps it needs to follow in order to properly update the meta-data files.

I. *Do you want the current meta-data files to be copied to have .MOD extensions prior to generating SMFLUP? (Y/N)*

It is **required** that this always be answered **'Y'** to ensure the .MOD files contain the latest modifications. Answering 'N' will use the .MOD files already in place to generate the SMFLUP file.

II. *Do you want all .NEW files to be copied to have both no extension and a .SSI extension after SMFLUP has been generated? (Y/N)*

It is **required** that this always be answered **'Y'**. This will eliminate all manual renaming of files, and ensures that you continue to work with the new meta-data files.

III. *If you have entered Modification IDs in your meta-data, you can enter the IDs you want SMFLUP to contain.*

It is **required** that this be left blank to accept all mods.

IV. *Do you want custom note categories to be included in SMFLUP? (Y/N)*
Answer Y to bring the custom note types forward. Answer N to eliminate them.

It is highly recommended that you answer this question Y.

NOTE: If .SSI files are missing, you will receive a message. Hit Enter to continue.

NOTE: If you restart UTR999 for any reason, you should restore the data directories to their original state first.

Auto-Update Process

12. At the FACTS Sign-on Screen, click the Infor logo and type install.
13. Select **Install Update/Add-on Module** from the Install menu.
14. Press **F1-Auto Update**.
15. Press **CR-Continue** at the next window.
16. Select the **6.07 Update**.
17. Accept the defaults in the Parameters box, type **Yes** to continue with the update.
18. When the update is complete, press **F3-End**.
19. Exit ProvideX and restart FACTS.
20. Select Company F/M from the install menu and enter the FACTS 7.7 authorization codes.

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21. Exit ProvideX and restart FACTS.
22. Make sure you can successfully log into FACTS.

Setting up and installing the API Toolkit

These instructions address the installation and configuration of the Polling Directory option for the API Toolkit only. For instructions on installing and configuring the ProvideX Web Server for use with the API Toolkit, refer to the *FACTS eCommerce Catalog Integration and Setup* manual.

These instructions assume you understand how to setup a ProvideX program to run as a service.

FACTS requires that the API Toolkit be running at all times. There are transactions which FACTS uses to communicate internally, which are processed by the API Toolkit, and the functions within FACTS that rely on those transactions will fail if the Toolkit is not operational.

The API Toolkit will process these required transactions even if the Toolkit has not been purchased. If you wish to use the API Toolkit for other purposes, you must license it by purchasing the AT module.

Once the API Toolkit is installed and running, you must enter the API Publish key code in API Key Code Entry (SME007). This step also helps prevent unauthorized access to the API by providing a password that is required for access to the Subscribe APIs. The key must be setup as follows:

Key Code: [API-Publ]

Description: API Publish

Password: any value as long as it isn't left blank

Default Co: leave blank

Catalog Requests: No

Send Namespace: No

Date Format: leave blank

Do not enter any valid companies.

The Polling program: SMU954

SMU954 monitors the API Polling directory as setup in System Control F/M for XML transactions. When one is received, it processes it and returns a response (if requested) to the Response directory indicated in System Control F/M.

Windows Systems

SMU954 only requires that its Start-In directory be the main directory FACTS is installed in (by default, c:\infor\facts77). The command line

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should refer to the ProvideX installed for FACTS 7.7, and should look like this:

C:\infor\facts77\pvx\pvxwin32.exe prog/SM/SMU954

Following the instructions for setting up *nthost as a service, set this up as a service as well.

As many copies of SMU954 may be started as needed, based on volume.

Before you allow users to sign into FACTS

If you chose either the automated upgrade or the custom upgrade, review the file cnv_err.log for any errors that may have occurred during the BBx to ProvideX file conversion.

Review the Colors tab in Terminal F/M (*System Management→File Maintenances→Terminal F/M*) for the T0 record. Make sure all the colors correspond to numbers, not letters.

Modification Review

If you chose either the automated upgrade or the custom upgrade, review the change and exception log file, changes.txt and exceptions.txt, and resolve any issues with the metadata.

Archive Update

If you are running Archive, you **must** sign into FACTS to set global variables, break to a ProvideX prompt and run "prog/AC/ACNSTALL". For further information, refer to the Archive documentation in the Third Party Doc folder on the installation CD.

Sales Order and Purchase Order Entry Options

For new FACTS installs, a default record for all entry program types is included for both the Sales Order Entry Options F/M, Purchase Order Entry Options F/M and Transfer Entry Options F/M for company 01 only.

For upgrades, a default record for all entry types is added for the Purchase Order Entry Options F/M and Transfer Entry Options F/M for all companies, but only a default record for quotes is included for Sales Order Entry Options F/M for all companies.

Bitmap Synchronization

When new or updated bitmaps are released, they will automatically be copied to the client's workstation. Each time the user signs on, FACTS checks the server's version file against the version file on the client's PC. If the server's version ID can not be found in the client's version file, the program copies all the bitmaps and updates the client's version file. While the copy is taking place, "Synchronizing Bitmaps—Please Wait" is displayed.

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Upgrading from FACTS 6.07

Before you begin

- Run all registers and update before conversion.
- All invoices must be posted to Sales Analysis before the conversion.
- **Back up your data.**
- Make sure you have adequate disk space to run the conversion. We recommend that the server have enough disk space to accommodate **three** additional copies of the original FACTS data. At a minimum, there must be enough disk space to accommodate 2 copies of the data.
- Make sure the server and all PC stations are running 32-bit or higher versions of Microsoft Windows. FACTS does not support 16-bit operating systems.
- Document any custom changes made to SMNAME, SMNAMZ, SMSLCT, SMFILE, and JSJOBS that the customer wants to carry over. They will be lost during the upgrade.
- Suggested PO and Transfer duplications are no longer handled by the Suggested Entry programs. For your reference, DELSUG.LOG is created listing deleted records.

IMPORTANT:

- **If you made any modifications to DOFILB, DOFILH, DOVARI, SMFMFM, SMGCTL or SMPRMT in FACTS 6.07, make sure you have the ORIGINAL UNMODIFIED version of these files with .SSI extensions.**

Installation Procedures

The upgrade process now has three installation options: Express, Custom and Manual. These options are detailed in Chapter 4 "Installing FACTS on a Windows Server."

Complete the full process in Chapter 4 for your chosen upgrade option, then continue with the remaining instructions below.

Notice: If you chose the Express setup or Custom setup option, proceed to step 19. Steps 1 through 18 are the Manual upgrade instructions, to be executed following completion of the steps in Chapter 4.

1. Open Windows Explorer and navigate to where you installed FACTS 7.7.

The SM terminal records will be deleted and automatically rebuilt by the new security system.

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2. Create a new folder under **infor\facts77** called **data67**. This is the directory where you will place your 6.07 data.

   Example: C:\infor\facts77\data67

3. Copy your 6.07 data into **infor\facts77\data67**.
4. Delete the following from the infor\facts77\data67 directory if they exist:
   - → the CL directory
   - → the DO directory
   - → the HELP directory
   - → the SU directory
   - → the TF directory
   - → the VF directory
   - → all .NEW files from the DO and SM directories
   - → ACNAME, ACNAMZ, ACSLCT
   - → ARHOLD, ARPAYS
   - → JCHOLD
   - → ICALPX, ICCLSX, ICMVCX, ICVNDX
   - → SANSTK
   - → SMEOPL.empty, SMFIDS, SMFILE, SMFLUP, SMGLD*
   - → SMHELP, SMHLPR, SMINQC, SMLOCK, SMMODS, SMMSGS, SMMSGS.SSI
   - → SMNAME, SMNAMZ, SMSLCT, SMUHLP, SMUSED, SMWPRF
   - → SOHOLD
   - → SRHOLD
5. **IMPORTANT:**

   Remove any .SSI files from infor\facts77\data\DO & infor\facts77\data\SM.

6. **MODS NOTE:**

   If data modifications exist and they are required for FACTS 7.7, take appropriate steps to bring these forward.

7. It is recommended to copy infor\facts77\data to infor\facts77\data77 in case a restart is needed. (optional)
8. Copy **infor\facts77\data67** to **infor\facts77\data**. This overwrites the FACTS 7.7 data files created during installation with your from source data files.

   NOTE: You can delete the **infor\facts77\data67** directory or you can keep it so you have a backup of the source data.

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9. Double click the FACTS Server shortcut icon on the desktop.
10. At the FACTS Banner Screen, click the Infor logo and type **install**.
11. From the install menu, run **Generate SMFLUP**.

NOTICE: The generation of SMFLUP is **REQUIRED** to properly establish the structure of all meta-data files. **DO NOT SKIP THIS STEP**

This program will compare the .SSI and the .MOD versions from the source data, and write the net changes, if any, to the SMFLUP file.

Running UTR999 (Generate SMFLUP) will ask you several questions to determine the steps it needs to follow in order to properly update the meta-data files.

I. *Do you want the current meta-data files to be copied to have .MOD extensions prior to generating SMFLUP? (Y/N)*

It is **required** that this always be answered **'Y'** to ensure the .MOD files contain the latest modifications. Answering **'N'** will use the .MOD files already in place to generate the SMFLUP file.

II. *Do you want all .NEW files to be copied to have both no extension and a .SSI extension after SMFLUP has been generated? (Y/N)*

It is **required** that this always be answered **'Y'**. This will eliminate all manual renaming of files, and ensures that you continue to work with the new meta-data files.

III. *If you have entered Modification IDs in your meta-data, you can enter the IDs you want SMFLUP to contain.*

It is **required** that this be left blank to accept all mods.

IV. *Do you want custom note categories to be included in SMFLUP? (Y/N)* Answer Y to bring the custom note types forward (for instance, if you are upgrading a customer). Answer N to eliminate them. It is highly recommended that you answer this question 'Y'.

NOTE: If .SSI files are missing, you will receive a message. Hit Enter to continue.

NOTE: If you restart UTR999 for any reason, you should restore the data directories to their original state first.

IMPORTANT!!!

If modifications were found, wait until AFTER the file updates are complete before merging SMFLUP (step 19).

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Auto-Update Process

12. If you are at the FACTS Sign-on Screen, click the Infor logo and type **install**.
13. Select **Install Update/Add-on Module** from the Install menu.
14. Press **F1-AutoUpdate**.
15. At the next window, press CR to Continue.
16. Select **7.0 Update** from the pick list. Press CR to Continue.
17. Accept the defaults at the Parameters box and type **Yes** to continue with the update.
18. Once the update is complete, press **F3-End**.
19. If modifications were found during the generation of SMFLUP, type **install** at the FACTS Sign-on Screen and run **Merge SMFLUP**.

    You are given the option to update the files with the changes identified. You are given the option to "Automatically recreate the .MOD files after the mods are applied". It is recommended this always be answered **'N'**. Recreating the .MOD versions will automatically erase the current .MOD files and copy the final merged version of the metadata files with all of the modifications applied to .MOD versions. This is unnecessary if you always answer **'Y'** to the question, "Do you want the current meta-data files to be copied to have .MOD extensions prior to generating SMFLUP?" in the Generate SMFLUP program.

    I. Enter filenames (.txt) that are used to create the Exceptions and Changes files.

    II. After completion, review the Exceptions and Changes files.

    III. Run the string template generator if prompted.

25. If not already at the Install Menu, at the FACTS Sign-on Screen click the Infor logo and type install.
26. From System Control F/M, enter the ALF expiration date and make any other changes from your authorization code sheet.
27. From Company F/M, enter the FACTS 7.7 authorization code.
28. Exit ProvideX and restart FACTS.
29. Make sure you can successfully log into FACTS.
30. Before you begin testing the system, complete the instructions below for Setting up and installing the API Toolkit. Then, test the system.

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Setting up and installing the API Toolkit

These instructions address the installation and configuration of the Polling Directory option for the API Toolkit only. For instructions on installing and configuring the ProvideX Web Server for use with the API Toolkit, refer to the *FACTS eCommerce Catalog Integration and Setup* manual.

These instructions assume you understand how to setup a ProvideX program to run as a service.

FACTS requires that the API Toolkit be running at all times. There are transactions which FACTS uses to communicate internally, which are processed by the API Toolkit, and the functions within FACTS that rely on those transactions will fail if the Toolkit is not operational.

The API Toolkit will process these required transactions even if the Toolkit has not been purchased. If you wish to use the API Toolkit for other purposes, you must license it by purchasing the AT module.

Once the API Toolkit is installed and running, you must enter the API Publish key code in API Key Code Entry (SME007). This step also helps prevent unauthorized access to the API by providing a password that is required for access to the Subscribe APIs. The key must be setup as follows:

Key Code: [API-Publ]

Description: API Publish

Password: any value as long as it isn't left blank

Default Co: leave blank

Catalog Requests: No

Send Namespace: No

Date Format: leave blank

Do not enter any valid companies.

The Polling program: SMU954

SMU954 monitors the API Polling directory as setup in System Control F/M for XML transactions. When one is received, it processes it and returns a response (if requested) to the Response directory indicated in System Control F/M.

Windows Systems

SMU954 only requires that its Start-In directory be the main directory FACTS is installed in (by default, c:\infor\facts77). The command line should refer to the ProvideX installed for FACTS 7.7, and should look like this:

C:\infor\facts77\pvx\pvxwin32.exe prog/SM/SMU954

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Following the instructions for setting up *nthost as a service, set this up as a service as well.

As many copies of SMU954 may be started as needed, based on volume.

Upgrade Notice

If upgrading from v6.7 and the current system contains any one-character item numbers, those item numbers must be run through the Item Changer F/M. FACTS v7.0 and greater does not support one-character item numbers.

Modification Review

If you chose either the automated upgrade or the custom upgrade, review the change and exception log file, changes.txt and exceptions.txt, and resolve any issues with the metadata.

Archive Update

If you are running Archive, you **must** sign into FACTS to set global variables, break to a ProvideX prompt and run "prog/AC/ACNSTALL". For further information, refer to the Archive documentation in the Third Party Doc folder on the installation CD.

Sales Order and Purchase Order Entry Options

For new FACTS installs, a default record for all entry program types is included for both the Sales Order Entry Options F/M, Purchase Order Entry Options F/M and Transfer Entry Options F/M for company 01 only.

For upgrades, a default record for all entry types is added for the Purchase Order Entry Options F/M and Transfer Entry Options F/M for all companies, but only a default record for quotes is included for Sales Order Entry Options F/M for all companies.

Bitmap Synchronization

When new or updated bitmaps are released, they will automatically be copied to the client's workstation. Each time the user signs on, FACTS checks the server's version file against the version file on the client's PC. If the server's version ID cannot be found in the client's version file, the program copies all the bitmaps and updates the client's version file. While the copy is taking place, "Synchronizing Bitmaps—Please Wait" is displayed.

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Upgrading from FACTS 7.0 or greater

Before you begin

- **Back up your data.**
- All invoices must be posted to Sales Analysis before the conversion.
- Make sure you have adequate disk space to run the conversion. We recommend that the server have enough disk space to accommodate one additional copy of the original FACTS 7.x data.
- Make sure the server and all PC stations are running 32-bit or higher versions of Microsoft Windows. FACTS does not support 16-bit operating systems.
- If upgrading from FACTS 7.6 or prior, document any custom changes made to SMNAME, SMNAMZ, SMSLCT and SMFILE that the customer wants to carry over. They will be lost during the upgrade.
- Job Streams for reports or updates that have been converted to the new architecture since the FACTS version being converted from will be deleted during the upgrade. The upgrade will build a list of them in JSJOBS.OUT. Be prepared to review this file and reenter those Job Streams lines after the upgrade is completed.
- Suggested PO and Transfer duplications are no longer handled by the Suggested Entry programs. For your reference, DELSUG.LOG is created listing deleted records.
- If your system is running the API Toolkit (either SMU954 or the ProvideX Web Server), stop all of those processes before continuing.

IMPORTANT:

- **If you made any modifications to the FACTS 7.x metadata files, make sure you have the ORIGINAL UNMODIFIED version of these with .SSI extensions.**

Installation Procedures

The upgrade process now has three installation options: Express, Custom and Manual. These options are detailed in Chapter 4 "Installing FACTS on a Windows Server."

Complete the full process in Chapter 4 for your chosen upgrade option, then continue with the remaining instructions below.

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Notice: If you chose the Express setup or Custom setup option, proceed to step 27. Steps 1 through 26 are the Manual upgrade instructions, to be executed following completion of the steps in Chapter 4.

The SM terminal records will be deleted and automatically rebuilt by the new security system.

1. Open Windows Explorer and navigate to where you installed FACTS 7.7.
2. Create a new folder under **infor\facts77** called **data7x**. This is the directory where you will place your 7.x data.

   Example: C:\infor\facts77\data71
3. Copy your 7.x data into **infor\facts77\data7x**.
4. Remove any .NEW files from **infor\facts77\data7x** directory.

   Note: Be sure to examine ALL subdirectories in addition to DO and SM.
5. Delete the following from the infor\facts77\data7x directory if they exist:
   - → the CL directory
   - → the DO directory
   - → the HELP directory
   - → the SU directory
   - → the TF directory
   - → the VF directory
   - → all .NEW files from the DO, RM and SM directories
   - → ACNAME, ACNAMZ, ACSLCT
   - → ARHOLD, ARPAYS
   - → EMBATH, EMBATL
   - → ICALPX, ICCLSX, ICMVCX, ICVNDX
   - → JCHOLD
   - → RMEVWTDF, RMQRYHDF, RMQRYLDF, RMQFLD
   - → RMDMAP.STD, RMDSET.STD
   - → SANSTK
   - → SMEOPL.empty, SMFIDS, SMFILE, SMFLUP, SMFREE
   - → SMGLD*, SMHELP, SMHLPR, SMINQC, SMLOCK, SMMODS
   - → SMNAME, SMNAMZ, SMSLCT, SMTHLP, SMUHLP
   - → SMUSED, SMUSRL, SMWPRF
   - → SOHOLD, SOHSOH, SOHSOL
   - → SRHOLD
6. IMPORTANT:

   Remove all .SSI files from infor\facts77\data\DO & infor\facts77\data\SM.

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7. **MODS NOTE:**

   If data modifications exist and they are required for FACTS 7.7, take appropriate steps to bring these forward.

8. It is recommended to copy infor\facts77\data to infor\facts77\data77 in case a restart is needed. (optional)

9. Copy **infor\facts77\data7x** to **infor\facts77\data**. This overwrites the FACTS 7.7 data files created during installation with your source data files.

   NOTE: You can now delete the **infor\facts77\data7x** directory or you can keep it so you have a backup of your data.

10. Double click the FACTS Server shortcut icon on the desktop.

11. At the FACTS Sign-on Screen, click the Infor logo, and type **install**.

12. From the install menu, run **Generate SMFLUP**.

    NOTICE: The generation of SMFLUP is **REQUIRED** to properly establish the structure of all meta-data files. **DO NOT SKIP THIS STEP**

    This program will compare the .SSI and the .MOD source versions, and write the net changes, if any, to the SMFLUP file.

    Running UTR999 (Generate SMFLUP) will ask you several questions to determine the steps it needs to follow in order to properly update the meta-data files.

    I. *Do you want the current meta-data files to be copied to have .MOD extensions prior to generating SMFLUP? (Y/N)*

       It is **required** that this always be answered **'Y'** to ensure the .MOD files contain the latest modifications. Answering **'N'** will use the .MOD files already in place to generate the SMFLUP file.

    II. *Do you want all .NEW files to be copied to have both no extension and a .SSI extension after SMFLUP has been generated? (Y/N)*

       It is **required** that this always be answered **'Y'**. This will eliminate all manual renaming of files, and ensures that you continue to work with the new meta-data files.

    III. *If you have entered Modification IDs in your meta-data, you can enter the IDs you want SMFLUP to contain.*

       It is **required** that this be left blank to accept all mods.

    IV. *Do you want custom note categories to be included in SMFLUP? (Y/N)*
       Answer Y to bring the custom note types forward (for instance, if you are upgrading a customer). Answer N to eliminate them.

       It is highly recommended that you answer Y to this question.

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NOTE: If .SSI files are missing, you will receive a message. Hit Enter to continue.

NOTE: If you restart UTR999 for any reason, you should restore the data directories to their original state first.

IMPORTANT!!!

If modifications were found, wait until AFTER the file updates are complete before merging SMFLUP (step 20).

Auto-Update Process

13. At the FACTS Sign-on Screen, click the Infor logo and type **install**.
14. Select **Install Update/Add-on Module** from the Install menu.
15. Press **F1-AutoUpdate**.
16. At the next window, press CR to Continue.
17. Select the release level **AFTER** the version you are currently on.

    Ex. If upgrading from v7.0, then select **7.1 Update** from the pick list

    If upgrading from v7.1 then select **7.2 Update** from the pick list

    Press CR to Continue.
18. Accept the defaults at the Parameters box, and type **Yes** to continue with the update.
19. Once the update is complete, press **F3-End**.
20. If modifications were found during the generation of SMFLUP, type **install** at the FACTS Sign-on Screen and run **Merge SMFLUP**.

    You are given the option to update the files with the changes identified.

    You are given the option to "Automatically recreate the .MOD files after the mods are applied". It is recommended this always be answered **'N'**. Recreating the .MOD versions will automatically erase the current .MOD files and copy the final merged version of the metadata files with all of the modifications applied to .MOD versions. This is unnecessary if you always answer **'Y'** to the question, "Do you want the current meta-data files to be copied to have .MOD extensions prior to generating SMFLUP?" in the Generate SMFLUP program.

    I. Enter filenames that are used to create the Exceptions and Changes files.

    II. After completion, review the Exceptions and Changes files.

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III. Run the string template generator if prompted.

21. At the FACTS Sign-on Screen, click the Infor logo and type install.
22. From System Control F/M, enter the ALF expiration date.
23. From Company F/M, enter the FACTS authorization code.
24. Exit ProvideX and restart FACTS.
25. Make sure you can successfully log into FACTS.
26. Be sure to review the JSJOBS.OUT file located in your infor\facts77\ directory which lists any Job Stream entries that must be re-entered.
27. Before you begin testing the system, complete the instructions below for Setting up and installing the API Toolkit. Then, test the system.

Setting up and installing the API Toolkit

These instructions address the installation and configuration of the Polling Directory option for the API Toolkit only. For instructions on installing and configuring the ProvideX Web Server for use with the API Toolkit, refer to the *FACTS eCommerce Catalog Integration and Setup* manual.

These instructions assume you understand how to setup a ProvideX program to run as a service.

FACTS requires that the API Toolkit be running at all times. There are transactions which FACTS uses to communicate internally, which are processed by the API Toolkit, and the functions within FACTS that rely on those transactions will fail if the Toolkit is not operational.

The API Toolkit will process these required transactions even if the Toolkit has not been purchased. If you wish to use the API Toolkit for other purposes, you must license it by purchasing the AT module.

Once the API Toolkit is installed and running, you must enter the API Publish key code in API Key Code Entry (SME007). This step also helps prevent unauthorized access to the API by providing a password that is required for access to the Subscribe APIs. The key must be setup as follows:

Key Code: [API-Publ]

Description: API Publish

Password: any value as long as it isn't left blank

Default Co: leave blank

Catalog Requests: No

Send Namespace: No

Date Format: leave blank

Do not enter any valid companies.

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The Polling program: SMU954

SMU954 monitors the API Polling directory as setup in System Control F/M for XML transactions. When one is received, it processes it and returns a response (if requested) to the Response directory indicated in System Control F/M.

Windows Systems

SMU954 only requires that its Start-In directory be the main directory FACTS is installed in (by default, c:\infor\facts77). The command line should refer to the ProvideX installed for FACTS 7.7, and should look like this:

C:\infor\facts77\pvx\pvxwin32.exe prog/SM/SMU954

Following the instructions for setting up *nthost as a service, set this up as a service as well.

As many copies of SMU954 may be started as needed, based on volume.

Modification Review

If you chose either the automated upgrade or the custom upgrade, review the change and exception log file, changes.txt and exceptions.txt, and resolve any issues with the metadata.

Archive Update

If you are running Archive, you **must** sign into FACTS to set global variables, break to a ProvideX prompt and run "prog/AC/ACNSTALL". For further information, refer to the Archive documentation in the Third Party Doc folder on the installation CD.

Sales Order and Purchase Order Entry Options

For new FACTS installs, a default record for all entry program types is included for both the Sales Order Entry Options F/M, Purchase Order Entry Options F/M and Transfer Entry Options F/M for company 01 only.

For upgrades, a default record for all entry types is added for the Purchase Order Entry Options F/M and Transfer Entry Options F/M for all companies, but only a default record for quotes is included for Sales Order Entry Options F/M for all companies.

Bitmap Synchronization

When new or updated bitmaps are released, they will automatically be copied to the client's workstation. Each time the user signs on, FACTS checks the server's version file against the version file on the client's PC. If the server's version ID cannot be found in the client's version file, the program copies all the bitmaps and updates the client's version file. While the copy is taking place, "Synchronizing Bitmaps—Please Wait" is displayed.

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Infor ERP FACTS

CHAPTER 6

Installing General Report Writer

General Report Writer 6.0 by Synergetic Data Systems, Inc. enables users to generate customized reports from FACTS data.

NOTE: If the customer is running SQL Server and not all companies in FACTS are converted and in the same database; reports run across multiple companies in General will not work.

Before you begin

- Make sure FACTS and ProvideX are installed.
- If you are upgrading from a BBx based version of General Report Writer, run your **GEN3MST or GEN4MST** through the ProvideX conversion utility (pvx/lib/_conv.bbx/cv-nobbx) before you import the secondary dictionary.

Installing General Report Writer on UNIX

1. Sign on to the server as root and set TERM appropriately for the type of terminal you are using.
2. Place the CD-ROM in the drive, and mount the drive. Refer to your current operating system documentation for instructions on drive mounting. We recommend that you name the drive **cd_drive**.

   NOTE: The install script is written to read the contents of the CD as **lower case**. Use the appropriate operating system parameter to mount the CD-ROM as lower case.

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3. Change directories to the CD drive.
4. Type **./install.sh** to launch the installation script. The script automatically sets *umask* to 0.
5. Choose the operating system running on the server and the OS version.

6. Enter 'New' as the setup type.
7. Enter the destination directory. **/infor/facts77** is the recommended default. Enter another destination directory if necessary. You also have the option of checking disk space on this screen before you continue with the installation.
8. Leave the incremental update location blank.
9. Enter the path to the CD-ROM drive on your server. The default is **/cd_drive**.
10. At the Components screen:

    Type **N** at the FACTS 7.7 option.

    Type **N** at the ProvideX option.

    Type Y at the General Report Writer option.

    Type **N** at the ODBC Client Server option.
11. Type **Y** at the Installation Overview screen to continue with the installation.
12. Refer to gen60man.pdf for documentation on final installation and configuration.
13. Proceed to the configuration instructions on the following page.

Installing General Report Writer on Windows

1. Make sure you close any open applications.
2. Place the FACTS Installation CD in the CD drive.
3. Wait for the InstallShield to start automatically or if autorun is not enabled on your computer, run FACTS77.exe from the CD.
4. Select *Report Writer*.
5. From the Report Writer screen, select *server*.
6. Wait for the Report Writer InstallShield to begin.
7. Click **Next** at the Welcome screen.
8. Click **Next** to accept the General 6.0 Server Software License Agreement.
9. Make the destination folder include gen6x where you have FACTS installed.

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Ex. If you installed FACTS to C:\infor\facts77, change the destination directory to reflect C:\infor\facts77\gen6x. Do not include the Server subfolder

Click **Next**.

10. Click **Next** to complete the installation.
11. Refer to gen60man.pdf for documentation on final installation and configuration.

Configuring Report Writer for FACTS

1. Modify the configuration file gen60/gen60d.ini.
    a. Beneath the [defaults] section, assign an available port number for General 6 to monitor. Port 8414 is currently the default.
    b. Also beneath the [defaults] section, add a new value called 'factspath'. This path should represent the full path to the FACTS application.

    Ex. factspath=C:\infor\facts77
2. At the FACTS Sign-in Screen, click the Infor logo and type **install**. Select System Control F/M from the menu and enter the number of CUI and GUI user counts from your authorization code sheet.

    Note: If the character version of RW6 was purchased, include the full character path to General 6 from the CUI user count field.

    Ex. C:\infor\facts77\gen6x\gen60_pv\
3. Select Company F/M from the install menu, and enter the FACTS authorization codes.
4. Restart FACTS to ensure you can successfully log in.
5. From Program F/M, add Report Writer 6.0 (RWE610).
6. From Menu F/M, add RWE610 to the Report Writer Master menu (RWS000).
7. Restart FACTS.
8. Stop and restart the General server to accept this new parameter.

Upgrading Report Writer Dictionary

1. If upgrading from FACTS v6.7 or greater, be sure to copy GENPTRS.PVX (Gen4) or genptrs.pvx (gen5) to genptrs.pvx (lowercase) in the destination folder where you have Report Writer installed. This maintains the setup of printers from the previous version.

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2. If you are upgrading from a BBx based version of General Report Writer, run your **GEN3MST or GEN4MST** through the ProvideX conversion utility (pvx/lib/_conv.bbx/cv-nobbx) before you import the secondary dictionary.

Importing Report Writer Dictionary

1. Establish the secondary dictionary to import.

   In determining which file to import as the Secondary Dictionary, evaluate each scenario below to decide which is more appropriate for your situation.

   In each scenario, the goal is to minimize the amount of modifications necessary to the Report Writer Dictionary definitions.

   IMPORTANT: Because the Import Secondary Option is only valid through the character interface, if you have a graphical client installed then navigate to the directory where it was installed and temporarily rename the guigen.exe file.

   Scenario A

   If your FACTS data files are heavily modified or if you have added custom data files to the dictionary, it would be advisable to start with the gen60/gen60_pv/gen6mst.in4 file provided with FACTS.

   - Rename the gen6mst.in4 file to gen6mst.
   - Copy the gen6mst file and the previous GENxMST dictionary file to the ../gen60_pv directory located where the General server was installed.
   - Import GENxMST as the secondary dictionary.

   Scenario B

   If your data files contain zero or little modifications or any custom data is contained in companion files, it would be advisable to start with the previous GENxMST dictionary file.

   - Rename the GENxMST file to gen6mst.
   - Copy the gen6mst file and the gen60/gen60_pv/gen6mst.in4 provided with FACTS to the ../gen60_pv directory located where the General server was installed.
   - Import gen6mst.in4 as the secondary dictionary.

2. Start FACTS and enter the access code **RW** at the main menu.
3. Select the Configuration menu and choose the **Import Secondary Dictionary** option.
4. From the scenarios above enter the **Secondary Dictionary** to merge, and enter '**Y**' to overwrite fields.

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5. From the Configuration Menu, select **User Function Definitions**. Verify that the following appears.

   a) `Name: FNJUL`

   `Description: FACTS to Report Writer Date Conversion`

   `Function: (F_DATE$)=DEC(ATH(PAD(CVS(F_DATE$,3),6,"0")))`

   b) `Name: FNPD$`

   `Description: Period Conversion/Display`

   `Function:` (F_PD$,F_YEARFIRST)=F_PD$(1+2*F_YEARFIRST,2)+"/"+STR(MOD(1900+(DEC(00+F_PD$(3-2*F_YEARFIRST,1))-38)*10+NUM(F_PD$(4-2*F_YEARFIRST,1)),100):"00")

   Press **F9** to save and then press **F10** to abort.

7. On the **Configuration Maintenance** menu, select **Display Formats.** Change the exit program to **prog/RW/RWE611** in UNIX or **prog\RW\RWE611** in Windows.
8. On the **Configuration Maintenance** menu, select **Report Heading Defaults**.
9. Center the report title and place it on line 2.
10. Make Text1 [[@COMP.NAME@VDT]]. Center it and place it on line 1.
11. Exit Report Writer.
12. If you previously renamed the graphical client then be sure to rename it back to guigen.exe.

Installing General Report Writer Client

1. Make sure you close any open applications.
2. Place the FACTS Installation CD in the CD drive.
3. Wait for the InstallShield to start automatically or if autorun is not enabled on your computer, run FACTS77.exe from the CD.
4. Select *Report Writer*.
5. From the Report Writer screen, select *client*.
6. Wait for the Report Writer Client InstallShield to begin.
7. Click **Next** at the Welcome screen.
8. Click **Next** to accept the General 6.0 Client Software License Agreement.
9. Enter your desired destination folder, and click **Next**.
10. Select the type of client you are installing, and client **Next**.
11. Click **Next** to complete the installation.

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Using General Report Writer Client

1. Run the Gen60 client by selecting START | All Programs | Gen60 Windows Client.
2. Verify the Server Information is accurate for the server you are connecting to. Select the Change button to alter the server IP address and/or port.
3. Select the correct company name from the list of available companies.
4. If you already have a FACTS user code and password setup, enter the user code in the Login ID field. No password is required. Then press ENTER or click Login to launch Report Writer.

   If you do not have a FACTS user code then you must first run the character version of Report Writer to populate the database with FACTS user codes. Then you may run the graphical version following step four above.

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CHAPTER 7

Installing Unform 8.0

Unform by Synergetic Data Systems, Inc., produces laser printer forms, reports and other documents, reducing or eliminating the need for preprinted forms.

Unform requires one ProvideX user license.

Before you begin

- FACTS and ProvideX need to be installed.
- Make sure the device driver *hplaser* is in the pvx/lib/_dev
- Read the Unform manual to learn how to create form rules and drivers.
- Create ProvideX link files using the Unform driver or drivers. For UNIX installations, refer to Chapter 2. For Windows installations refer to Chapter 4.

NOTE: If you are not installing Unform but you need a copy of the new .rul file (to access additional FACTS report settings), go to the web site http://www.unform.com/sdsi.cgi?p=unform&sp=articles/facts, and copy the facts7.7.rul file to your Unform directory.

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Installing Unform

UnForm is no longer installed through the FACTS Installation CD. It must be obtained from the web site of Synergetic Data Systems Inc. (http://www.unform.com/sdsi.cgi?p=unform). Install each piece per the UnForm documentation.

Download the latest version of the FACTS .rul file (facts7.7.rul), and once UnForm is installed, copy this file to your UnForm directory. (http://www.unform.com/sdsi.cgi?p=unform&sp=articles/facts)

Configuring UnForm

During installation, the ProvideX executable path and default rule file are prompted. If these values change, perform the following.

1. Navigate to the ufc folder and run 'ufsetup.exe'.
2. On the Setup Unform screen, enter the path to the Providex executable file.
   Ex. C:\infor\facts77\pvx\pvxwin32.exe
3. Enter **facts7.7.rul** as the default rule file. Select **OK**.

   Note: If you made any modifications to the existing .rul file, you need to bring these forward to the facts7.7.rul file.

Configuring FACTS to use Unform

1. Start FACTS and navigate to Printer F/M (*System Management →File Maintenances →Printer F/M*).
2. Create a printer in the FACTS Printer F/M, using the link file you created as the alias. See Chapter 2 for creating printers in UNIX and Chapter 4 for creating printers in NT.
3. Update the fax prep cmd in Faxlink Static Control F/M if UnForm is used with faxlink.

   Ex. C:\windows\ufc80c –f facts7.7.rul
4. If you are using the client/server version of UnForm, be sure the Client/Server field is checked in Faxlink Static Control F/M.
5. Add the Unform path to the PATH = Statement in the Autoexec.bat file.

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CHAPTER 8

Installing VSI-FAX and FaxLink

The FaxLink module uses VSI-FAX by VSI to deliver a client/server network fax solution.

VSI-FAX is available for UNIX and Windows systems and ships with one server license and five client licenses.

For complete installation instructions and a description of system requirements for different configurations, see the *Getting Started* manual provided by VSI. An electronic version of this manual — **vsifax_instadm.PDF** — is included in Acrobat PDF format on the VSI-FAX Installation CD.

The following instructions apply to standalone installations of the VSI-FAX server and client software.

Before you begin

- FACTS must be installed.
- Verify that the modem is set up and working on the server.
- Create a ProvideX link file using the *Faxlink* driver. Refer to the printer section in Chapter 2 for UNIX instructions or Chapter 4 for Windows instructions.
- Make sure the device driver *hplaser* is in the **pvx\lib_dev** directory.
- *UNIX installations:* Make sure you have the *Installation and Administration Guide* manual on hand. You need to refer to the section "Installing VSI-FAX Server on UNIX/Linux" during the installation procedure.
- *Windows installations:* VSI-FAX Server must be installed, and you must be logged in as Administrator. Make sure you have the *Installation and Administration Guide* manual on hand. You need to refer to the section

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"Installing VSI-FAX Server on Windows" during the installation procedure.

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UNIX system requirements

- The VSI-FAX Installation CD and Authorization Code Sheet
- A minimum of 100 MB of free hard disk space (VSI recommends 500 MB)
- At least 100 MB of temporary disk space
- TCP/IP network connectivity (except on SCO Host Servers)

Windows system requirements

- The VSI-FAX Installation CD and Authorization Code Sheet
- Intel-based computer that meets VSI's minimum system requirements
- A minimum of 128MB of RAM (VSI recommends 256MB)
- At least 100 MB of free hard disk space (VSI recommends 500 MB)
- At least 100 MB of temporary disk space
- TCP/IP network connectivity (Winsock 1.1 or 2.2 compliant only)

Installing VSI-FAX server side

To perform a standalone installation on UNIX:

1. Follow the instructions provided in the *Installation and Administration Guide* manual. Refer to the "Installing VSI-FAX Server on UNIX" chapter. This documentation is available on the FACTS Installation CD. Choose the *Third-party Doc* folder and the file named ***vsifax_instadm.PDF.***
2. Modify vsisrv.ini for auto registration and dialing prefix.
   - In the [VSINET] section, set AutoReg=on

     This is for sites where security is not a concern. Setting it OFF requires more work on the administrator's part to manually update VSI-FAX databases giving each user authorization to use VSI-FAX.
   - In the [DEVICE] section, set the DialPrefix value to "9,"

     if needed for the client's phone system.
3. Proceed to the configuration instructions on page 8-3.

To perform a standalone installation of VSI-FAX on Windows:

1. Place the VSI-FAX Installation CD in the CD-ROM drive.
2. Make sure you sign on as Administrator.
3. Wait for the InstallShield to start automatically or if autorun is not enabled on your computer, run setup.exe from the CD.
4. Select VSI-FAX Server from the menu list.

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5. Follow the instructions provided in the *Installation and Administration Guide* manual. Refer to the "Installing VSI-FAX Server on Windows" chapter. This documentation is available on the FACTS Installation CD. Choose the *Third-party Doc* folder and the file named vsifax_instadm.*PDF*.

Installing VSI-FAX on PC clients

1. To install the client, run the setup program from the LanFax Windows Client, and follow the prompts.

2. After installing, you will need three pieces of information to login:
   - The VSI-FAX username/client id of the user
   - The password for the specified user as setup on the fax server--this is not the OS password
   - The Fax Server hostname or IP address

3. The install program adds the LanFax Windows Client to the start menu under Programs\VSI-FAX.

FaxLink configuration in FACTS for Unix

1. Start FACTS and navigate to System Control F/M (*System Management→File Maintenance→System Control F/M*) and select the **FL** flag under the *Use Modules* tab.
2. Navigate to Company Control F/M (located on the same menu as System Control F/M) and make sure the **FL** flag in that program is also selected.
3. Navigate to the FaxLink Static Control F/M (FaxLink→File Maintenances→Infrequent F/Ms→FL Static Control F/M).
4. Enter the path to the VSI-FAX Server.

   Example: /usr/vsifax3/bin/
5. Enter the path to the VSI-FAX **AutoSend** directory where FACTS delivers Fax files to VSI-FAX.

   Example: /usr/vsifax3/autosend/
6. In the **Fax Prep Cmd** input, enter the full path to the Unform directory if you want to run Faxes through the Unform software and specify the rule file you want to use. (See Unform documentation for help on creating rule files.)

   Example: /usr/bin/unform80 –f /infor/unform80/facts7.rul

   Leave this input blank if you did not purchase Unform, have not yet installed it or do not want Faxes to be formatted by Unform before they are sent through VSI-FAX.

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7. In the **use suffix** input, enter the letter for the type of suffix code to use. You may choose from the following:

   N — Do not use a suffix

   D — Use a suffix on long distance calls only

   L — Use a suffix on local calls only

   B — Use a suffix for both local and long distance call.

   The dialing suffix is used if an accounting code is required by the phone system for making local or long distance calls. For example if the phone system requires that a billing code be used after dialing any phone number, enter B in this field.

8. Enter the **Fax Alias**, which is the name of the link file created using the Faxlink driver.

9. Enter the path to the ..**infor/facts77/data/FL/graphs** directory if you want to include your company logo or other graphics on your Faxes.

   Example: /infor/data/FL/graphs

10. Enter the path to the **..infor/facts77/data/FL/text** directory in which text files for cover pages are stored.

    Example: /infor/data/FL/text

11. Enter the path to the **..infor/facts77/data/FL/tmp** directory. This is essentially a scratchpad area, where FaxLink places temporary text files while it is creating Faxes.

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FaxLink configuration in FACTS for Windows

1. Start FACTS and navigate to System Control F/M (*System Management→File Maintenance→System Control F/M*) and select the **FL** flag under the *Use Modules* tab.
2. Navigate to Company Control F/M (located on the same menu as System Control F/M) and make sure the **FL** flag in that program is also selected.
3. Navigate to the FaxLink Static Control F/M (FaxLink→File Maintenances →Infrequent F/Ms→FL Static Control F/M).
4. Enter the path to the VSI-FAX Server.

   *Example: C:\program files\vsi-fax\faxserver*bin\
5. Enter the path to the VSI-FAX **AutoSend** directory where FACTS delivers Fax files to VSI-FAX.

   Example: *C:\program files\vsi-fax\faxserver\a*utosend\
6. In the **Fax Prep Cmd** input, enter the full path to the Unform directory if you want to run Faxes through the Unform software and specify the rule file you want to use. (See Unform documentation for help on creating rule files.)

   Example: c:\infor\facts77\unform80\unform80.exe –f c:\infor\facts77\unform80\facts7.7.rul

   Leave this input blank if you did not purchase Unform, have not yet installed it or do not want Faxes to be formatted by Unform before they are sent through VSI-FAX.
7. In the **use suffix** input, enter the letter for the type of suffix code to use. You may choose from the following:

   N—Do not use a suffix

   D—Use a suffix on long distance calls only

   L— Use a suffix on local calls only

   B—Use a suffix for both local and long distance call.

   The dialing suffix is used if an accounting code is required by the phone system for making local or long distance calls. For example if the phone system requires that a billing code be used after dialing any phone number, enter B in this field.
8. Enter the **Fax Alias**, which is the name of the link file created using the Faxlink driver.
9. Enter the path to the ..**infor\facts77\data\FL\graphs** directory if you want to include your company logo or other graphics on your Faxes.

   Example: C:\infor\facts77\data\FL\graphs

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10. Enter the path to the **..infor\facts77\data\FL\text** directory in which text files for cover pages are stored.

    Example: C:\infor\facts77\data\FL\text

11. Enter the path to the **..infor\facts77\data\FL\tmp** directory. This is essentially a scratchpad area, where FaxLink places temporary text files while it is creating Faxes.

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CHAPTER 9

Configuring the ICVerify/FACTS Integration

FACTS offers two methods for processing credit card transactions: Infor's TCP/IP Manager working with PayPal and manually processing these transactions via voice authorization.

ICVerify is no longer an Infor-certified method of processing credit card transactions. Since ICVerify was previously a certified solution, we are leaving these instructions here for completeness.

Automatic credit card processing is possible by integrating the FACTS system with ICVERIFY software and magnetic stripe devices, which are purchased separately from ICVERIFY, Inc. (See www.icverify.com for more information.)

With either method, FACTS users can perform sales, credits and voids.

Setting up credit card handling for voice authorization

1. Set up a *cash* type terms code in the Accounts Receivable Terms Code F/M. Credit cards must be cash type payments, not an A/R type. The General Ledger Number you choose must be a cash G/L account number.

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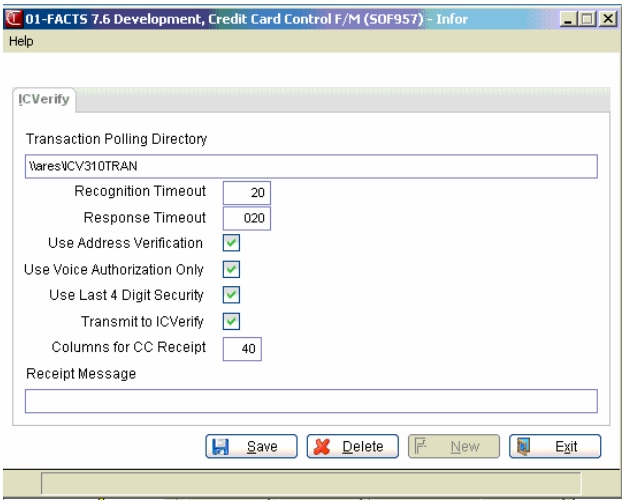
2. Go to the Credit Card Control F/M in Sales Order Infrequent File Maintenances.



- Select the Use Voice Authorization Only checkbox.
- Select the User Address Verification checkbox based on your company needs. If you select this checkbox, the system requires that you enter the customer's address and Zip code on all transactions.
- Select the Use Last 4 Digit Security checkbox. Credit card transactions work with this flag set to N; however, for your customers' benefit, it is recommended that you activate this flag.
- Enter the number of columns over which you want the credit card receipts to print. The available range is between 30 and 80 columns (30 gives you a 2½-inch wide receipt).
- Enter the message you would like printed on the receipts. This entry is optional.

Credit Card Processing with Voice Authorization

When you enter a credit card payment, FACTS opens a pop-up window, which confirms that you are in voice-authorization mode and the amount of the purchase and whether the transaction is a sale, void sale, credit or void credit.

In this window, enter the customer's credit card number and the expiration date.

The system then asks whether it is OK to process a sale.

Enter Y to continue with the sale, and call your credit card processing company to authorize the sale. Enter the authorization code in the prompt provided.

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*Credit Card Processing with IC*VERIFY

IC*VERIFY* is a third-party credit card processing software package that can be integrated with FACTS to provide automatic credit card processing capabilities. The company also offers several types of magnetic card stripe readers that interface with FACTS terminals. Since the card readers are recognized as keyboard devices, no device drivers or link files are needed.

Configuring FACTS to work with IC*VERIFY*

1. Go to the System Management System Control F/M. Enter the number of ICVERIFY licenses your company purchased at the ICVerify Licenses field. FACTS supports up to 999 licenses.
2. Set up a credit card terms code in the Accounts Receivable Terms Code F/M if you have not already done so. Credit cards must be set up as a *cash* type; so the General Ledger number you choose must be a cash G/L account number.
3. Edit the Credit Card Control F/M.
   - Enter the Transaction Polling Directory. This is the path to the server acting as your IC*VERIFY* "master" station (see the IC*VERIFY* user manual for more information on its setup). The path must be 60 characters or less.
   - Set the recognition time out value up to 999 seconds.
   - Set the response time out value.
   - Select the Use Address Verification checkbox, based on your company's needs. If you select this checkbox, then anyone running a credit card transaction will be required to enter the customer's address after swiping their card.
     - Do not select the Use Voice Authorization Only checkbox.
     - Select the Use Last 4 Digit Security checkbox, based on your company's needs.
     - Select the Transmit to IC*VERIFY* flag checkbox.
     - Enter the number of columns over which you want the credit card receipts to print. The available range is between 30 to 80 (30 columns will give you a 2½-inch wide receipt).
     - Enter the message you would like printed on the receipts. This entry is optional.

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4. (Optional) To print credit card receipts, set up SOP610 in Program F/M. Then select the printer usage and normal printer for each terminal (the entries for fields 2-8 are arbitrary) so credit card receipts will print. This allows you to have one credit card receipt printer for all terminals, or a different printer for some terminals, as necessary.

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Card Reader Requirements

Your card reader must be configurable to match the following requirements:

- Returning both card tracks
- Prefacing the read (or the first track) with a header of "%"
- Terminating each track w/either a carriage return ($0d$) or a line feed ($0a$)

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Working with automatic credit card transactions

After entering the terms code and the purchase amount, the credit card pop-up window appears.

1. Enter the credit card number or swipe the card through the reader.
2. Enter the expiration date. If you swiped the card, the system automatically enters this data.
3. If you select the Use Address Verification checkbox in the Credit Card Control F/M, enter the customer's street address and Zip code.
4. The system now asks whether to proceed with the sale. Answer Yes and press Enter (CR).

   A mini dialog box will appear, telling you the system is waiting for recognition and then a response.

   If the credit card processing company does not answer or respond within the time set in the Credit Card Control F/M, the system gives you either a recognition timeout (if the provider does not respond at all) or a response timeout (if the provider's system answers but does not approve or decline within the response time).

   Recognition timeouts. You may wait again or cancel the transaction. Canceling a document after a recognition timeout creates no problems because the processing company is not aware of the transaction.

   Response timeouts. You have the option to wait or hold the document. If you choose to hold, you must call the processing company to determine whether the transaction has been approved or declined.

   If for some reason the swipe device isn't working, the card processing company is offline or the Voice Authorization flag in the Credit Card Control F/M is set to Y, the person entering the credit card transaction will need to call the processing company and enter the provided authorization code in the prompt that appears.

At the end of the transaction, FACTS checks to see if you are signed on to a cash drawer. If not it asks you to do so. Press F2 to search.

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Using the Process Pending Transactions program
(Communications down)

In cases where your processing company is offline or ICVERIFY is down, you can still force sales and reconcile the transactions later.

At the end of the shift or day, enter the Process Pending Transactions program from the Invoices menu. If transactions are pending, press Enter (CR) to begin processing. *This program must be run before the Daily Sales Register is updated.*

If everything runs smoothly, the system tells you the "Batch Processing of Pending Transactions Is Complete," and you can press Enter (CR) to return to the Invoices menu.

If a transaction is declined, it must be resolved (e.g. with another method of payment), and the Process Pending Transactions program must be run again.

As with single credit card transactions, recognition and response timeouts sometimes occur. If you get a recognition timeout, you can wait or press F3 to stop processing.

If you are faced with a response timeout, you can either wait or abort the process. Be advised that when you abort the process, you will need to call your processing company and verify which transactions they received. Those they did not receive will have to be settled through the ICVERIFY software.

➢Refer to the *Sales Orders* manual for more information on Credit Card Handling F/M and Process Pending Transactions.

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CHAPTER 10

Installing ODBC

Local: Windows Only

Client/Server: Windows & Unix

Microsoft Data Access Components **(MDAC) v2.5:**

As of version 3.30, ProvideX ODBC requires MDAC with minimum requirement version 2.5 Service Pack 2. This is the same version of the MDAC components installed by Windows 2000 Service Pack 2

IMPORTANT! Downloading ProvideX's ODBC driver including MDAC will not over-write newer MDAC files already on your system. During the install process, if the required .dll's are found to be already on the system which meet the minimum requirements for MDAC 2.5, the installation will proceed without reinstalling or overwriting the MDAC files.

Overview

By configuring tools from ProvideX, including the ODBC Driver and Data Dictionary utilities in NOMADS, users can view and analyze FACTS data with any of the 32-bit ODBC-compliant data handling applications, such as MS-Access, MS-Query and Crystal Reports.

Product limitations/exclusions

The ODBC driver must be installed on a supported Windows desktop. ODBC installations will also work on UNIX systems using the client/server version of the ODBC driver.

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➲ **INFOR DOES NOT SUPPORT THE READ/WRITE VERSION OF THIS PRODUCT.** To protect the integrity of FACTS data, all ProvideX 32-Bit ODBC Drivers purchased from Infor should be installed as Read Only (choose the Typical install option during installation).

The Read Only option will not limit the data that can be viewed via ODBC; however, it does eliminate the ability to modify FACTS data through an ODBC-compliant application.

This policy exists because most ODBC applications do not correctly format and verify data in a manner that can be handled by FACTS. **As a result, processing errors may occur in the FACTS system**.

Installing Local ODBC

Close all applications before installing ODBC.

Updating the Data Dictionary in FACTS

1. Standard versions of **DOFILB** and **DOFILH** are included on the FACTS installation media. Compare these to your own versions of the same data files. Make sure you reconcile any custom modifications to FACTS data files or companion files that need to be included in ODBC.
2. The ODBC Data Dictionary will be built from aliases defined for each file within the DO system.
3. Make sure that the files **providex.dde** and **providex.ddf** are in the FACTS root directory. For example, if your FACTS program files are in **infor\facts77\prog** and data files are in **infor\facts77\data**, the dde/ddf files need to be located at **infor\facts77\providex.dde** and **infor\facts77\providex.ddf,** respectively.
4. **IMPORTANT**: YOUR EXISTING **providex.dde** AND **providex.ddf** FILES WILL BE OVERWRITTEN BY THE UPDATE PROGRAM. If any custom changes have been made to these files, they need to be entered into the FACTS DO system in order for them to be included in the new dictionary. Custom I/O procedures will be preserved, however.
5. Check for the following in the DO Static Control:

   OK to Rewrite Data Dictionary: Selected

   Client Server ODBC: Not Selected

   Path to Dictionary Directory (Windows): C:\infor\facts77\dict (assuming you installed FACTS to the C:\ drive).
6. Run program **DOU100**, "Data Dictionary Update." This creates a ProvideX data dictionary for ODBC from DOFILB and DOFILH, and embeds the dictionary definitions in the individual normalized data files. This process allows *all* FACTS dictionary maintenance to take place in the FACTS DO system. This program will also create **FACTSDD.INI**, which allows non-normalized data files to be used with ODBC. Additionally, it will also create

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an .ini file in the **infor\facts77\dict** directory for any module with one or more non-normal files. This program also creates **NORMALIZED.INI** listing all normalized files in the DO system.

Installing the ProvideX ODBC (Local) driver (version 4.21)

1. Make sure you close any open applications before you run ODBC Setup.
2. Place the FACTS Installation CD in the CD drive.
3. Wait for the InstallShield to start automatically or if autorun is not enabled on your computer, run FACTS77.exe from the CD.
4. Select *ODBC.*
5. From the ODBC Driver screen, select *LOCAL.*
6. Choose **Next** at the ODBC Installation Welcome screen.
7. Enter the Customer ID, Company name in the User Information window. Choose **Next** to continue.
8. Select Yes to install Microsoft Data Access Components, and choose **Next**.
9. Select to install the Read-Only version of the ODBC driver which is the version FACTS endorses.
10. Choose **Install** to start copying files.
11. A separate window will open where you will enter the activation information. Enter the serial number, number of users and activation key on the Activation Information screen. Choose **Next**.
12. When all files are copied, choose **Finish**.
13. If there is no need to install another application, select **Exit** from the FACTS Installation menu bar to exit the installation.

If you wish to install a demo version of the ODBC driver, enter DEMO in the Serial Number field on the User Information screen during installation.

Configuring your data source

1. Choose *Start→Settings→Control Panel.*
2. Double-click the ODBC Data Sources (32-bit) icon in the Control Panels window.

   ➲ You may want to create a shortcut icon and place it on the desktop for quicker access in the future.
3. Make sure the User DSN tab is selected in the ODBC Data Source Administration window and choose **Add**.
4. Select **ProvideX 32-bit ODBC Driver** in the Create New Data Source window and then choose **Finish**.
5. From the tabs in the ProvideX 32-bit ODBC Driver Setup window, enter the following information.

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Data Source: FACTS 7.7

Description: This is optional, and it can be left blank.

Database Directory: Enter the location of the ProvideX dde and ddf files.

Example: C:\infor\facts77

Definition File: Enter the location of the FACTS data dictionary, including the FACTSDD.INI file name. This is the .ini file that lists non-normalized data files.

Example: C:\infor\facts77\dict\FACTSDD.INI

6. The remaining tab fields can be left blank. Choose **OK**.
7. Choose **OK** at the ODBC Data Source Administration window to complete the configuration. You can now begin configuring the data source.

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Installing ODBC Client/Server for Windows

Close all applications before installing ODBC.

Updating the Data Dictionary in FACTS

1. Standard versions of **DOFILB** and **DOFILH** are included on the FACTS installation media. Compare these to your own versions of the same data files. Make sure you reconcile with the FACTS DO files any custom modifications to FACTS data files or companion files that need to be included in ODBC.
2. The ODBC Data Dictionary is built from aliases defined for each file within the DO system.
3. Make sure that the files **providex.dde** and **providex.ddf** are in the FACTS root directory. For example, if your FACTS program files are in **infor\facts77\prog** and data files are in **infor\facts77\data**, the dde/ddf files need to be located at **infor\facts77\providex.dde** and **infor\facts77\providex.ddf,** respectively.
4. **IMPORTANT**: The update program will overwrite your existing **providex.dde** AND **providex.ddf** files. If any custom changes were made to these files, they need to be entered into the FACTS DO system in order for them to be included in the new dictionary. Custom I/O procedures are preserved, however.
5. Check for the following in the DO Static Control:

   OK to Rewrite Data Dictionary: Selected

   Client Server ODBC: Selected

   Path to Dictionary Directory (Windows): C:\infor\facts77\dict (assuming you installed FACTS to the C:\ drive).
6. Run program **DOU100**, "Data Dictionary Update." This creates a ProvideX data dictionary for ODBC from DOFILB and DOFILH, and embeds the dictionary definitions in the individual normalized data files. This process allows *all* FACTS dictionary maintenance to take place in the FACTS DO system. This program will also create **FACTSDD.INI**, which allows non-normalized data files to be used with ODBC. Additionally, it will also create an .ini file in the **infor\facts77\dict** directory for any module with one or more non-normal files. This program also creates **NORMALIZED.INI** for all normalized files in the DO system.

Installing the ProvideX ODBC Server driver (version 4.21)

1. Make sure you close any open applications before you run ODBC Setup.
2. Place the FACTS Installation CD in the CD drive.

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3. Wait for the InstallShield to start automatically or if autorun is not enabled on your computer, run FACTS77.exe from the CD.
4. Select *ODBC.*
5. From the ODBC Driver screen, select *SERVER.*
6. Choose **Next** at the ODBC Installation Welcome screen.
7. Accept the Customer Information, and select **Next**.
8. Choose **Install** to start copying files.
9. A separate window will open where you will enter the activation information. Enter the serial number, number of users and activation key on the Activation Information screen. Choose **Next**.
11. When all files are copied, choose **Finish**.
12. If there is no need to install another application, select EXIT from the FACTS Installation menu bar to exit the installation.

If you wish to install a demo version of the ODBC driver, enter DEMO in the Serial Number field on the User Information screen during installation.

Configuring your (Server) data source

1. Choose *Start→Settings→Control Panel.*
2. Double-click the ProvideX ODBC Server icon in the Control Panels window.
3. Select the Port tab.

   The TCP/IP Port Number is the port the server monitors. By default this is 20222, and is not recommended by ProvideX to change it. However, should you choose to change it (ProvideX ODBC range: 1024-65535), you must change the DNS TCP/IP Port setting on the client side accordingly.
4. Select the Permissions tab. Infor only supports Read Only access.

   Important: For security reasons, you should Remove the default setting and set up permissions based on your own business rules as soon as possible after installation.

   You can Add, Update or Remove user permissions by assigning default User ID's and Company Codes, and entering the Data Dictionary path and INI file location which includes the FACTSDD.INI filename. (Asterisks * indicates all)
5. Select the Services tab.

   The ProvideX ODBC configuration program recognizes the version of the Operating System being run, and allows you to set up the driver as a Service under Windows.

   You can install the service by clicking the Install Service button or by selecting Services from the Control Panel. (When you start up the ProvideX ODBC Service, the initial startup type is automatic, ie., it starts whenever the system is rebooted.)

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6. Select the Activation tab.

   After installation, the ProvideX ODBC Service will be properly activated. You can change the registration information by entering the new activation and applying the changes.

7. From the Services icon through Control Panel, start the service.

Installing the ProvideX ODBC Client driver (version 4.21)

1. Make sure you close any open applications before you run ODBC Setup.
2. Place the FACTS Installation CD in the CD drive.
3. Wait for the InstallShield to start automatically or if autorun is not enabled on your computer, run FACTS77.exe from the CD.
4. Select *ODBC.*
5. From the ODBC Driver screen, select *CLIENT.*
6. Choose **Next** at the ODBC Installation Welcome screen.
7. Enter the Name and Company in the User Information window.
8. Select Yes to install Microsoft Data Access Components, and choose **Next**.
9. Choose **Install** to start copying files.
10. When all files are copied, choose **Finish**.
11. If there is no need to install another application, select EXIT from the FACTS Installation menu bar to exit the installation.

Configuring your (Client) data source

1. Choose *Start→Settings→Control Panel.*
2. Double-click the ODBC Data Sources (32-bit) icon in the Control Panels window.

   ➲ You may want to create a shortcut icon and place it on the desktop for quicker access in the future.

3. Make sure the User DSN tab is selected in the ODBC Data Source Administration window and choose **Add**.
4. Select **ProvideX 32-bit ODBC Client Driver** in the Create New Data Source window and then choose **Finish**.
5. From the Basic tab in the ProvideX 32-bit ODBC Driver Setup window, enter the following information.

   Data Source: FACTS 7.7

   Description: This is optional and it can be left blank.

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Database Directory: Enter the location of the ProvideX dde and ddf files using the path **relative to the server**. *This path should reflect the EXACT location on the server (e.g. e:\infor\facts77) even though drive e:\ on the client machine might be a CD-ROM, another local drive or a mapped drive.*

The ProvideX ODBC driver uses this as the relative starting point for all embedded file references. The client needs to know the path on the server, but has no access to the data files except through the ODBC driver.

Reminder: It's mandatory to include configuration information in either this field or the next field (.INI Definition File). That is, there must be at least one source for a data definition. If both are defined, the contents of both are merged.

Definition File: Enter the location of the FACTS data dictionary, including the FACTSDD.INI file name. This is the .ini file that lists non-normalized data files. Again, this is the exact server path and not a client path. (e.g. e:\infor\facts77\dict\FACTSDD.INI)

6. From the Server tab, enter the following information.

   Server Name or IP: The server's network name or IP address needed to connect to the server. Example: **MyFileServer or 127.34.28.15** (D*isplayed for ProvideX ODBC Server and Client)*

   TCP/IP Port: Port on which the server is running. Default setting: 20222. Range 1024-65535

7. The remaining tab fields can be left blank. Choose **OK**.
8. Choose **OK** at the ODBC Data Source Administration window to complete the configuration.

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Installing ODBC Client/Server for Unix

Updating the Data Dictionary in FACTS

1. Standard versions of **DOFILB** and **DOFILH** are included on the FACTS installation media. Compare these to your own versions of the same data files. Make sure you reconcile with the FACTS DO files any custom modifications to FACTS data files or companion files that need to be included in ODBC.
2. The ODBC Data Dictionary is built from aliases defined for each file within the DO system.
3. Make sure that the files **providex.dde** and **providex.ddf** are in the FACTS root directory. For example, if your FACTS program files are in **infor/facts77/prog** and data files are in **infor/facts77/data**, the dde/ddf files need to be located at **infor/facts77/providex.dde** and **infor/facts77/providex.ddf,** respectively.
4. **IMPORTANT**: The update program will overwrite your existing **providex.dde** AND **providex.ddf** files. If any custom changes were made to these files, they need to be entered into the FACTS DO system in order for them to be included in the new dictionary. Custom I/O procedures are preserved, however.
5. Check for the following in the DO Static Control:

   OK to Rewrite Data Dictionary: Selected

   Client Server ODBC: Selected

   Path to Dictionary Directory (Unix): /infor/facts77/dict (assuming you installed FACTS to the /infor/facts77 directory).
6. Run program **DOU100**, "Data Dictionary Update." This creates a ProvideX data dictionary for ODBC from DOFILB and DOFILH, and embeds the dictionary definitions in the individual normalized data files. This process allows *all* FACTS dictionary maintenance to take place in the FACTS DO system. This program will also create **FACTSDD.INI**, which allows non-normalized data files to be used with ODBC. Additionally, it will also create an .ini file in the **infor/facts77/dict** directory for any module with one or more non-normal files. This program also creates **NORMALIZED.INI** for all normalized files in the DO system.

Installing the ProvideX ODBC Server driver (version 4.21)

1. Sign on to the server as root and set TERM appropriately for the type of terminal you are using.
2. Place the CD in the drive and mount the drive.
3. Change directories to the CD drive.

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4. Type **./install.sh** to launch the installation script. The script automatically sets *umask* to 0.
5. Choose the operating system running on the server and the version.
6. Enter 'New' as the setup type.
7. Enter the destination directory. **/infor/facts77** is the recommended default. You have the option of checking disk space from this screen.
8. Leave the incremental update location blank.
9. Enter the path to the CD drive on the server. The default is **/cd_drive**.
10. At the Components screen:

    Type **N** at the FACTS 7.7 option.

    Type **N** at the ProvideX option.

    Type Y at the ODBC option.

    Type **N** at the General Report Writer option.

    Type **N** at the FacetTerm option.
11. Type **Y** at the Installation Overview screen to continue with the installation.
12. Refer to the following sections of the install.txt file located in /usr/pvxodbc for proper configuration instructions. ODBC will not run if not activated correctly.

    - Configuring the server

    - Running the server
13. Check the error log for any errors during installation.

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Aliases for FACTS data files

The aliases for the FACTS data files, which are the table names that are displayed in ODBC applications, are in the form "MM_ALIAS_NAME_30," where MM is the file module code.

The FACTS DO system must contain an alias for each file and variable that will be used in ODBC. For variables, aliases are displayed as the column name in ODBC applications. The aliases present in FACTS ODBC contain abbreviations because of a 30-character limit imposed by the ODBC Driver. The standard DOFILH/DOFILB that ship with FACTS contain more than 500 files already aliased for ODBC.

Standards for creating aliases

1. Aliases must start with a letter
2. Use "_" instead of spaces
3. Use letters and numbers only — no special characters
4. Use uppercase letters
5. Do not use reserved ProvideX words
6. Maximum length is 30 characters
7. Alias must be unique
8. No two variables in the same file may share the same alias
9. Not two *files* can have the same aliases.

Importing vs. linking

The ProvideX ODBC Driver supports Importing and Linking of data files to most ODBC-compliant application.

For a static table, where data is captured once in the ODBC application, choose Import. This option copies data from FACTS to the ODBC application, with no remaining tie to the original FACTS data file. The captured data will be unaffected by future changes made to data in FACTS. This method provides the fastest operation for repeated file use, since the ODBC Driver is not continually engaged.

For "live" files where data is updated whenever a table is reopened, choose Link in the ODBC application. This method creates a dynamic link between the application and FACTS via the ODBC Driver. As changes are made in FACTS, the data changes are updated each time the table is reopened. This method is not as fast as Importing since the ODBC Driver must be used each time the Link is reestablished.

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Connecting to FACTS data from ODBC-compliant applications

These instructions assume that the ODBC-compliant application has been correctly installed. As a result of the ever-increasing number of applications that support ODBC, we can only provide typical instructions.

The following steps outline the procedure used to add a FACTS table to a database in MS-Access:

1. Once a database (new or otherwise) has been opened, go to the Table page and click **New** to add a table. Then click **Import Table** or **Link Table**.
2. Select ODBC Databases from the Files of Type drop box at the bottom of the Import/Link window.
3. When the Machine Data Source window appears, click on "FACTS 7.7" from the ODBC Data Sources listing.
4. Data files from the list of available FACTS tables should appear in the Import/Link Objects window. Select tables to bring into the ODBC application, then click **OK**.
5. If you select "Import File," Access imports the FACTS data files selected.
6. If you select "Link File," Access requests the unique identifier of the file. This is the same as the primary key in a FACTS data file. Once you specify this, Access creates a dynamic link between the FACTS data file and its own database.

For imported tables, Access allows you to use SQL and other data analysis tools to manipulate the data.

Editing NOMADS Data Dictionary for Normalized Files

NOTE: Editing the NOMADS Data Dictionary is an advanced action and is not intended for the average user.

Should problems importing or viewing FACTS data occur, or should additional normal data files need to be added, this can be accomplished permanently in the FACTS DO system, and temporarily in the ProvideX Data Dictionary Maintenance Utility.

Access the ProvideX Data Dictionary Maintenance Utility by entering the following at the command line:

```
→RUN "*NOMADS"
```

The NOMADS initialization screen should appear. Select "Dictionary," then "Maintenance" from the menu bar for Data Dictionary Maintenance. Detailed instructions about working with the Data Dictionary Maintenance Utility can

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be found in the NOMADS II instruction manual from ProvideX or in the Data Dictionary chapter of the NOMADS II section of the ProvideX On-line Manual.

IMPORTANT: If a file definition is changed, you will need to press the "Update Physical" button on the Data Dictionary Maintenance window to imbed those changes in the actual data file. If a prompt appears to ask which kind of file update to perform, select "Rewrite data dictionary only."

Editing MMDD.ini for Non-Normalized Files

NOTE: Editing this INI file is an advanced action, and is not intended for the average user.

Should problems occur with non-normalized FACTS data files, or if you need to add more non-normalized FACTS data files, you can add them permanently by adding the appropriate alias information to FACTS DO system or temporarily by directly editing MMDD.INI where MM is the module for the .ini file in the **/dict** directory.

The MMDD.INI file that is generated by running DOU100, "Data Dictionary Update"(see "Updating the Data Dictionary in FACTS, step 4" at the beginning of this chapter), can be edited with any standard text editor such as Word Pad. For complete rules on defining data file structures with an INI file, refer to the ProvideX web site (www.pvx.com) and documentation.

Some common errors and troubleshooting tips

Following is a list of errors that may occur when creating the new Data Dictionary for use with the ProvideX ODBC Driver. While Infor makes every effort to provide an error-free and fully functional Data Dictionary, users may encounter some of these errors, particularly when they are accessing auxiliary data files or file customizations particular to a specific FACTS installation.

1. **Error #9**: Indicates an ODBC Date Error where non-Date data has been encountered by the ODBC Driver when attempting to process a variable defined as a date. This can be remedied by checking the data residing in fields that have aliases that end in "_DATE". This can also be diagnosed by using the NOMADS Data Dictionary Maintenance Utility to turn off date recognition in individual date columns by changing the "Class" entry to blank.
2. **Error #1011**: Indicates that the definition for the records of a data file is larger that the actual records data file. This error occurs because ODBC columns have been defined for data that does not exist in the file structure.
3. **Error #1012**: Indicates a numeric data error. This is typically caused by alphabetic data occurring in a field defined as numeric only. Since these fields are intended for math processing in the ODBC application, alphabetic characters generate an error in these fields.

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4. **FACTS incorporates Periods in a packed PPYY format.** The ProvideX ODBC Driver does not currently interpret these periods. In data displays, this information will show as "/709", for example. The first character, "/", represents the decade, in this case 1990's, the second represents the year, and the last two represent the period. So, "/709" would be read as "1997, period 9". Beginning in the year 2000, this field became more readable, as the decade will match the tens digit of the actual year (e.g. "0009" for "2000, period 9").
5. If you have unexplained difficulty getting the ODBC-compliant applications to link with the ODBC Administrator, check the version date of any associated 32-Bit "dll" files. If the .dll files do not match the version of the application, errors may occur.
6. To enable tracking and identification of errors that may occur when using ODBC, a log file can be created for each Data Dictionary. To create the log file, simply open the ODBC Administrator, and click on the "Tracing" tab, and enter the log file location and a file name. The log file will be used to track all ODBC calls. This file can later be examined in any text editor to view in depth details on the interactions of the ODBC Driver with the Data Dictionary and data files.

External sort files (future use)

The FACTS Data Dictionary includes several external sort files. These files are typically named "_____BY____", such as "AP_VEND_BY_ALPHA." The current release of the ProvideX ODBC driver does not support sort files. These definitions have been included in the Data Dictionary for future use.

Additional resources

The ProvideX On-line Manual

The manual is available at http://www.pvx.com/support/#support-docs

Visions '98 Presentations

While these presentations are not documentation per se, they provide accurate and concise information on many ProvideX subjects, including ODBC. The presentations are available at http://www.pvx.com.

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Infor ERP FACTS

CHAPTER 11

ProvideX Application Server

These instructions were written with FACTS in mind, and only contain those fields necessary to configure Application Server for FACTS in a basic manner. For a complete explanation of each field in the configuration utility, and to understand the security features of the Application Server, refer to the Application Server Manual found on Sage's website (www.pvx.com).

Example Configuration

Examples given will be for a default installation of FACTS to the C:\infor\facts77 directory.

Server Configuration

To access the Application Server Configuration, you need to either connect to the server using WindX or, for Windows you may simply create a shortcut (target line below). There is NO character interface for the Application Server Configuration.

To connect via WindX:

- Run WindX from the Windows Start button.
- Use the 'Settings' menu option to connect to the server via Telnet (input the IP address). Make sure you are using ansi emulation.
- Login to the server (it's recommended that you login as root (unix) or administrator (windows).
- The command line syntax is as follows:
    - **Windows Platforms:**

      PVX_Path -hd apscfg.ini *appserv\config [–ARG "AsService"]

      *Example: C:\infor\facts77\pvx\pvxwin32.exe –hd apscfg.ini *appserv\config*

      Where:

      PVX_Path *Full p*ath to the ProvideX Executable.

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-hd	Start Hidden.
apscfg.ini	Configuration's standard INI file.
AsService	*Optional* flag to the configuration, which informs it not to allow start/stop on the desktop if server daemons are running as Windows Services.

- **UNIX/Linux Platforms:**

  PVX_Path *appserv/config

  *Example: /infor/facts77/pvx/pvx *appserv/config*

To connect from the server (Windows platforms only):

- Choose Start/Run and enter the target line:

  PVX_Path -hd apscfg.ini *appserv\config [–ARG "AsService"]

  *Example: C:\infor\facts77\pvx\pvxwin32.exe –hd apscfg.ini *appserv\config*

General Information

Creating a New Server

- To create a new server for FACTS, enter a new name in the **Server** name field.

  Example: FACTS

Server Names

- The name may comprise any legal characters up to 20 characters in length. You cannot use characters less than hex 20, spaces, nor any of the following: **"<> ,/*?&|;:{}()$!`.**
- All server names are case-insensitive.

Other Information about Servers

Saving Your Changes

To save the changes to your current server, either select the **Apply** button, or switch to a different server name.

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Starting and Stopping Servers

To start a server:

• From the configuration utility, click the **Start** button on the **Server** tab while the specific server name is selected.

To stop a server:

• From the configuration utility, click the **Stop** button on the **Server** tab, while the specific server named is selected.

Server Status

Next to the server **Name** field, there is a server **Status** field. This status will inform you whether or not the server is Running, Stopped, Starting, or Stopping, and when an Update is in progress. The status field is ***not*** constantly updated. It will be updated only when:

• Moving from one tab to the next

• Selecting the **Refresh** button on the **Session** tab

• Attempting to Start or Stop

• Clicking the **Apply** button.

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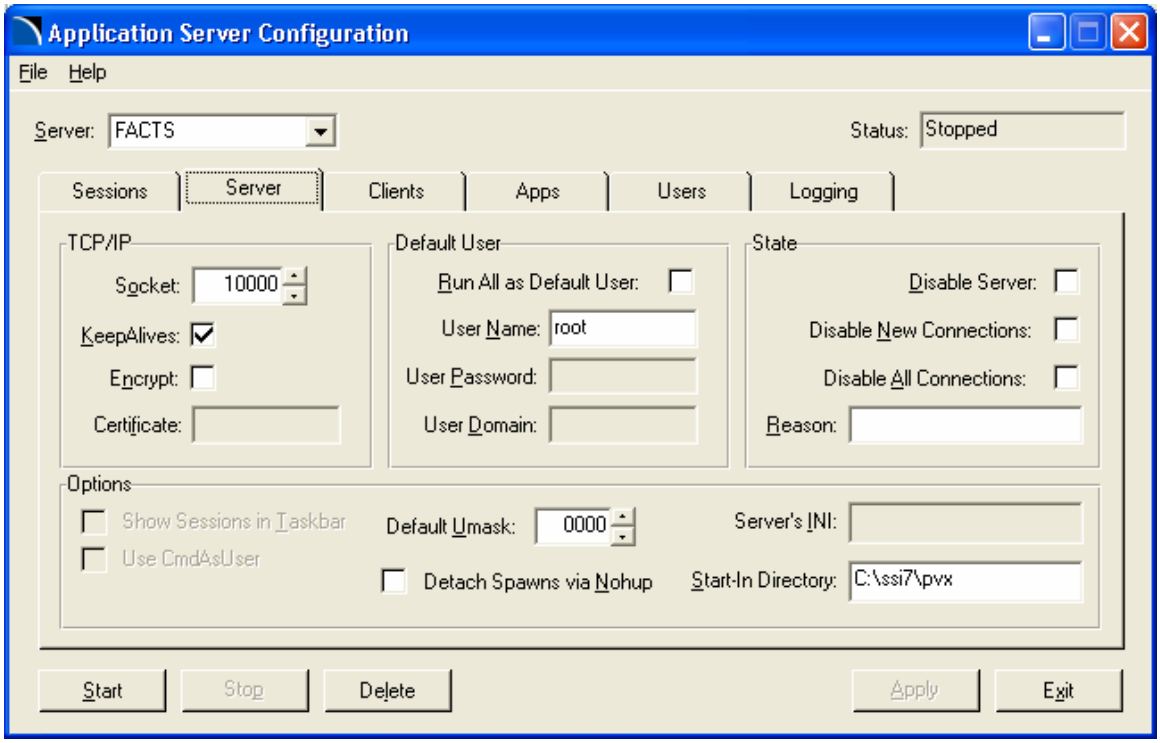
Server Tab Properties



This is the screen where you configure the primary attributes of your Application Server. You may also Start, Stop, Modify, Create, or Delete a server from this screen. The currently selected server is shown in the Server drop list. You may switch to another configured server by selecting a different server in the drop list, or by entering the name of a new server to configure.

TCP/IP Properties

Socket: TCP/IP port number or Socket number that the server will open and listen for requests on. It is used for all aspects of the server, from the initial connections through handling the session traffic of all connected clients. You may select any valid TCP/IP port from 1 to 65535.

NOTE: The use of sockets between 1 and 1024 is governed by the operating system, and most operating systems will only let processes running as root, or users who are members of the Administrators group, open sockets in this range.

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Options

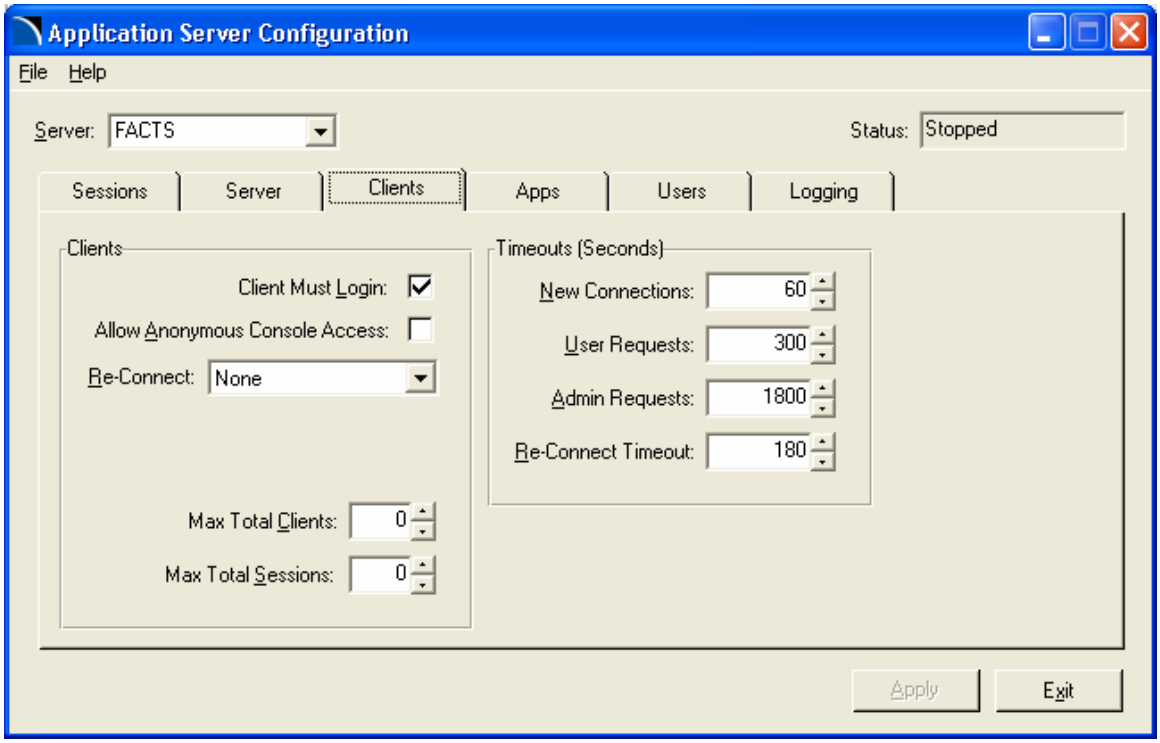
Start-In Directory:

Specifies the directory where the ***appserv/server** daemon is to be started in. It is only required if you use the **Start** button to start the server daemons from within the configuration utility. It does not have any effect on the Start-In directory used when running the ***appserv/server** daemon from the OS command line.

Example: C:\infor\facts77\pvx

For a complete explanation of each field on the Server tab, refer to the Application Server Manual.

Client Tab Properties



Client Must Login: If you want to require the user to login with a Unix or Windows user and password, check this box. If you do not check this box, the users will be able to connect anonymously.

All other defaults are acceptable for a FACTS installation. For a complete explanation of each field on the Client tab, refer to the Application Server Manual.

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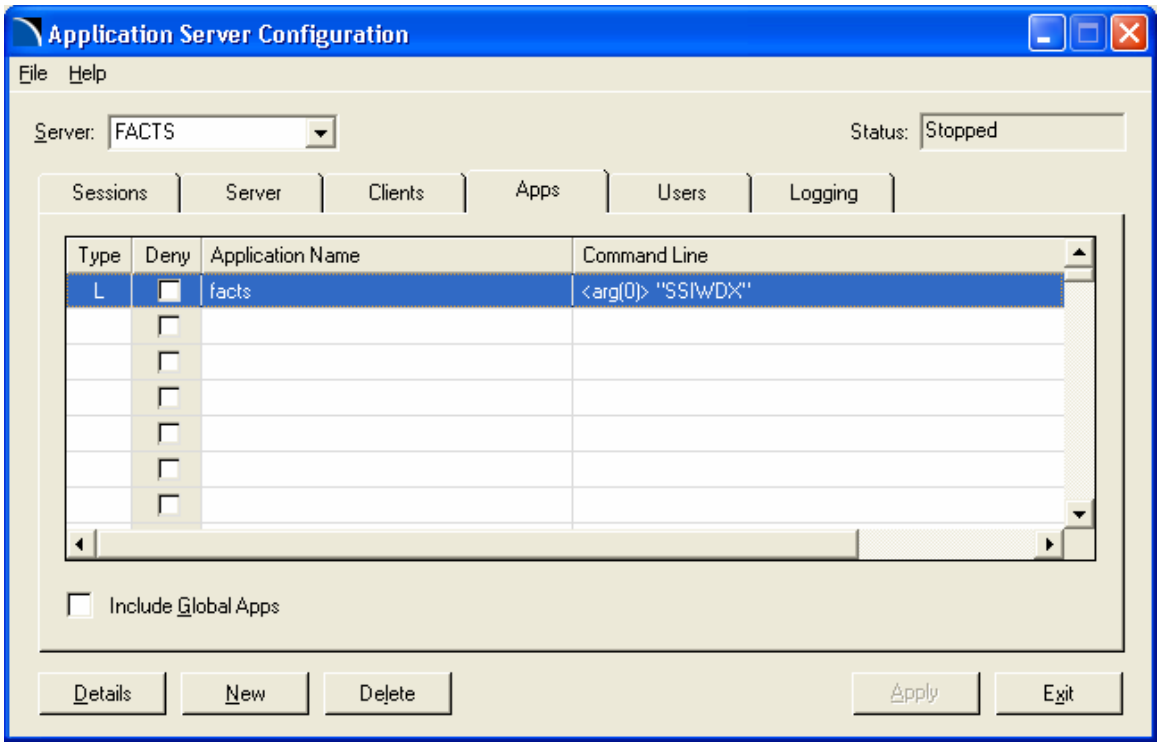
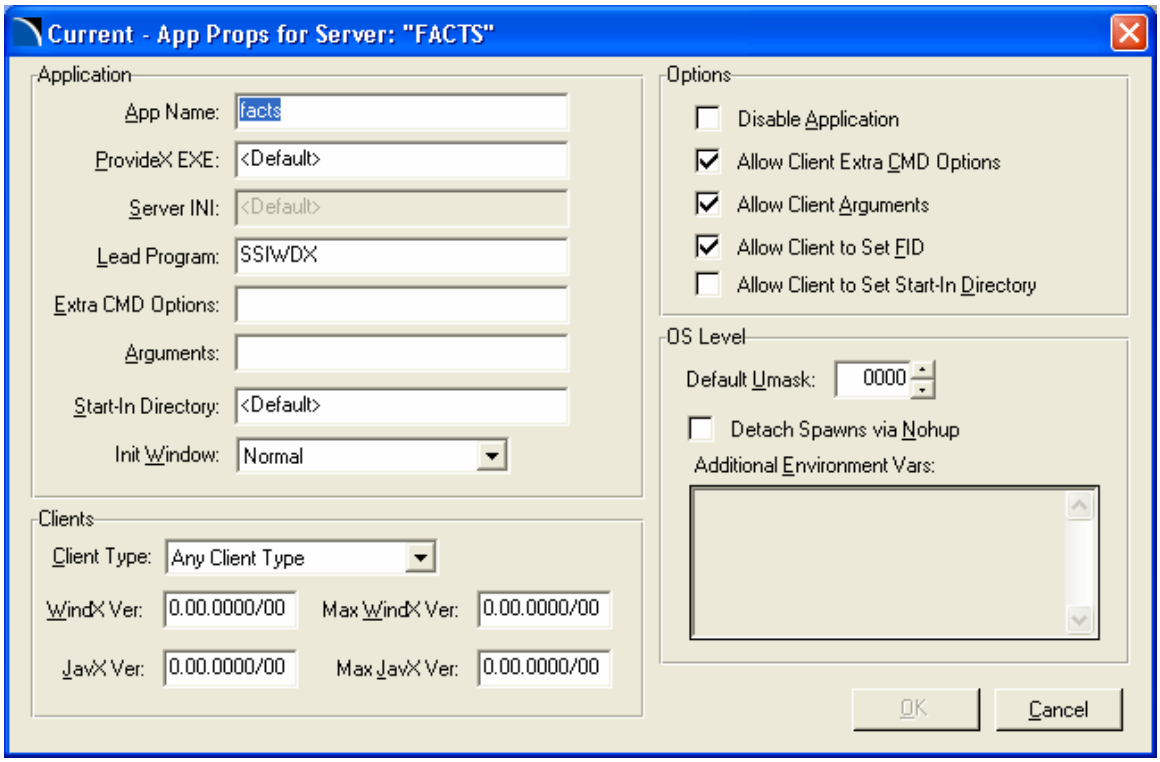
Application Tab Properties



This screen allows you to administer the valid or configured applications that may be run by this particular server.

To Add FACTS as an Application:

Click on the New Button: This creates a new "Local" application that is only available to the currently-selected server.



App Name: Descriptive name for a set of application properties.

Each application is created, referenced, and stored by using a descriptive name. The name entered may contain any legal characters up to 40 characters in length. You cannot use a character less than hex 20 nor any of the following: **"<> ,/*?&|;:{}()$!`**. Application names are case-insensitive.

Example: FACTS

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ProvideX EXE:

Location on the server of the ProvideX executable to run this application. You may use default if you are using the same ProvideX to run FACTS as you are to run the Application Server. Otherwise, specify the path to the executable.

Example: C:\infor\facts77\pvx\pvxwin32.exe or /infor/facts77/pvx/pvx (unix)

Server INI: (Windows Only)

You may use "default" if you are using the same ProvideX to run FACTS as you are to run the Application Server. Otherwise, specify the path to the INI file.

Lead Program:

Actual name of the ProvideX program to be run, known in ProvideX as the "Lead Program".

Example: C:\infor\facts77\SSIWDX or /infor/facts77/SSIWDX (unix)

Start-In Directory:

Server directory where the application server is to launch the process that runs the specified lead program. This will become the Home Working Directory (HWD) of the process.

Example: C:\infor\facts77\ or /infor/facts77/ (unix)

All other defaults are acceptable for a FACTS installation. For a complete explanation of each field on the Apps tab, refer to the Application Server Manual.

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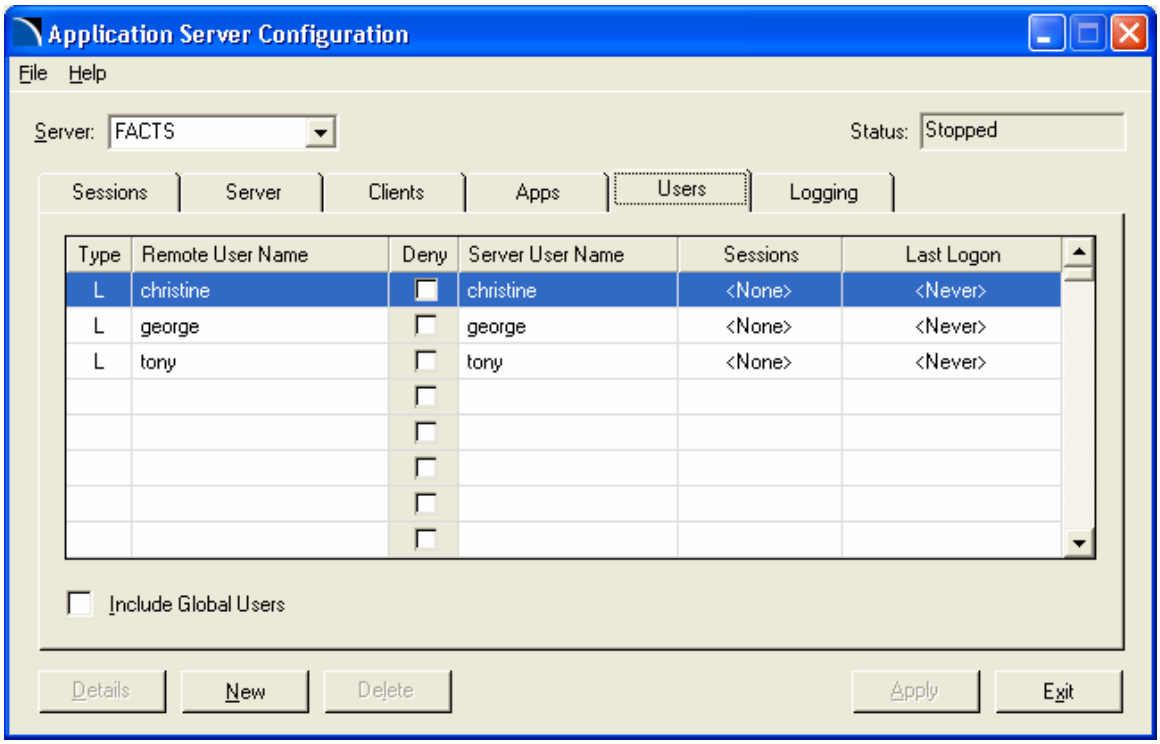
User Tab Properties



This screen lists all the valid or configured users that may log into this particular server if clients are required to log in on the Clients tab.

Details, New and Delete Buttons

Details Button: To view or modify the properties of any listed user name, highlight

any portion of the user's entry within the list given and click **Details**.

New Button: To create a new remote user name. This will create a new "Local" user name which is only available to the currently selected server.

Delete Button: To delete a remote user name, highlight or select an entry in the user list and click the **Delete** button.

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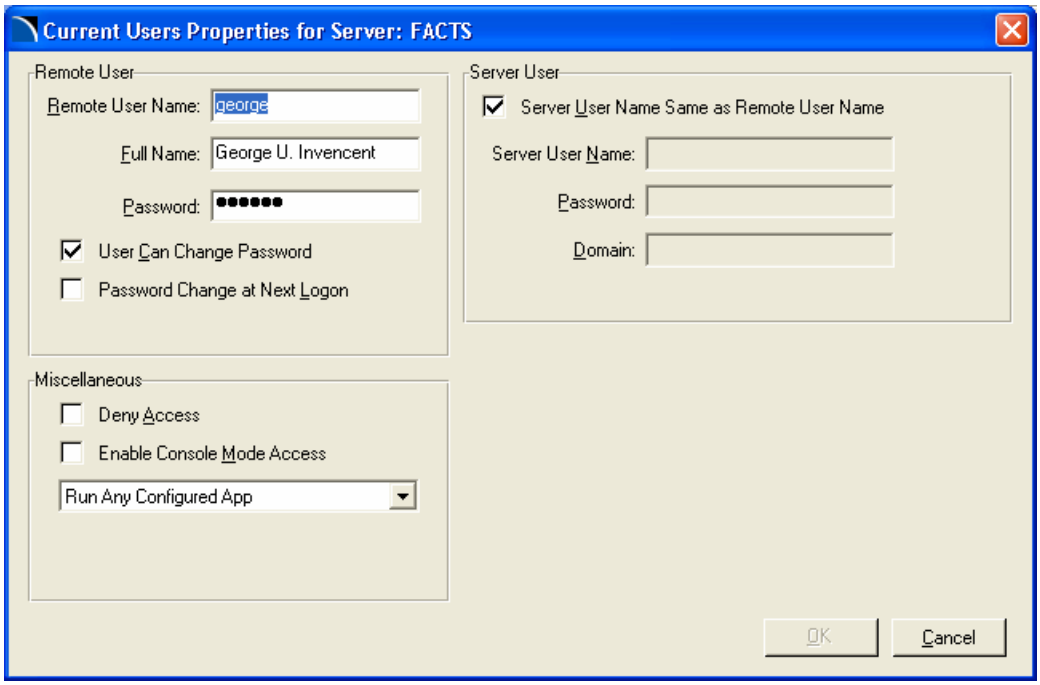
User Details

This screen presents you with the details of a particular user, and allows you to configure the abilities and properties this user will have in relation to the application server.



Remote User

Remote User Name:

Case-insensitive login name for the remote user. This is the name the user would enter in any Login Dialogue on the remote workstation running *client (if you require login on the Clients tab). Maximum 60 characters.

Full Name: Descriptive name for the remote user.

Password: Case-sensitive password the user must enter while logging into the application server.

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User Can Change Password: (optional)

Allows user to change their password from ***client** programs. Internally, this setting decides whether or not the server will accept a "PASSWORD" request in the server for the user which is logged in via a "LOGIN" request.

Password Change at Next Login: (optional)

Forces the user to change their password the next time they login to the application server. Internally, when set, the server refuses any command from a user other than a "PASSWORD" change request after it receives a "LOGIN" request from a client workstation. Once a successful password change request has been completed, this setting is automatically turned off by the server. To force the user to change their password later on, simply turn this setting on.

Server User: You can designate a specific server user for the remote user to run as, or, if the name of the remote user matches the server user, you can check the "Server User Name Same as the Remote User Name".

All other defaults are acceptable for a FACTS installation. For a complete explanation of each field on the Users tab, refer to the Application Server Manual.

Logging

This screen allows administrators to determine and maintain aspects of the application Server's logging functions. All log files are saved as ASCII text files in a subdirectory of the ***appserv** directory, where the subdirectory has the same name as the server.

Example: **Server Name: FACTS**

Log File Location: *appserv/FACTS

The Log Listing

Enable: Turns the logging of a particular aspect on or off.

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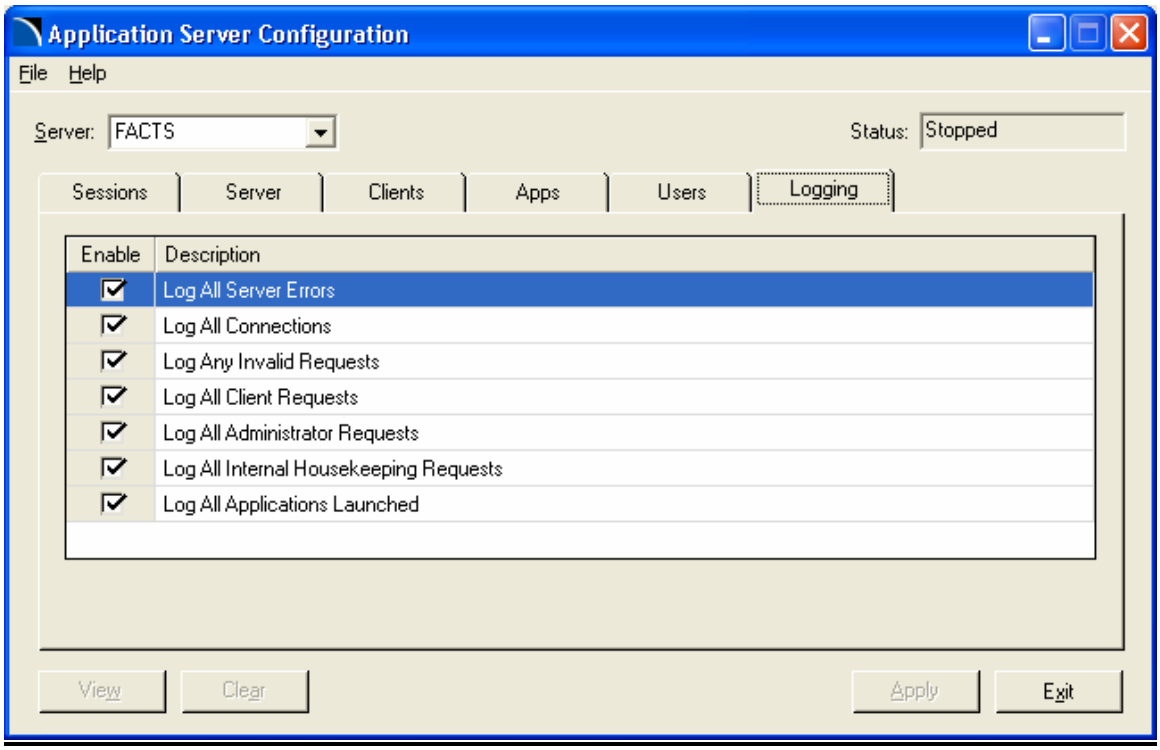
Description: A basic description of the logging operation performed.

For a complete explanation of each field on the Logging tab, refer to the Application Server Manual.



Client Configuration Using WindX

*CLIENT Program:

***CLIENT** - Component used on client machines with WindX to establish a connection to the server.

The ***CLIENT** program can be customized to provide a user interface for connecting to application servers. However, the ***CLIENT** program must exist because the *spawn* and *launch* entry points within it are required for the spawning procedure. The section where the user interface elements exist, and establish the initial connection to the server, may be changed and/or copied to a new program name.

The WindX directory must be at the same directory tree level as the ProvideX 'lib' directory.

The command line syntax is as follows:

PVX_Path [*state*] [*ini*] *client –ARG *ServerName [ServerSocket]* ["*Application*"]

[-FID *xxx*] [-DIR *xxx*] [-CMD *xxx*] [-ARG *xxx*] [-SSL] [-LOGIN]

[-LANG *xxx*] [-KA] [-USR1 *xxx*] [-USR2 *xxx*] [-USR3 *xxx*] [-USR4 *xxx*]

*Example: C:\infor\facts77\pvx\pvxwin32.exe *client -ARG 128.1.1.34 29000 "FACTS"*

Where

PVX_Path Path to ProvideX.

state ***Optional***. To govern the initial WindX window: null or -rs for normal window; **-mn** for Start Minimized; **–hd** for Start Hidden; -mx for Start Maximized. We recommend you start the ***CLIENT** window in either hidden or minimized mode.

Ini ***Optional***. User-defined INI file. ***Note:*** The initial session uses this INI for its client-side ProvideX characteristics. Spawned sessions will re-use the same INI, unless specifically overridden during the spawn.

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ServerName IP Address or DNS resolvable name of the server to connect to.

ServerSocket TCP/IP port (socket) that the server daemon is listening to. If no socket number is given, then a default value of 10000 is assumed.

"*Application*" ***Optional***. Lead program or configured application name the server is to run. Quotes are required if it contains spaces. If Null or not given, then the request is for a ProvideX Console Mode Session.

For a complete explanation of each field on client configuration, refer to the Application Server Manual.

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