



# Infor Distribution FACTS 7.8.0 Installation Guide

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## About this guide

This guide describes workflow, concepts and procedures for installing Infor Distribution FACTS 7.8.0.

## Intended audience

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.

## Organization

This table shows the chapters of the guide:

Section	Description
<b>Chapter 1</b>	Provides an overview of prerequisites and requirements for installation. It also provides information about where to find third-party installation instructions.
<b>Chapter 2</b>	Provides instructions for installing FACTS on a UNIX host. It also provides instructions on Windows clients and printers.
<b>Chapter 3</b>	Provides instructions for upgrading existing FACTS systems to the current version of FACTS on UNIX.
<b>Chapter 4</b>	Provides instructions for installing FACTS on a Windows server and clients. It also provides information on printer configuration
<b>Chapter 5</b>	Provides instructions on upgrading existing FACTS systems to the current version of FACTS on Windows.
<b>Chapter 6</b>	Provides instructions on API setup and client installation.
<b>Chapter 7</b>	Provides instructions on configuring printers, drivers and link files
<b>Chapter 8</b>	Provides instructions on how to get FACTS up and running.

Section	Description
<b>Chapter 9</b>	Provides installation and configuration instructions for General Report Writer.
<b>Chapter 10</b>	Provides installation and configuration instructions for Uniform.
<b>Chapter 11</b>	Provides installation and configuration instructions for VSI-FAX Server and clients software needed to run the FaxLink module.
<b>Chapter 12</b>	Provides instructions on how to configure tools from PxPlus, 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.
<b>Chapter 13</b>	Provides instructions on how to configure PxPlus Application Server for FACTS.
<b>Appendix A</b>	Provides information on Terminal configuration.
<b>Appendix B</b>	Provides troubleshooting information for printing in UNIX and Windows environments.

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## Related documents

You can find the documents in the product documentation section of the Infor Xtreme Support portal, as described in "Contacting Infor" on page 10.

## Contacting Infor

If you have questions about Infor products, go to the Infor Xtreme Support portal at [www.infor.com/inforxtreme](http://www.infor.com/inforxtreme).

If we update this document after the product release, we will post the new version on this Web site. We recommend that you check this Web site periodically for updated documentation.

If you have comments about Infor documentation, contact [documentation@infor.com](mailto:documentation@infor.com).

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# Chapter 1 Introduction

1

Welcome to the FACTS 7.8 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 and Open SSL on the customer's chosen operating system.

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

## 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/facts78** in UNIX or **INFOR/FACTS78** 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/facts78** in UNIX or **C:\INFOR\FACTS78** in Windows.

The following tables illustrate the main FACTS directory (infor/facts78) 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/facts78/data/AP	infor/facts78/prog/AP	
Accounts Receivable	infor/facts78/data/AR	infor/facts78/prog/AR	
General Ledger	infor/facts78/data/GL	infor/facts78/prog/GL	
Inventory Control	infor/facts78/data/IC	infor/facts78/prog/IC	
Purchase Orders	infor/facts78/data/PO	infor/facts78/prog/PO	
Sales Analysis	infor/facts78/data/SA	infor/facts78/prog/SA	
System Management	infor/facts78/data/SM	infor/facts78/prog/SM	
Office Automation	infor/facts78/data/OA	infor/facts78/prog/OA	
Job Stream	infor/facts78/data/JS	infor/facts78/prog/JS	
Sales Orders	infor/facts78/data/SO	infor/facts78/prog/SO	
Add-on Modules	FACTS Data Files	FACTS Programs	Other
FaxLink*	infor/facts78/data/FL	infor/facts78/prog/FL	infor/facts78/faxlink
Job Cost	infor/facts78/data/JC	infor/facts78/prog/JC	
Manufacturing Control	infor/facts78/data/MC	infor/facts78/prog/MC	
Payroll	infor/facts78/data/PR	infor/facts78/prog/PR	
Service and Repair	infor/facts78/data/SR	infor/facts78/prog/SR	
Accellos Integration	infor/facts78/data/EW	infor/facts78/prog/EW	

*Chart continued on next page*

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Other	FACTS Data Files	FACTS Programs	Other
PxPlus			/infor/facts78/pvx/
WindX			\pvx
ODBC			/usr/pvxodbc (UNIX location)
Adobe Acrobat			\infor\facts78\Acrobat
Report Writer Integration		infor/facts78/prog/RW	infor/facts78/gen6x
Uniform			infor/facts78/uniform
VSI-FAX			facts78/vsi-fax
Modification Support			infor/facts78/mods

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## Understanding the FACTS Authorization Code Sheet

This is a confidential document Infor delivers with each FACTS 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 PxPlus products purchased

**Note:** 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 PxPlus products.

## Understanding WindX and the pxphost script

WindX can help improve performance on FACTS systems running on PxPlus 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 the PxPlus simple client server program or the PxPlus Application Server to provide communications between WindX clients and the server running PxPlus.

## PxPlus Application Server

PxPlus 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 PxPlus manuals for information on installing, configuring and maintaining the Application Server.

## Simple Client/Server

The PxPlus Simple Client/Server includes a server-side program that runs continuously in the background. It exists solely to monitor a particular TCP socket number and respond to connections from clients.

All connections to the simple client-server program are managed on a single TCP/IP socket, eliminating the need to expose a range of sockets. Also, it is no longer necessary to have multiple instances for load balancing.

The practice of passing the user name on the command line is no longer possible, but identifying the processes that belong to a specific user should be done via the User Management/Terminal Inquiry programs in FACTS, which identify the process IDs.

The client-side program retains the server's TCP/IP address and the socket number the server monitors. It also tells PxPlus 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 the client program calls the server at the TCP/IP address and socket number provided.

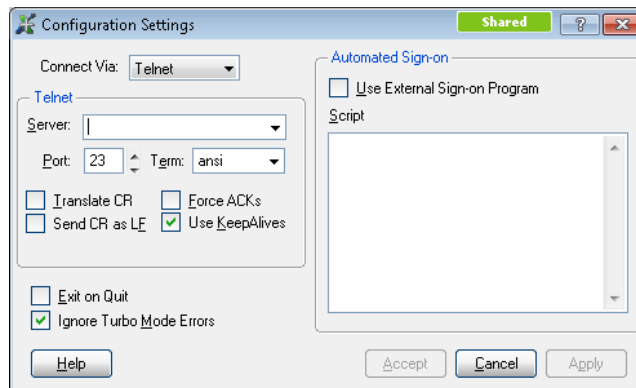
When the server-side program receives this call, it spawns a new PxPlus session running the program indicated on the WindX command line, usually IN4WDX.PxPlus

## Technical Insight: Alternative WindX configurations

### Telnet as an option

In general, the Simple Client/Server 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 PxPlus 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 PxPlus, transmission speeds may degrade to as much as a tenth of a TCP/IP client-server connection.

Configuration involves fewer steps, since Telnet connections don't use the server-side program, and all the setup happens on the 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 *Connect Via* to Telnet. Then enter the server's TCP/IP address or server name and click *Accept*.
- 3 Choose **Connect**.

Users should see a standard UNIX sign on prompt, at which they can enter their sign on and password. Once PxPlus the user starts FACTS, 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.



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## Additional resources and documentation

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

- PxPlus
- PxPlus 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.

<b>For additional information on...</b>	<b>Go to...</b>
PxPlus, WindX and ODBC	<a href="http://www.pvxplus.com">www.pvxplus.com</a>
Electronic Data Interchange (EDI)	<a href="http://edialliance.com/">http://edialliance.com/</a>
Archive, Document Delivery, Email, and Pro BI	<a href="http://www.earnestassoc.com">www.earnestassoc.com</a>
VSI-FAX (Esker)	<a href="http://www.esker.com">www.esker.com</a>
General Report Writer and Unform	<a href="http://www.unform.com">www.unform.com</a>
Adobe Acrobat Reader and PDF files	<a href="http://www.adobe.com">www.adobe.com</a>



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## Chapter 2 Installing FACTS in UNIX Environments

# 2

These instructions work for the following UNIX operating systems:

- IBM AIX v6.1 & 7.1
- Redhat Enterprise Linux 5 (32 & 64-bit) & 6 (32 & 64-bit)

### Things to know before you begin

**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 able to assist.

- The Unix install of FACTS 7.8 must be done from a stand-alone WindX session.
- Install FACTS, PxPlus, and third-party products after normal business hours when all users are logged off the system.
- Read the section "Understanding SSI\_BASE environment variable." Make sure you have the FACTS Authorization Code Sheet (see Chapter 1).
- Read the section "Understanding WindX and the pxphost script" in Chapter 1.
- *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.
- Make sure OpenSSL is installed as a shared library and working. libcrypto.so must be present and linked if necessary to the version-specific library. libssl.so must also be present and linked if necessary to the version-specific library.
- FACTS 7.8 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 7.8 incremental update. To do this login to [www.inforxtreme.com](http://www.inforxtreme.com). On the home page click Downloads -> Products -> Infor -> Enterprise

Resource Planning -> FACTS -> FACTS Cumulative and choose the option that best fits your needs to download the incremental update.

Place the incremental files in a temporary location. Simply note the location of the files - do not run install.sh. 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, PxPlus, 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/ISO to install WindX client software on each client PCs that will be used to run FACTS. Assign one SSI\_BASE value per client installation.
- 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 30.*
- 4 Configure any third-party products purchased.**
  - Refer to Chapter 9 for Report Writer.
  - Refer to Chapter 10 for Uniform.
  - Refer to Chapter 11 for VSI-FAX and FaxLink.
  - Refer to Chapter 12 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 PxPlus Web Server.

### Installing the WindX thin-client

Because installing FACTS on UNIX requires the use of WindX, you will first need to install a Stand-alone WindX client. If you already have one setup and working, there is no need to install it again.

- 1** From the FACTS Installation CD/ISO, Navigate to the Windows > *windx* folder and select the appropriate executable (the file ending with WDX is the stand-alone WindX, and the file ending with WPI is the WindX Plug-In).
- 2** Right click on your selection and choose “Run as Administrator”
- 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 Read the Developer Notification and choose Next.
- 6 Provide your customer information, and click **Next**.
- 7 On the Destination Folder screen, **make sure the destination directory is C:\infor\facts78\pvx**, (assuming you installed FACTS on the C: drive).
- 8 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.
- 9 Choose **Next** to continue with the installation.
- 10 Review the selections, and click **Install**.
- 11 Click **Finish** at the InstallShield Wizard Complete message.
- 12 Enter the Main Company name in the Registered User Name field. This is not case sensitive.
- 13 If you are installing stand-alone WindX, enter the 25-character Activation key from the FACTS Authorization Code Sheet on the PxPlus Activation screen. Click the Record Key Button.  
**Do not use this serial number on any other client installations.**
- 14 **Click Done to close the activation window.**

## Server Installation

Now, using the WindX client installed above, you can continue with installing the FACTS software on the server.

- 1 Start WindX and connect to the UNIX server via a telnet connection.
- 2 Sign on to the server as root and make sure TERM is set correctly.
- 3 Place the CD-ROM containing the 7.8 ISO image 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.  
**As an alternative to burning a CD with the 7.8 ISO image, you can ftp the contents of the Unix-Linux folder (unix and install.sh) from the ISO to a directory, i.e., 78install.**
- 4 Change directories to the directory the CD is mounted on (e.g. cd /cd\_drive) or to the install directory where you have FTP'd the necessary files from the ISO.
- 5 Type **./install.sh** to launch the installation script. The installation script automatically sets umask to 0.
- 6 Press **Enter** past the banner screen.
- 7 If you agree, type Y and press **Enter** to accept the FACTS license agreement.
- 8 Choose the operating system running on the server.

9 Select the type of setup you prefer.

Note: The recommended install directory is **/infor/facts78**. If you are doing an upgrade from a prior version of FACTS, the 7.8 install directory must be different from the location of the prior FACTS version.

▪ New Install:

Installs a FACTS 7.8 release.

- a) Enter the destination directory. 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 7.8 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. You also have the option of checking disk space on this screen before you continue with the installation.
- 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 7.8 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.
- b. Enter the location of the FACTS version you are upgrading from.
- c. Enter the destination directory. You also have the option of checking disk space on this screen before you continue with the installation.
- 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)

For upgrades, it is **required** that you answer Y to bring the custom note types forward.

f. Merge SMFLUP:

If metadata modifications are found, 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' 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.

V. Replenishment Setup

- *Convert Qualified Usage? Y/N* – Default to N

(If qualified usage was meticulously maintained, it can be converted, but it is inexact because qualified usage was a monthly bucket, and in 7.8 all usage is stored document-by-document. The difference between actual and qualified usage for each period will attempt to be proportionately spread across all usage documents for the given period – results can be confusing and inaccurate. Do not convert qualified usage unless it was carefully maintained and is considered highly important.)

- *For Min/Max Items, Convert Frozen Minimums to T-Min Order Point? Y/N* – Default to Y

(7.8 no longer has Min/Max as a replenishment option, and non-frozen min/max values will not be converted. If frozen minimums have been well-maintained, they can be converted to T-Min Order Points.)

- *For Min/Max Items, Convert Frozen Maximums to Frozen Line Point? Y/N* – Default to N

(Frozen maximums should only be converted to frozen line points if they were entered due to limited shelf space. T-Min Order Points adjust up when demand increases, but Frozen Line Points do not adjust up or down with demand – they are rigid and should be used sparingly.)

- *Enter the maximum # months to keep T-Min OP/Frozen LP values:* integer, minimum 1, maximum 24, default 12

(In 7.8, all T-mins and frozen controls must have expiration dates. When converting frozen minimums to T-Min Order Points and frozen maximums to Frozen Line Points, we will look at the # months they were frozen and set the expiration date accordingly. For permanent



freezes or those frozen for more than this number or months, we will use this number of months to establish the expiration date.)

- *Convert Standard Pack to Vendor ARP Rounding in Stocking UM? Y/N*  
– Default to N

(The standard pack field in the item master file is not directly associated with any specific UM. Users can put any value they chose in that field, to mean whatever they want it to mean. If the field was carefully maintained, and it was entered as the stocking UM quantity, and the primary vendor required purchasing the item in multiples of that value, it can be converted as the rounding value to be used for PO's - i.e. vendor ARP. If standard pack was not carefully maintained per above, converting it could cause more trouble than value.)

- Answer YES to Continue Update

- Manual Setup:

Installs a FACTS 7.8 release, and allows the user to perform the upgrade process manually by following the steps found in [Chapter 3](#).

a. Enter the destination directory. 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.

- 10 Enter the path the CD is mounted on (ex. /cd\_drive) or the path to the directory containing the installation files (ex. /78install).
- 11 Type **Y** to install FACTS 7.8. Press Enter.
- 12 Type **Y** to install PxPlus. Press Enter.
- 13 Indicate if you want to install the Report Writer Server.
- 14 Indicate if you want to install the Client/Server ODBC Driver.
- 15 Enter the **TCP/IP socket** that you want the simple client-server to monitor. The default is 10000. Enter a different socket if another service is running on 10000. See "Understanding WindX and pxphost script" in Chapter 1 for more information about WindX, TCP/IP services and socket number assignments.
- 16 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.
- 17 Enter your initials indicating you have read and agree to the PxPlus License terms and conditions.
- 18 Enter the Main Company name in the Registered User Name field. This is not case sensitive.

- 19 Enter the 25 character PxPlus Activation Key (all caps) on the Authorization Code sheet and click Record Key.  
Continue entering the 25 character keys for PxPlus Enhancements, PKG ID 774 and any additional PKG IDs, clicking the Record Key button after each key.  
HINT: The keys can be copied from the .pdf copy of the auth sheet (including dashes) and pasted into the fields to minimize the chance of mistakes by manually entering keys and to save time.
- 20 The script installs any third-party products selected.
  - General Report Writer (refer to Chapter 9 for additional instructions)
  - ODBC Client Server (refer to Chapter 12 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 Add a line to the end of **etc/inittab** that will respawn the host.  
*Example:* `in4:1234:respawn:/infor/facts78/pxphost`
- 25 Run **./FACTS7**, and begin setting up the INSTALL menu programs.

## 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.

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

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 the programs in the order that they appear on the Install Menu.

- Generate SMFLUP
- Merge SMFLUP (upgrades only)
- Install FACTS Update (upgrades only)
- System Control F/M
- Company F/M
- Company Control F/M
- Terminal F/M
- Printer Maintenance

**I. At the FACTS INSTALL menu, run Generate SMFLUP.**

**NOTICE:** The generation of SMFLUP is **REQUIRED**, even for new FACTS installs, to properly establish the structure of all metadata 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 metadata 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.

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

For upgrades, it is **required** that you answer Y to bring the customer's note types forward.

**NOTES:**

If .SSI files are missing, you will receive a message. Press Enter to continue.

If you restart UTR999 for any reason, you should restore the meta 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**.
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 **Partner Name** (up to 30 characters).
7. Enter the **Partner Phone Number**, including area code.
8. From the Modules Tab, select the **Purchased Modules** that appear on the Authorization Code sheet.
9. Enter whether Source Code and/or SQL Server is authorized from the Authorization Code sheet.
10. Enter the number of CUI and GUI users for General 6+ from the Authorization Code sheet.
11. Click on the button next to the CUI users field and enter the full path to gen60\_pv directory (ex. /infor/facts78/gen6x/gen60\_pv/)
12. Enter the full path to the FACTS API Polling (primary and secondary) and Output directories. NOTE: These directories must be created before they can be entered here! (ex. Polling: /infor/facts78/api/in  
Secondary Polling: /infor/facts78/api/in2  
Output: /infor/facts78/api/out)
13. On 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.
14. Set the number of minutes you want to allow for **Menu Timeout**. You can set the Menu Timeout feature from **1** to **99** minutes.  
Note: If you don't want menus to timeout at all, enter 0 in this field.
15. 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 additional companies.

6. Save the entries made in Company F/M and exit the program.

#### **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 Used Tab

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

##### Security/Settings Tab

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

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

Enter the path and directory name (from the server's perspective) where Internal Resource files will be stored

Enter the path and directory name (from the client's perspective) where Internal Resource files will be stored.

##### API Settings 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 PxPlus 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 PxPlus 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.

Repeat the above entries for each company on your auth code sheet.

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

**V. Select Printer Maintenance 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 [Chapter 7, “Printers, Drivers and Link Files”](#).

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

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

**Proceed to [Chapter 6, “API Setup and Client Installation”](#).**

## Chapter 3 Upgrading FACTS on UNIX

# 3

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.

The fourth section applies to all upgrades.

### 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.

### Notes:

FACTS 7.8 no longer supports dumb terminals or terminal emulators. The character-based interface is no longer available.

**The installation procedures for FACTS 7.8 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 by following the manual instructions below under the heading 'Auto-Update Process'.

## Before you begin

- Run all registers and update before conversion.
- All invoices must be posted to Sales Analysis before conversion.
- **Back up your data.**
- For upgrades from FACTS 6.06: 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 **3.5** additional copies of the original FACTS data. At a minimum, there must be enough disk space to accommodate 2.5 copies of the data.
- If upgrading from prior to FACTS 7.7, document any custom changes made to SMNAME, SMNAMZ, SMSLCT, SMFILE
- 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.
- If your system is running the API Toolkit (either SMU954 or the PxPlus Web Server), stop all of those processes before continuing.
- **IMPORTANT:** If you made any modifications to metadata files, make sure you have the ORIGINAL UNMODIFIED version of these with .SSI extensions.
- 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 2, "Installing FACTS in UNIX Environments"](#).

Complete the steps in Chapter 2 for your chosen upgrade option, up to the point it indicates to return to Chapter 3, then continue with the remaining instructions below.

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

**Notice:** If you chose the Express setup or Custom setup option proceed to [step 12 on page 40](#), where you access System Control F/M to enter the ALF expiration date, and make any other changes from your authorization code sheet. Steps 1 through 11 are the manual upgrade instructions to be executed following the completion of the steps in chapter 2.



## Upgrade Notice for 6.07 or Prior

If upgrading from FACTS 6.7 or earlier 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.

### **For Upgrades from FACTS 6.06:**

- 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/facts78/data66
- 4 Copy your 6.06 data into /infor/facts78/data66.
- 5 Delete the following from the /infor/facts78/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, SMEOPL.EMPTY, SMFILE, SMGCTL, SMGLD\*, SMMODS

SMNAME, SMNAMZ, SMSLCT, SMUHLP, SMUSED

SOHOLD

SRHOLD

- 6 Convert your data to PxPlus file format.

Create a temporary directory to hold the newly-converted data files. You may want to *chmod 777* to set permissions.

**Example:** /infor/facts78/data.conv

Remember or write down where the FACTS 6.06 data files are located

**Example:** /infor/facts78/data66

Start PxPlus using the full path: **/infor/facts78/pvx/pxplus**

Change your current directory to the `pvx/lib/_conv.bbx` directory:

**Example:** `pwd` `"/infor/facts78/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/facts78/data66`)

Output File/Directory: **Path and file name for the temporary location** (e.g., `/infor/facts78/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/facts78/data.conv` directory should be populated with the PxPlus data files.

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

**IMPORTANT:** Remove ALL `.SSI` files from `/infor/facts78/data/DO` & `data/SM`

**MODS NOTE:** If data modifications exist and they are required for FACTS 7.8, take appropriate steps to bring these forward.

Copy `/infor/facts78/data.conv` to `/infor/facts78/data`. This overwrites the FACTS 7.8 data files created during installation with your converted source data files.

Note: You may want to keep the `/infor/facts78/data.conv` dataset as a backup copy.

### **For Upgrades from FACTS 6.07:**

- 1 Log into UNIX as root.
- 2 Make sure TERM is set correctly.
- 3 Create a new directory under `/infor/facts78` called **data67**. This is the directory where you will place your 6.07 data. Example: `/infor/facts78/data67`
- 4 Copy 6.07 data into **infor/facts78/data67**.
- 5 Delete the following from the `infor/facts78/data67` directory if they exist:
  - the CL 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, 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 7.8, take appropriate steps to bring these forward.
- 8 It is recommended to copy infor/facts78/data to infor/facts78/data78 in case a restart is needed. (optional)
- 9 Copy infor/facts78/data67 to infor/facts78/data. This overwrites the FACTS 7.8 data files created during installation with your source data files.  
NOTE: You can now delete the infor/facts78/data67 directory or you can keep it so you have a backup of the source data.

### **For Upgrades from FACTS 7.0 or greater:**

- 1 Make sure TERM is set correctly.
- 2 Navigate to where you installed FACTS 7.8.
- 3 Create a new directory under /infor/facts78 called data7x. This is the directory where you will place your 7.x data. Example: /infor/facts78/data7x
- 4 Copy your 7.x data into infor/facts78/data7x.
- 5 Delete the following from the infor/facts78/data7x directory:
  - the CL 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  
 DOBOAS\*, DOBODH\*, DOBODL\*, DOFREL\*, DOVARI\*  
 EMBATH, EMBATL  
 ICALPX, ICCLSX, ICMVCX, ICVNDX  
 JCHOLD  
 RMDMAP.STD, RMDSET.STD, RMEVWL.SSI  
 RMEVWTF, RMQRYH, RMQRYHDF, RMQRYL, RMQRYLDF, RMQFLD  
 SANSTK  
 SMCTRY, SMEOPL.empty, SMFIDS, SMFILE, SMFLUP, SMFREE  
 SMGLD\*, SMHELP, SMHLPR, SMINQC, SMLOCK, SMMODS  
 SMNAME, SMNAMZ, SMSLCT, SMSTCD, SMTHLP, SMUHLP  
 SMUSED, SMUSRL, SMWPRF  
 SOHOLD, SOHSOH, SOHSOL  
 SRHOLD

**7 IMPORTANT:** Remove all .SSI files from infor\facts78\data\DO, & infor\facts78\data\SM.

**8** Move the following files and .ssi extensions from data7x to facts78\meta\xx:

DODBRW	DOFILB	DOFILH
DOSTYP	DOTYPE	RMEACT
RMEVWF	RMEVWH	RMFILE
RMQRYH	RMQRYL	RMSMIF
RMVARS	SMALCD	SMANSR
SMAPIN	SMAPIR	SMAPIT
SMBKPM	SMENTY	SMFMFM
SMFRMH	SMFRML	SMGCTL
SMINQY	SMLNCH	SMMENU

SMMNUS	SMMSGs	SMNCAT
SMNNT	SMNTRF	SMNTYP
SMPCKH	SMPCKL	SMPGMN
SMPRMT	SMRPLC	SMRPTF
SMRPTG	SMRPTI	SMRPTL
SMRPTR	SMRPTS	SMRRTR
SMRSMD	SMSITH	SMSITL
SMSMIF	SMTABS	SMUNFL
SMUNFO	SMVIEW	

- 9 MODS NOTE: If data modifications exist and they are required for FACTS 7.8, take appropriate steps to bring these forward.
- 10 It is recommended to copy infor/facts78/data to infor/facts78/data78 and infor /facts78/meta to infor/facts78/meta78 in case a restart is needed. (optional)
- 11 Copy infor/facts78/data7x to infor/facts78/data. This overwrites the FACTS 7.8 data files created during installation with your source data files. **NOTE:** You can now delete the infor/facts78/data7x directory or you can keep it so you have a backup of the source data.

### **For All Upgrades:**

- 1 Type ./FACTS7 to run FACTS
- 2 At the FACTS Sign-on Screen, click on the Infor logo and type install.
- 3 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.

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 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)*

It is **required** that this always be answered Y to bring the custom note types forward.

#### NOTES:

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

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 11 on page 39](#)).*

### **Auto-Update Process**

- 4 Select 3. **Install FACTS Update** from the Install menu.
- 5 Press **F1-AutoUpdate**.
- 6 At the next window, press CR to Continue.
- 7 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.
- 8 Press CR to Continue.
- 9 Answer the following questions accordingly:

Convert Qualified Usage? Y/N – Default to N

(If qualified usage was meticulously maintained, it can be converted, but it is inexact because qualified usage was a monthly bucket, and in 7.8 all usage is stored document-by-document. The difference between actual and qualified usage for each period will attempt to be proportionately spread across all usage documents for the given period – results can be

confusing and inaccurate. Do not convert qualified usage unless it was carefully maintained and is considered highly important.)

For Min/Max Items, Convert Frozen Minimums to T-Min Order Point? Y/N – Default to Y

(7.8 no longer has Min/Max as a replenishment option, and non-frozen min/max values will not be converted. If frozen minimums have been well-maintained, they can be converted to T-Min Order Points.)

For Min/Max Items, Convert Frozen Maximums to Frozen Line Point? Y/N – Default to N

(Frozen maximums should only be converted to frozen line points if they were entered due to limited shelf space. T-Min Order Points adjust up when demand increases, but Frozen Line Points do not adjust up or down with demand – they are rigid and should be used sparingly.)

Enter the maximum # months to keep T-Min OP/Frozen LP values: integer, minimum 1, maximum 24, default 12

(In 7.8, all T-mins and frozen controls must have expiration dates. When converting frozen minimums to T-Min Order Points and frozen maximums to Frozen Line Points, we will look at the # months they were frozen and set the expiration date accordingly. For permanent freezes or those frozen for more than this number of months, we will use this number of months to establish the expiration date.)

Convert Standard Pack to Vendor ARP Rounding in Stocking UM? Y/N – Default to N

(The standard pack field in the item master file is not directly associated with any specific UM. Users can put any value they chose in that field, to mean whatever they want it to mean. If the field was carefully maintained, and it was entered as the stocking UM quantity, and the primary vendor required purchasing the item in multiples of that value, it can be converted as the rounding value to be used for PO's - i.e. vendor ARP. If standard pack was not carefully maintained per above, converting it could cause more trouble than value.)

Answer YES to Continue Update

- 10 Once the update is complete, press **F3-End**.
- 11 If modifications were found during the generation of SMFLUP, 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.
- 12 Select System Control F/M from the menu and enter the ALF expiration date, and make any other changes from your authorization code sheet.
- 13 From Company F/M, enter the FACTS 7.8 authorization code.
- 14 Run the Data Dictionary Update (DOU100) program.
- 15 Exit PxPlus and restart FACTS 7.8.
- 16 Make sure you can successfully log into FACTS 7.8.
- 17 Be sure to review the JSJOBS.OUT file located in your infor/facts78/ directory which lists any Job Stream entries that must be re-entered.
- 18 Before you begin testing the system, complete the instructions below for Setting up and installing the API Toolkit. Then, test the system.

## 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.

Proceed to [Chapter 6, “API Setup and Client Installation”](#).



---

# Chapter 4 Installing FACTS on Windows Servers

# 4

These instructions work for the following configurations:

Windows 2008 Server networked with Windows XP, Windows 7 and Windows 8 clients on direct TCP/IP connection.

## Things to know before you begin

- 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.
- Read the section “Understanding SSI\_BASE environment variable.” Make sure you have the FACTS Authorization Code Sheet (see Chapter 1).
- 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.
- 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 7.8 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 7.8 incremental update. To do this login to [www.inforxtreme.com](http://www.inforxtreme.com). On the home page click Downloads -> Products -> Infor -> Enterprise Resource Planning -> FACTS -> FACTS Cumulative and choose the option that best fits your needs to download the incremental update.

Place the incremental files in a temporary location. Simply note the location of the files - do not run the installation. The automated installation process will apply the incremental update.

# Installing FACTS

## Process Overview

**1 Install FACTS and PxPlus on the server.** The FACTS Installation ISO installs the current Infor certified version of FACTS, PxPlus, 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 ISO 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 page 36.*

**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.

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

Refer to Chapter 9 for Report Writer.

Refer to Chapter 10 for Uniform.

Refer to Chapter 11 for VSI-FAX and FaxLink.

Refer to Chapter 12 for ODBC.

**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 PxPlus Web Server.

## Server Installation

- 1 Make sure you close any open applications.
- 2 Place the FACTS Installation CD that you created from ISO in the CD drive or mount the ISO with third party software.
- 3 Navigate to Windows > FACTS, right-click on setup.exe and select Run as Administrator.
- 4 Choose **Next** at the Welcome screen.
- 5 If you agree, select **Yes** to accept the FACTS license agreement.
- 6 Select the type of install or upgrade you prefer, and choose **Next**:

Note: The recommended install directory is **c:\infor\facts78**. If you are performing an upgrade from a prior version of FACTS, the 7.8 install directory must be different from the location of the prior FACTS version.

- New Install Setup:

Installs a new FACTS 7.8 release.

- a. Enter the destination directory

- Client Setup:

Installs a client version of the FACTS 7.8 release.

- a. Enter the destination directory.

- Express Upgrade Setup:

Installs a new FACTS 7.8 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.
- c. Enter the destination directory.

- Custom Upgrade Setup:

Installs a new FACTS 7.8 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.
- c. Enter the destination directory

#### 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 metadata 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)*

It is **required** that this be answered 'Y' to bring the custom note types forward from the source FACTS system.

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.

Merge SMFLUP:

If metadata modifications are found during the generate SMFLUP process, these questions will determine how those modifications are applied to the new 7.8 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.

V. Replenishment Setup

- Convert Qualified Usage? Y/N – Default to N

(If qualified usage was meticulously maintained, it can be converted, but it is inexact because qualified usage was a monthly bucket, and in 7.8 all usage is stored document-by-document. The difference between actual and qualified usage for each period will attempt to be proportionately spread across all usage documents for the given period – results can be confusing and inaccurate. Do not convert qualified usage unless it was carefully maintained and is considered highly important.)

- For Min/Max Items, Convert Frozen Minimums to T-Min Order Point? Y/N – Default to Y  

(7.8 no longer has Min/Max as a replenishment option, and non-frozen min/max values will not be converted. If frozen minimums have been well-maintained, they can be converted to T-Min Order Points.)
- For Min/Max Items, Convert Frozen Maximums to Frozen Line Point? Y/N – Default to N  

(Frozen maximums should only be converted to frozen line points if they were entered due to limited shelf space. T-Min Order Points adjust up when demand increases, but Frozen Line Points do not adjust up or down with demand – they are rigid and should be used sparingly.)
- Enter the maximum # months to keep T-Min OP/Frozen LP values: integer, minimum 1, maximum 24, default 12  

(In 7.8, all T-mins and frozen controls must have expiration dates. When converting frozen minimums to T-Min Order Points and frozen maximums to Frozen Line Points, we will look at the # months they were frozen and set the expiration date accordingly. For permanent freezes or those frozen for more than this number of months, we will use this number of months to establish the expiration date.)
- Convert Standard Pack to Vendor ARP Rounding in Stocking UM? Y/N – Default to N  

(The standard pack field in the item master file is not directly associated with any specific UM. Users can put any value they chose in that field, to mean whatever they want it to mean. If the field was carefully maintained, and it was entered as the stocking UM quantity, and the primary vendor required purchasing the item in multiples of that value, it can be converted as the rounding value to be used for PO's - i.e. vendor ARP. If standard pack was not carefully maintained per above, converting it could cause more trouble than value.)
- Manual Upgrade Setup:  

Installs a new FACTS 7.8 release and allows the user to perform the upgrade process manually by following the steps found in [Chapter 5](#).

  - 1 Enter the destination directory.
  - 2 Enter the location of the latest 7.8 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”.

- 3 Click **Next** to accept the default Program Folder name.
- 4 Review the selections made in the previous screens. Choose **Back** to make changes to previous screens. Choose **Next** to begin copying files.
- 5 Continue with the installation of PxPlus below. FACTS 7.8 requires PxPlus version 10.2.

**Note: If you get a PxPlus activation error when you try to sign into FACTS**, you can return the PxPlus Activation screen by running ppxwactv.exe from the c:\infor\facts78\pvx directory.

- (a) Choose **Next** at the PVXPlus Welcome screen.
  - (b) Accept the terms of the license agreement, and click **Next**.
  - (c) Provide your customer information, and click **Next**.
  - (d) At the Destination Folder screen, **make sure the destination directory is set to install in C:\infor\facts78\pvx** (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 c:\infor\facts78\pvx folder. Click **OK** to return to the Destination Folder Screen.
  - (e) Choose **Next** to continue with the PxPlus installation.
  - (f) Click **Install** to begin the installation. Enter the Main Company name in the Registered User Name field. This is not case sensitive.
  - (g) Enter the 25 character PxPlus Activation Key (all caps) on the Authorization Code sheet and click Record Key. Continue entering the 25 character keys for PxPlus Enhancements, PKG ID 774 and any additional PKG IDs, clicking the Record Key button after each key.
  - (h) Click **Done**.
  - (i) Click Finish.
- 6 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 Installation screen.
  - 7 Click **Finish** to complete the installation.
  - 8 If other applications are needed refer to the appropriate 3<sup>rd</sup> Party chapters.
  - 9 **If you are performing a manual upgrade, exit this procedure now, and continue with the steps found in [Chapter 5](#).**

## Configuring Simple Client Server

Refer to <http://manual.pvxplus.com/> and search for Simple Client Server Interface for further information.

- 1 To setup the Windows service for simple client-server, click Start – All Programs -> Infor -> Infor Distribution FACTS -> Facts7.8 -> PxPlus Host as a Service.
- 2 Enter the following:  
Starting Directory: (defaults to C:\infor\facts78) enter full path to the FACTS home directory  
Port to Use: (defaults to 4093) Enter desired port to be used, i.e., 11000.  
Forced Prog: Leave blank
- 3 Go to Windows Control Panel/Services and locate PxPlus Simple Client Server. Edit the properties as desired and start the service.

### 3<sup>rd</sup> Party Installation

If you are installing a 3<sup>rd</sup> party application and you installed FACTS in a different directory or drive other than the FACTS default, be sure to change the 3<sup>rd</sup> party destination directory to the same directory in which you installed FACTS7.8. Refer to the appropriate chapter for 3<sup>rd</sup> party installation instructions.

### 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.

Run these programs in the order that they appear on the Install Menu.

- Generate SMFLUP
- Merge SMFLUP (upgrades only)
- Install Update/Add-on Modules (upgrades only)
- System Control F/M
- Company F/M
- Company Control F/M
- Terminal F/M
- Printer Maintenance

#### I. At the FACTS INSTALL menu, run Generate SMFLUP.

**NOTICE:** The generation of SMFLUP is **REQUIRED**, even for new FACTS installs, to properly establish the structure of all metadata 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.

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 metadata, 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)*

It is **required** that the always be answered 'Y' to bring the custom note types forward.

**NOTES:**

- If .SSI files are missing, you will receive a message. Hit Enter to continue.
- 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** — 7.8
- 4 From the Authorization Code Sheet, enter the Max FACTS Users in the **Maximum Terminals** field.
- 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 **Partner Name** (up to 30 characters).
- 7 Enter the **Partner Phone Number**, including area code.



- 8 From the Modules Purchased Tab, select the Purchased Modules that appear on the Authorization sheet.
- 9 Enter whether Source Code and/or SQL Server is authorized from the Authorization sheet.
- 10 Enter the number of CUI and GUI users for General 6+ from the Authorization Code sheet.
- 11 Click on the button next to the CUI users field and enter the full path to gen60\_pv directory (ex. C:\infor\facts78\gen6x\gen60\_pv\)
- 12 Enter the full path to the FACTS API Polling (primary and secondary) and Output directories.  
NOTE: These directories must be created before they can be entered here! (ex. Polling: c:\infor\facts78\api\in and c:\infor\facts78\api\in2; Output: c:\infor\facts78\api\out)
- 13 On 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.
- 14 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.
- 15 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.
- 6 Repeat Steps 1-5 for all companies listed on the FACTS Authorization Code Sheet.
- 7 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 Used Tab

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

##### Security/Settings Tab

Enter 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.

Enter 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.

Enter the path and directory name (from the server's perspective) where Internal Resource files will be stored

Enter the path and directory name (from the client's perspective) where Internal Resource files will be stored.

##### 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 PxPlus 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 PxPlus 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.

Repeat the above entries for each company on your auth code sheet.

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

#### V. Select Printer Maintenance 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 [Chapter 7“Printers, Drivers and Link Files,”](#) for printer configuration instructions.

**This concludes the FACTS server installation.**

Test the installation by signing into FACTS.

Double click the FACTS 7.8 Server icon on the desktop.

Enter the following information:

Login: IN4

Password: IN4

Company number: 01

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

***Proceed to [Chapter 6, "API Setup and Client Installation"](#).***



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## Chapter 5 Upgrading FACTS on a Windows Server

# 5

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.

The fourth section applies to all upgrades.

### 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 PxPlus and FACTS installations through Add/Remove Programs in the Windows Control Panel. This process will properly and **fully** uninstall the applications. Then manually remove any remaining folders from the original install.
- 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'.

## Before you begin

- Run all registers and update before conversion.
- All invoices must be posted to Sales Analysis before conversion.
- **Back up your data.**

- For upgrades from FACTS 6.06: 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 **3.5** additional copies of the original FACTS data. At a minimum, there must be enough disk space to accommodate 2.5 copies of the data.
- If upgrading from prior to FACTS 7.7, document any custom changes made to SMNAME, SMNAMZ, SMSLCT, SMFILE
- 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.
- If your system is running the API Toolkit (either SMU954 or the PxPlus Web Server), stop all of those processes before continuing.
- **IMPORTANT:** If you made any modifications to metadata files, make sure you have the ORIGINAL UNMODIFIED version of these with .SSI extensions.
- 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 Windows”](#).

Complete the steps in Chapter 4 for your chosen upgrade option, up to the point it indicates to return to Chapter 5, then continue with the remaining instructions below.

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

**Notice:** If you chose the Express setup or Custom setup option, proceed to [step 12 on page 61](#) where you access System Control F/M from the menu and enter the ALF expiration date. The previous steps are the Manual upgrade instructions, to be executed following completion of the steps in Chapter 4.

## Upgrade Notice for 6.07 or Prior

If upgrading from FACTS 6.7 or earlier 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.

### **For Upgrades from FACTS 6.06:**

- 1 Open Windows Explorer and navigate to where you installed FACTS 7.8.

- 2 Create a new folder under infor\facts78 called data66. This is the directory where you will place your 6.06 data.

Example: C:\infor\facts78\data66

- 3 Copy your 6.06 data into infor\facts78\data66.
- 4 Delete the following from the infor\facts78\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

- 4 Convert your data to PxPlus file format:

- Create a temporary directory to hold the converted data files.

Example: C:\infor\facts78\data.conv

(Remember or write down where the FACTS 6.06 data files are located.)

Example: C:\infor\facts78\data66

- Start PxPlus: C:\infor\facts78\pvx\PxPlus.exe.
- Change your current directory to pvx\lib\\_conv.bbx

**Example:** `cwdir "C:\infor\facts78\pvx\lib\_conv.bbx"`

- Start the conversion program by running **cv-nobbx** and answering the questions as follows:
  - a Checkout Only: **No**
  - b Variable Length Record files: **Yes**
  - c Eliminate Max Record Counts: **Yes**
  - d Input File/Directory: **Path and file name for the BBx data** (e.g., c:\infor\facts78\data66)
  - e Output File/Directory: **Path and file name for the temporary location** (e.g., c:\infor\facts78\data.conv)
  - f Conversion Log file name: **Path and Name for file to hold warnings/error information**

**g 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\facts78\data.conv directory should be populated with the PxPlus data files.
- Review the Log file for any errors which might have occurred during the BBx to PxPlus conversion.

**5 IMPORTANT: Remove any .SSI files from Infor\facts78\data\DO & data\SM.**

**6 MODS NOTE:** If data modifications exist and they are required for FACTS 7.8, take appropriate steps to bring these forward.

**7 Copy infor\facts78\data.conv into infor\facts78\data.** This overwrites the FACTS 7.8 data files created during installation with your converted source data files.

Note: You may want to keep the infor\facts78\data.conv dataset for the purpose of maintaining a backup copy.

**For upgrades from FACTS 6.07:**

- 1 Open Windows Explorer and navigate to where you installed FACTS 7.8.
- 2 Create a new folder under **infor\facts78** called **data67**. This is the directory where you will place your 6.07 data.

*Example:* C:\infor\facts78\data67

- 3 Copy your 6.07 data into **infor\facts78\data67**.
- 4 Delete the following from the infor\facts78\data67 directory if they exist:

the CL 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\facts78\data\DO & infor\facts78\data\SM.
- 6 **MODS NOTE:** If data modifications exist and they are required for FACTS 7.8, take appropriate steps to bring these forward.
- 7 It is recommended to copy infor\facts78\data to infor\facts78\data78 and infor\facts78\meta to infor\facts78\meta78 in case a restart is needed. (optional)
- 8 Copy **infor\facts78\data67** to **infor\facts78\data**. This overwrites the FACTS 7.8 data files created during installation with your from source data files.

**NOTE:** You can delete the **infor\facts78\data67** directory or you can keep it so you have a backup of the source data.

### **Upgrading from FACTS 7.0 or greater:**

- 1 Open Windows Explorer and navigate to where you installed FACTS 7.8.
- 2 Create a new folder under **infor\facts78** called **data7x**. This is the directory where you will place your 7.x data.

*Example:* C:\infor\facts78\data71

- 3 Copy your 7.x data into **infor\facts78\data7x**.
- 4 Delete the following from the infor\facts78\data7x directory if they exist:

- the CL 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
- DOBOAS\*, DOBODH\*, DOBODL\*, DOFREL\*, DOVARI\*
- EMBATH, EMBATL
- ICALPX, ICCLSX, ICMVCX, ICVNDX
- JCHOLD
- RMEVWTFD, RMQRYH, RMQRYHDF, RMQRYL, RMQRYLDF, RMQFLD
- RMDMAP.STD, RMDSET.STD, RMEVWL.SSI
- SANSTK
- SMCTRY, SMEOPL.empty, SMFIDS, SMFILE, SMFLUP, SMFREE
- SMGLD\*, SMHELP, SMHLPR, SMINQC, SMLOCK, SMMODS

SMNAME, SMNAMZ, SMSLCT, SMSTCD, SMTHLP, SMUHLP  
 SMUSED, SMUSRL, SMWPRF  
 SOHOLD, SOHSOH, SOHSOL  
 SRHOLD

**5 IMPORTANT: Remove all .SSI files from infor\facts78\data\DO, & infor\facts78\data\SM.**

**6** Move the following files and .ssi extensions from data7x to facts78\meta\xx:

DODBRW	DOFILB	DOFILH
DOSTYP	DOTYPE	RMEACT
RMEVWF	RMEVWH	RMFILE
RMQRYH	RMQRYL	RMSMIF
RMVARS	SMALCD	SMANSR
SMAPIN	SMAPIR	SMAPIT
SMBKPM	SMENTY	SMFMFM
SMFRMH	SMFRML	SMGCTL
SMINQY	SMLNCH	SMMENU
SMMNUS	SMMSGS	SMNCAT
SMNNCT	SMNTRF	SMNTYP
SMPCKH	SMPCKL	SMPGMN
SMPRMT	SMRPLC	SMRPTF
SMRPTG	SMRPTI	SMRPTL
SMRPTR	SMRPTS	SMRRTR
SMRSMD	SMSITH	SMSITL
SMSMIF	SMTABS	SMUNFL
SMUNFO	SMVIEW	

**7** MODS NOTE: If data modifications exist and they are required for FACTS 7.8, take appropriate steps to bring these forward.

- 8 It is recommended to copy `infor\facts78\data` to `infor\facts78\data78` and `infor\facts78\meta` to `infor\facts78\meta78` in case a restart is needed. (optional)
- 9 Copy `infor\facts78\data7x` to `infor\facts78\data`. This overwrites the FACTS 7.8 data files created during installation with your source data files.

**NOTE:** You can now delete the `infor\facts78\data7x` directory or you can keep it so you have a backup of your data.

### **For all Upgrades:**

- 1 Double click the FACTS Server shortcut icon on the desktop.
- 2 At the FACTS Sign-on Screen, click the Infor logo, and type **install**.
- 3 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)*

It is **required** that this always be answered 'Y' to bring the custom note types forward

### **NOTES:**

- If .SSI files are missing, you will receive a message. Hit Enter to continue.
- If you restart UTR999 for any reason, you should restore the data and meta directories to their original state first.

**IMPORTANT!!!**

*If modifications were found, wait until **AFTER** the file updates are complete before merging SMFLUP ([step 11 on page 61](#)).*

### **Auto-Update Process**

**4** Select **3. Install FACTS Update** from the Install menu.

**5** Press F1-AutoUpdate.

**6** At the next window, press CR to Continue.

**7** Select the release level **AFTER** the version you are currently on.

Example: 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.

**8** Press CR to Continue.

**9** Answer the following questions accordingly:

Convert Qualified Usage? Y/N – Default to N

(If qualified usage was meticulously maintained, it can be converted, but it is inexact because qualified usage was a monthly bucket, and in 7.8 all usage is stored document-by-document. The difference between actual and qualified usage for each period will attempt to be proportionately spread across all usage documents for the given period – results can be confusing and inaccurate. Do not convert qualified usage unless it was carefully maintained and is considered highly important.)

For Min/Max Items, Convert Frozen Minimums to T-Min Order Point? Y/N – Default to Y

(7.8 no longer has Min/Max as a replenishment option, and non-frozen min/max values will not be converted. If frozen minimums have been well-maintained, they can be converted to T-Min Order Points.)

For Min/Max Items, Convert Frozen Maximums to Frozen Line Point? Y/N – Default to N

(Frozen maximums should only be converted to frozen line points if they were entered due to limited shelf space. T-Min Order Points adjust up when demand increases, but Frozen Line Points do not adjust up or down with demand – they are rigid and should be used sparingly.)

Enter the maximum # months to keep T-Min OP/Frozen LP values: integer, minimum 1, maximum 24, default 12

(In 7.8, all T-mins and frozen controls must have expiration dates. When converting frozen minimums to T-Min Order Points and frozen maximums to Frozen Line Points, we will look at

the # months they were frozen and set the expiration date accordingly. For permanent freezes or those frozen for more than this number or months, we will use this number of months to establish the expiration date.)

Convert Standard Pack to Vendor ARP Rounding in Stocking UM? Y/N – Default to N

(The standard pack field in the item master file is not directly associated with any specific UM. Users can put any value they chose in that field, to mean whatever they want it to mean. If the field was carefully maintained, and it was entered as the stocking UM quantity, and the primary vendor required purchasing the item in multiples of that value, it can be converted as the rounding value to be used for PO's - i.e. vendor ARP. If standard pack was not carefully maintained per above, converting it could cause more trouble than value.)

Answer YES to Continue Update

- 10 Once the update is complete, press **F3-End**.
- 11 If modifications were found during the generation of SMFLUP, 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.
  - a. Enter filenames that are used to create the Exceptions and Changes files.
  - b. After completion, review the Exceptions and Changes files.
  - c. Run the string template generator if prompted.
- 12 Select System Control F/M from the menu and enter the ALF expiration date, and make any other changes from your authorization code sheet.
- 13 From Company F/M, enter the FACTS authorization code.
- 14 Run the Data Dictionary Update (DOU100) program.
- 15 Exit PxPlus and restart FACTS 7.8.
- 16 Make sure you can successfully log into FACTS.
- 17 Be sure to review the JSJOBS.OUT file located in your infor\facts78\ directory which lists any Job Stream entries that must be re-entered.
- 18 Before you begin testing the system, complete the instructions below for Setting up and installing the API Toolkit. Then, test the system.

## 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.

**Proceed to [Chapter 6, “API Setup and Client Installation”](#).**

---

## Chapter 6 API Setup and Client Installation

# 6

### Getting the FACTS API Running

The polling program, SMU954, must be running on all FACTS 7.8 systems or FACTS will not operate properly. SMU954 monitors the API Polling directories as setup in System Control F/M for XML transactions. When one is received, it is processed and a response (if requested) is returned to the Response directory indicated in System Control F/M.

With FACTS 7.8 there is a new Secondary Polling directory that must be created and identified in System Control F/M.

**Before proceeding, create a secondary directory, and enter it in System Control F/M.**

Example:

Primary Directory: `./api/in`

Secondary Directory: `./api/in2`

The API program runs in an environment established by a different `START_UP` than standard FACTS uses. The `START_UP` used by the API program is located on the server in the `*web` directory (`pvx/lib/_web`). Furthermore, it requires a proper PxPlus PREFIX, which must be set in the `*web/START_UP.MOD`.

To set the PREFIX properly, you can apply the following rules:

- Start with the standard PREFIX that all FACTS users are assigned
- Give each directory in the prefix a full path
- Add to the beginning of the prefix the full path to the directory FACTS is installed in

For Example:

If the normal FACTS user's PREFIX is `"mods/ mods/prog/ prog/ hotkeys/ link/ mods/prog/CS/ prog/CS/"`

and FACTS is installed in `/infor/facts78/`

```
*web/START_UP.MOD should set the prefix to "/infor/facts78/  
/infor/facts78/mods/ /infor/facts78/mods/prog/ /infor/facts78/prog/  
/infor/facts78/hotkeys/ /infor/facts78/link/ /infor/facts78/mods/prog/CS/  
/infor/facts78/prog/CS/"
```

The effect is to allow the API to successfully run FACTS even when the local working directory is NOT the directory FACTS is installed in.

## Setting up the API on a UNIX Server

The FACTS install script places *apistart* in the **infor/facts78** directory. This script runs `prog/SM/SMU954` on the server. A line must be added to end of **etc/inittab** to respawn *apistart*.

You should review the *apistart* script before starting it. It will contain the default values for your install.

## Setting up the API on a Windows Server

SMU954 requires that its Start-In directory be the main directory FACTS is installed in (by default, `c:\infor\facts78`).

There is a shortcut on the start menu under All Programs ->Infor -> Infor Distribution FACTS -> FACTS 7.8 called PxPlus Inittab Emulation which will start the PxPlus Windows inittab emulation Server. Once the service is started, using windows explorer, navigate to the `C:\infor\facts78\pvx\lib\_plus\winutl` folder. Make a copy of `inittab.sample`, naming it `inittab`. Edit `inittab` and add a line to the bottom of the file that looks like this:

```
api1 respawn PxPlus prog\sm\smu954
```

Save changes and verify the service is started. An `inittab.log` will appear in the `winutl` folder and you should be able to see the program running in Terminal Inquiry.

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

## FACTS Client Installation

Whether you are upgrading FACTS or doing a new install, the WindX clients must be updated to the new PxPlus version.

If you are upgrading and moving from stand-alone WindX to server-side licensing (i.e. Pro-Bundle or the WindX Plug-in) you should first remove the existing WindX client and do a new install to eliminate the serial number assignment for the WindX client.

## Installing WindX on FACTS 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 that the simple client-server program is installed and 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 its autoexec.bat file/System Environment, the install will use this value instead of asking for one.
- Make a note of the server's TCP/IP address and the port address that the simple client-server is using. You will need it to modify the Shortcut Properties Target line for each client.

## Client Installation

The Client installation is separate from the WindX thin-client installation. It installs FACTS-specific programs and files on the client, and it should not be skipped.

**Important:** Do not choose the Server Install option during client PC installations. The client installation only installs the files needed for the thin client to operate. The server installation installs a full version of the FACTS application.

The Client Installation installs FACTS-specific files required for the client to operate.

- 1 Make sure you close any open applications.
- 2 Place the FACTS Installation CD in the CD drive or mount the ISO image.
- 3 Right-click Setup.exe and left-click Run as Administrator.
- 4 Choose **Next** at the Welcome screen.
- 5 If you agree, select **Yes** to accept the FACTS license agreement.
- 6 Select **Client** as your setup type, and choose **Next**.
- 7 The destination directory defaults to C:\infor\facts78. Click **Browse** to change drives or directories. Click **Next** when you are ready to continue.
- 8 Choose **Next** to accept the default Program Folder name.
- 9 Review the selections made in the previous screens. Choose **Back** if you need to make any corrections. Otherwise, click **Next** to begin copying files.
- 10 When all files are copied, choose **Finish**.

## Installing the WindX thin-client

The WindX installation installs the PxPlus WindX client.

- 1 From the FACTS Installation CD/ISO, Navigate to the Windows > *windx* folder and select the appropriate executable (the file ending with WDX is the stand-alone WindX, and the file ending with WPI is the WindX Plug-In).
- 2 Right click on your selection and choose "Run as Administrator"
- 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 Read the Developer Notification and click **Next**.
- 6 Provide your customer information, and click **Next**.
- 7 On the Destination Folder screen, **make sure the destination directory is C:\infor\facts78\pvx** (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 Review the selections, and click **Install**.
- 9 Click **Finish** at the InstallShield Wizard Complete message.
- 10 Enter the Main Company name in the Registered User Name field. This is not case sensitive.
- 11 If you are installing stand-alone WindX (i.e. you are NOT using server-side licensing, Pro-Bundle or WindX Plug-In), enter the 25-character Activation key from the FACTS Authorization Code Sheet on the FACTS Authorization screen. Click the Record Button.  
**Do not use this serial number on any other client installations.**
- 12 **Click Done to close the activation window.**

## Configuring the Desktop Icon

- 1 Right click on the *FACTS 7.8 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\facts78\pvx\pxplus.exe \*plus\cs\client -arg {server;port} IN4WDX  
  
Enter the server's **TCP/IP address or machine name** and the **socket** number that the server monitors, separated by a semicolon. Make sure you remove the brackets { }.  
  
*For example:* C:\infor\facts78\pvx\pxplus.exe \*plus\cs\client -arg 192.168.2.10;115000  
IN4WDX  
  
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 simple client server setup above.**
- 2 Make sure the **Start in** directory is C:\infor\facts78, assuming you installed the FACTS Client on the C: drive.
- 3 Click **OK** in the FACTS 7.8 Client Properties window to set the properties.
- 4 If necessary, restart the client workstation to set the SSI\_BASE value.
- 5 Double click the *FACTS 7.8 Client* icon to launch FACTS.

## Bitmap Synchronization

With FACTS 7.8, 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.

6 This completes the WindX installation on a FACTS client.

**Proceed to [Chapter 7, "Printers, Drivers, and Link Files"](#).**



**If you are upgrading and already have your printers defined, proceed to [Chapter 8, “Getting FACTS Running”](#).**

### Printers, drivers and link files

**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 or a dot-matrix printer.

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 Maintenance. This enables users to select printers from menus in reports registers, updates and searches.

### Making a list of required printers

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

PxPlus 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`).

The standard device driver, `hplaser`, supports most laser printers in 10cpi.

These device drivers can be copied and changed to handle alternate printer settings as required.

**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.)

Example: The following shows the `hplaser` device 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.

```

1>load "*dev/hpl10
1>print pgn
M:\PUX\lib\_dev\hp110
1>/
0010 ! HP Laser : 10 cpi, 6 lpi, Landscape
0020 defprt (lfo)80,60
0030 mnemonic (lfo)'*C'=esc+"E" ! Close printer mnemonic -- Resets all
0040 mnemonic (lfo)'FF'=$0C$ ! <formfeed>
0050 mnemonic (lfo)'CR'=$0D$ ! <cr>
0060 mnemonic (lfo)'LF'=$000A$ ! <cr><lf>
0070 mnemonic (lfo)'NP'=esc+"&k0S":110,0 ! 10 cpi
0080 mnemonic (lfo)'SP'=esc+"(s12H":132,0 ! 12 cpi
0090 mnemonic (lfo)'CP'=esc+"&k2S":180,0 ! 16.66 cpi
0100 mnemonic (lfo)'LT'=esc+"&l12D":0,96 ! 12 Lines per inch
0110 mnemonic (lfo)'L8'=esc+"&l8D":0,64 ! 8 lines per inch
0120 mnemonic (lfo)'L6'=esc+"&l6D":0,48 ! 6 lines per inch
0130 mnemonic (lfo)'PM'=esc+"&l00" ! Portrait mode
0140 mnemonic (lfo)'LM'=esc+"&l10" ! Landscape mode
0150 mnemonic (lfo)'RM'=mnm('LM',lfo)+mnm('NP',lfo)+mnm('L6',lfo):110,48
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
0180 let X$=fib(lfo); if X$(19,1)="S" then lock (lfo,err=*next)
0190 print (lfo,err=0200)*C', 'RM',
0200 end
1>|

```

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

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 device drivers

PxPlus 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).

The standard device driver, hplaser, supports most laser printers in 10cpi.

These device drivers can be copied and changed to handle alternate printer settings as required.

**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.)

Example: The following shows the hplaser 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.

```

1>load '*dev/hp110
1>print pgn
M:\PVX\lib\_dev\hp110
1>/
0010 ? HP Laser : 10 cpi, 6 lpi, Landscape
0020 defprt (lfo)80,60
0030 mnemonic (lfo)*C'=esc+"E" ? Close printer mnemonic -- Resets all
0040 mnemonic (lfo)'FF'=$0C$ ? <formfeed>
0050 mnemonic (lfo)'CR'=$0D$ ? <cr>
0060 mnemonic (lfo)'LF'=$0D0A$ ? <cr><lf>
0070 mnemonic (lfo)'NP'=esc+"&k0S":110,0 ? 10 cpi
0080 mnemonic (lfo)'SP'=esc+"(s12H":132,0 ? 12 cpi
0090 mnemonic (lfo)'CP'=esc+"&k2S":180,0 ? 16.66 cpi
0100 mnemonic (lfo)'LT'=esc+"&l12D":0,96 ? 12 Lines per inch
0110 mnemonic (lfo)'L8'=esc+"&l8D":0,64 ? 8 lines per inch
0120 mnemonic (lfo)'L6'=esc+"&l6D":0,48 ? 6 lines per inch
0130 mnemonic (lfo)'PM'=esc+"&l00" ? Portrait mode
0140 mnemonic (lfo)'LM'=esc+"&l10" ? Landscape mode
0150 mnemonic (lfo)'RM'=mnm('LM',lfo)+mnm('NP',lfo)+mnm('L6',lfo):110,48
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
0180 let X$=fib(lfo); if X$(19,1)="S" then lock (lfo,err=*next)
0190 print (lfo,err=0200)*C', 'RH',
0200 end
1>

```

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 PxPlus \*UCL utility. Answer the questions and the utility builds the file from this information. Link files need to be kept in **infor\facts78\link**.

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

**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.

To run the \*UCL utility, at a PxPlus command prompt, type *run\*ucf*. Answer the following questions.

### 1. Name of link file?

Enter *link*[up to four characters], for example, linkP1. Prefacing the name with *link* ensures that the file gets created in the **infor\facts78\link** directory.

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 ...

UNIX:

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]
```



Windows:

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, check it in the Windows printer configuration screen.

→ 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 in PXPlus](#)" if 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.

UNIX Example:

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

Windows Example:

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 (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 the printer 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.

## Technical Insight: Troubleshooting printer issues in UNIX

### **Handling non-spooled printers in UNIX**

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

When printing to non-spooled printers from within PxPlus, 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 driver 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'=$0DOA$ ! <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
0240 exit 1

```

## 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/facts78**. 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 carriage
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
```

## Technical Insight: Accessing Windows Printers in PxPlus

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 PxPlus 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 PxPlus 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*
```

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
```

PxPlus 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 exist on the server, users receive Error 12s, which means PxPlus 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

```
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 PxPlus 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 PxPlus 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 PxPlus graphical viewer. Infor pre-configures the viewer so it's ready to go at installation.

**With any new install or upgrade to FACTS 7.8, there are multiple steps that must be completed before processing can begin. These steps should not be skipped – review each one carefully.**

### Configuring the API Toolkit

Once the API Toolkit is installed and running, you must enter the API Publish key code in API Key Code Entry (key in SME007 in access code). 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.

### Sales Order and Purchase Order Entry Options

For new FACTS 7.8 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.

## New 7.8 Settings and 7.8 Replenishment

Following an upgrade to 7.8 there remains important updates that must be completed before the system is operational. Specifically, the background processes that roll up daily usage, rank items in the warehouse, establish replenishment controls like Order Point/Line Point, and create system alerts need to be started in a controlled manner.

These background processes rely on settings which should be reviewed/updated prior to the first run of the background processes.

Furthermore, the Replenishment background process should run to completion prior to the Alert Miner background process runs. Following the steps below after an upgrade will give the best results.

### Replenishment Parameters

The upgrade will set defaults for all replenishment parameters, but these settings can impact the initial rollup of usage, document hits and warehouse ranking. It is best to have reviewed the settings and make any known changes prior to the first run of the background processes.

Refer to the AIM Guide for details on the settings.

### Review Cycles for Transfers

In 7.8, review cycles must be established for transfer replenishment paths in addition to vendor replenishment paths. Review Cycle Setup can be used to identify and setup missing review cycles. An assigned buyer and review cycle days are critical for the proper functioning of the Buyer's Control Center and the Exception Control Center.

### Enable and Schedule Background Processes

In 7.8, the API program, SMU954, is responsible for not only processing API requests, it also handles launching background processing tasks according to the frequency schedule for these tasks. The frequency of these tasks is established in metadata or company-by-company in the Background Scheduler Dashboard found on the System Dashboards Menu in SM.

The settings in metadata are the default for all companies, whereas the settings in the Background Scheduler Dashboard override the metadata settings for specific companies.

Background tasks are launched as separate PxPlus processes for each task and each company.

By default, all of the background processes are set to 'Manual', meaning they will only be run when a user specifically runs them. The reason they are defaulted this way is simply to control the order in which they are run following an upgrade.

**Following an upgrade**, R1 should be allowed to run to completion prior to A1 being run. To accomplish that, you should first enable background processes by un-checking the 'Disable Background' flag in System Control F/M – that will allow background processes to run.

Next, change the schedule for R1 from Manual to Daily (this should typically be done in metadata so it is effective for all companies, but can be done for each company individually in the Background Scheduler Dashboard).

Once the schedule is saved, SMU954 will start R1, and you can monitor its progress in the Background Scheduler Dashboard. Depending on the amount of data, the first time R1 runs, it could



take hours to complete as it builds out the full history of all warehouse item records. Normal processing of R1 will take much less time, as it only has to deal with records that have changed.

When R1 has finished, update the schedule for A1. SMU954 will then run it. A1 takes much less time than R1.

**For new installs and for upgrades**, it is necessary to update the schedule for background tasks. The recommended settings for normal operation are as follows:

R1 – Replenishment Calcs – should be run daily at a time that will not conflict with user activity or backups. On a large FACTS customer, R1 could take 60 minutes to complete. On a small customer, R1 will likely in less than 5 minutes.

R2 and R3 should remain manual. They are run by R1.

A1 – System Alert Miner – should be run daily at a time when R1 would be expected to be complete.

R4 – Seasonality Analysis – should be run monthly or not at all if the customer doesn't have any seasonal items.

S1 – System Clean Up – should be run monthly.

### **Suggested PO/TR Settings**

Review the SO Entry Options setting for creating suggested POs and Transfers. Normal processing in 7.8 should not require creation of suggested POs and TRs for stocked and nonstocked items. Refer to the AIM Guide for further information.

### **IC to GL Posting F/M – Journal for Cost Discrepancy**

IC to GL Posting F/M has a new setting for the journal for cost discrepancy postings. This value should be updated.

### **Check SO Static and PO Static Control Settings**

There are new flag settings in both SO and PO Static Control F/M which should be reviewed and updated.



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 PxPlus are installed.
- If you are upgrading from a BBx based version of General Report Writer, run your **GEN3MST** or **GEN4MST** through the PxPlus 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.
- 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/facts78** 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 7.8 option.  
Type **N** at the PxPlus 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 Navigate to Windows > General, select **gen60d\_setup.exe**, right click and select “Run as Administrator”.
- 4 Click **Next** at the Welcome screen.
- 5 Click **Next** to accept the General 6.0 Server Software License Agreement.
- 6 Make the destination folder include gen6x where you have FACTS installed.  
Ex. If you installed FACTS to C:\infor\facts78, change the destination directory to reflect C:\infor\facts78\gen6x. Do not include the Server subfolder  
Click **Next**.  
Click **Next** to complete the installation.
- 7 Refer to gen60man.pdf for documentation on final installation and configuration.

## Configuring Report Writer for FACTS

- 1 Modify the configuration file gen60/gen60d.ini.  
  
Beneath the [defaults] section, assign an available port number for General 6 to monitor. Port 8414 is currently the default.  
  
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\facts78
- 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\facts78\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.
- 2 If you are upgrading from a BBx based version of General Report Writer, run your **GEN3MST** or **GEN4MST** through the PxPlus 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.
  - 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: FNPDS  
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")
  - 6 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 Navigate to Windows > General, select **gen60c\_setup.exe**, right click and select "Run as Administrator".
- 4 Click **Next** at the Welcome screen.
- 5 Click **Next** to accept the General 6.0 Client Software License Agreement.

- 6 Enter your desired destination folder, and click **Next**.
- 7 Select the type of client you are installing, and click **Next**.
- 8 Click **Next** to complete the installation.

## 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.
- 5 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.





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 PxPlus user license.

### Before you begin

- FACTS and PxPlus need to be installed.
- Make sure the device driver *hplaser* is in the *pxx/lib/\_dev*
- Read the Unform manual to learn how to create form rules and drivers.
- Create PxPlus 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 facts7.8.rul file to your Unform directory.

### 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 PxPlus 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 PxPlus executable file. Ex.  
C:\infor\facts78\pvx\pvxwin32.exe
- 3 Enter **facts7.8.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 facts7.8.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 7, “Printers, Drivers and Link Files”](#).
- 3 Update the fax prep cmd in Faxlink Static Control F/M if UnForm is used with faxlink.  
Ex. C:\windows\ufc80c -f facts7.8.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.

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 PxPlus 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 **pvxlib\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 “Installing VSI-FAX Server on Windows” during the installation procedure.

## 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.*
- 3 In the [DEVICE] section, set the DialPrefix value to "9,"  
*if needed for the client's phone system.*
- 4 Proceed to the configuration instructions in this chapter.

### 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.
- 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:
  - a. The VSI-FAX username/client id of the user
  - b. The password for the specified user as setup on the fax server--this is not the OS password
  - c. 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 Uniform directory if you want to run Faxes through the Uniform software and specify the rule file you want to use. (See Uniform documentation for help on creating rule files.) *Example: /usr/bin/uniform80 -f /infor/uniform80/facts7.8rul* Leave this input blank if you did not purchase Uniform, have not yet installed it or do not want Faxes to be formatted by Uniform 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/facts78/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/facts78/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/facts78/data/FL/tmp** directory. This is essentially a scratchpad area, where FaxLink places temporary text files while it is creating Faxes.

## 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\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: c:\infor\facts78\unform80\unform80.exe -f c:\infor\facts78\unform80\facts7.8.rul*
- 7 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.
- 8 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.
- 9 Enter the **Fax Alias**, which is the name of the link file created using the Faxlink driver.
- 10 Enter the path to the **..infor\facts78\data\FL\graphs** directory if you want to include your company logo or other graphics on your Faxes.  
*Example: C:\infor\facts78\data\FL\graphs*
- 11 Enter the path to the **..infor\facts78\data\FL\text** directory in which text files for cover pages are stored.  
*Example: C:\infor\facts78\data\FL\text*

- 12 Enter the path to the **..\infor\facts78\data\FL\tmp** directory. This is essentially a scratchpad area, where FaxLink places temporary text files while it is creating Faxes.





### Overview

By configuring tools from PxPlus, including the ODBC Driver and Data Dictionary utilities in NOMADS, users can view and analyze FACTS data with many 32-bit ODBC-compliant data handling applications.

There are two licensing methods for the ODBC drivers – client side licensing and server side licensing. Client side licensing requires a Stand-Alone ODBC authorization code and is only available on Windows systems. Server side licensing requires the E-Commerce Bundle and an ODBC Key

For more detailed information on installing and configuring the PxPlus ODBC Driver, refer to the manual at <http://manual.pxplus.com/> (**PxPlus ODBC Driver** section).

### 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.

#### **INFOR DOES NOT SUPPORT THE READ/WRITE VERSION OF THIS PRODUCT.**

To protect the integrity of FACTS data, all PxPlus 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.**

### 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. If your FACTS system was installed in **infor/facts78** (**/infor/facts78** for Unix), the dde/ddf files need to be located at **infor/facts78\providex.dde** and **infor/facts78\providex.ddf**, respectively (**/infor/facts78/providex.dde** and **/infor/facts78/providex.ddf** for Unix).
- 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 only if using Stand-Alone ODBC for Windows, otherwise, it should be selected.  
Path to Dictionary Directory (Use Windows field **or** Unix field depending on OS):  
Windows: C:\infor/facts78\dict (assuming you installed FACTS to the C:\ drive).  
Unix: /infor/facts78/dict (assuming you installed FACTS to the /infor/facts78 directory).
- 6 Run program **DOU100**, "Data Dictionary Update." This creates a PxPlus 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/facts78\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. **This file is not used by the ODBC driver – it is there for reference only.**

## PxPlus ODBC v5.1 Installation for Windows

### Installing the Server driver

- 1 Close all applications before installing ODBC
- 2 Uninstall any previous versions of the ODBC driver
- 3 Make sure you close any open applications before you run ODBC Setup.
- 4 Place the FACTS Installation CD in the CD drive.
- 5 Navigate to Windows > ODBC, select **file\_server\_5.10.0002\_windows\_32-bit\_x86.exe**, right click and select "Run as Administrator".
- 6 Choose **Next** at the ODBC Installation Welcome screen.
- 7 Accept the License Agreement, and click **Next**.
- 8 Enter User Information and click **Next**.

- 9 On your FACTS Authorization Code sheet, locate the E-Commerce/Pro Bundle section. In the activation window, enter the serial number and number of users from the E-Commerce/Pro Bundle line into the Serial Number and User Count fields. Enter the ODBC key from the next line of the authorization sheet in the Activation field. Choose **Next**.
- 10 Accept the default destination location, and click **Next**
- 11 Accept the default **Start Menu Folder** and click **Next**
- 12 Click Install to begin installation, click **Finish**.

## Configuring the Server data source

- 1 Choose Start→PVX Plus Technologies → File Server → pxpsconf.exe
- 2 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 PxPlus to change it. However, should you choose to change it (PxPlus ODBC range: 1024-65535), you must change the DNS TCP/IP Port setting on the client side accordingly.
- 3 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)

- 4 The PxPlus file server is installed as a service by default. You can install/uninstall the service from the NT Service tab.
- 5 Select the Activation tab.  
After installation, the PxPlus ODBC Service will be properly activated. You can change the registration information by entering the new activation and applying the changes.
- 6 From the Services icon through Control Panel, start the service if not already started.

## Installing the Client

- 1 Make sure you close any open applications before you run ODBC Setup.
- 2 Remove any previously configured data sources for previous versions of the ODBC driver
- 3 Uninstall any previous versions of the ODBC driver **IMPORTANT: You must complete step 2 before uninstalling the driver!**
- 4 Place the FACTS Installation CD in the CD drive.

- 5 Navigate to Windows > ODBC, select **odbc\_driver\_5.10.0002\_windows\_32-bit\_x86.exe**, right click and select “Run as Administrator”.
- 6 Choose **Next** at the ODBC Installation Welcome screen.
- 7 Accept the license agreement. Choose **Next** to continue.
- 8 Enter the User Name and Organization. Choose **Next** to continue.
- 9 Select **Client Side Licensing** if you are installing a stand-alone license or **Server Side Licensing** if you are installing client/server ODBC.  
  
If you select Client Side Licensing do **NOT** check the “Allow ODBC driver to write data files” option. Click **Next** to continue.  
  
**For Client Side Licensing only:**
- 10 On your FACTS Authorization Code sheet, locate the Stand-Alone ODBC 5.x section. In the activation window, enter the serial number and number of users, and activation key. Choose **Next** to continue.
- 11 Accept the default destination location, click **Next**
- 12 If installing on a 64-bit operating system, check the option to “Install 32-bit ODBC Administrator shortcut to start menu”. Click **Next**
- 13 Accept the default location for the **Select Start Menu Folder**, if the option was checked in the previous step. Click **Next**
- 14 Choose **Install** to begin installation.
- 15 When all files are copied, choose **Finish**.

## Configuring the Client data source for client side licensing

- 1 Choose Start→PVX Plus Technologies → ODBC Driver (32-bit) → Data Sources (ODBC) 32-bit
- 2 Make sure the User DSN tab is selected in the ODBC Data Source Administrator window and choose **Add**.
- 3 Select **PxPlus ODBC Driver (32-bit)** in the Create New Data Source window and then click **Finish**.
- 4 On the Basic tab in the PxPlus ODBC Driver Setup window, enter the following information.

**Data Source:** FACTS 7.8

**Description:** This is optional, and it can be left blank.

**Database Directory:** Enter the *server's* location of the provdex dde and ddf files.

Example: [\\myfactsserver\infor\facts78](#) or  
E:\infor\facts78 (if using mapped drives)

**Definition File:** Enter the *server's* location of the FACTS data dictionary, including the

FACTSDD.INI file name. This is the .ini file that lists non-normalized data files.

Example: [\\myfactsserver\infor\facts78\dict\FACTSDD.INI](#)  
E:\infor\facts78\dict\FACTSDD.INI (if using mapped drives)

- 5 Select the **Debug** tab and click the **Apply** button. Then click **Test Connection**. You should see confirmation that the connection was successful and tables are available.
- 6 Choose **OK** to complete the configuration.

## Configuring the Client data source for server side licensing

- 1 Choose Start→PVX Plus Technologies → ODBC Driver (32-bit) → Data Sources (ODBC) 32-bit
- 2 Make sure the User DSN tab is selected in the ODBC Data Source Administrator window and choose **Add**.
- 3 Select **PxPlus ODBC Driver (32-bit)** in the Create New Data Source window and then click **Finish**.
- 4 On the **Basic** tab in the PxPlus ODBC Driver Setup window, enter the following information.  
**Data Source:** FACTS 7.8

**Description:** This is optional and it can be left blank.

**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 even though the driver letter on the client machine might be a CD-ROM, another local drive or a mapped drive.

Example: E:\infor\facts78

The PxPlus 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.

**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.

Example: E:\infor\facts78\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**

**TCP/IP Port:** Port on which the server is running. Default setting: 20222. Range 1024-65535

- 7 Select the **Debug** tab and click the **Apply** button. Then click **Test Connection**. You should see confirmation that the connection was successful and tables are available. **NOTE: If the server is not running, you will be prompted for activation information! Start the server and then click Test Connection again.**

- 8 Choose **OK** at the ODBC Data Source Administrator window to complete the configuration.

## PxPlus ODBC v5.1 Installation for Unix

### Installing the Server driver

- 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.
- 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/facts78** 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 7.8 option.
  - Type **N** at the PxPlus option.
  - Type **N** at the General Report Writer option.
  - Type Y at the ODBC 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/pxpiosvr** 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.

### Configuring the Client data source

- 1 Choose Start→PVX Plus Technologies → ODBC Driver (32-bit) → Data Sources (ODBC) 32-bit
- 2 Make sure the User DSN tab is selected in the ODBC Data Source Administrator window and choose **Add**.

- 3 Select **PxPlus ODBC Driver (32-bit)** in the Create New Data Source window and then click **Finish**.
- 4 On the **Basic** tab in the PxPlus ODBC Driver Setup window, enter the following information.  
**Data Source:** FACTS 7.8  
**Description:** This is optional and it can be left blank.  
**Database Directory:** Enter the location of the providex dde and ddf files **on the server**.  
Example: /infor/facts78  
**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.  
Example: /infor/facts78/dict/FACTSDD.INI
- 5 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**  
**TCP/IP Port:** Port on which the server is running. Default setting: 20222. Range 1024-65535
- 6 Select the **Debug** tab and click the **Apply** button. Then click **Test Connection**. You should see confirmation that the connection was successful and tables are available. **NOTE: If the server is not running, you will be prompted for activation information! Start the server and then click Test Connection again.**
- 7 Choose **OK** at the ODBC Data Source Administrator window to complete the configuration.

## 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

- Aliases must start with a letter
- Use "\_" instead of spaces
- Use letters and numbers only — no special characters
- Use uppercase letters

- Do not use reserved PxPlus words
- Maximum length is 30 characters
- Alias must be unique
- No two variables in the same file may share the same alias
- Not two *files* can have the same aliases.

## Importing vs. linking

The PxPlus 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.

## 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 7.8” 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.



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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 PxPlus Data Dictionary Maintenance Utility.

Access the PxPlus 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 be found in the NOMADS II instruction manual from PxPlus or in the Data Dictionary chapter of the NOMADS II section of the PxPlus 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 PxPlus web site ([www.pvxplus.com](http://www.pvxplus.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 PxPlus 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.

- **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.
- **Error #1011:** Indicates that the definition for the records of a data file is larger than the actual records data file. This error occurs because ODBC columns have been defined for data that does not exist in the file structure.
- **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.
- **FACTS incorporates Periods in a packed PPYY format.** The PxPlus 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”).
- 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.
- 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 PxPlus ODBC driver does not support sort files. These definitions have been included in the Data Dictionary for future use.

## Additional resources

The PxPlus On-line Manual <http://manual.pxplus.com/>

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](http://www.pvx.com)).

### Example Configuration

Examples given will be for a default installation of FACTS to the C:\infor\facts78 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:

- 1 Run WindX from the Windows Start button.
- 2 Use the 'Settings' menu option to connect to the server via Telnet (input the IP address). Make sure you are using ansi emulation.
- 3 Login to the server (it's recommended that you login as root (unix) or administrator (windows)).
- 4 The command line syntax is as follows:

- **Windows Platforms:**

*PVX\_Path* -hd apscfg.ini \*appserv\config [-ARG "AsService"]

*Example: C:\infor\facts78\pvx\pxplus.exe -hd apscfg.ini \*appserv\config*

*Where:*

*PVX\_Path* Full path to the PxPlus Executable.

-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/facts78/pvx/pxplus \*appserv/config*

5 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\facts78\pvx\pxplus.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.

### 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:

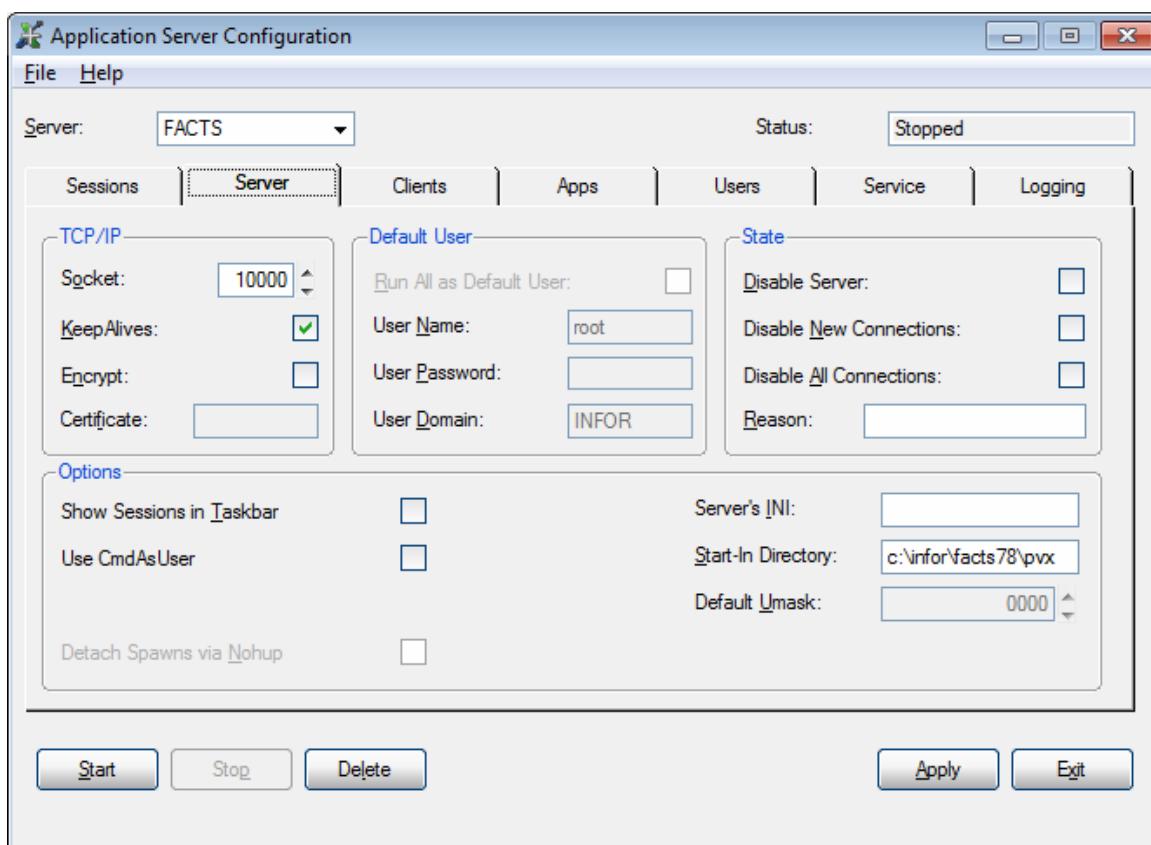
From the configuration utility, click the **Stop** button on the **Server** tab, while the specific server named is selected.

## 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.

## 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.

## Options

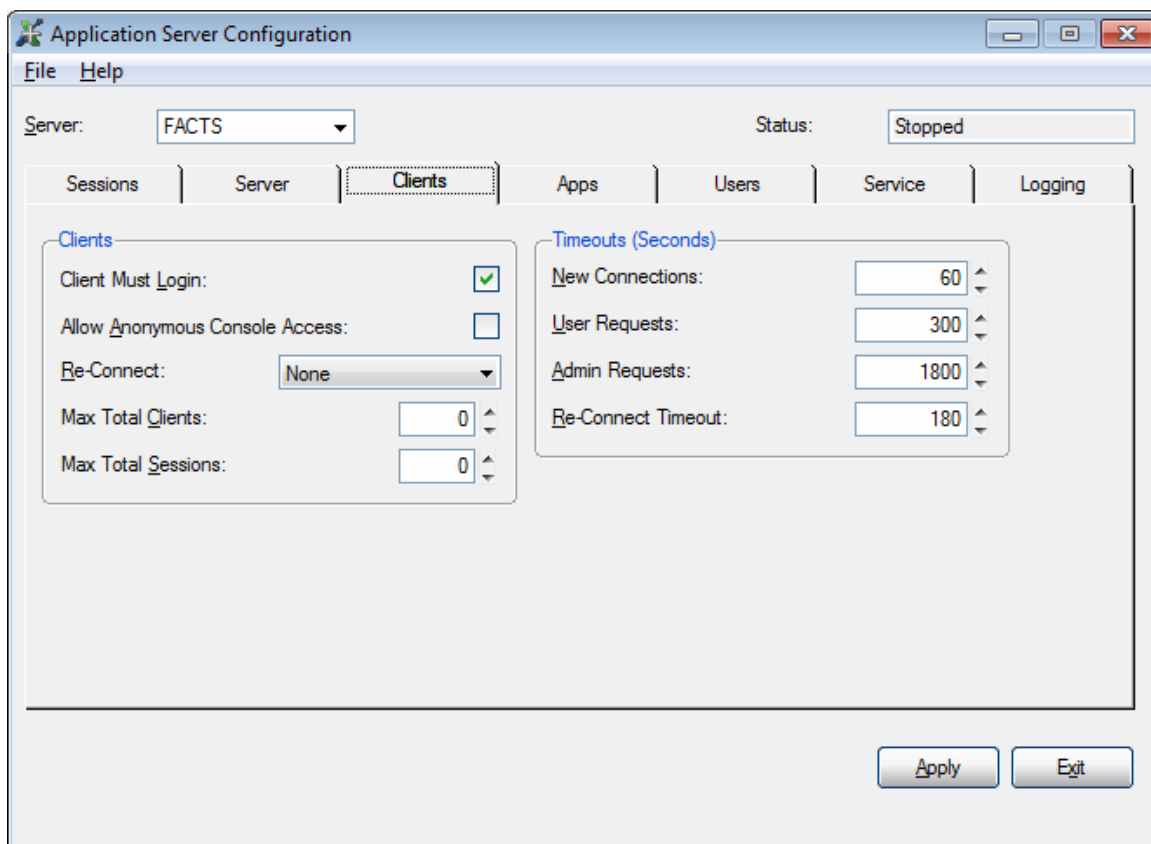
### **Start-In Directory:**

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\facts78\pvx*

***For a complete explanation of each field on the Server tab, refer to the Application Server Manual.***

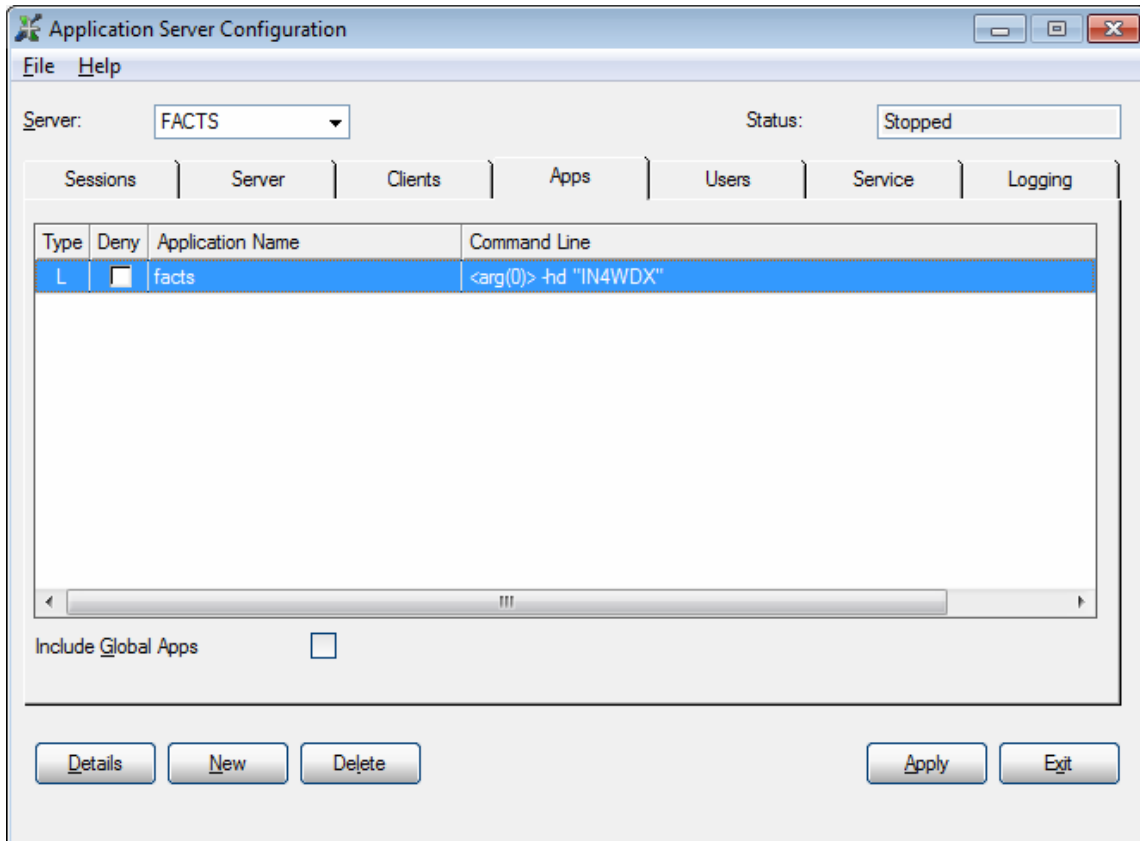
## Client Tab Properties



**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.***

## 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*

### PxPlus EXE:

Location on the server of the PxPlus executable to run this application. You may use default if you are using the same PxPlus to run FACTS as you are to run the Application Server. Otherwise, specify the path to the executable.

*Example: C:\infor\facts78\pvx\pvxwin32.exe or /infor/facts78/pvx/pvx (unix)*

### Server INI: (Windows Only)

You may use "default" if you are using the same PxPlus 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 PxPlus program to be run, known in PxPlus as the "Lead Program".

*Example: C:\infor\facts78\SSIWDX or /infor/facts78/SSIWDX (unix)*

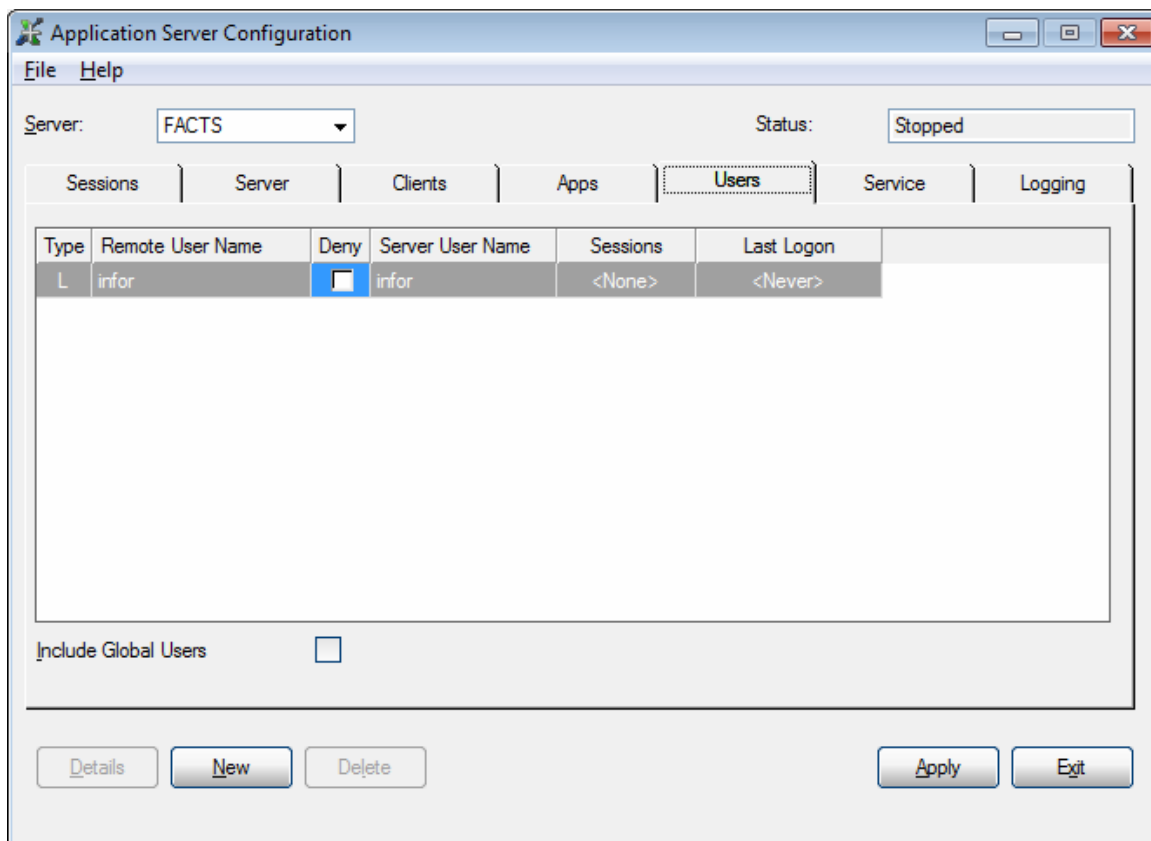
**Start-In Directory:**

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\facts78\ or /infor/facts78/ (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.***

## 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.

## 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.

**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**

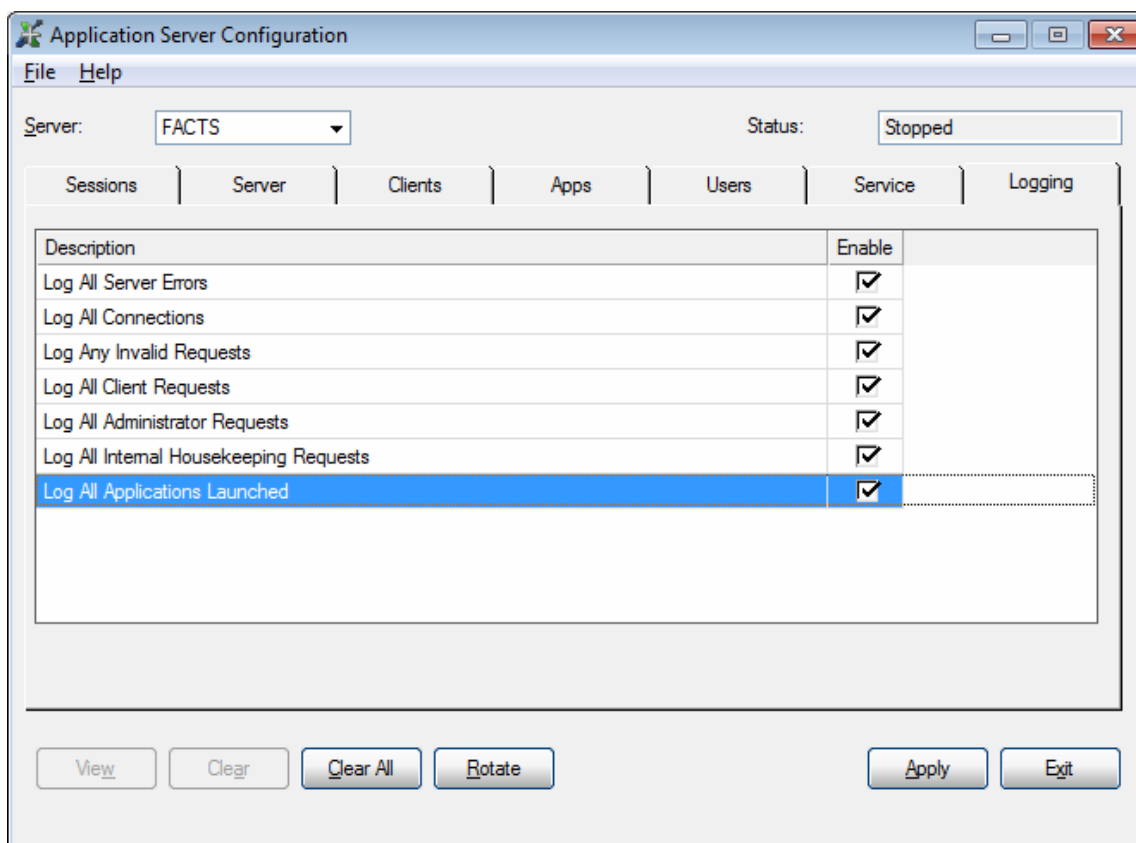
**Log File Location: \*appserv/FACTS**

### The Log Listing

**Enable:** Turns the logging of a particular aspect on or off.

**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 PxPlus '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:\inforfacts78\pvx\pxplus.exe *client -ARG 128.1.1.34 29000 "FACTS"
```

*Where*

*PVX\_Path* Path to PxPlus.

*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 PxPlus characteristics. Spawned sessions will re-use the same INI, unless specifically overridden during the spawn.

*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 PxPlus Console Mode Session.

***For a complete explanation of each field on client configuration, refer to the Application Server Manual.***

---

# Appendix A Terminal Configuration

A

PxPlus 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 PxPlus 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 PxPlus utilities.

### **Disadvantages of user-specific keyboard configuration files**

In short, user-specific keyboard configuration files create more work. PxPlus 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, PxPlus 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, PxPlus 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 PxPlus keyboard mapping utility.



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# Appendix B Troubleshooting Other Printer Problems



## B

### Troubleshooting printer problems in UNIX Environments

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/facts78/link** and opening the link file in Word Pad.

**Error messages.** If hard errors occur when someone tries to print, it may indicate that PxPlus 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/facts78/link**. In \*UCL, **enter link/[file name]**.
- 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.

## Troubleshooting printer problems in Windows Environments

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 PxPlus 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\facts78\link** and opening the link file in Word Pad.

**Error messages.** If hard errors occur when someone tries to print, it may indicate that PxPlus 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\facts78\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.

## Troubleshooting tips

Error message	Cause	Fix
Illegal pathname	Information in the target line of the FACTS 7.8 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 7.8 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\facts78\pvx was not specified during the PxPlus or WindX installations.	Uninstall FACTS and PxPlus/WindX software and reinstall the software.
VSI-FAX Server cannot install	Installing the VSI-FAX Server software on Windows XP/7/8	VSI-FAX server must be installed on a supported Windows operating system.

