

Proficy* HMI/SCADA - iFIX

CHANGE MANAGEMENT AND iFIX

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About this Guide

If you develop iFIX pictures or projects, you can use Proficy* Change Management within iFIX to help you manage your iFIX project files, and track changes to these files.

This help system describes how to use Change Management features in the iFIX WorkSpace. The help includes the following sections:

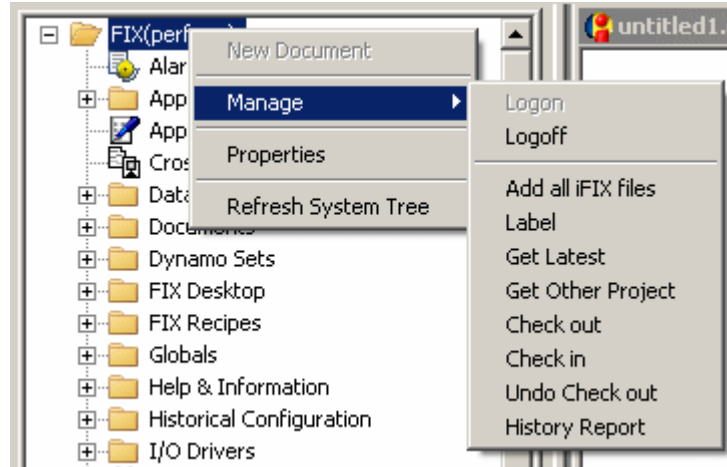
- Introduction
- Configuring iFIX with Change Management
- Using Change Management from the iFIX WorkSpace
- Information for Proficy Machine Edition Users
- Quick Start: Configuring iFIX with Integrated Change Management Support
- Quick Tour: Using Proficy Change Management Features in iFIX

For more information on using Change Management outside of iFIX, refer to the Proficy Change Management online help.

Introduction

Version controlled files provide fast recovery and reduce the cost and risk of downtime. The Proficy Change Management add-on for the iFIX product provides version control for your iFIX project files. Change Management with Proficy Machine Edition also provides audit trails for tracking changes, security for preventing unauthorized changes, and scheduled backups to ensure you always have the latest files.

If you purchase the Change Management feature for iFIX, Change Management is integrated into your iFIX development environment. To access Change Management functions in the iFIX WorkSpace environment, you use the right-click menu on the WorkSpace system tree, as illustrated in the following figure. Or, in Ribbon view only, you may access project level Change Management functions on the Administration tab, in the Proficy Change Management group, in the Manage Project list.



Using Change Management Functions in the iFIX WorkSpace

NOTE: Only one user at a time can check out a file.

Features

When you use Proficy Change Management with iFIX, you can do the following:

- Manage all iFIX project files, including configuration files, FIX Desktop, and non-iFIX project files (such as .OCXs, .DLLs, and .EXE files) from the iFIX WorkSpace.
- Use all Change Management features from the right-click Manage menu from the iFIX WorkSpace tree.
- Perform a text compare of pictures (including VBA), process databases, Dynamos, SCU files, and user.fyg changes.
- Use the Proficy Change Management Client to run scheduled backups of your iFIX project files and report back the changes.
- Capture information on who, when, and why iFIX project files were modified. The audit trail displays in the Proficy Change Management (PCM) History window (also available from the right-click Manage menu).
- Identify changes between versions using the PCM History window.
- Automatically log in to the Change Management Server from the iFIX WorkSpace, when you synchronize your user names and passwords across the products.
- Label iFIX files, folders, or projects with specific text string identifiers.
- Optionally require iFIX electronic signatures when checking out or checking in files to the Change Management Server (from the right-click menu) in the iFIX WorkSpace.
- Include predefined comments for the operators to select when entering an electronic signature. The comments you display can reside in a different table than the other iFIX electronic signatures.

Limitations

When using Proficy Change Management with iFIX, be aware of the following limitations:

- In order to use the integrated Change Management features within iFIX, you must have Proficy Change Management 5.8 or 5.9 installed.
- Running the Proficy Change Management (PCM) Server or the Client/Scheduler on iFIX 5.1 nodes is not supported on Microsoft Windows Vista or Windows Server 2008, since Proficy Change Management 5.8 and 5.9 do not support these Windows versions.
- In order to use the integrated Change Management features within iFIX, you must have administrative rights on the iFIX Client computer.
- Project-specific folders created for multiple users, such as those described in the Best Practices for Managing Multiple iFIX Users section in the Optimization guide, cannot be managed with Proficy Change Management features in iFIX. Project-specific folders are typically used by Terminal Server users.
- Do not check in any iFIX files which contain special characters, as detailed in the following Microsoft article: <http://office.microsoft.com/en-us/access/HA102146111033.aspx>. For example, if you attempt to check in an iFIX tag group file with a special characters such as the % character, an error message appears. This error a result of the inability to check files with special characters into the Visual SourceSafe application that is used by Proficy Change Management.
- When using Terminal Services with iFIX, Proficy Change Management is supported only from the console session – not from a remote connection.
- While you can add, check in, check out, and get Proficy Batch Execution files from the Change Management Server, the version of the Batch Execution files is not retained. Since there is no version recorded, a version number for these files does not appear in the PCM History window.
- Proficy Batch Execution files are added or checked in to the base iFIX project folder on the Change Management Server. For example, if your project name is FIX1, then the Batch Execution files are checked in to the base FIX1 project folder in Machine Edition. They are not checked into the APP folder, or a separate Batch Project folder at this time.
- In the PCM History window, when displaying the differences in the FIX Desktop Files, all files except the *.hgp files for the Historical Display are compared.
- In the PCM History window, when displaying the differences of the Security folder, all files except the display.dov file (if it exists) are compared.
- In the PCM History window, when doing a Text compare, changes to ActiveX Controls or Chart Configuration are not included.
- Depending on the number of FIX Desktop files you have, it may take a longer time to perform Change Management functions with these files than with other iFIX files. This is because for FIX Desktop all files are managed together, instead of individually. For a list of the files in the FIX Desktop folder that you can manage, refer to the FIX Desktop Folder section.
- Because the FIX Desktop files are saved as one file, individual FIX Desktop files cannot be viewed individually from within the Proficy Change Management application.
- Be aware that the Change Management application's Server Trim utility removes labels from iFIX projects, folders, security files, FIX Desktop files, Historical Assignment files, and user add-on files. It does, however, leave your labels on individual iFIX files.

- Files from a remote location cannot be added to your Change Management project. If you want to use a network path, you must use a mapped network drive.
- Security files that point to a remote security path or a non-local iFIX path cannot be added to the Change Management Server. Make sure that the primary and backup security path in the Security application's Configuration dialog point to the iFIX Local folder. For instance, if you install iFIX to the default folder, this path is: C:\Program Files\Proficy\Proficy iFIX\LOCAL.
- If multiple users want to manage iFIX files from the WorkSpace, and each user wants the ability to check out the entire project, the project paths (including the drive letter) must be the same on all computers. Also, the iFIX user names and passwords must be the same on the Change Management Server.
- If you Get an iFIX project from the Change Management Server, you must restart iFIX. If the SCU files you get do not map to your current path (the paths are different), the project will not start in iFIX. You must update the SCU file. Refer to the Get Other Project section for more details.
- While iFIX is running, you cannot get security files, the current SCU, or the User.fgx file from the iFIX WorkSpace. You can, however, use the Get Other Project command to copy these files to another location, and then update the SCU to run the project.
- You currently cannot manage the iFIX WorkSpace's Help & Information folder, or the files it contains.
- The Proficy Change Management Server is only available in English. You can run the Proficy Change Management Client that is installed with iFIX in English and other single byte operating systems. Double or multiple byte operating systems are not supported.

Setting up iFIX for Use with Change Management

In order to use integrated Change Management features in the iFIX WorkSpace, you must have both iFIX and Change Management installed. Additionally, you need configure a few items on both iFIX and the Change Management Server, as described below.

►To configure the iFIX product for integrated Change Management:

1. Add iFIX users with Change Management application privileges.
2. Enable iFIX security. The options on the iFIX User Preferences dialog box's Change Management tab are unavailable until you enable security.
3. Confirm that any remote project paths appear as mapped network drives.
4. Confirm that all security paths are mapped to the iFIX Local path.
5. From the iFIX User Preferences dialog box's Change Management tab:
 - Enable the Change Management Server connection and select the server to which you want to connect.
 - Enter or select a project name.
 - Configure logon options and electronic signature requirements.

For more information on these steps, refer to Overview of iFIX Configuration Steps section.

►To configure the Change Management Server for iFIX 4.0:

1. Add users for the integrated iFIX feature. If you want to use the automatic login feature, Change Management user names and passwords should match the iFIX ones.
2. Configure user privileges.

For more information on these steps, refer to Overview of Change Management Server Configuration Steps section.

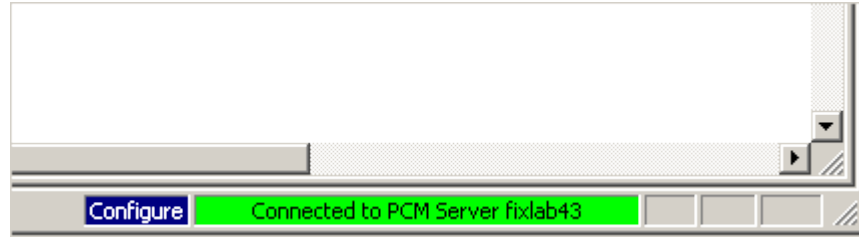
Logging into the Change Management Server from iFIX

When you enable the Change Management Server connection from the iFIX User Preferences dialog box in the WorkSpace, you can specify login options. This includes the server that you log in to, whether the Logon dialog box automatically appears when you start the iFIX WorkSpace, and whether you are prompted for the user name and password.

To log in to the Change Management Server when iFIX starts up, select the Logon at WorkSpace Startup check box in the Change Management User Preferences. Otherwise, with this check box cleared, you can right-click the node name in the system tree, point to Manage, and then click Logon. If the Prompt for User Name and Password at Logon check box is selected, the Change Management Logon dialog box appears, as shown in the following figure.

If you clear the Prompt for User Name and Password at Logon check, you can automatically log on to the Change Management Server without this dialog box. You must synchronize your iFIX and Change Management users properly to do so, however. When automatic login is configured properly, no Change Management Logon dialog box appears, unless the automatic logon fails due to an invalid user name or password. For information on automatically logging in users, refer to the Automatic Logon to the Change Management Server section.

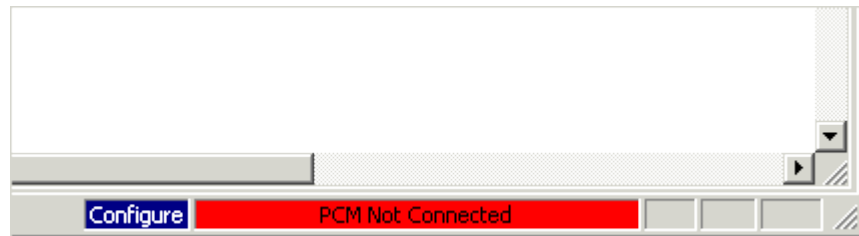
After you log in, the Connection status in the bottom right-hand corner of the iFIX WorkSpace changes from red to green and status bar reads: "Connected to PCM Server *Name*" as illustrated in the following figure (where *Name* refers to the actual server name).



TIP: If you have a very large iFIX project, you most likely do not want to enable the Logon at WorkSpace Startup. If it is selected, it may take several additional seconds or minutes (depending on the size of your project) for the WorkSpace to start up.

Logging Off

To log off from the Change Management Server from the iFIX WorkSpace, right-click the node name, point to Manage, and select Logoff. When you are disconnected from the Change Management Server, the bottom right-hand corner of the iFIX WorkSpace the status bar reads: "PCM Not Connected" and appears in red, as illustrated in the following figure.



Summary of Items Managed in the System Tree

The Manage right-click menu, shown in the Introduction section, is available whenever you right-click a supported item in the iFIX WorkSpace system tree. You must be logged in to the Change Management Server for the Manage right-click menu to be available. Otherwise, the only item in the system tree that displays the Manage menu is the node name, with the Logon option.

After you log on to the Change Management Server from iFIX, the Manage commands are available from the right-click menu on files and folders that store custom information about your projects and work environment.

For instance, the Picture folder and individual pictures within that folder all display the Manage right-click menu option when selected. Applications such as the Cross Reference Tool do not. However, with the integrated Change Management functionality, you can double-click on an application in the system tree, such as the Cross Reference Tool, to start it.

The following table describes the items in the WorkSpace's system tree from which the Manage right-click menu is available.

System Tree Item	Available	Not Available
Node Name (CMProject) – the top level folder	X	
Alarm History application		X
Application Support files folder		X
Application Support files\User Add-on Files	X	
Application Validator		X
Cross Reference Tool		X
Database folder		X
Database\Database Manager application		X
Database\Process Database folder	X	
Database\Process Database*.pdb	X	
Documents folder		X
Documents\Microsoft Excel WorkBook folder	X	
Documents\Microsoft Excel WorkBook*.xls	X	
Documents\Microsoft Word Document folder	X	
Documents\Microsoft Word Document*.doc	X	
Dynamo Sets folder	X	
Dynamo Sets*.fds files	X	
FIX Desktop folder		X
FIX Desktop\Draw application		X

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System Tree Item	Available	Not Available
FIX Desktop\FIX Desktop Files	X	
FIX Desktop\Historical Trend Display application		X
FIX Desktop\View application		X
FIX Recipes		X
FIX Recipes\Control Recipes folder and files	X	
FIX Recipes\Master Recipes folder and files	X	
FIX Recipes\New Recipe (Recipe Development application)		X
Globals folder		X
Globals\User folder	X	
Globals\User\Threshold tables (such as ChangeManagementPerformComments, ChangeManagementVerify, Comments PerformEsigComments, VerifyEsigComments)		X
Help & Information folder and files		X
Historical Configuration folder		X
Historical Configuration\Chart Group Wizard Files folder	X	
Historical Configuration\Chart Group Wizard Files\ChartGroup files (*.csv)	X	
Historical Configuration\Historical Assignment application		X
Historical Configuration\Historical Assignment files	X	
I/O Drivers folder		X
I/O Drivers\Discover & Config application		X





System Tree Item	Available	Not Available
I/O Drivers\I/O Driver Configuration folder and files	X	
Mission Control application		X
Picture Support Files folder		X
Picture Support Files\Color Tables folder and files	X	
Picture Support Files\Tag Status folder and files	X	
Pictures folder	X	
Picture\Picture files	X	
Project Toolbar Files folder		X
Project Toolbar Files\Category folder and files	X	
Project Toolbar Files\Toolbars folder and files	X	
Report folder and files	X	
Schedules folder and files	X	
Security folder		X
Security>Login application		X
Security\Security Files	X	
Security\Setup application		X
Startup Profiles folder		X
Startup Profiles\Startup Profile File	X	
Startup Profiles\Startup Profile Manager application		X

System Tree Item	Available	Not Available
System Configuration folder		X
System Configuration\INI Files folder	X	
System Configuration\SCU Files folder and files	X	
System Configuration\System Configuration Utility		X
Tag Group folder		X
Tag Group\Tag Group Editor application		X
Tag Group\Tag Group Files (folder and files)	X	

Status Indicators in the System Tree

When using Change Management features in iFIX, the file icons in the iFIX WorkSpace's system tree change, depending upon what their check out status is in the Change Management Server. The down arrow, green check mark, or red box that appears in the corner of the icon indicate the status of the file. While the file icons are different for each file type, the indicators are all the same.

For example, the following table shows the picture file icon with the different indicators you will encounter while working with integrated Change Management features in iFIX.

Icon	Status
	File is not checked in to Change Management Server. It resides on the local computer, as a writable file.
	File resides on the Change Management Server, but is not checked out.
	File that is checked out by the current user.
	File that is checked out by another user. You cannot check out this file while it is checked out by another user.

Summary of iFIX Project Files Managed in Change Management

When using Proficy Change Management with iFIX, you can manage the project, folders, or files that appears in the iFIX WorkSpace system tree. The project folder is the main folder. Subfolders appear under that main project folder, and files appear in each subfolder.

The following sections explain more on each subfolder in the system tree, and any restrictions:

- Application Support Files Folder
- Database Folder
- Documents Folder
- Dynamo Sets Folder
- FIX Desktop Folder
- FIX Recipes Folder
- Globals Folder
- Help & Information Folder
- Historical Configuration Folder
- I/O Drivers Folder
- Picture Support Files Folder
- Pictures Folder
- Project Toolbar Files Folder
- Reports Folder
- Schedules Folder
- Security Folder
- Startup Profile Folder
- System Configuration Folder
- Tag Group Folder

TIP: When a path appears in the following sections, such as the iFIX PIC folder, it refers to a folder in the path where you installed the iFIX product. For instance, if you installed iFIX to the default location, the iFIX PIC folder is located in the C:\Program Files\Proficy\Proficy iFIX\PIC path.

Application Support Files Folder

From the Application Support Files folder you can manage custom files (*.*) and folders within the iFIX APP folder. For example: APP\CustomUserDir folder could be the folder name that you want to manage.

Be aware that you can only manage application support files collectively. You cannot manage these files individually.

Database Folder

From the Database folder you can manage the Process Database (*.PDB) files in the iFIX PDB folder. The AlarmAreas.AAD is checked silently in with the *.PDB files.

Each .PDB file can be managed separately. If the .PDB file that you check out is different than the last one that was loaded in the Database Manager, when you try open that .PDB file in the Database Manager, a message box appears asking you to reload the database.

Documents Folder

From the Documents folder you can manage Microsoft Excel or Word files in the iFIX APP folder. Each file can be managed at the individual file level.

Dynamo Sets Folder

From the Dynamo Sets folder you can manage the dynamo files (*.fds) in the PIC folder. Each individual dynamo appears under the Dynamo Sets folder.

FIX Desktop Folder

The FIX Desktop folder only appears when you have the FIX Desktop option installed. From the FIX Desktop folder you can manage:

- Color Palettes (*.PLT) contained in the iFIX PIC folder.
- Dynamo Sets (*.SBL) contained in the iFIX PIC folder.
- Historical Display Files (*.HGP) contained in the iFIX HTR folder.
- Key Macro Files (*.KMX) contained in the iFIX PIC folder.
- Pictures (*.ODF) contained in the iFIX PIC folder.
- Tag Group Files (*.TGE) contained in the iFIX PIC folder.
- Templates (*.ODT) contained in the iFIX PIC folder.

Be aware that you can only manage FIX Desktop files collectively. You cannot manage these files individually. Depending on the number of FIX Desktop files you have, it may take longer to perform Change Management functions with FIX Desktop files than with other iFIX files.

FIX Recipes Folder

From the FIX Recipes folder you can manage:

- All control recipes (*.RCC) contained in the iFIX RCC folder.
- All master recipes (*.RCM) contained in the iFIX RCM folder.

The files from the older RCP.exe application, the *.RCX and *.RCY files, cannot be managed.

Globals Folder

From the Globals folder in the WorkSpace system tree, you can manage globals in the User.fxg file. This file is stored locally in the PIC folder, whose default path is: C:\Program Files\Proficy\Proficy iFIX\PIC. Other *.fxg files in the PIC folder are excluded. If you choose to manage the User.fxg file, you must close the WorkSpace and restart it in order to save User.fxg locally. The User.fxg file is not saved until the WorkSpace restarts.

***NOTE:** The PlugAndSolve.fxg, factoryglobal.fxg, and expertglobal.fxg do not appear in the WorkSpace system tree, and cannot be managed in the iFIX with Change Management environment.*

Help & Information Folder

You currently cannot manage the folder or files in this category.

Historical Configuration Folder

From the Historical Configuration folder you can manage:

- Chart Group Wizard files (*.CSV) contained in the iFIX HTR folder.
- Historical Assignment files (*.CFG and *.DAT) contained in the iFIX HTR folder.

Each individual chart group or historical assignment file appears separately under the Historical Configuration folder.

I/O Drivers Folder

From the I/O Drivers folder you can manage:

- Binary I/O Driver Configuration Files (*.yyy, where yyy is the driver acronym).
- IGS Driver files (*.OPF).

IMPORTANT:

- *To manage driver configuration files, you must add the driver in the SCU's SCADA Configuration dialog box. To add the I/O driver from the SCU, in the Configure menu, click SCADA. In the I/O Driver Definition area, click the browse (...) button to select the I/O driver name, and then click Add.*
- *Be aware that configuration files for 7.x series drivers saved outside of the iFIX database directory cannot be managed from the integrated iFIX with Change Management environment. If you installed iFIX to the default location, the path to the iFIX database directory is: C:\Program Files\Proficy\Proficy iFIX\PDB.*

Picture Support Files Folder

From the Picture Support folder you can manage:

- Color Tables (*.FTB) contained in the iFIX PIC folder. The Tables.lst file is checked in silently with the *.FTB files.

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- Tag Status files (*.grf) contained in the iFIX PIC\TagStatus folder.

Each individual color table and tag status file appears separately under the Picture Support folder.

IMPORTANT: Be aware that the iFIX WorkSpace saves color table files (*.FTB) on exit only. So, if you try to get the latest version from the Change Management Server, it may appear as if the get did not work properly. Restart the WorkSpace, and your color tables should get updated. For more information refer to the Tips for Getting Color Table (*.FTB) files section.

Pictures Folder

From the Pictures folder you can manage:

- Pictures (*.GRF) contained in the iFIX PIC folder.
- Translated text files (*.CSV) if they exist for an associated picture in the iFIX PIC folder are checked in silently with the *.GRF files.
- **TIP:** The format of these .CSV files is: *PictureName_LangLetter.csv*, where *PictureName* is the name of the picture whose language file you are exporting, and *LangLetter* is the acronym for the language the picture is being translated into.

Each individual picture file (*.GRF) appears separately under the Picture folder.

Project Toolbar Files Folder

From the Project Toolbar folder you can manage:

- Toolbar Categories (*.TBC) contained in the iFIX LOCAL folder. Only categories created by the logged in user are shown, along with the iFIX default .TBC files.
- Toolbars (*.TBX) contained in the iFIX LOCAL folder.

The Node_Association.dat files that are associated with the .TBC or .TBX file are silently checked in with these files.

Each individual toolbar or toolbar category appears separately under the Project Toolbar folder.

Reports Folder

From the Reports folder you can manage Crystal Report files (*.rpt) contained in the APP folder. Each individual report appears separately under the Reports folder.

Schedules Folder

From the Schedules folder you can manage event schedules (*.evs) in the iFIX PDB folder. Each individual schedule appears under the Schedules folder.

Security Folder

From the Security folder you can manage the following iFIX security Files: *.UTL, *.AUT, *.DOV, and the SANAMES.CFG files.

In order to check in and check out security files, the iFIX user must have the Security Configuration application feature assigned to it, in addition to the Change Management feature.

***TIP:** For information on configuring users and application feature selection, refer to the Understanding iFIX Security section in the Configuring Security Features electronic book.*

While iFIX is running, you cannot get security files from the iFIX WorkSpace. The Get feature, from both the right-click menu and from the PCM History window, is unavailable for Security Files. You can, however, use the Get Other Project command to copy these files to another location, and then update the SCU to run the project.

Be aware that security files that point to a remote security path or non-local iFIX path cannot be added to the Change Management Server. Make sure that the primary and backup security path in the Security application's Configuration dialog point to the iFIX Local folder. For instance, if you install iFIX to the default folder, this path is: C:\Program Files\Proficy\Proficy iFIX\LOCAL.

Also, be aware that you can only manage security files collectively. You cannot manage these files individually.

Startup Profile Folder

From the Startup Profile folder you can manage the Profiles.cfg in the iFIX product install path, if it exists.

System Configuration Folder

From the System Configuration folder you can manage:

- Initialization files (*.INI) contained in the iFIX LOCAL folder. Be aware that you can only manage the *.INI collectively. You cannot manage these files individually.
- SCU files (*.SCU) contained in the iFIX LOCAL folder. The *.SCU files can be managed individually.

In order to check in and check out system configuration (*.SCU) files, the iFIX user must have the System Configuration application feature assigned to it, in addition to the Change Management feature.

***TIP:** For information on configuring users and application feature selection, refer to the Understanding iFIX Security section in the Configuring Security Features electronic book.*

While iFIX is running, you cannot get the current SCU. The Get feature, from both the right-click menu and from the PCM History window, is unavailable for SCU files. You can, however, use the Get Other Project command to copy these files to another location, and then update the SCU to run the project. If you get an .SCU file that does not map to your current path (the paths are different), the project will not start in iFIX. You must update the SCU file. Refer to the Get Other Project section for more details.

Tag Group Folder

From the Tag Group folder you can manage the tag group files (*.tgd) in the iFIX PIC folder. Each individual tag group appears under the Tag Group folder.

The .TGS files, that are created when you resolve tags in a picture, are not managed. The .TGS files are mainly used for speeding up run mode performance.

Configuring iFIX with Change Management

To use the iFIX WorkSpace with integrated Change Management features, there are steps for both products that you must perform. The following sections outline these steps:

- Overview of iFIX Configuration Steps
- Overview of Change Management Server Configuration Steps

For an quick overview of the entire setup process, refer to the Setting up iFIX for Use with Change Management section.

Overview of iFIX Configuration Steps

To enable the integrated Change Management features in the iFIX product, you must perform the following steps in iFIX:

1. Create an iFIX user with Change Management application privileges.
2. Enable iFIX security.
3. Confirm that any remote project paths appear as mapped network drives.
4. Confirm that all security paths are mapped to the iFIX Local path.
5. Enable Change Management in the iFIX User Preferences.

NOTE: Each set of steps is listed in the order that they should be performed.

▶To create an iFIX user with Change Management application privileges:

1. Start the Security Configuration application.
2. On the Security toolbox, click the User Account button.
3. Click Add.
4. In the Full Name field, enter a name for the new user account.
5. If using iFIX Security, enter the login name and password for the account in the Login Name and Password fields.

TIP: In iFIX, user names and passwords are not case-sensitive. However, in Proficy Change Management, passwords are case-sensitive. When in iFIX, it is recommended that you enter both the user name and password all in the same case, so that it is less likely you will run into issues later.

6. If you want to use Windows security, select the Use Windows Security check box, and, in the Full Name and Domain fields, enter the login name and domain name of the Windows user account you want to use.

7. If you want to limit the time the operator remains logged into iFIX, in the Login Timeout field, enter a timeout value.
8. Under the Application security area, click Modify. The Application Feature Selection dialog box appears.
9. In the Available list box, select **Change Management**, and then click Add.
NOTE: To add all the security areas to the current account, click Add All.
10. Click OK.
11. Similarly, modify group accounts and security areas, as required.
12. Click OK.
13. Repeat steps 3-12 for each user you want to add.
14. On the File menu, click Save.

►To enable iFIX security:

1. Open the Security Configuration application, if it is not already open.
2. Click the Configuration button on the Security toolbox.
3. Select Enabled to enable security.
4. On the File menu, click Save.

►To confirm that any remote project paths appear as mapped network drives:

1. Open the System Configuration (SCU) application, if it is not already open.
2. On the SCU's Configure menu, click Paths. The Path Configuration dialog box appears.
3. Confirm that all of the project paths point to a mapped network drive. If the paths do not point to a mapped network drive, make adjustments so that they do.

For instance, \\MyServer\Program Files\Proficy\Proficy iFIX in the Project path field is not supported, but a network drive mapped to D:\Program Files\Proficy\Proficy iFIX\LOCAL folder (where D:\ is the map to \\MyServer) would work.

4. Exit the SCU.

►To confirm that all security paths are mapped to the iFIX Local path:

1. Start iFIX.
2. Open the System Configuration (SCU) application.
3. On the Configure menu, click Security. The Security Configuration dialog box appears.
4. On the Edit menu, click Configuration. The Configuration dialog box appears.
5. Confirm that the Security Path and Backup Path both point to the iFIX Local path. If you install iFIX to the default location, this path is: C:\Program Files\Proficy\Proficy iFIX\LOCAL.

If the paths do not point to the local install path, make adjustments so that they do.

6. Save your changes and exit the Security Configuration application.

7. Exit the SCU.

►To enable Change Management in the iFIX User Preferences:

1. Start iFIX, and the Proficy iFIX WorkSpace.
2. In Classic view, on the WorkSpace menu, click User Preferences.
-Or-
In Ribbon view, on the Home tab, in the Workspace group, click Settings and then click User Preferences.
3. Click the Change Management tab.
4. Select the Enable Change Management Server Connection check box.
5. In the Change Management Server field, enter the name of the server. For instance, if your server was named MyServer, enter MyServer in this field.
6. If you want to log on to the Change Management Server when you start the iFIX WorkSpace, select the Logon at Workspace Startup.

***TIP:** For large projects, it is recommended that you clear this check box, since it will take iFIX longer to start, depending on the size of the project.*

7. If you always want a Logon dialog box to display when a user logs on to the Change Management Server from the iFIX WorkSpace, select the Prompt for User Name and Password check box.

For information on how to configure automatic login, refer to the Automatic Logon to the Change Management Server section.

8. In the Change Management Project Name field, enter the name of your project.
If an integrated iFIX project folder is not already created on the Change Management Server, this is name of the project folder that will be created when you log in to the Change Management Server for the first time. It is recommended that you create your projects through iFIX this way, rather than through the Change Management Server.
9. Optionally, if you want to require that the user enter comments when checking in or checking out files, select the Require comments to check in and check out files check box.
10. If you want to enable iFIX electronic signatures, enter the electronic signature options. For more information on how to do this, refer to the iFIX Electronic Signatures and Change Management section.
11. Click OK.

Automatic Logon to the Change Management Server

When you enable Change Management from the iFIX User Preferences dialog box in the WorkSpace, you can specify the login options, such as whether you log on when the WorkSpace starts up, and whether a dialog box appears requesting a password.

***TIP:** If you have a very large iFIX project, you most likely do not want to enable the Logon at Workspace Startup. If it is selected, it may take several additional seconds or minutes (depending on the size of your project) for the WorkSpace to startup.*

With automatic logon, no dialog box appears requesting your logon credentials. Instead, when you choose to logon, either at the WorkSpace start up or from the system tree's right-click menu, the logon occurs automatically. If the automatic logon fails due to an invalid user name or password, the Change Management Logon dialog box does appear, however.

To enable automatic logon to the Change Management Server from iFIX, from the iFIX User Preferences dialog box on the Change Management tab, you must clear the Prompt for User Name and Password at Logon check box.



For automatic logon to work properly, the user you log into iFIX with must also be defined on the Change Management Server. The user name and password defined in on both servers must be identical.

TIP: In iFIX, user names and passwords are not case-sensitive. However, in Proficy Change Management, passwords are case-sensitive. When in iFIX, it is recommended that you enter both the user name and password all in the same case, so that it is less likely you will run into issues later.

Similarly, when creating your iFIX users, you should be aware of the limitations set on the Change Management passwords. You do not want to create an iFIX user with a password that Change Management does not support. For more information on creating passwords in Change Management, refer to the "Working with users" topic in the Proficy Change Management help.

When the user names and passwords do not match in both applications, or the iFIX user you are logged in as is not defined as a user on the Change Management Server (or vice versa), after an error message, the Logon dialog box appears, even with the Prompt for User Name and Password at Logon check box cleared.

iFIX Electronic Signatures and Change Management

When checking out and checking in files to the Change Management Server, you can require that the user provide an electronic signature before the action occurs. With iFIX Electronic Signatures enabled, the Electronic Signature dialog box appears, before the Change Management Check Out or Check In dialog box appears. This is the same Electronic Signature dialog box that appears in the iFIX product, like the ones described in the Examining the Electronic Signature Dialog Box section of the Using Electronic Signatures electronic book.

If the user name and password entered for the electronic signature is rejected, iFIX does not perform the check out or check in file command on the Change Management Server.

Comments can be entered into both the Electronic Signature dialog box and Check In/Out dialog box. The comments included with the Electronic Signature dialog box are tracked with other iFIX electronic signatures, and appear in the same audit trail.

If you want to use electronic signatures for checking in files to the Change Management Server from

the iFIX WorkSpace, open the User Preferences dialog box, click the Change Management tab, and enter the options you want in the Electronic Signature Options area.

For more information about electronic signatures in iFIX, refer to the What are Electronic Signatures? section in the Using Electronic Signatures electronic book.

► **To configure electronic signatures for Change Management actions in iFIX:**

1. If the iFIX WorkSpace is open and you are logged into the Change Management Server, log off. To do this, right-click the node name in the system tree, select Manage and then click Logoff.

***NOTE:** You cannot make changes to the Change Management setting in iFIX while logged on to the Change Management Server.*

2. In Classic view, on the WorkSpace menu, click User Preferences.

-Or-

In Ribbon view, on the Home tab, in the WorkSpace group, click Settings, and then click User Preferences.

3. Click the Change Management tab.
4. Confirm the Enable Change Management Server Connection check box is selected. If it is not, select it. Otherwise, you cannot modify the Electronic Signature Options.
5. Optionally, if you want to require that the user enter comments when checking in or checking out files (in the Check In and Check Out dialog boxes), select the Require comments to check in and check out files check box.

***NOTE:** This option can be enabled with or without the electronic signature option.*

6. In the Electronic Signature Options area, select the type of type of electronic signature you want to enable:

- **Perform Only** – the operator (the "performer") that initiated the action must electronically sign for that action.
- **Perform and Verify** – the operator (the "performer") that initiated the action must electronically sign for that action and another individual (the "verifier") must electronically sign to validate the action.

By default, the electronic signature Type is set to None.

7. If you want to allow the operator to repeatedly sign for successive actions by supplying only a password, when electronic signatures are enabled, select the Allow Continuous Use check box.

Continuous use applies only to the person performing an action and does not affect the person verifying an action.

8. If you want to provide a different set of predefined comments in the drop-down list, do the following:

- For the Perform Only comments, click Create Default Perform Comments Table
- For the Perform and Verify comments, click Create Default Perform Comments Table

Alternatively, you can enter a name for the table in each of these fields.

9. If you created your own comment tables, configure them. Refer to the steps in the Comment Tables, Electronic Signatures, and Change Management section for more information.
10. Click OK.
11. Restart the iFIX WorkSpace.

Comment Tables, Electronic Signatures, and Change Management

When using iFIX with Change Management and an Electronic Signature dialog box appears, if you create your own comment tables, operators can select from a drop-down list of predefined comments. Perform and Verify comment lists are stored in different tables. As such, you can configure different comments to appear from the drop-down list in the Perform Comments section and in the Verify Comments section of the Electronic Signature dialog box.

The table names you enter in the Perform Comments Table Name and Verify Comments Table Name fields can be the same as the ones you use for your other iFIX applications, or you can configure Change Management specific comment tables. If you click the button to create a table, Change Management specific tables are created:

- ChangeManagementPerformComments
- ChangeManagementVerifyComments

However, you can also enter the name of the table you want to use into the edit box for the Perform Comments Table Name and Verify Comments Table name fields from the User Preferences dialog box's Change Management tab. You do not have to use the button to create the table, if you already have one created. If not, you can create it by clicking the corresponding Create Default Comments Table button.

IMPORTANT: *The operator can enter text in the Comment field regardless of whether you configure a comment table and create pre-defined comments. The custom tables are provided if you want to customize the drop-down list that displays. Custom tables are saved as part of the User.fgx file. If you choose to manage the User.fgx file, you must close the WorkSpace and restart it in order to save User.fgx locally. The User.fgx file is not saved until the WorkSpace restarts.*

►To create a comment table:

1. In Classic view, on the WorkSpace menu, click User Preferences.
-Or-
In Ribbon view, on the Home tab, in the WorkSpace group, click Settings, and then click User Preferences.
2. Select the Change Management tab.
3. Optionally, rename the table(s) by entering text in the Perform Comments Table Name field and the Verify Comments Table Name fields, respectively.
4. Click the corresponding button, either the Create Default Perform Comments Table button or the Create Default Verify Comments Table button, as appropriate.

A message box appears, confirming that the comment table was successfully created. If you do not rename the tables in step 3, these default names are assigned to the tables:

- ChangeManagementPerformComments

- ChangeManagementVerifyComments

The comment tables you create are listed in the System Tree of the WorkSpace, in the Globals folder, in the User category.

5. Click OK in the WorkSpace message box.
6. Once you create a comment table, you can fill it with comments you want to use in your application.

►To customize the content of a comment table:

1. From the iFIX WorkSpace, right-click the comment table, such as ChangeManagementPerformComments in the system tree, and select Custom. The Custom Lookup Table dialog box appears.
2. In the Value column, enter a numeric value.

This value can be up to seven digits long. Sequence the numbers in this column in relative, ascending order. This value is used as an index for this comment and is not otherwise associated with the comment.
3. In the String field, enter the comment.

The comment can be up to 168 characters long. Keep in mind that this comment can be combined with a free-text comment in the Electronic Signature dialog box, so you may want to conserve the length of this comment.

►To rename a comment table to give it a more descriptive name:

1. From the iFIX WorkSpace, access the system tree.
2. Select the comment table you want to rename in the system tree.
3. Open the Properties window by right-clicking the comment table in the system tree and selecting the Property Window... option.
4. Select the Name property, and enter the new table name.
5. Close the Property window.

►To delete a comment table:

1. In the iFIX WorkSpace, access the system tree.
2. Right-click the name of the table you want to delete, and click the Delete option.

Overview of Change Management Server Configuration Steps

To allow Change Management features to be used from the iFIX WorkSpace, you must perform the following steps on Change Management Server:

1. Add a user for iFIX projects.
2. Configure user privileges.

NOTE: Each set of steps is listed in the order that they should be performed.

►To add a user for iFIX projects:

1. Start Proficy Machine Edition.
2. In the Navigator, right-click Access Control and select Check Out Access Control.
3. In the Access Control folder, right-click the User folder and select New User.
4. Enter a name and press Enter. The name that you enter in this field is one that you created for iFIX in the Overview of iFIX Configuration Steps section.
5. Right-click the user you just created in step 4, and select Change Password. The Change Password dialog box appears.

Be sure that the password matches the password that you entered in the iFIX Security Configuration application. This password should be in the same case as the iFIX password.

TIP: For more information on creating passwords in Change Management, refer to the "Working with users" topic in the Proficy Change Management help.

6. Click OK.
7. In the Navigator, right-click Access Control and select Check In Access Control.

►To configure user privileges:

1. In the Navigator, right-click Access Control and select Check Out Access Control.
2. Double-click the User folder to view all users.
3. Right-click user that you just created in the previous set of steps, and select Add to Group, and then Administrators.

IMPORTANT:

- *Members of the Administrator group can perform any operation in Change Management, the Scheduler, or projects stored in the folder. You must be an Administrator if you want to run schedules and have full check in and check out rights on the iFIX project files. The Administrator group has full manage rights, including check out rights.*
- *If you want to give a user a subset of permissions (for example, just check in/check out privileges), it is recommended that you create a group that only has Check in/Check out set to TRUE, and then assign that user to the group.*
- *Permissions are "additive." So, if a user belongs to 3 groups and if any those three groups a permission set to TRUE, the user gets that permission. The permissions that the iFIX WorkSpace uses include: Check In and Out, Get, Label, Override Checkout, Change Password, and Edit Project List.*

4. In the Navigator, right-click Access Control and select Check In Access Control.

Using Change Management from the iFIX WorkSpace

In Classic view, to access Change Management functions in the iFIX WorkSpace environment, in the system tree, use the right-click Manage menu. In Ribbon view, you may access Change Management features in the same way as in Classic view, or you may access *project level* file operations via the ribbon on the Administration tab, in the Proficy Change Management group. The following table provides brief descriptions of the Change Management items. Click an action for more detailed information.

Action	Quick Description
Logon	<p>Allows you to log on to the Change Management Server.</p> <p>This option is only available from the node name folder (the top level folder) in the system tree.</p> <p>If configured for a dialog box, a Change Management Logon dialog box appears. If you are configured to automatically log on, no dialog box appears.</p>
Logoff	<p>Allows you to log off from the Change Management Server.</p> <p>This option is available only from the node name folder (the top level folder) in the system tree.</p>
Add All iFIX Files	<p>Allows you to add all of your iFIX project files from the selected node to the Change Management Server.</p> <p>This option is available only from the node name folder (the top level folder) in the system tree.</p>
Add	<p>Allows you to add a file or folder to the Change Management Server.</p>
Check Out	<p>Allows you to lock a file, folder, or project from the Change Management Server. Another logged in user cannot modify that item or items until you check the item or items back in.</p> <p>Optionally, if the file or folder on your local computer is newer than the one in the Change Management Server, you can leave the local copy of the file or folder and still lock the files on the Change Management Server with the Check In – so that no one else can edit them.</p> <p>To copy files when checking out, clear the "Don't overwrite local file(s) with managed copy" check box in the Check Out dialog.</p>
Check In	<p>Allows you to copy your local file, folder, or project from your local SCADA to the Change Management Server.</p> <p>After you check the item or items back in, they can be edited by other users.</p>

Action	Quick Description
Check Out Status	Allows you to view whether the file is checked out from the Change Management Server, and the name of the user currently working on the file.
Undo Check Out	<p>Allows you to leave the files in the Change Management Server without copying your changes to it.</p> <p>The Undo Check Out command releases the files so that other users can work on them.</p>
Destroy	Allows you to permanently remove a file from the Change Management Server. You can optionally remove the file from your local drive, or delete it as well.
Get Latest	<p>Allows you to copy the latest version of the selected folder, file, or project from the Change Management Server to your local computer. If a version already exists on your local computer, it is overwritten.</p> <p>The file or files get copied to your local computer with writable attributes. The status file or files on the Change Management remains the same. No Check Out occurs when you get the latest version.</p> <p>If you get the entire project, be aware that you must restart iFIX so that it starts with the SCU and security files you get, which lets you work on the project.</p>
Get Other Project	<p>Allows you to copy an entire iFIX project from the Change Management Server to your local computer. You cannot copy another project to your local iFIX install path.</p> <p>NOTE: <i>If you later want to run this project in iFIX, you need to update the SCU. Click the How Do I button in the Get Other Project section for more information.</i></p> <p>This option is available only from the node name folder (the top level folder) in the system tree.</p>
Label	Allows you to assign a user defined text string to a specific version of a file, folder, or project in the Change Management Server.
History Report	Allows you to view the revision history of a file, folder, or project.

TIP: *If a Change Management feature is not available for a selected item in the system tree, the right-click menu or menu option appears disabled. For a list of items in the system tree for which the Manage menu is available, refer to the Summary of Items Managed in the System Tree section.*

Tips for Working with Multiple Users

If you plan to have multiple developers creating iFIX pictures make sure that:

- All users install iFIX to the same folder. This ensures that the SCU files start iFIX properly on all developers' computers.
- Remote paths for shared files use mapped network drives.

Create a Project

It is recommended that you create a Change Management project for an iFIX node within the iFIX WorkSpace. Although you can create integrated iFIX project folders within the Proficy Machine Edition product, if the name does not exactly match the one you enter on your iFIX SCADA node, problems can arise. For more information on how projects are defined in both projects, refer to the Projects in Change Management vs. iFIX section.

When you configure your Change Management settings in the iFIX User Preferences dialog box, you define a project name. As soon as you login to the Change Management Server from the iFIX WorkSpace, that new project is created.

Typically, the Change Management project name that you enter into the iFIX User Preferences is the same name as your iFIX node name. But, you can enter any name.

►To create a project from the iFIX WorkSpace:

1. From the iFIX WorkSpace, disconnect from the Proficy Change Management Server if you are already connected. For more information, refer to the Logging Off section.
2. In Classic view, on the WorkSpace menu, click User Preferences.
-Or-
In Ribbon view, on the Home tab, in the Workspace group, click Settings and then click User Preferences.
3. Click the Change Management tab.
4. Select the Enable Change Management Server Connection check box, if it is not already select.
5. In the Change Management Server field, enter the name of the server. For instance, if your server was named MyServer, enter MyServer in this field.
6. If you want to log on to the Change Management Server when you start the iFIX WorkSpace, select the Logon at WorkSpace Startup.
TIP: For large projects, it is recommended that you clear this check box, since it will take iFIX longer to start, depending on the size of the project.
7. If you always want a Logon dialog box to display when a user logs on to the Change Management Server from the iFIX WorkSpace, select the Prompt for User Name and Password check box.

For information on how to configure automatic login, refer to the Automatic Logon to the Change Management Server section.

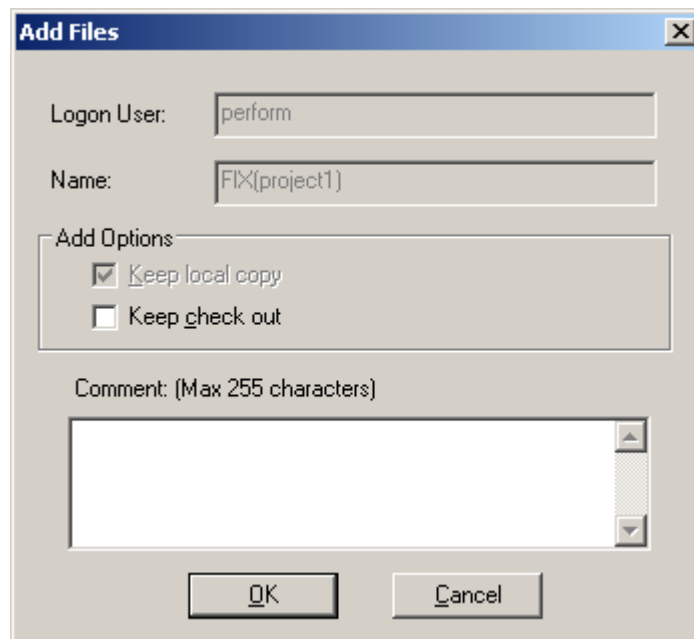
8. In the Change Management Project Name field, enter the name of your project. If name already exists, enter a new one to create a new project.

As soon as you login to the Change Management Server from the iFIX WorkSpace, that new project is created.

9. Optionally, if you want to require the user to enter comments when checking in or checking out files, select the Require comments to check in and check out files check box.
10. If you want to enable iFIX electronic signatures, enter the electronic signature options. For more information on how to do this, refer to the iFIX Electronic Signatures and Change Management section.
11. Click OK.
12. From the WorkSpace, logon to the Change Management Server to create the project on the Change Management Server. For logon steps, refer to the Logging into the Change Management Server from iFIX section.

Add Files

The Add and Add All Files options from the Manage menu allows you to add all of your iFIX project files from the selected node to the Change Management Server. When you choose to add a file, folder, or entire project, the Add Files dialog box appears, as shown in the following figure. You can enter a comment, as well as choose whether you want to keep the local copy checked out and/or writable.



The screenshot shows a standard Windows-style dialog box titled "Add Files". It features a close button (X) in the top right corner. The dialog contains the following elements:

- Logon User:** A text input field containing the text "perform".
- Name:** A text input field containing the text "FIX(project1)".
- Add Options:** A section containing two checkboxes:
 - Keep local copy**
 - Keep check out**
- Comment:** A text area with the label "Comment: (Max 255 characters)". The text area is currently empty.
- Buttons:** Two buttons at the bottom: "OK" and "Cancel".

NOTE: Files from a remote location cannot be added to your Change Management project, unless you map the drive. Additionally, security files that point to a remote security path or non-local iFIX path cannot be added to the Change Management Server. Make sure that the primary and backup security path in the Security application's Configuration dialog point to the iFIX Local folder. For instance, if you install iFIX to the default folder, this path is: C:\Program Files\Proficy\Proficy iFIX\LOCAL.

►To add an entire project:

1. In the iFIX WorkSpace system tree, right-click the node name, and from the Manage menu, select Add All Files in Project. The Add File dialog box appears.
2. Optionally, in the Comment text box, enter a comment. The comment can be no longer than 255 characters. The comments you enter are recorded on the Change Management Server.
3. Optionally, select the Keep Local Copy check box if you want to keep a writable version of the project files on your local computer. Otherwise, clear the Keep Local Copy check box to remove the local files after you add them to the Change Management Server.
4. Optionally, select the Keep Check Out check box, if you want to add the files, and check them out to your local computer.
5. Click OK. A status box appears on screen as the files get added.

►To add a selected file or folder:

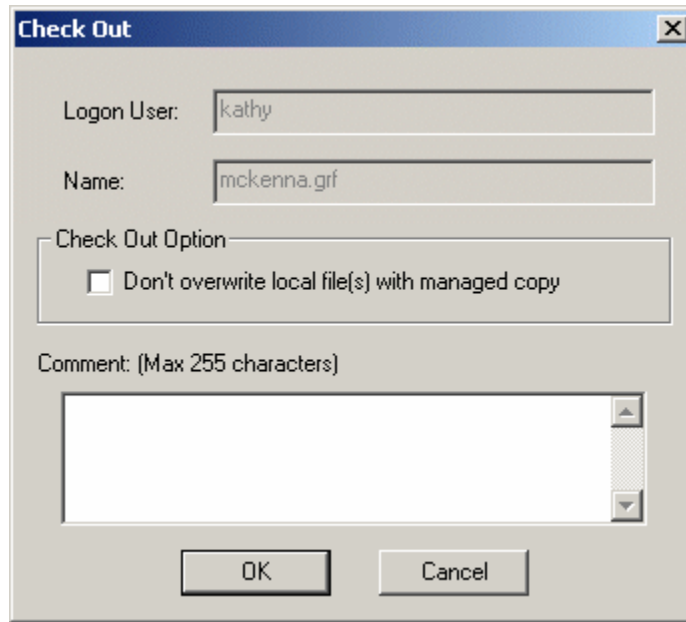
1. In the iFIX WorkSpace system tree, right-click the file or folder name, and from the Manage menu, select Add. The Add File dialog box appears.
2. Optionally, in the Comment text box, enter a comment. The comment can be no longer than 255 characters. The comments you enter are recorded on the Change Management Server.
3. Optionally, select the Keep Local Copy check box, if you want to keep a writable version of the project files on your local computer. Otherwise, clear the Keep Local Copy check box to remove the local files after you add them to the Change Management Server.
4. Optionally, select the Keep Check Out check box, if you want to add the files, and check them out to your local computer.
5. Click OK. A status box appears on screen as the files get added.

Check Out

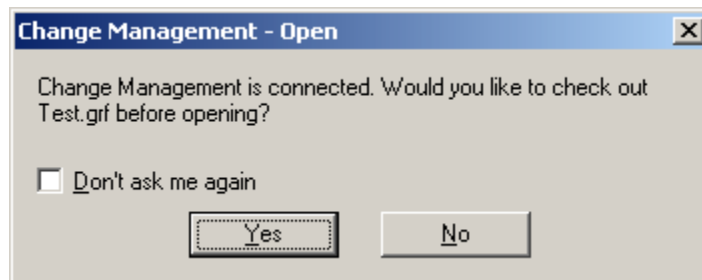
The Check Out option from the Manage menu allows you to lock a file, folder, or project from the Change Management Server. Another logged in user cannot modify that item or items until you check the specified item or item back in.

Optionally, if the file or folder on your local computer is newer than the one in the Change Management Server, you can leave the local copy of the file or folder, and still lock the files on the Change Management Server with the Check Out option so that no one else can edit them.

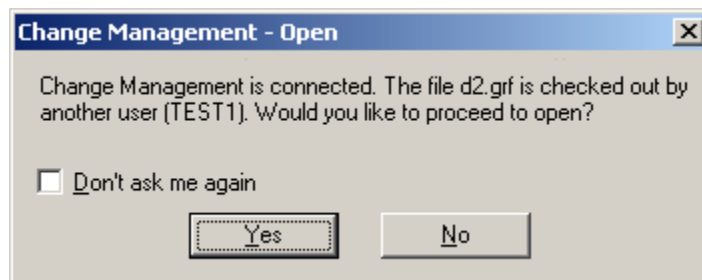
To copy files from the Server to your local computer when checking out, clear the Don't overwrite local file(s) with managed copy check box in the Check Out dialog, as shown in the following figure. Be aware that if you are checking out pictures and there are pictures are open the WorkSpace with the same name, you need to close them and re-open them in the WorkSpace to view the Server versions locally.



If you try to open a read-only file on your local computer, that resides on the Change Management Server, but is not checked out, the Change Management - Open dialog box appears, as shown in the next figure. If you click Yes to this dialog box, the Check Out dialog box also appears.



If you try to open a file that is checked out by another user, or by you on another computer, you cannot modify that item or items until the user checks the specified item or items back in, giving up source control. The following message box appears.



►To check out a file, folder, or project:

1. In the iFIX WorkSpace system tree, right-click the file, folder, or project that you want to check out, and on the Manage menu, select Check Out. The Check Out dialog box appears.
2. If you want to copy the files from the Change Management Server to your local computer

when checking them out, clear the Don't overwrite local file(s) with managed copy check box.

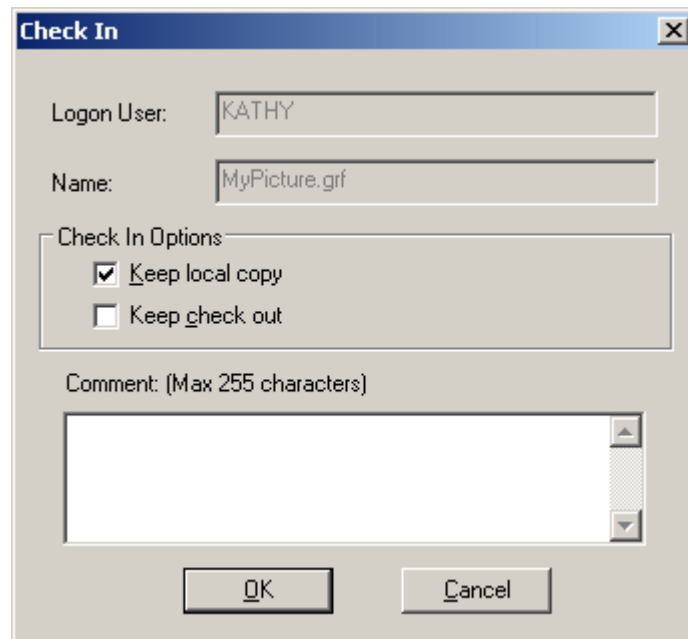
3. Optionally, in the Comment text box, enter a comment. The comment can be no longer than 255 characters. The comments you enter are recorded on the Change Management Server.

NOTE: *If comments are required, the OK button in this dialog box does not become available until you enter a comment. Comments are required when you enable them in the iFIX User Preferences dialog box, on the Change Management tab, by selecting the Require Comments to Check In and Check Out Files check box.*

4. Click OK. A status box appears on screen as the files check out.

Check In

The Check In option from the Manage menu allows you to copy a file, folder, or project from your local SCADA to the Change Management Server. After you use the Check In command, you release your control on that file, folder, or project so that another user can work on that file, folder, or project. The following figure displays an example of the Check In dialog box.



IMPORTANT: *You must perform a Check Out (copy a writable version of the file, project, or folder from the Change Management Server to your computer), before you can perform a Check In (copy your version of the file, project, or folder from your computer back to the Change Management Server).*

►To check in a file, folder, or project:

1. In the iFIX WorkSpace system tree, right-click the file, folder, or project that you want to copy to the Change Management Server, and on the Manage menu, and select Check In. The Check In dialog box appears.
2. Optionally, in the Comment text box, enter a comment. The comment can be no longer than 255 characters. The comments you enter are recorded on the Change Management Server.

***NOTE:** If comments are required, the OK button in this dialog box does not become available until you enter a comment. Comments are required when you enable them in the iFIX User Preferences dialog box, on the Change Management tab, by selecting the Require Comments to Check In and Check Out Files check box.*

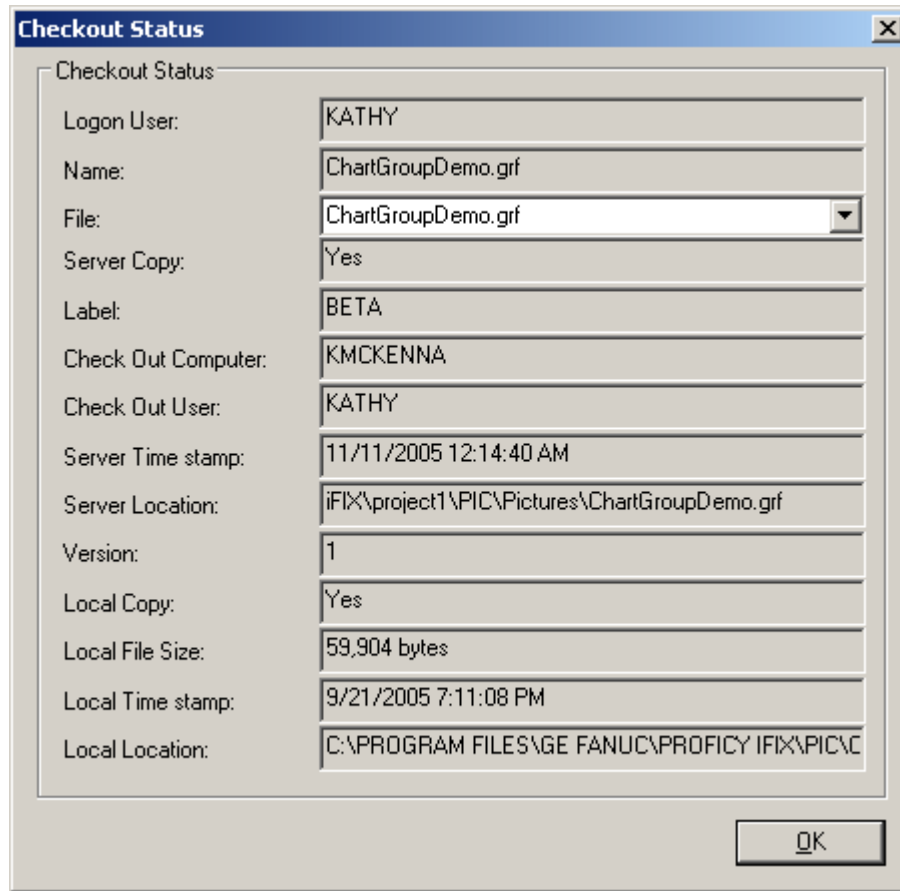
3. Optionally, select the Keep Local Copy check box, if you want to keep a writable version of the project files on your local computer. Otherwise, clear the Keep Local Copy check box to remove the local files after you add them to the Change Management Server.
4. Optionally, select the Keep Check Out check box, if you want to check in the files, and check them out to your local computer.
5. Click OK. A status box appears on screen as the files check in.

Check Out Status

The Check Out Status option from the Manage menu allows you to view whether the file is checked out from the Change Management Server, and the name of the user currently working on the file. You can use the Check Out status command only on an individual file.

This feature is helpful if you want to check out a file, but another user is working on it. When you determine the user name, you can either wait for the person to check in the file, or inform that user that you need to make changes and that he needs to check in the file.

For example, in the following figure, a user name KATHY has the ChartGroupDemo.grf file checked out. The Label indicates that she's working on the BETA version of the file.

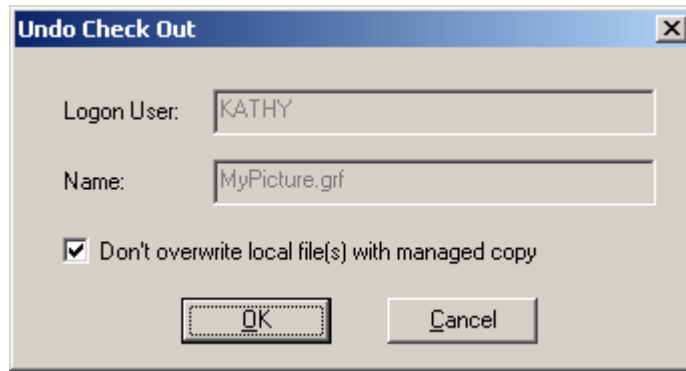


►To view the check out status of a file:

1. In the iFIX WorkSpace system tree, right-click the file whose status you want to view, and from the Manage menu, select Check Out Status. The Check Out Status dialog box appears.
2. Review the Logon User field to see the user name who has the file checked out.
3. Review the other fields you are interested in, and click OK when you finish.

Undo Check Out

The Undo Check Out option from the Manage menu allows you to leave the files in the Change Management Server without copying your changes to it. The Undo Check Out releases the files so that other users can work on them. If you want to undo the check out on the Server without changing the updated files on your local computer, make sure the Don't overwrite local file(s) with managed copy check box is selected.



IMPORTANT: If you clear the *Don't overwrite local file(s) with managed copy* check box for a check out, you must reload the file to view the changed file on the local computer.

►To undo a check out:

1. In the iFIX WorkSpace system tree, right-click the file, folder, or project that you want to undo changes on, and on the Manage menu, select Undo Check Out. The Undo Check Out dialog box appears.
2. If you want to undo the check out on the Server without changing the updated files on your local computer, make sure the *Don't overwrite local file(s) with managed copy* check box is selected.

Clear this check box if you want to undo the check out on the Change Management Server, and then replace the files on your local computer with the versions on the Change Management Server. If you clear this check box, be aware that you must reload the file to view the changed file on your local computer.

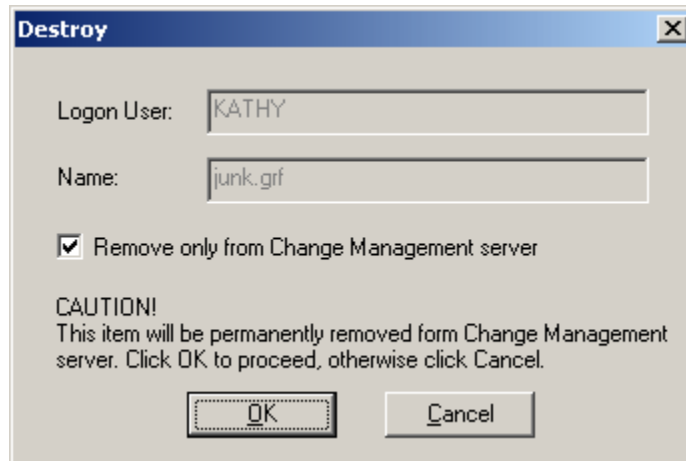
3. Click OK. A status box appears on screen as undo check out proceeds.

Destroy

The Destroy option from the Manage menu allows you to permanently remove a file from the Change Management Server. You can optionally remove the file from your local drive, or delete it as well.

WARNING: After you destroy a file, there is no history of the file on the Change Management Server. A destroyed file is permanently lost and cannot be recovered.

The following figure shows an example of the Destroy dialog box.



►To destroy a file:

1. In the iFIX WorkSpace system tree, right-click the file you want to delete, and on the Manage menu, select Destroy.
2. If you want to keep the version of the file on your local drive, select the Remove only from Change Management server check box. Otherwise, to delete the local version of the file as well, clear this check box.
3. Click OK. A status box appears on screen as the file is removed.

Get Latest

You can copy the latest version of a file, folder, or project from the Change Management Server to your local computer by using the:

- Get Latest option from the Manage menu
- PCM History window

If a version already exists on your local computer, when you get the file, that version is overwritten. The file or files get copied to your local computer with writable attributes. If you are checking out pictures, and pictures with the same name are open in the WorkSpace, you need to close them and re-open them to view the Server versions locally. The status file or files on the Change Management remains the same. No Check Out occurs when you get the latest version.

If you get the entire project, be aware that you must restart iFIX so that it starts with the SCU and security files you get, and you can work on the project.

IMPORTANT:

- *If the SCU paths in the project you get from the Change Management Server are not mapped to the path of your local iFIX install, you will not be able to start iFIX with this project.*
- *For example, say the SCU project path is mapped to D:\Program Files\Proficy\Proficy iFIX, but your local iFIX install is installed to C:\Program Files\Proficy\Proficy iFIX. You must open this SCU in the System Configuration utility to update this paths before you can run this project locally. You should confirm the correct paths exist in the Path Configuration, Task Configuration, Network Configuration, Local Startup Definition, and SQL Task*

Configuration dialog boxes.

- *If multiple developers intend to work on the same iFIX project, make sure each user installs iFIX to the same path and drive. This ensures that paths will always load properly in iFIX SCU files.*

Tips for Getting Color Table (*.FTB) files

Color table files (*.FTB) are saved only when the iFIX WorkSpace exits. So, if you try to get the latest version from the Change Management Server, it may appear as if the get did not work properly. Restart the WorkSpace, and your color tables should get updated.

Steps for Getting Files

The steps that follow describe to get a file or files from the right-click menu or the PCM History window.

►To get the latest version of a file, folder, or project from the right-click menu:

1. In the iFIX WorkSpace system tree, right-click the file, folder, or project that you want to get, and from the Manage menu, and select Get Latest.
2. If you selected a project, a message box appears indicating that iFIX must be restarted. To continue:
 - Click Yes. Another message appears to confirm the shut down. The PCM Utility window appears, displaying the status in the background.
 - Click OK. You are prompted to save any files with unsaved changes. Click Yes for each file you want to save.
 - If you suspect that the install paths do not match your local iFIX installation path, modify the SCU file so that it contains the correct paths in the Path Configuration, Task Configuration, Network Configuration, Local Startup Definition, and SQL Task Configuration dialog boxes.
 - Restart iFIX.
3. If you retrieved a color table file that you want to work on, restart the WorkSpace so that it loads properly and you can view it.

►To get a version of a file, folder, or project from the PCM History window:

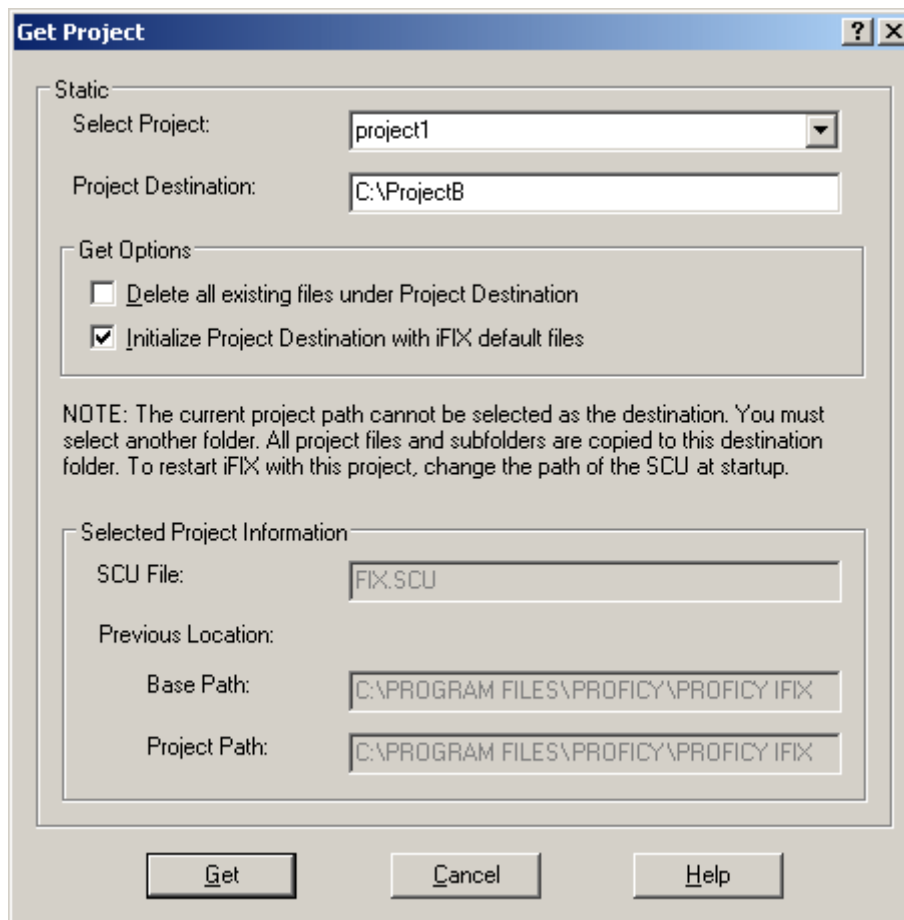
1. In the iFIX WorkSpace system tree, right-click the file, folder, or project that you want to obtain a version from the Change Management Server, and on the Manage menu, click History Report. The PCM History window appears.
2. In the PCM History window, select the version of the file, folder, or project that you want to get from the Change Management Server, and click Get.
3. Click OK to continue. A status box appears on screen as the selected file, folder, or project is copied to your local computer.
4. If you retrieved a color table file that you want to work on, restart the WorkSpace so that it loads properly and you can view it.
5. If you retrieved an entire project, restart iFIX.

NOTE: If you notice that your files are not updated, verify that you have enough available memory to complete the operation. Low memory prevents the files from being copied to your local computer.

Get Other Project

The Get Other Project option from the Manage menu allows you to copy an entire iFIX project from the Change Management Server to your local computer. You cannot copy another project to your local iFIX install path, you must enter another path. If you later want to run this project in iFIX you need to update the SCU.

The following figure shows an example of the Get Other Project dialog box. In this example, iFIX is installed to the C:\Program Files\Proficy\Proficy iFIX folder, so the Project Destination was changed to C:\ProjectB. This project will not run in iFIX until the SCU information is modified so that it runs in the proper path.



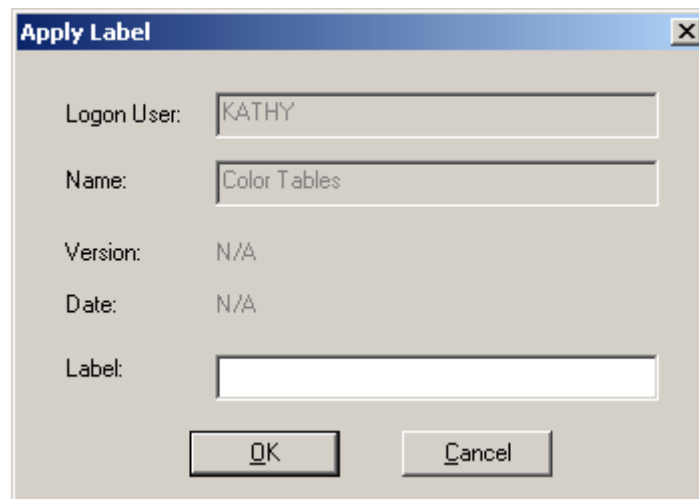
Select the Delete all existing files under Project Destination check box if you want to delete all existing files under the project you specify. If you select this check box, it is strongly recommended that you also select the Initialize Project Destination with iFIX default files check box.

Selecting the Initialize Project Destination with iFIX default files check box deploys all iFIX default system files to the project you specify. If you plan to start iFIX with this project, it is strongly recommended that you select this check box.

Label

The Label option from the Manage menu allows you to assign a user defined text string to the latest version of a file, folder, or project in the Change Management Server. When you assign a label at the project or folder level, that label only applies to the select project or folder. For instance, if you apply a label at the project level, all folders and files in that project are not individually labeled. Only the project folder is labeled.

From the PCM History window, you can compare a labeled version of a project, file, or folder in the Change Management Server with the version on your local computer. You can also compare two labeled versions of the same file in the Change Management Server. The Apply Label dialog box is illustrated in the following figure.



Be aware that if you run the Change Management Server Trim utility, labels on from iFIX projects, folders, security files, FIX Desktop files, Historical Assignment files, and user add-on files are removed. Labels on individual iFIX files remain, however. For more information on labels in iFIX and Change Management, refer to the Labeling Differences section.

►To assign a label to a version of a file, folder, or project in the PCM Server:

1. In the iFIX WorkSpace system tree, right-click the file, folder, or project that you want to display a history report on, and from the Manage menu, select Label. The Apply Label dialog box appears.
2. In the Label field, enter the text string for the label you want to use. Be aware that the label you enter can be no longer than 31 characters.
3. Click OK.

History Report

The History Report option from the Manage menu allows you to view the revision history of a file, folder, or project:

- If you select a folder, the history of Change Management actions in iFIX is detailed for the individual folder, as well as all the files in that folder.

Change Management and iFIX

- If you select a file, only the actions for that file display.
- If you select a project, only the label changes to the project display. A change history of all folders and files in the project does not display. You can, however, compare your local project with a labeled version in the Change Management Server from this window.

When you select the History Report option, the PCM History window appears. You can also get files, or versions of files from this window. For detailed information on this window, refer to the Understanding the Proficy Change Management History Window section.

►To display a history report:

1. In the iFIX WorkSpace system tree, right-click the file, folder, or project that you want to display a history report on, and from the Manage menu, select History Report. The PCM History window appears.
2. Scroll through the list to view the history of Change Management actions on the selected item.

IMPORTANT: *It is recommended that you check in picture files when they are not open in the WorkSpace. Otherwise, a managed picture on the Change Management Server will show a difference at the Binary level, between the open and closed states, even if you did not modify anything in the picture.*

Understanding the Proficy Change Management History Window

The Proficy Change Management (PCM) History window allows you to view the revision history of a file, folder, or project. You can also compare different versions of the same file or folder in the Change Management Server, or even compare versions on the server with the ones stored on your local computer.

For instance, you can compare your local project to the latest version of the project in the Change Management Server, or any labeled version. You must be logged into the Change Management Server in order to use the History window.

Additionally, from the PCM History window, you can get a specific version of a project, file, or folder from the Change Management Server. Getting an entire project requires that you shut down iFIX in the process. Every node should have its own project in the Change Management Server.

To open the PCM History window, right-click a file, folder, or project in the Proficy iFIX WorkSpace system tree. From the Manage menu, choose History Report. The History window displays the change history for the selected project, folder, or file in the iFIX WorkSpace system tree. The following figure is an example of the window that appears.

Version	Path	User	Label	Date/Time	Action	Checkin Comments
	PIC\PICTURES					Select this entry for Fol...
3	PIC\PICTURES\KATE.GRF	smoke		5/29/2007 4:48:30 PM	Check In	Change to OpenPicture
2	PIC\PICTURES\KATE.GRF	smoke		5/29/2007 4:46:54 PM	Check In	
1	PIC\PICTURES\KATE.GRF	smoke		5/29/2007 4:46:04 PM	Created	
1	PIC\PICTURES\LOCALASBACKUP.GRF	smoke		5/29/2007 4:46:04 PM	Created	
1	PIC\PICTURES\DYNPIC1.GRF	smoke		5/29/2007 4:52:42 PM	Created	
1	PIC\PICTURES\MULTIPLEINSTANCE.GRF	smoke	BETA	5/29/2007 4:52:42 PM	Created	
1	PIC\PICTURES\CHARTGROUPDEMO.GRF	smoke		5/29/2007 4:46:04 PM	Created	
1	PIC\PICTURES\DYNAMOSANDSHAPES.GRF	smoke		5/29/2007 4:52:42 PM	Created	
1	PIC\PICTURES\WOC033OVERVIEW.GRF	smoke		5/29/2007 4:52:44 PM	Created	
1	PIC\PICTURES\DYNAMO_UPDATE_02.GRF	smoke		5/29/2007 4:52:42 PM	Created	
1	PIC\PICTURES\DYNAMO_UPDATE_01.GRF	smoke		5/29/2007 4:52:42 PM	Created	
1	PIC\PICTURES\WOC033CHT.GRF	smoke		5/29/2007 4:52:42 PM	Created	
1	PIC\PICTURES\VALMCOUNTPIC.GRF	smoke		5/29/2007 4:52:42 PM	Created	
1	PIC\PICTURES\LOCALASPRIMARY.GRF	smoke		5/29/2007 4:46:04 PM	Created	
1	PIC\PICTURES\WOC033FILL.GRF	smoke		5/29/2007 4:52:44 PM	Created	
2	PIC\PICTURES\DYNAMOUPDATE2.GRF	smoke		5/29/2007 4:55:52 PM	Check In	Fixed Customer 321 iss
1	PIC\PICTURES\DYNAMOUPDATE2.GRF	smoke		5/29/2007 4:52:42 PM	Created	
1	PIC\PICTURES\WISICONXTEST.GRF	smoke		5/29/2007 4:52:42 PM	Created	

Clear the Text check box (the default) to run a binary compare that lists the changed files, including those with VBA changes. Select the Text check box to display the details of the changes in each file. Details do not include ActiveX control object changes.

PCM History Window

The change history for a selected *project* only includes label changes to the project. For instance, say you label a project 3 times, and then you right-click the top level Project folder for the node, select Manage, and choose History Report. The PCM History window appears with four rows: one for the latest project, and one for each of the three labels you added. If you want to compare the differences between your local project and one on the Change Management Server, click the Difference button. The summary report lists all the files and folders for the project, and whether changes exist.

In the PCM History window, the change history for a folder includes all the files that appear in the iFIX WorkSpace system tree under that folder, as well as the folder label changes. For example, for the Pictures folder, the PCM History window displays the change history for every single picture and the PIC folder.

The following sections describe the parts of the Change Management History window and the information it contains.

Spreadsheet Columns

The spreadsheet that appears in the Change Management History window displays all versions of the **selected** file or folder. The following table describes the columns in the spreadsheet.

Column Name	Description
Version	The version number of the file in the Change Management Server. All files start at version number 1, and then go on to 2, 3, 4, 5, and so on, with each change that you check in to the Change Management Server.
Path	The relative path of the iFIX folder or file name within the current Change Management project.
User	The name of the Change Management user who performed the action on the file.
Label	<p>A user defined text string that you can assign to a specific version of a file, folder, or project in the Change Management Server.</p> <p>For example, you could label a collection of files in a folder or project with "Beta Release" as the text string. Later, you can read down all the files labeled "Beta Release" from the Change Management Server.</p>
Date/Time	The time that the action occurred on the Change Management Server computer. The time appears with the local region settings defined on the Change Management Server.
Action	The type of action performed on the file or folder in the Change Management product. For instance, these actions include: Add, Label, Get Latest, Get, Check Out, Check In, and Undo Check Out.
Check In Comments	Comment optionally entered by the Change Management user when the check in action was performed. The maximum number of characters in this field is 255.

You can sort files in the spreadsheet based on a column name, in ascending or descending order. To sort in ascending order, click the column heading once. To sort in descending order, click the same heading again.

You can move column headings to different locations by clicking and dragging the column heading to the desired location. Two red arrows appear when you can drop the heading to the new column.

All sorting options and moved column headings are refreshed the next time you open the Change Management History window.

Details Button

Provides details for the selected row. For instance, if the Check In Comments column appears too long to be easily read in the spreadsheet, select the row and click the Details button to open a dialog box that displays the Check In Comments in a larger visible area.

You can also double-click a row to display the Details dialog box. This dialog box displays comments in a larger area and includes the label for the folder, if one exists.

Difference Button

Displays the differences between two versions of the same file or folder in a summary report:

- Select two different versions of the same file or folder in the spreadsheet, and click Difference to report the differences between the versions.
- Select a single file or folder in the spreadsheet to compare that version from the Change Management Server with the version saved on your local drive.

The History window displays previous versions of iFIX files if they are being stored on the Change Management Server.

Ctrl or Shift click to select two items in the spreadsheet. You cannot select a folder and a file at the same time in the spreadsheet. You must select two different versions of the same file or same folder, or one version of the file or folder (to compare with the one on your local drive). If the action you want to perform is invalid, the button is unavailable.

The summary report displays as an .html file.

IMPORTANT: When displaying the differences of FIX Desktop folder, all files except the *.hgp files for the Historical Display are compared. When displaying differences of the Security folder, all files except the display.dov file (if it exists) are compared.

Text Compare Check Box

This check box appears only when you select a single picture file (to compare a specific version with the one on your local computer), or two versions of the same picture file (to compare two different versions). This check box is not available for folders or projects, such as the entire iFIX picture folder or project folder. By default, when this check box appears, it is cleared.

When you clear this check box and click Difference, a binary compare is performed that indicates if any differences are found in the picture. If there is a difference found, a red row displays in the summary report.

When you select this check box, and then click Difference, an ASCII compare is performed that lists whether differences are found in the picture, as well as details on each change in that picture. These details include VBA script, Dynamo, process database, and user.fxg changes. They do not include changes to ActiveX Controls or Chart Configuration changes. The ASCII compare may take longer than the binary (default) compare. If there are changes, details on each change appears in the summary report that displays.

Get Button

Retrieves a copy of the selected file, folder, or project in the spreadsheet to your local iFIX folder. Each item is copied with writable attributes. Getting an entire project requires that you shut down iFIX in the process.

The Get button is unavailable for Security Files.

Report Button

Exports the currently displayed spreadsheet into an .html, .xml, .csv, or .txt file.

Help Button

Displays this help file.

Exit Button

Closes the Proficiency Change Management (PCM) History window.

Right-click Menu Options

The Details, Difference, Get, and Report commands are also available from the right-click menu. Select a file or folder in the spreadsheet and optionally use the right-click commands instead of the buttons to perform the required tasks. Be aware that if an action is invalid for the selected items, the action on the right-click menu is also unavailable.

Summary of Binary vs. ASCII Compare Functionality

Two types of compare operations can be performed from the PCM History window:

- **Binary** – lists only the files that are different.
- **ASCII** – lists whether differences are found, and the details on each change.

The ASCII compare is only available for some types of iFIX files, such as pictures and SCU files. ASCII is the default compare type for SCU files. For pictures and the user.fyg file, ASCII is an option. The following table lists the compare functionality available for each iFIX file type in the PCM History window.

Be aware that VBA script, Dynamo, process database, and user.fyg changes are included in ASCII summary reports from iFIX.

***TIP:** If you only want to run a binary compare on iFIX files such as SCU file, you can use the Machine Edition Scheduler to run an iFIX Compare event. For more information, refer to the Scheduled Backups section.*

The ASCII compare is a feature in the integrated iFIX with Change Management environment; it is currently not available in the Change Management product.

File Type	File Extension	iFIX Folder	Compare Functionality
Application Support Files	*.*	APP\CustomUserDir	Binary
Batch Execution files (if installed)	*.WKB, *.UPC, *.UOP, *.BPC	base path	Binary
Database files	*.PDB	PDB	Binary by default, ASCII by option
Documents	*.DOC, *.XLS	APP	Binary
Dynamos	*.FDS	PIC	Binary by default, ASCII by option
FIX Desktop files	*.PLT, *.SBL, *.HGP, *.KMX, *.ODF, *.TGE, *.ODT	<ul style="list-style-type: none"> • PIC • HTR (*.HGP only) 	Binary
FIX Recipes	*.RCC, *.RCM	<ul style="list-style-type: none"> • RCC • RCM 	Binary
Globals	User.fyg	PIC	Binary by default, ASCII by option
Help & Information	*.CHM, *.HLP	ProficyDoc	Not Available
Chart Group Wizard files	*.CSV	HTR	ASCII
Historical Assignment files	*.CFG, *.DAT	HTR	Binary
I/O Drivers (Binary I/O Driver Configuration Files)	*.yyy, where yyy is the driver acronym, *.OPF	PDB	Binary

File Type	File Extension	iFIX Folder	Compare Functionality
Picture Support files	*.FTB, *.GRF	<ul style="list-style-type: none"> • PIC • PIC\TagStatus (*.grf) 	<p>For *.FTB – ASCII.</p> <p>For *.GRF – Binary by default, ASCII by option.</p>
Pictures	*.GRF, *.CSV	PIC	Binary by default, but can also perform ASCII compares
Toolbars	*.TBC, *.TBX	LOCAL	Binary
Reports	*.RPT	APP	Binary
Schedules	*.EVS	PDB	Binary by default, ASCII by option
Security files	*.UTL, *.AUT, *.DOV, and the SANAMES.CFG file	LOCAL	Binary
Startup Profiles	Profiles.cfg	base path	Binary
System Configuration (SCU) files	*.INI, *.SCU	LOCAL	ASCII
Tag Group files	*.TGD	PIC	ASCII

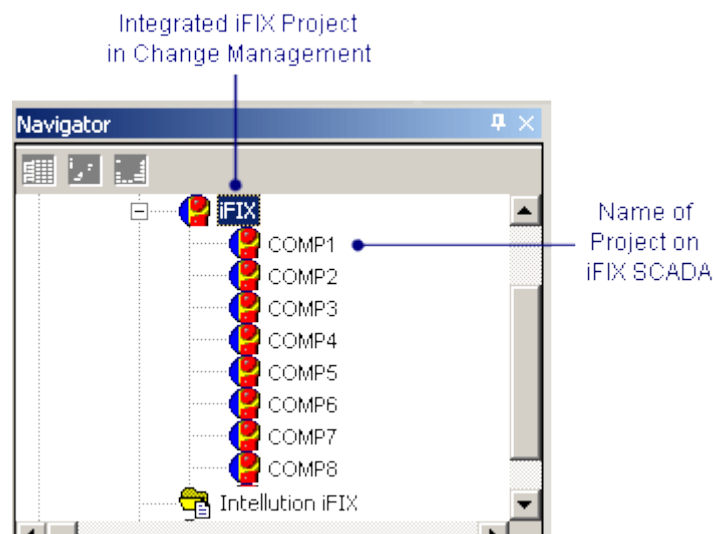
Information for Proficy Machine Edition Users

When using the Proficy Machine Edition (Client or Server) application, be aware of the following information when working with iFIX:

- Projects in Change Management vs. iFIX
- Labeling Differences
- Scheduled Backups
- Where to Find More Information in the Machine Edition Help

Projects in Change Management vs. iFIX

A project in iFIX is not the same as project in Proficy Change Management. In Change Management, iFIX is the actual project folder name. Within the iFIX project in Change Management are the integrated iFIX project folders. Each integrated project folder represents a project in the iFIX product, as illustrated in the following example.



Every SCADA iFIX node that you want to include on the Change Management Server should have its own integrated project folder in the Change Management Server. The Project Name that you enter in the iFIX User Preferences's Change Management tab, should map to an integrated project folder name on the Change Management Server. These names should always be the same.

TIP: If you create your Change Management project from the iFIX User Preferences's Change Management tab, you ensure that these project names are always same. It is recommended that you create your project from iFIX, rather than from the Machine Edition application. For more information, refer to the Add Files section.

Typically, each integrated iFIX project folder in Change Management name represents an iFIX node name. But, the node name does not always have to be used. For instance, if you use the default node

name of FIX when you create your iFIX node, you will not be able to use that name for your project in Change Management. "FIX" is a reserved name in Change Management. In this case, if you try to enter FIX in the iFIX User Preferences's Change Management tab, an error message appears and you would have to enter another name.

Do not try to check in multiple iFIX projects into the same integrated iFIX project folder on the Change Management Server.

IMPORTANT: *Be aware when working in Machine Edition, that you should not delete iFIX projects or files from the hard drive of the Microsoft Visual Sourcesafe server computer without using the Visual SourceSafe client.*

For more information on configuring the Change Management project name in iFIX, refer to the Overview of iFIX Configuration Steps section on this help file. For more information on projects in Change Management, refer to the "Integrated iFIX Projects folder" topic in the Machine Edition online help.

Labeling Differences

In Proficy Change Management, you currently can only create labels at the file level. However, if you are using the iFIX WorkSpace with the integrated Change Management features, you can label files at the project and folder level.

Labeling files, folders, and projects helps you identify a version of a file or files with a specific string. For example, in the iFIX WorkSpace, you could label a collection of files in a folder or project with "Beta Release" as the text string. Later, you can read down all the files with the version labeled "Beta Release" from the Change Management Server in the PCM History window.

Be aware that once you run the Change Management Server Trim utility, labels on from iFIX projects, folders, security files, FIX Desktop files, Historical Assignment files, and user add-on files are removed. Labels on individual iFIX files remain, however.

For more information on labeling and Change Management, refer to the "Using Version Labels" topic in the Proficy Machine Edition online help.

Scheduled Backups

In Proficy Machine Edition, you run two types of iFIX scheduled events:

- **iFIX Compare** – Checks if your local iFIX project files are different from the ones on the Change Management Server. This option was available for 3.5 projects, although with iFIX 3.5 this event only compared the iFIX backup (.fbk) file. With iFIX 4.0, this event compares the entire iFIX project, file by file, for differences.
- **iFIX Compare and Backup** – Checks if your local iFIX project files are different from the ones on the Change Management Server. If the ones on your local drive are newer, or do not exist yet on the Change Management Server, these files are checked in. This option is available only for iFIX 4.0.

Both of these events use binary compares, which means that the log file only lists the files that changed. Details on what changes occur in the files are not reported.

TIP:

- *After the "iFIX Compare" or "iFIX Compare and Backup" event runs the binary compare, if you want more information about the specific changes in each file, you can run an ASCII compare for some file types in iFIX.*
- *For example, if you want details of the changes in your picture files, not including VBA script changes, you can use the PCM History window and select the Text Compare check box (which runs an ASCII compare) to generate a summary report with changes. For more information on this option, refer to the Understanding the Proficy Change Management History Window section.*
- *Additionally, some file compares that you run in iFIX are ASCII compares, which provide more information, by default. Refer to the Summary of Binary vs. ASCII Compare Functionality section for a list the compare formats available for each file type in the PCM History window.*

If you want to run the "iFIX Compare" and "iFIX Compare and Backup" events, you must have the Proficy Machine Edition Client and Scheduler Components installed on your SCADA Server (at a minimum). These install programs are *not* found on the iFIX product CD. You need to install them from the Proficy Machine Edition CD.

After the scheduled event runs for "iFIX Compare" and "iFIX Compare and Backup" events, a log file is written to the following folder:

```
c:\fxData\API\\<logged in user>\iFIX\logs\

```

The steps that follow describe how to add an "iFIX Compare" or "iFIX Compare and Backup" event in Proficy Machine Edition. For more detailed information, refer to the "Scheduler Event Properties" topic in the Proficy Machine Edition online help.

►To add an iFIX Compare Event:

1. Start Proficy Machine Edition.
2. In the Navigator, right-click Scheduler Event List and select Check Out Access Control.
3. Right-click Scheduler Event List, and click Add.
4. Enter a name, and press Enter.

NOTE: Names can include numbers (0-9), lowercase letters (a-z), uppercase letters (A-Z), or the dash (-) symbol, and can be up to 31 characters long. The first character must be a letter. Spaces are not allowed.

5. Double-click the event you added in step 4 to open the Event Properties dialog box.
6. In the Event Type field, select iFIX Compare.
7. In the Computer Name field, enter the name of the iFIX SCADA computer.

NOTE: Machine Edition supports computer names that include numbers (0-9), lowercase letters (a-z), uppercase letters (A-Z), or the dash (-) symbol. If you leave this field blank or

enter a period "." in this field, the event executes on all computers the schedule is run on.

8. In the Project Type field, enter a description.
9. In the Event Trigger field, select Once, Hourly, Daily, Weekly, Monthly, or Manually.

TIP: *Try not start an event exactly on the hour. This is because the Scheduler's AutoRefresh setting overrides any events that take place at the same time. Event execution is suspended while the refresh process takes place. For example, if an event is set to be triggered at 7 a.m. and AutoRefresh is set to 7, the event will not occur. The event is also ignored if the refresh process takes one-and-a-half minutes and the event is set to be triggered at 7:01.*

10. If Manually is not selected, enter a day and time to start the event.
11. Click OK.
12. In the Navigator, right-click Scheduler Event List and select Check In Access Control.

►To add an iFIX Compare and Backup Event:

1. Start Proficy Machine Edition.
2. In the Navigator, right-click Scheduler Event List and select Check Out Access Control.
3. Right-click Scheduler Event List, and click Add.
4. Enter a name, and press Enter.

NOTE: *Names can include numbers (0-9), lowercase letters (a-z), uppercase letters (A-Z), or the dash (-) symbol, and can be up to 31 characters long. The first character must be a letter. Spaces are not allowed.*

5. Double-click the event you added in step 4 to open the Event Properties dialog box.
6. In the Event Type field, select iFIX Compare and Backup.
7. In the Computer Name field, enter the name of the iFIX SCADA computer.

NOTE: *Machine Edition supports computer names that include numbers (0-9), lowercase letters (a-z), uppercase letters (A-Z), or the dash (-) symbol. If you leave this field blank or enter a period "." in this field, the event executes on all computers the schedule is run on.*

8. In the Project Type field, enter a description.
9. In the Event Trigger field, select Once, Hourly, Daily, Weekly, Monthly, or Manually.

TIP: *Try not start an event exactly on the hour. This is because the Scheduler's AutoRefresh setting overrides any events that take place at the same time. Event execution is suspended while the refresh process takes place. For example, if an event is set to be triggered at 7 a.m. and AutoRefresh is set to 7, the event will not occur. The event is also ignored if the refresh process takes one-and-a-half minutes and the event is set to be triggered at 7:01.*

10. If Manually is not selected, enter a day and time to start the event.
11. Click OK.
12. In the Navigator, right-click Scheduler Event List and select Check In Access Control.

Where to Find More Information in the Machine Edition Help

If you want more information on how to work with iFIX in Change Management, refer the following table. This table lists the topics in the Proficy Machine Edition help that you may find helpful when configuring iFIX with the integrated Change Management option.

Task or Topic	Read this Topic...	Search the Online Index for...
Creating Users	"User Properties" "Working with Users"	user
Configuring User Privileges	"Working with Permissions"	permissions
Integrated iFIX Projects	"Working with Integrated iFIX Projects"	iFIX
Understanding Groups	"Groups: An Overview"	groups
Configuring Scheduler Events	"Scheduler Event Properties" "Scheduler Events" "Working with the Event List"	event properties Scheduler
Running the Scheduler	"Running the Scheduler"	Scheduler
Troubleshooting user creation	"Groups, Users, and Permissions: FAQ"	Groups, Users, and Permissions: FAQ
Using Labels	"Using Version Labels"	labeling

Quick Start: Configuring iFIX with Integrated Change Management Support

The following steps provide a quick example of how to get set up iFIX so that you can use it with the integrated Change Management features. There are also steps on the Change Management Server that you need to perform. The configuration steps for iFIX and Change Management include:

- Step 1: Adding a User in iFIX
- Step 2: Enable Security in iFIX

Change Management and iFIX

- Step 3: Set iFIX User Preferences
- Step 4: Add a User and Configure Privileges in Machine Edition
- Step 5: Configure User Privileges in Machine Edition
- Step 6: Add a Schedule in Machine Edition
- Step 7: Restart the iFIX WorkSpace

In these steps, we add a user named PAUL. His password is ge, in all lowercase letters. The user exists on both the iFIX SCADA and on the Change Management Server. iFIX Security is enabled on the SCADA node, and PAUL has access to all iFIX features, including the Change Management feature.

Additionally, PAUL is also an administrator on the Change Management Server. The Administrator group includes privileges for all of the following features used in iFIX: Check In, Check Out, Get, Label, Override Checkout, Change Password, and Edit Project List.

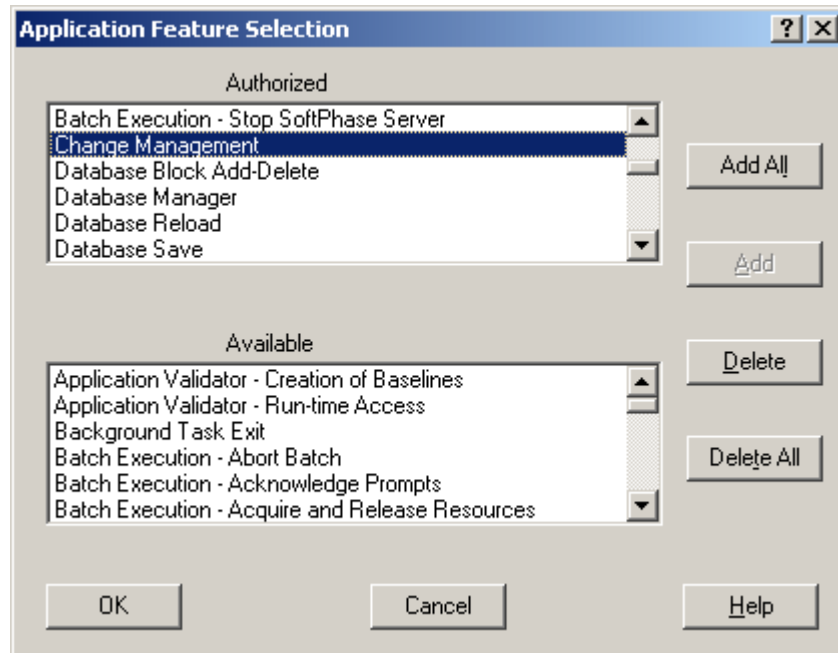
As an Administrator, PAUL can also run schedules. We will schedule an iFIX Backup and Restore event to occur daily, at 11:30 pm, starting next Monday.

When Paul logs in to the Change Management Server when he starts iFIX. No Logon dialog box displays. No iFIX electronic signatures are required to check in files.

These steps assume that you already installed Proficy iFIX, Machine Edition, Change Management, and the Scheduler. You must know the name of your Change Management Server and the name of your iFIX SCADA node to proceed.

Step 1: Adding a User in iFIX

In the following steps, we add an iFIX SCADA user named PAUL with privileges to all iFIX features, including the Change Management feature, as illustrated in the following figure.



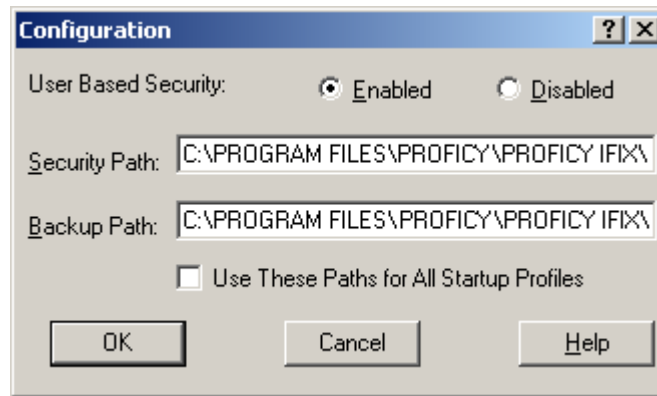
Security Configuration: Application Features for User

►To add a user in iFIX with Change Management capability:

1. Start the Security Configuration application.
2. On the Security toolbox, click the User Account button. The User Accounts dialog box appears.
3. Click Add. The User Profile dialog box appears.
4. Leave the Use the Windows Security check box cleared.
5. In the Full Name field, enter PAUL for the new user account.
6. In the Login name field, enter PAUL.
7. In the Password field, enter ge.
8. Under Application Features, click Modify. The Application Feature Selection dialog box appears.
9. Click the Add All button. All Application Features listed in the Available list box are added to the Authorized list box. This step ensures that the user is an administrator on the SCADA node and has privileges for the Change Management feature.
10. Click OK to save your changes.
11. Click OK.
12. On the File menu, click Save.

Step 2: Enable Security in iFIX

In order to configure User Preferences in the iFIX WorkSpace, you must enable security, as illustrated in the following figure. Without security enabled, you cannot edit the Change Management tab on the User Preferences.



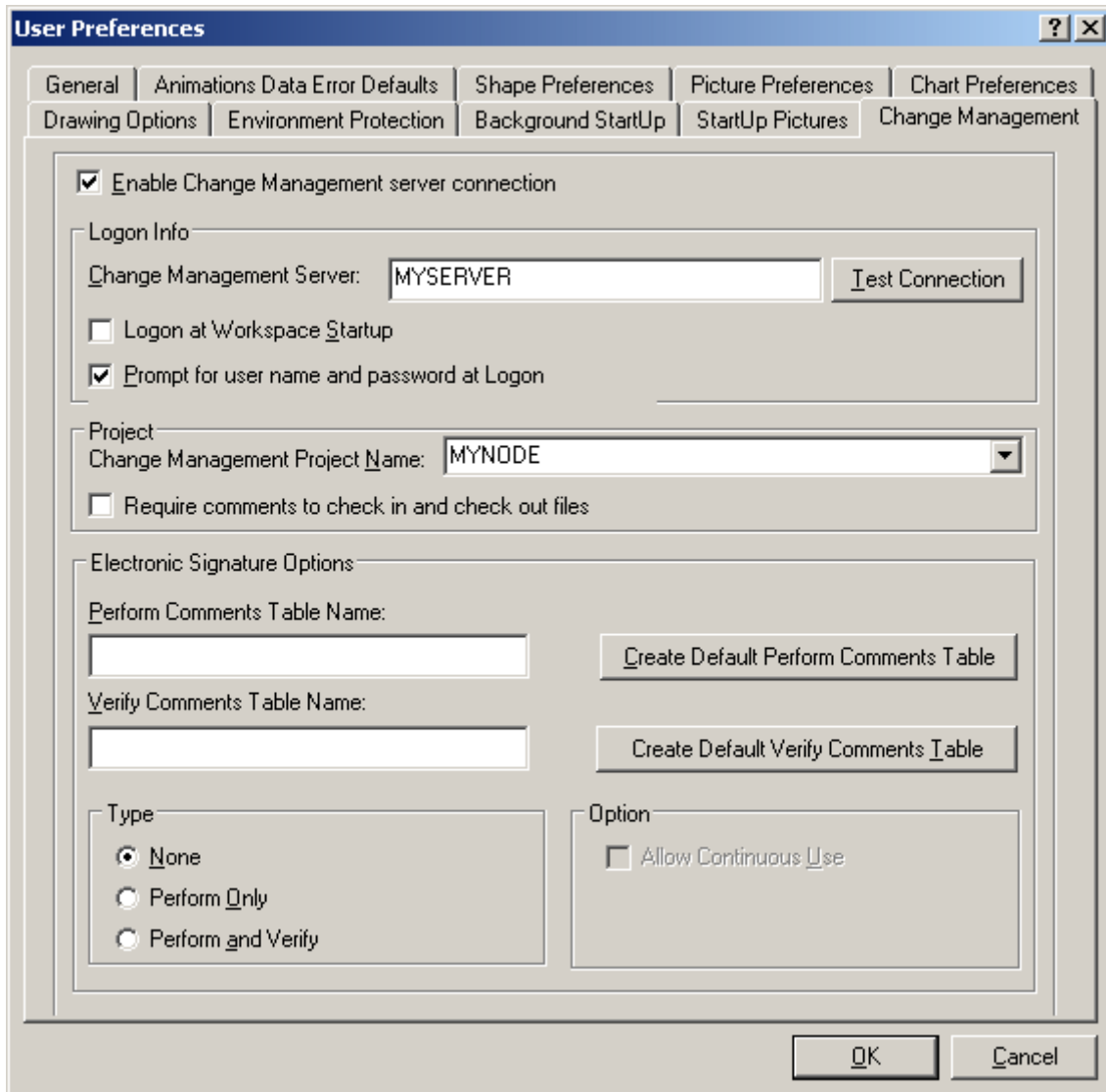
Security Configuration: User Based Security Enabled

►To enable iFIX security:

1. Open the Security Configuration application, if it is not already open. iFIX must be running.
2. Click the Configuration button on the Security toolbox. The Configuration dialog box appears.
3. Select Enabled to enable security.
4. On the File menu, click Save.

Step 3: Set iFIX User Preferences

In the following steps, in the iFIX User Preferences dialog box on the Change Management Server tab, we select the Enable Change Management Server Connection check box to enable the feature. We also specify the Change Management Server name, configure automatic logon when the WorkSpace starts up, and create a project named after the iFIX node name.



iFIX User Preferences

►To enable Change Management User Preferences:

1. Shut down iFIX if it is running.
2. Start iFIX, and the Proficy iFIX WorkSpace.
3. In Classic view, on the WorkSpace menu, click User Preferences.

-Or-

In Ribbon view, on the Home tab, in the Workspace group, click Settings and then click User Preferences.

3. Click the Change Management tab.
4. Select the Enable Change Management Server Connection check box.
5. In the Change Management Server field, enter the name of your server. For instance, if your server was named MyServer, enter MyServer in this field.

Change Management and iFIX

6. Select the Logon at WorkSpace Startup check box.
7. Clear the Prompt for User Name and Password check box, so that you can automatically logon to the Change Management Server when you start the WorkSpace.
8. In the Change Management Project Name field, enter the name of your iFIX project. This can be any name, but typically you want to use the name of your iFIX node.
9. Optionally, if you want to require that the user enter comments when checking in or checking out files, select the Require comments to check in and check out files check box.
10. In the Electronic Signature Options area, select None for the Type.
11. Click OK.
12. Do not restart iFIX yet. Wait until you configure your users in Machine Edition.

Step 4: Add a User and Configure Privileges in Machine Edition

In the following steps, we add a user for Change Management Server, as illustrated in the following figure. The user name is PAUL and the password is ge, which is the identical to the iFIX SCADA user name and password created in the previous set of steps.

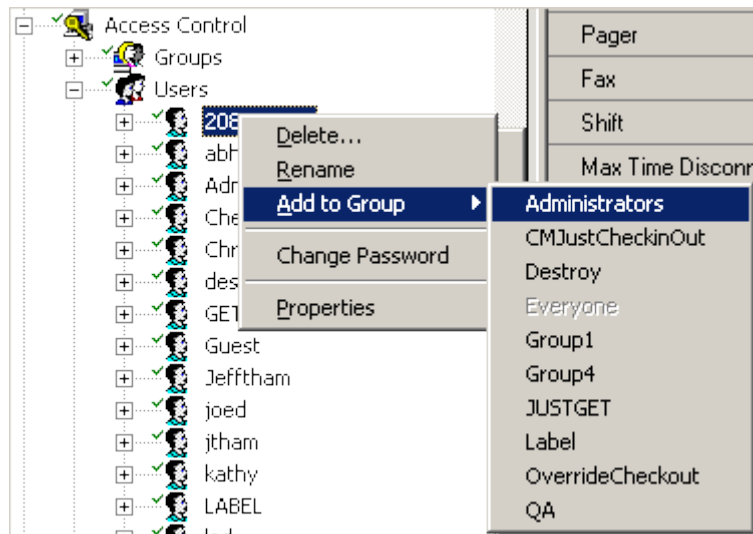


►To add a user for iFIX projects:

1. Start Proficy Machine Edition.
2. In the Navigator, right-click Access Control and select Check Out Access Control.
3. In the Access Control folder, right-click the User folder and select New User.
4. Enter PAUL and press Enter.
5. Right-click the user you just created in step 4, and select Change Password. The Change Password dialog box appears.
6. For the password, enter ge. This password should be in the same case as the iFIX password.
7. Click OK.
8. In the Navigator, right-click Access Control and select Check In Access Control.

Step 5: Configure User Privileges in Machine Edition

In the following steps, we add privileges from the Administrator group to the user that we created, as shown in the following figure. As an Administrator, PAUL will have access to perform the following functions in iFIX: Check In, Check Out, Get, Label, Override Checkout, Change Password, and Edit Project List. This is because the Administrator group includes all of these privileges.

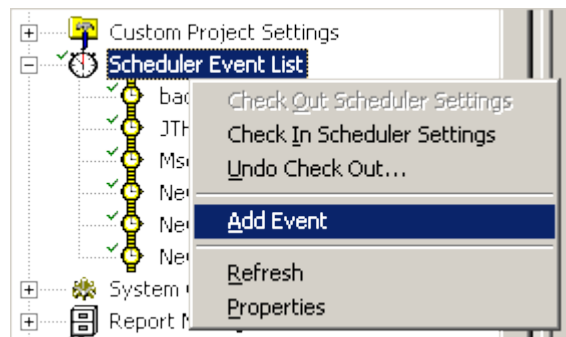


►To configure user privileges:

1. In the Navigator, right-click Access Control and select Check Out Access Control.
2. Double-click the User folder to view all users.
3. Right-click the user named PAUL, and select Add to Group, and then Administrators.
4. In the Navigator, right-click Access Control and select Check In Access Control.

Step 6: Add a Schedule in Machine Edition

In these steps, we lead you through the process of scheduling an iFIX Compare and Backup event, as shown in the following figure. The event will run daily at 11:30 pm, and will start running this Monday.



When an iFIX Compare and Backup event runs, Machine Edition checks if your local iFIX project files are different from the ones on the Change Management Server. If the ones on your local drive are newer, these files are checked in. This option is available only for iFIX 4.0.

If you want to run either of the "iFIX Compare" or the "iFIX Compare and Backup" event, you must have the Proficy Machine Edition Client and Scheduler Components installed on your SCADA Server. These install programs are *not* found on the iFIX product DVD. You need to install them from the Proficy Machine Edition CD.

►To add an iFIX Compare and Backup Event:

1. Start Proficy Machine Edition.
2. In the Navigator, right-click Scheduler Event List and select Check Out Access Control.
3. Right-click Scheduler Event List, and click Add.
4. Enter a name, and press Enter.

NOTE: Names can include numbers (0-9), lowercase letters (a-z), uppercase letters (A-Z), or the dash (-) symbol, and can be up to 31 characters long. The first character must be a letter. Spaces are not allowed.

5. Double-click the event you added in step 4 to open the Event Properties dialog box.
6. In the Event Type field, select iFIX Compare and Backup.
7. In the Computer Name field, enter the name of the iFIX SCADA computer.

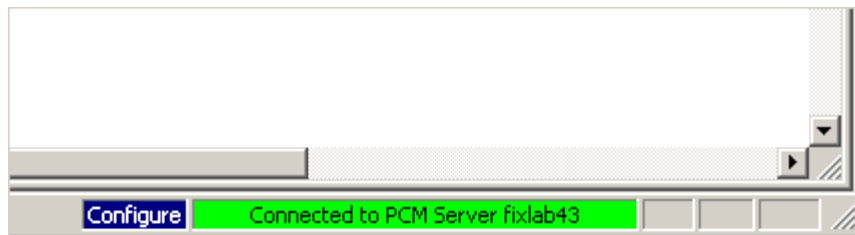
NOTE: Machine Edition supports computer names that include numbers (0-9), lowercase letters (a-z), uppercase letters (A-Z), or the dash (-) symbol. If you leave this field blank or enter a period "." in this field, the event executes on all computers the schedule is run on.

8. In the Project Type field, enter a description.
9. In the Event Trigger field, select Daily.
10. Configure the event to run daily at 11:30 pm, starting this Monday.
11. Click OK.
12. In the Navigator, right-click Scheduler Event List and select Check In Access Control.

Step 7: Restart the iFIX WorkSpace

After you finish configuring iFIX and Change Management, you can test your configuration. To do this, restart the iFIX. When iFIX starts, logon the user named PAUL. Start the iFIX WorkSpace. The Change Management Server should automatically log you in.

You are now ready to use Change Management features from within the iFIX WorkSpace. For tips on how to get started, refer to the Quick Tour: Using Proficy Change Management Features in iFIX section.



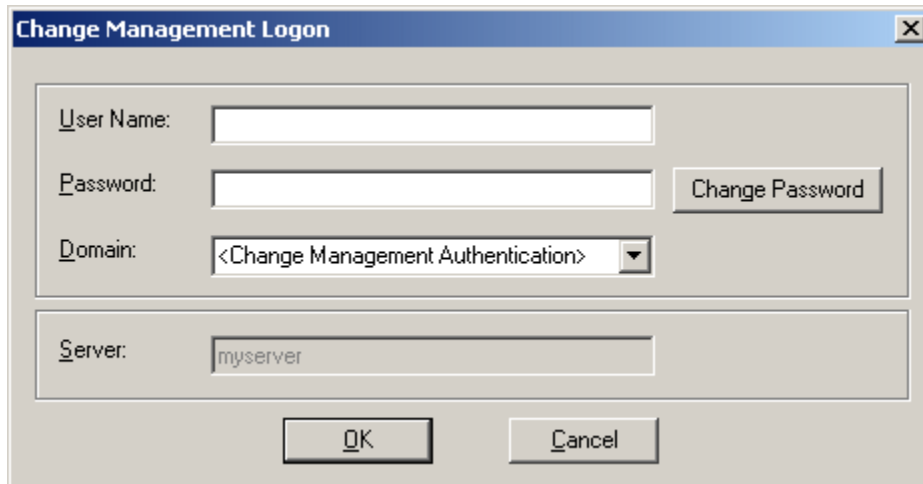
Quick Tour: Using Proficiency Change Management Features in iFIX

The following sections describe how to get started with Change Management features in iFIX, after you configure the iFIX WorkSpace and Proficiency Change Management Server. It provides information on the following functions:

- Logging In
- Viewing the Connection to the Change Management Server
- Using Change Management Features in iFIX
- Adding Files
- Checking Out Files
- Checking In Files
- Understanding Electronic Signatures
- Using the Change Management History Window

Logging In

To log in to the Change Management Server from iFIX, you do so at startup, or by simply right-clicking the node name, pointing to Manage, and selecting Logon. If the Logon dialog is configured to display, it appears as shown in the following figure.

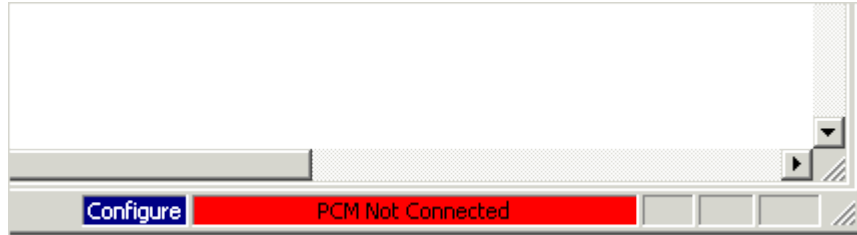
The image shows a Windows-style dialog box titled "Change Management Logon". It has a blue title bar with a close button (X) on the right. The dialog contains several input fields and buttons. The "User Name:" field is empty. The "Password:" field is empty, and there is a "Change Password" button to its right. The "Domain:" field is a dropdown menu showing "<Change Management Authentication>". The "Server:" field contains the text "myserver". At the bottom of the dialog are two buttons: "OK" and "Cancel".

Change Management Logon Dialog Box from the iFIX WorkSpace

For more information on how to configure logon options, refer to the Overview of iFIX Configuration Steps and Automatic Logon to the Change Management Server sections.

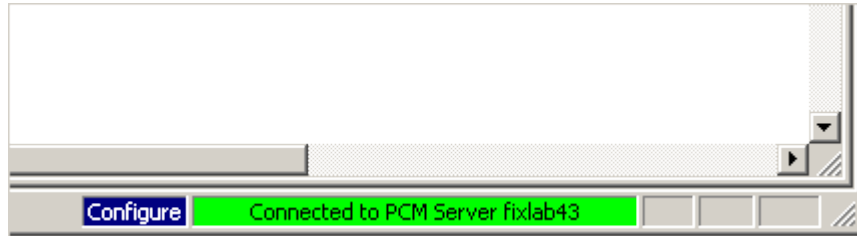
Viewing the Connection to the Change Management Server

If you are not logged into the Change Management Server, the iFIX WorkSpace displays: PCM Not Connected. The status area displays in red, as shown in the following figure.



Change Management Server Not Connected

After you successfully log into the Change Management Server, the iFIX WorkSpace displays: Connected PCM Server *ServerName*. *ServerName* is the actual Proficy Change Management Server's name. The status area changes to green, as shown in the following figure.

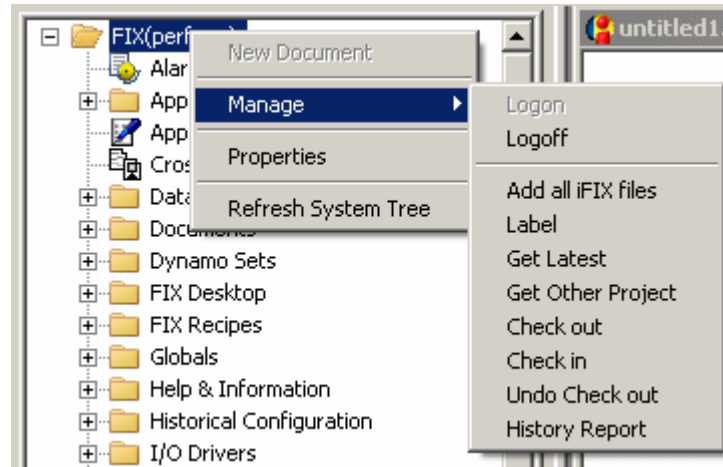


Change Management Server Connected

Once the status area changes to green, you can begin using Change Management features in the iFIX WorkSpace.

Using Change Management Features in iFIX

In Classic view, to access Change Management features in the iFIX WorkSpace environment, you use the right-click menu on the WorkSpace system tree, as illustrated in the following figure.



Using Change Management Functions in the iFIX WorkSpace

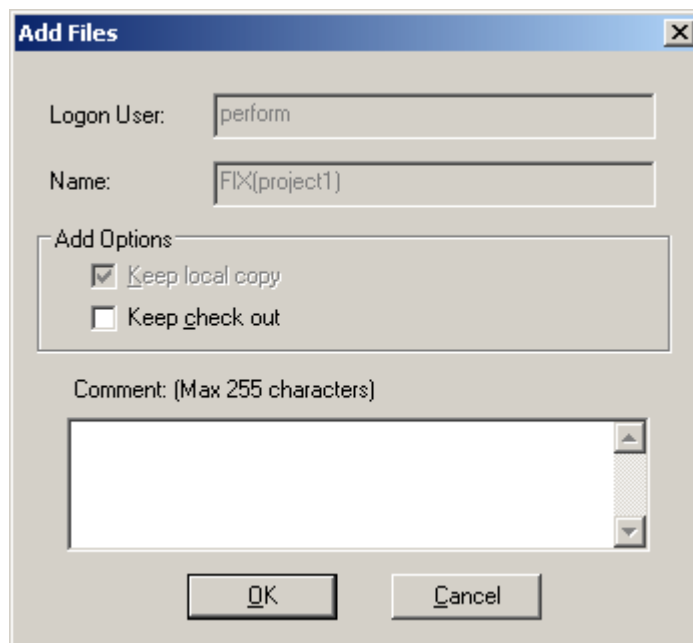
In Ribbon view, you may access Change Management features in the same way as in Classic view or you may access *project level* file operations via the ribbon on the Administration tab, in the Proficy Change Management group.

In both Classic and Ribbon views, you must be logged into the Proficy Change Management Server in order to view the Change Management commands.

For more information on how to use the Change Management right-click menu command in the iFIX WorkSpace, refer to the Using Change Management from the iFIX WorkSpace section.

Adding Files

To add a file or files to the Change Management Server, in the iFIX WorkSpace tree right-click the file, folder, or project you want to add, then select Manage and then Add (or "Add All Files in Project" for a project). The Add Files dialog box appears, as shown in the following figure. Click OK to add your file or files.



You can enter a comment, as well as choose whether you want to keep the local copy checked out and/or writable. The Keep Local Copy check box is unavailable for projects; by default, this check box is selected for projects.

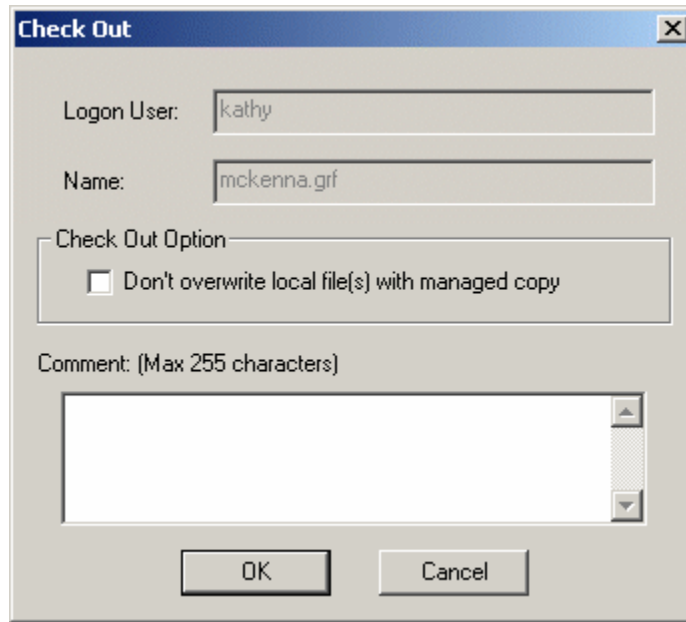
***NOTE:** Files from a remote location cannot be added to your Change Management project, unless you map a drive to that location. Additionally, security files that point to a remote security path or non-local iFIX path cannot be added to the Change Management Server. Make sure that the primary and backup security paths in the Security application's Configuration dialog point to the iFIX Local folder. For instance, if you install iFIX to the default folder, the paths should both be: C:\Program Files\Proficy\Proficy iFIX\LOCAL.*

Checking Out Files

The Check Out option from the Manage menu allows you to lock a file, folder, or project from the Change Management Server. Another logged in user cannot modify that item or items until you check the specified item or item back in.

Optionally, if the file or folder on your local computer is newer than the one in the Change Management Server, you can leave the local copy of the file or folder and still lock the files on the Change Management Server with the Check In – so that no one else can edit them.

To check out a file or folder from the Change Management Server, in the iFIX WorkSpace system tree, right-click the file, folder, or project that you want to check out, and on the Manage menu, select Check Out. The following figure displays an example of the Check Out dialog box.



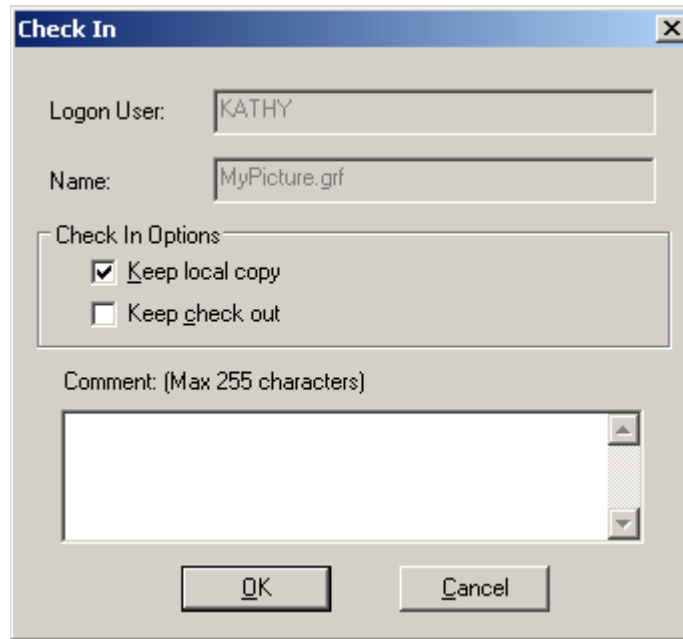
To copy files when checking out, clear the Don't overwrite local file(s) with managed copy check box in the Check Out dialog.

Optionally, in the Comment text box, enter a comment. The comment can be no longer than 255 characters. The comments you enter are recorded on the Change Management Server. If comments are required, the OK button in this dialog box does not become available until you enter a comment. Comments are required when you enable it in the iFIX User Preferences dialog box, on the Change Management tab, by selecting the Require Comments to Check In and Check Out Files check box.

Checking In Files

The Check In option from the Manage menu allows you to copy a file, folder, or project from your local SCADA to the Change Management Server. After you perform Check In command, that file, folder, or project is available so that another user can work on that file, folder, or project.

To check in a file or folder to the Change Management Server, in the iFIX WorkSpace system tree, right-click the file, folder, or project that you want to copy to the Change Management Server, and on the Manage menu, and select Check In. The following figure displays an example of the Check In dialog box.



IMPORTANT: You must perform a Check Out (copy a writable version of the file, project, or folder from the Change Management Server to your computer), before you can perform a Check In (copy your version of the file, project, or folder from your computer back to the Change Management Server).

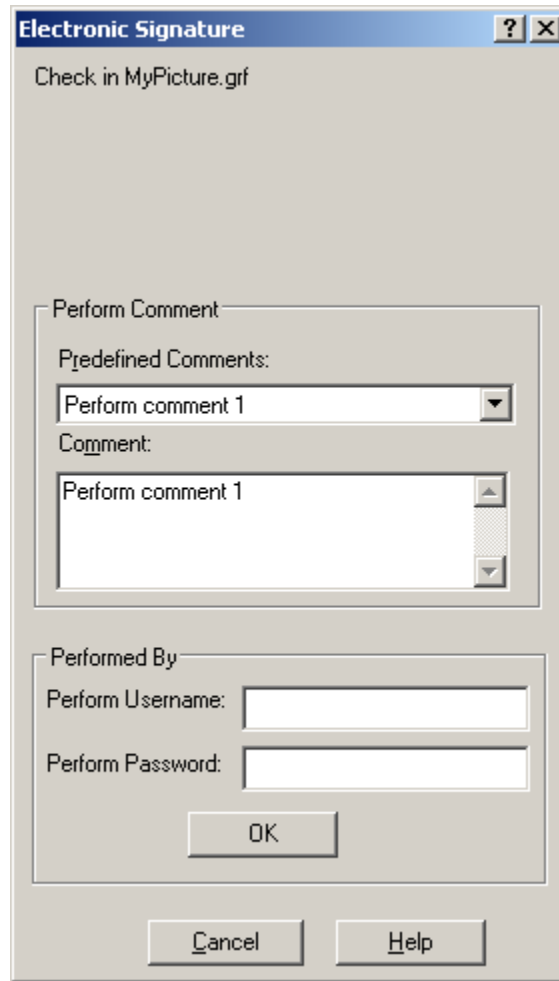
Optionally, in the Comment text box, enter a comment. The comment can be no longer than 255 characters. The comments you enter are recorded on the Change Management Server. If comments are required, the OK button in this dialog box does not become available until you enter a comment. Comments are required when you enable it in the iFIX User Preferences dialog box, on the Change Management tab, by selecting the Require Comments to Check In and Check Out Files check box.

Optionally, you can also select the Keep Local Copy check box, if you want to keep a writable version of the project files on your local computer (by default, this check box is selected). Otherwise, clear the Keep Local Copy check box to remove the local files after you add them to the Change Management Server.

Understanding Electronic Signatures

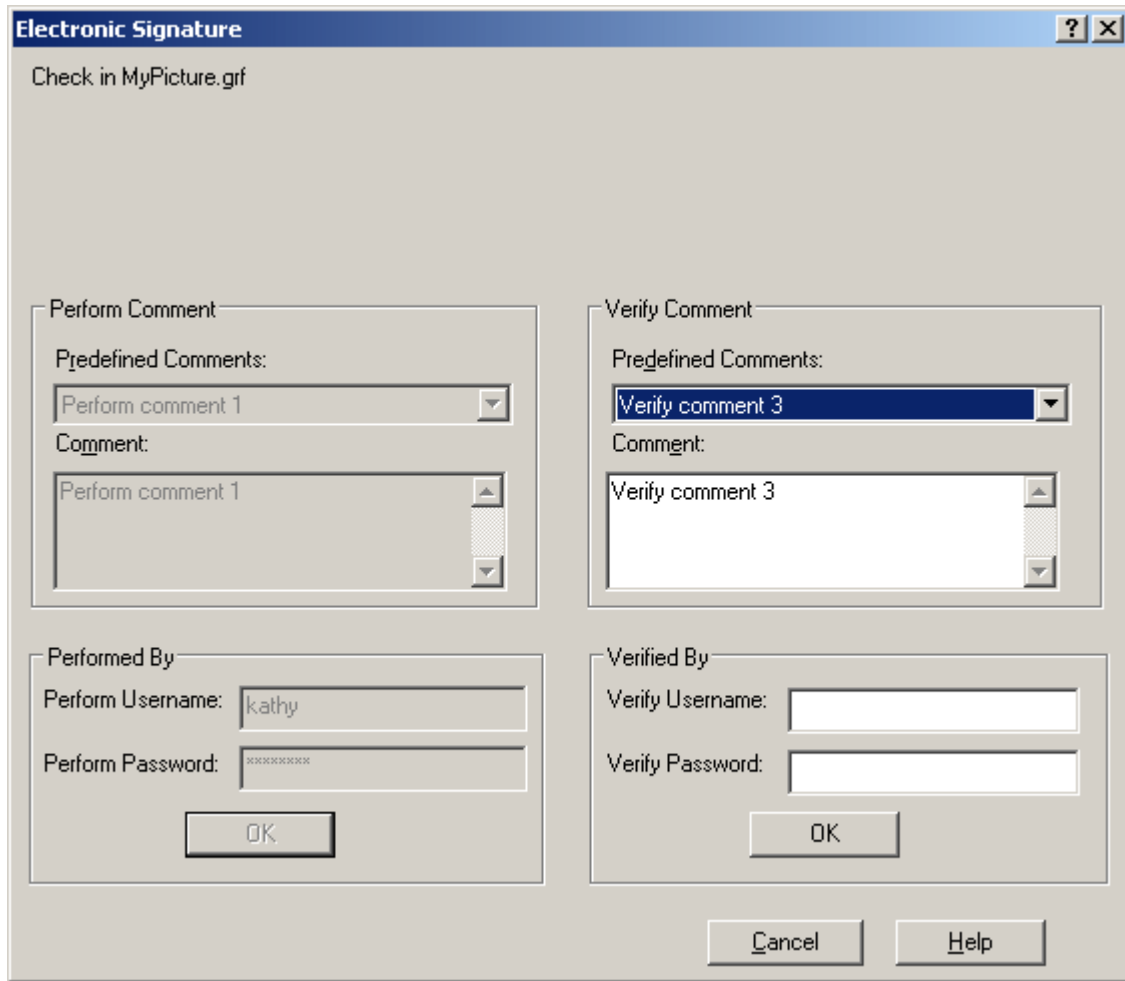
When checking out and checking in files to the Change Management Server, you can optionally specify that the user provide one or more iFIX electronic signatures before a file is overwritten on the Change Management Server.

When you check out or check in a file, the Electronic Signature dialog box appears first. If only a Perform signature is required, the following Electronic Signature dialog box appears:



Electronic Signature Dialog Box – Perform

If Perform and Verify signatures are required, the following Electronic Signature dialog box appears instead:



Electronic Signature Dialog Box – Perform and Verify

These Electronic Signature dialog boxes are the same ones used by the iFIX product in other areas, and work the same way.

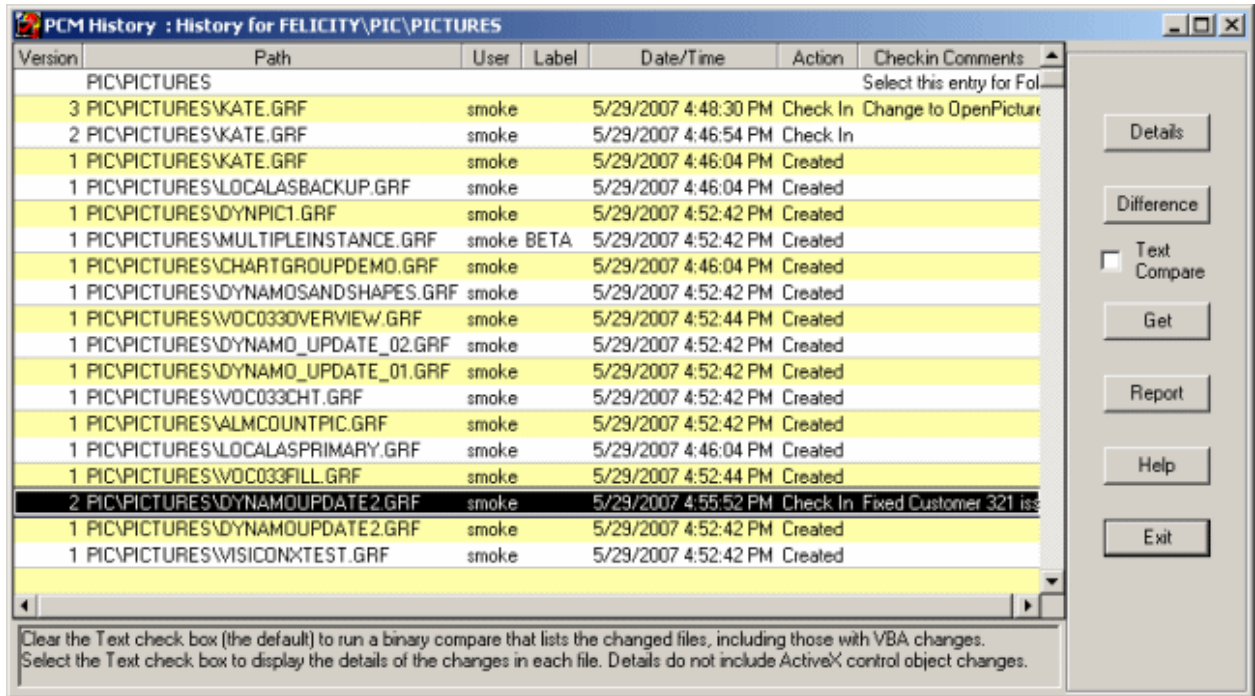
After the Electronic Signature dialog box appears, and the signatures have been accepted, the Check In/Out dialog box appears.

For more information on using iFIX electronic signatures and Change Management, refer to the iFIX Electronic Signatures and Change Management and Comment Tables, Electronic Signatures, and Change Management sections.

Using the Change Management History Window

The Proficy Change Management (PCM) History window allows you to view the revision history of a file, folder, or project. You can also compare different versions of the same file or folder in the Change Management Server, or even compare versions on the Server with the ones stored on your local computer.

You open the PCM History window by right-clicking a file, folder or project in the iFIX WorkSpace system tree, pointing to Manage, and then clicking History Report. The following figure is an example of the window that appears.



PCM History Window

For more information on using the PCM History window, refer to the History Report and Understanding the Proficy Change Management History Window sections.

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