

iFix and Terminal Services

A Deployment Guide



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iFix and Terminal Services

1. Introduction

iFix is a SCADA (System Control and Data Acquisition) software. It was developed by Intellution and is now part of the GE Fanuc Proficy series of industrial software.

This tech note is a simplified deployment guide for ThinManager users. Although it was prepared with the help of iFix users and specialists, it is a mere aid and not the definitive source for information. **Please refer to official iFix documentation for questions and details.**

A special thanks goes to Scott Crider of Advantage Industrial Automation.

1.1. Topics

- Network Configuration
- Deployment Choices
- Microsoft Pre-planning
- iFix Installation
- iFix Licensing
- iFix System Configuration
- Profile Manager
- Launching from within ThinManager
- Additional Microsoft Configurations

2. Network Configuration

IFix is designed to pull data out of PLCs and factory-level sensors, present the data in a form usable by humans, and save the data for further usage. iFix is designed to function with a "two-box" system.

- The first box is a **SCADA** (Systems Control And Data Acquisition) computer. This is a PC that gathers the I/O and data from the PLCs and machinery and runs the iFix database. This computer provides the data and values to the system.
- The second box is a **View Node**. This is a computer that pulls the data from the SCADA node and displays it on screens for the operator.

In a terminal services environment the terminal server acts as the View node. Each client that connects to a terminal server will start a session and launch a view node



within the session. The sessions on the terminal server run the operator screens populated with data from the SCADA node.



iFix Thin Client Network

Sample iFix Network with Thin Clients

In a ThinManager system dual terminal servers can be setup to provide redundancy and failover. This allows the operator screens to keep running with current data if a terminal server fails.

Details about failover can be found on our Failover Tech Note at http://www.thinmanager.com/TechNotes/Failover/Failover_main.shtml .



3. Deployment Choices

How iFix will be deployed and used influences how iFix is configured.

- **Generic Deployment Model** All users use a common SCU file to launch a commonly configured application.
- **Specialized Deployment Model** Each user runs a unique environment and each user requires a specially configured SCU file.

This article will assume a generic deployment but will point out where changes need to be made to deploy a specialized configuration.

The generic deployment can be designed to launch a Main Menu with navigational buttons to allow the user to select the needed screens or the welcome screen can have scripts added that launch the desired screens based on the node name of the client.

Consult your iFix documentation for details.



4. Microsoft Pre-planning

There are a few configuration changes that iFix may require on the Microsoft operating system, especially if legacy applications are needed to be upgraded to run on the new system. Consult your iFix documentation for details.

4.1. Relaxed Security

IFix requires the Relaxed Security setting. This can be applied by opening the **Terminal Services Configuration** console by selecting *Start> Programs> Administrative Tools> Terminal Services Configuration*. Select the **Server Setting** folder and change the **Permission Compatibility** setting to *Relaxed Security*.



Terminal Services Configuration – Server Settings

See

http://www.thinmanager.com/TechNotes/Microsoft/WindowsTips_main.shtml#open for details.



4.2. Disable DEP (Data Execution and Prevention

The DEP may need to be disabled for the terminal server to recognize USB license keys. The iFix documentation says:

"iFIX Does Not Start After Install Due to DEP Access Restriction (Proficy HMI/SCADA – iFIX Release Notes VERSION 4.0)

"When you start iKeyDiag or iFIX 4.0 for the the first time, an access violation may occur. You will not be able to start iFIX. This can occur due to hardware enforced DEP (Data Execution Protection) settings within Windows Server 2003 SP1 or Window XP SP2. To remedy this issue, you can selectively add the iFIX program to the DEP exception list or shut down the feature. iFIX will then run normally. For more information, refer to "DEP Support Statement For GE Fanuc Products Using Proficy Common Licensing" article on the GlobalCare site for more information:

http://globalcare.gefanuc.com/kc/kb/glbCarekbinfo.asp?objid=1553203&id=2 68450132 "

- iFix Documentation

Right Click on the **My Computer** Icon and choose *Properties*. Select the *Advanced* tab, then the *Settings* button in the **Startup and Recovery** section. Select the (manual) *Edit* button on the **Startup and Recovery Properties** Window.

Set the bootloader information to:

[boot loader]

timeout=30

default=multi(0)disk(0)rdisk(0)partition(1)\WINNT

[operating systems]

multi(0)disk(0)rdisk(0)partition(1)\WINNT="Windows Server 2003, Standard"
/fastdetect /NoExecute=alwaysoff

4.3. Application Compatibility Script

The following information is from the iFix e-books under <u>Installing and Configuring</u> <u>iFIX with Windows Terminal Server.</u> Also as a separate Document, it can be found at

C:\Program Files\GE Fanuc\ProficyDoc\1033\iFIX**TM.CHM**

Before you begin installing and configuring iFIX on a Terminal Server, it is recommended that you complete the following Windows administrative tasks:

- Run chkroot.cmd from the C:\Windows\Application Compatibility Script folder. This creates the RootDrv2.cmd file.
- In Notepad or another text editor, open the RootDrv2.cmd file from the C:\Windows\Application Compatibility Script folder. At the end of the file, on the Set RootDrive= line, add a driver letter. For example: Set RootDrive=W:
- Save the RootDrv2.cmd file.
- Run the RootDrv2.cmd file.

Verify that your Terminal Server is set up and functioning.



5. IFix Installation

The iFix software, like all software, should be installed on a terminal server in the **Install Mode**. Do this by selecting *Start > Settings > Control Panel > Add/Remove Programs > Add New Programs* and follow the installation wizard.

Proficy H	MI/SCADA - iFIX 4.0
i	Terminal Serverices is enable on this machine.Please verify that this install program was started using the Add/Remove programs control panel control.
	OK

Terminal Services Installation Warning

A warning will be displayed if you try to install on a terminal server without using the **Add/Remove Programs** function.

Proficy HMI/SCA	DA - iFIX 4.0	×
Setup Type Select the setu	up type to install.	
Please select a	a setup type.	
Complete	All program features will be installed. (Requires the most disk space.)	
C Cu <u>s</u> tom	Select which program features you want installed. Recommended for advanced users.	
InstallShield	< <u>B</u> ack <u>N</u> ext > Cancel	

Setup Type Window

During the install a Setup Type window will be displayed.

The Complete selection is the normal choice unless the install is going to run Fix32 graphics using the Fix Desktop.



Proficy iFIX Configure	Wizard 🗙
Node Name	
NodeName: Fl	×
Node Type	
🔿 SCADA	 View
Connectivity	
Networked	Stand Alone

Proficy iFix Configure Wizard

Proficy iFix Configure Wizard allows the terminal to be configured as a *View Node*. It also will be Networked, as shown in the picture.

The **SCADA** radio button will be selected when installing the SCADA node of the system.

The *NodeName* can be left as the default.

Remote SCADA Node List
Enter a remote SCADA node name:
List of remote SCADA nodes:
Add
Delete
<u>D</u> K. <u>S</u> kip

Remote SCADA Node List

The **Remote SCADA Node List** allows the SCADA nodes to be identified. This can be done now or later in the SCADA section of the Systems Configuration Utility.

5.1. Restart after Installation

Do not do an automatic restart at the end of the installation on a Windows 2003. Instead let the installation finish and then restart the computer manually. This allows the completion of the full install.



6. iFix Licensing

The iFix installation on the terminal server should be licensed before configuration begins. Consult your iFix documentation for details.

The License Viewer can be launched by selecting *Start>Programs > Proficy Common > License Viewer*.

🤣 M4 License Viewer		. 8 ×
Show All Save	Print	<u>About</u>
Proficy Products	License Key Diagnostics	
	License Key Information	^
Motion Developer	Customer Service Number:Customer Name 12345678 : ACP License Serial Number 22334455	
	Key Expiration Thursday, November 15, 2007 License Creation Friday, June 15, 2007	
	License Key Version 2	
Logic Developer PC	License Type Hardware	
	iFIX	
View Developer	License Expiration No Expiration	
	Licensed Version 4	
토	Number of Terminal Server Connections 10	
	Number of Unit Blocks 0	
Change	Process Database Size 0	
Management	Number of Drivers Allowed 8	
	Number of OPC Connections 4	
	Options	
IFIX	SCADA Node with Baseline Blocks Enabled	
	SCADA SQC Enabled	
	SCADA Batch Enabled	
	SCADA Control Enabled	
Batch Execution	Networking Enabled	
Daten Execution	Historical Trend Recording Enabled	
	ODBC Drivers Enabled	
	Recipies Enabled	-
🍂 Start 🛛 🚱 🏉 👘	🖾 Command Prompt 🔰 D:\Downloads\iFixUpd 🗁 D:\iFix_Documentation 💀 M4 License Viewer 🛃 🗞 10	:51 AM

License Viewer

The **Proficy License Viewer** will display the number of terminal connections that the license allows along with other details.



6.1. Virtual Keyboard

iFIX provides a virtual keyboard that allows you to work in touch-screen environments or to use a mouse to enter passwords and other data. Install the virtual keyboard on the terminal server to make it available to each client licensed for iFIX.

To install the virtual keyboard:

- Double-click the **LICENSE.EXE** file in the Proficy iFIX directory on your terminal server. The IMG License Manager dialog box appears.
- Click Install Service to install the virtual keyboard licenses.
- Click *Administration Options & Help*. The **Terminal Server Administration Option** dialog box opens.
- Click Copy Global Settings to All User Folders, then click Yes to confirm.
- Click **OK** to return to the **IMG License Manager** dialog box.
- Click Start Service to activate the virtual keyboard for all licensed clients.



7. iFix System Configuration for Terminal Services

iFix is configured with the System Configuration Utility (SCU). The SCU tool allows the selection of startup options and file directories.

In iFix 3.0 and earlier, each terminal server user had to have a separate SCU (System Configuration Utility) file to allow each user to launch a unique instance of the program. The System Configuration Utility could be run once, then copied into a folder for each user. An additional IP address was need per session.

In iFix 4.0, a **Profile Manager** speeds the configuration process by allowing user settings to be based on the original configuration.

- If deploying using the Generic Deployment model create one SCU file in the SCU program and then use the Profile Manager to define the additional nodes.
- If deploying using the Specialized Deployment model create a SCU file for each node to define to program.



7.1. Launch iFix

The first step to configuration is verifying that iFix was installed properly and will run.

Launch the iFix workspace by selecting *Start>Programs > Proficy HMI SCADA – iFix 4.0 > iFix 4.0*. It will launch the **Proficy iFix Startup** program.

🔮 Proficy iFIX	Startup		×
- Proficy iFIX-	itart Proficy i <u>F</u> IX wi Node Name: SCU File: Description:	th these settings: FIX C:\Program Files\GE Fanue\Proficy iFIX\LOQ Configuration File for Node FIX	AL\FIX.S 💌
- Sample Syste	m		
SCU F	itart the <u>S</u> ample Sy Proficy iFIX wi capabilities. Run the System Co Allows you to	ustem Il run using a special set of files designed to der nfiguration Utility configure the iFIX system.	nonstrate it's
Desktop Sho	rtcut		
	reate a desktop s Create a short	hortcut cut on your desktop using the settings listed ab	ove.
Don't show	this dialog box ag	ain; always start Proficy iFIX.	Exit

Proficy iFix Startup Window

Select the icon in the **Proficy iFix** section to launch the workspace to make sure that iFix will run.



Proficy iFIX WorkSpace (Config	ure)		_ 🗆 ×
File Edit WorkSpace Object View	v <u>I</u> nsert Forma <u>t W</u> indow <u>H</u> e	lp	
ਫ਼₽₽₽₽₽₽	<u>z181< % 4 A </u>	▌ॾॾऄढ़ऻॶॾॕॎॗक़ॾॎॵॳॱॠॾॾऻ	9, 🔁 👬 🖏 🖶 💆
FIX Application Support File Application Validator Cross Reference Tool Database Documents Dynamo Sets FIX Recipes Globals Help & Information Historical Configuration Picture Support Files Picture Support Files Picture Support Files Picture Support Files Schedules Schedules System Configuration Tag Group	Toolbox X Image: Second sec	Configure PCM Disabled	
			1 1 1 14

iFix Workspace

Once you have verified that the iFix workspace will run it can be closed.

Launch the SCU tool by selecting *Start>Programs > Proficy HMI SCADA – iFix 4.0 > System Configuration*. It will launch the **Proficy iFix Startup** program.



Proficy iFIX S	tartup		×
Proficy iFIX — Sta	rt Proficy i <u>E</u> IX w Node Name: SCU File: Description:	ith these settings: FIX C:\Program Files\GE Fanue\Proficy iFIX\LOI Configuration File for Node FIX	Callyfix.s 💌
Sample System Sta	rt the <u>S</u> ample S, Proficy iFIX w capabilities. n the System Co Allows you to	ystem ill run using a special set of files designed to de onfiguration Utility configure the iFIX system.	emonstrate it's
Desktop Shortc	ut ate a desktop s Create a shori is dialog box ag	hortcut tout on your desktop using the settings listed a ain; always start Proficy iFIX.	bove. Exit

Proficy iFix Startup Window

Select the icon in the **SCU** section to launch the SCU tool.

An **iFix System Information** window will be launched to allow the path to the SCU files to be chosen.

iFIX System Information	×
Enter the SCU file you want to configure. Since Windows Terminal Services are enabled on this machin exist. If you do not want to edit an existing SCU file, cancel or	e, multiple SCU files may ut of this dialog.
SCU Path : C:\Program Files\GE Fanuc\Proficy iFIX\LOC OK Cancel	AL\FIX Browse

iFix System I	nformation
---------------	------------

The default path is normally fine. Select the *OK* button to proceed.





System Configuration Utility

The System Configuration Utility (SCU) allows the components of the project to be defined.



7.2. SCADA Configuration

SCADA node configuration is managed by selecting *Configure > SCADA...* in the System Configuration Utility (SCU) to launch the **SCADA Configuration**.

CADA Configuration	
SCADA Support Database Definition	
C Enable C Disable Database Name: DATABASE ?	
I/O Driver Definition	
I/O Driver Name: ?	
Configured I/O Drivers	
Add	
Configure	
Setup	
Delete	
Partner SCADA	
SCADA Name:	
OK Cancel Help	

SCADA Configuration

The terminal server is not a SCADA node so the *SCADA Support* should be disabled on the terminal server. The other features will be grayed out.

When configuring the SCADA node the SCADA Support is enabled and the database and I/O drivers can be defined.

Select **OK** to accept the configuration.



7.3. Path Configuration

Select *Configure > Paths* in the System Configuration Utility (SCU) to configure the file locations.

Path Configuration		×
Path	Location of System Software and Data Files	
Base:	C:\PROGRAM FILES\GE FANUC\PROFICY IFIX	?
Language:	C:\PROGRAM FILES\GE FANUC\PROFICY IFIX\NLS	?
	Location of Project Files	
Project:	C:\PROGRAM FILES\GE FANUC\PROFICY IFIX	?
Local:	C:\PROGRAM FILES\GE FANUC\PROFICY IFIX\LOCAL	?
Database:	C:\PROGRAM FILES\GE FANUC\PROFICY IFIX\PDB	?
Picture:	C:\PROGRAM FILES\GE FANUC\PROFICY IFIX\PIC	?
Application:	C:\PROGRAM FILES\GE FANUC\PROFICY IFIX\APP	?
Historical:	C:\PROGRAM FILES\GE FANUC\PROFICY IFIX\HTR	?
Historical Data :	C:\PROGRAM FILES\GE FANUC\PROFICY IFIX\HTRDATA	?
Alarms:	C:\PROGRAM FILES\GE FANUC\PROFICY IFIX\ALM	?
Master Recipe:	C:\PROGRAM FILES\GE FANUC\PROFICY IFIX\RCM	?
Control Recipe:	C:\PROGRAM FILES\GE FANUC\PROFICY IFIX\RCC	?
Alarm Areas (AAD):	C:\PROGRAM FILES\GE FANUC\PROFICY IFIX\PDB	?
Change Base	Change Project OK Cancel Help]

Path Configuration

The defaults are usually fine for the Generic Deployment Model.

If this system will use the Specialized Deployment Model then the **Local** path will need to point to where the SCU file will be stored.



7.4. Network Configuration

Select *Configure > Network* in the System Configuration Utility (SCU) to configure the network.

Network Configuration				
Network	Options			
○ No Network <u>S</u> upport	Dynamic Connections			
○ <u>N</u> etBIOS	Enforce Trusted Computing			
• <u>T</u> CP/IP	Network Password: INETWORK			
	Advanced			
Remote Nodes				
Remote Node Name:				
Configured Remote Nodes:				
	∆dd			
	<u>M</u> odify			
	Delete			
	<u></u> 01040			
	Configure			
✓ Show All Names				
<u>0</u> K	<u>C</u> ancel <u>H</u> elp			

Network Configuration

The Network configuration window allows the network and SCADA nodes to be defined.

Select the *TCP/IP* radio button for the **Network**.

The SCADA servers are defined by entering their name in the *Remote Node Name* filed and selecting the *Add* button.



etwork Configuration				
Network	Options			
○ No Network <u>S</u> upport	Dynamic Connections			
○ <u>N</u> etBIOS	Enforce Trusted Computing			
• <u>T</u> CP/IP	Network Password: INETWOR	١ĸ		
	Advanced			
Remote Nodes				
Remote Node Name:	TANK_IO			
Configured Remote Nodes	:			
IFIX_I0	Δ	hh		
Primary: BROWN				
TANK IO	<u>M</u> o	dify		
	<u>D</u> e	lete		
	Confi	aure		
☑ Show A <u>l</u> l Names				
<u>0</u> K	<u>C</u> ancel <u>H</u> elp			

Defined SCADA Nodes

If a SCADA node has a backup SCADA server it can be defined by highlighting the SCADA node and selecting the *Configure* button.



SCU	Network Configu	ration		. 🗆 🗙
<u>File</u> <u>C</u> c	Network		Options	<u>H</u> elp
	O No Netwo	rk <u>S</u> upport	Dynamic Connections	
_	○ <u>N</u> etBIOS		Enforce Trusted Computing	
	• <u>T</u> CP/IP	emote Node Conf	figuration	
	Remote Ni Remote N Configured IFIX_IO Primal Backu TANK_IO	Redundancy ✓ Enable L Logical Primary Backup <u>OK</u> Names	Logical Node Names Node: TANK_IO Node: TANK_IOA Node: TANK_IOB fy Timers Cancel Help re	

Remote Node Configuration

The Primary and Backup SCADA servers that make up the node can be entered to form a logical node. Select *OK* to accept changes.



etwork Configuration			
Network	Options		
○ No Network <u>S</u> upport	🗖 Dynamic Connectio	Ins	
○ <u>N</u> etBIOS	Enforce Trusted Computing		
⊙ <u>T</u> CP/IP	Network Password: INETWORK		
	Advand	ced	
Remote Nodes			
Remote Node Name:	FIELD_IO		
Configured Remote Nodes	:		
IFIX_IO		Add	
Backup: SILVER		Modify	
TANK_IO		mouny	
Primary: TANK_IOA Backup: TANK_IOB		<u>D</u> elete	
FIELD_IO		Con <u>f</u> igure	
Show All Names			
04	Cancel	Help	

Configured Remote Nodes

When all the SCADA nodes used by the View nodes are defined select OK to accept the changes.

Save the SCU file by selecting *File > Save* or using *CTL+S*.

Note: Saving the SCU file is important.



8. Profile Manager

Once a SCU file is created and saved it can be applied to many nodes with the Profile Manager.

Note: The Windows user accounts must be created before configuring users in the Profile Manager.

iFix must be running to launch Profile Mananger. Select *Start>Programs > Proficy HMI SCADA – iFix 4.0 > iFix 4.0* to launch the **Proficy iFix** workspace.



iFix Workspace

Launch Profile Manager by selecting the **Profile Manager** icon on the menu or by selecting *Start>Programs > Proficy HMI SCADA – iFix 4.0 > Startup Profile Manager*.



Profile Manager Button

The Profile Manager button shows two heads in profile against a monitor.



🖉 s	tartup Profile Manag	jer			
Eile	Settings Help				
iFl	IX Startup Profiles				
	Windows User 🔺	iEIX Nodename	SCU File	SCU Des 🔺	[
					<u>A</u> dd
_					
					· · · · · · · · ·
					<u>E</u> dit
_					Remove
_					
					1
		 		•	
4				Þ	
De	efault SCU:	<none></none>			Close
		1			

Startup Profile Manager

The **Startup Profile Manager** lists the defined profiles. Select the *Add* button to configure a profile.



$T = \Lambda_0$
Add Startup Profile
Domain: BLUE
Select a <u>W</u> indows user from the list, or enter user name manually:
Select the 'List Domain Users' button to populate this list.
Windows <u>U</u> ser:
iFIX <u>N</u> odename:
SCU <u>File:</u>
SCU Description:
FIX Startup Options
Allow user to run <u>S</u> ample System
Allow User to Modify Nodename and SCU
Add Profile Close <u>Cancel H</u> elp

Add Startup Profile

Enter the user information in the Add Startup Profile window.



Add Startup Profile		
<u>D</u> omain: BLU	E	List Domain Members
Select a <u>W</u> indows	user from the list, or enter	r user name manually:
Select the 'List Do	main Users' button to pop	pulate this list.
, Windows <u>U</u> ser:	tank1	
iFIX <u>N</u> odename:	tank1	
SCU <u>F</u> ile:	C:\Program Files\GE F	Fanuc\Proficy iFIX\LOCAL\F
SCU Description:	Configuration File for No	ode FIX
FIX Startup Optio ☐ Allow user to ☐ Allow User to	ns run <u>S</u> ample System <u>M</u> odify Nodename and S	SCU
Add <u>P</u> rofile	<u>0</u> K	<u>Cancel</u> <u>H</u> elp

Configured User

Enter the Windows user account that the node will use in the *Window User* field.

Enter the iFix node name in the *iFix Nodename* field. This can be the ACP ThinManager thin client's name.

Select the SCU file that the user will use by selecting the button with three periods. The same SCU file will be used if using the Generic Deployment Model while a different SCU file will be used for each user when using the Specialized Deployment Model.

Unselect the *Allow user to run Sample System* and the *Allow User to Modify Nodename and SCU* checkboxes.

Select *Add Profile* to accept the changes.

Create a profile for each terminal.

IX Startup Profiles				
Windows User 🔺	iFIX Nodename	SCU File	SCU Des	
poiler1	BOILER	C:\Program Files\GE Fanuc\Proficy iFIX\L	Configuration File	<u>A</u> dd
Forge1	FORGE1	C:\Program Files\GE Fanue\Proficy iFIX\L	Configuration File	
ank1	TANK1	C:\Program Files\GE Fanuc\Proficy iFIX\L	Configuration File	
ank2	TANK2	C:\Program Files\GE Fanue\Proficy iFIX\L	Configuration File	
				Edit
				_
				<u>R</u> emove
				<u>H</u> elp
•			•	

000

Profile Manager

The **Profile Manager** will list the configured nodes with their Windows user name when finished.



9. Launching from within ThinManager

ThinManager can be configured to launch the iFix program automatically. Full details are available in the Tech Notes section of The ThinManager web site at www.thinmanager.com.

- First create an AppLink Display Client for the iFix Launch program.
- Second, add the iFix Display Client to the terminal and enter a username and password on the Login Information page.

Configuring a Display Client with iFix

Right click on the Terminal Services branch of the Display Clients in the ThinManager tree and select *Add Display Client*.

- Name the Display Client.
- Select the *Application Link* checkbox on the **Terminal Services Display Client Options** page.
- Add the terminal servers with iFix installed on **the Display Client Members** page.
- Add the path to the iFix Launch program in the *Program Path and Filename* field of the *AppLink* page.
 The default path is *C:\Program File\GEFanuc\Proficy iFix\launch.exe*.



)isplay Client Wizard			
AppLink Enter the linked application	path.		۶
AppLink Path			
Program Path and Filename			
C:\Program Files\GE Fanue	\Proficy iFIX\laun	ich.exe	
		Brov	wse
Command Line Options			
Start in the following folder			
		Brow	wse

AppLink Page with iFix Launch in Path

This configures iFix to run when the Display Client is launched.

Configuring a Terminal to use the iFix Display Client

The terminal needs to be configured to automatically login and use the iFix Display Client.

- Open the **Terminal Configuration Wizard** for the desired terminal by double-clicking on it in the ThinManager tree.
- Select the *Use Display Clients* checkbox on the **Terminal Mode Selection** page.
- Add the iFix display client to the *Selected Display Client List* on the **Display Client Selection** page.
- Add a valid user name and password on the the **Log in Information** page of the wizard.
- Select Finish and turn on the terminal.

When the thin client boots it will automatically login to the terminal server and launch iFix with the configuration that was defined by the SCU specified in the Profile Manager for that user.



9.1. Hide the Startup Screen

Once the system is setup and the users and node are configured the Proficy Startup screen can be turned off so that iFix launches without displaying this window and making the user select iFix from the Startup window.

Open the Startup windows by selecting *Start>Programs > Proficy HMI SCADA – iFix 4.0 > iFix 4.0*. It will launch the **Proficy iFix Startup** program.

Proficy iFIX Startup	×
Proficy iFIX	
Start Proficy iEIX v	vith these settings:
Node Name:	FIX
SCU File:	C:\Program Files\GE Fanuc\Proficy iFIX\LOCAL\FIX.S 💌
Description:	Configuration File for Node FIX
Sample System	
Start the Sample S	ystem
Proficy iFIX w capabilities.	vill run using a special set of files designed to demonstrate it's
_ SCU	
Run the System C	onfiguration Utility
Allows you to	configure the iFIX system.
Desktop Shortcut	
Create a desktop :	shortcut
Create a sho	tout on your desktop using the settings listed above.
☑ Don't show this dialog box age	gain; always start Proficy iFIX. Exit
······································	

Proficy iFix Startup

Check the *Don't show this dialog box again; always start Proficy iFix* checkbox. This will launch iFix without requiring the user select iFix from the **Startup** window.



10. Additional Microsoft Configurations

There are a few Microsoft tweaks that will make the system more efficient. This is a guide. Please refer to iFix and Microsoft documentation for details.

10.1. Add Users to Remote Desktop Group

User accounts for terminal servers need to be added to the Remote Desktop Users group in Windows. Open the Computer Management console by selecting *Start* > *Programs* > *Administrative Tools* > *Computer Management*.

🖵 Computer Management 📃 🗆 🗙					
📃 Eile Action Yiew Window H	elp		_ 8 ×		
← → E 🖪 🗙 📽 🔒					
Computer Management (Local)	Name Radministrators	Description Administrators have complete and u			
	Backup Operators	Backup Operators can override secu			
Environment of the service of the se	Sistributed COM Users	Members are allowed to launch, acti Guests have the same access as me			
Users	Network Configuration	Members in this group can have som			
Performance Logs and Alert:	Seriormance Log Users	Members of this group have remote Members of this group have remote			
Storage	Power Users	Power Users possess most administr			
⊕	Remote Desktop Users	Members in this group are granted t			
Bisk Management	🜃 Replicator 🕼 Users	Supports file replication in a domain Users are prevented from making ac			
	BHCP Administrators	Members who have administrative a			
	Band DHCP Users	Members who have view-only acces Group for the Help and Support Center			
	Fix_Users Fix_wpc	TTC Washes Decrease Course			
		Members of this group have access t			
•	🚾vmware	VMware User Group			

Computer Management Console

Highlight *System Tools > Groups* and double-click on the *Remote Desktop Users* group to launch the properties window.



Remote Desktop Users Properties ? 🗙
General
Remote Desktop Users
Description: bers in this group are granted the right to logon remotely
<u>M</u> embers:
Suser1 Suser2 Suser3 Suser4 Suser5
Add
OK Cancel Apply

Remote Desktop Users Properties Window

Add all the users who will be logging onto the terminal server and select **OK**.



10.2. End Disconnected Sessions

Sessions that are disconnected and left on the terminal server should be configured to be logged off when they are disconnected. This can be done by user account or by terminal server.

User Account

Configure the desired user accounts by opening the Computer Management console by selecting *Start > Programs > Administrative Tools > Computer Management*.



Computer Management

Highlight *System Tools > Users* and double-click on the desired user to launch the user properties.



er3 Properties		? >
Remote control Termi General Member Of Pr	nal Services Profile ofile Environment	Dial-in Sessions
Use this tab to set Terminal Service:	s timeout and reconnectio	n settings
End a disconnected session:	1 minute	•
Active session limit:	Never	•
Idle session limit:	Never	-
Disconnect from session End session		
From any client		
C From <u>o</u> riginating client only		
)K Cancel	Apply

User Properties – Sessions Tab

Select the Sessions tab. Set the End a disconnected session to 1 minute.

Set the *When a sessions limit is reached or connection is broken setting* to **End Session**.

Select *OK* to save the changes.



Terminal Server Settings

The terminal server can be configured to have all the sessions logged off after a disconnect in the **RDP-tcp properties**. Open the Terminal Services Configuration console by selecting *Start > Programs > Administrative Tools > Terminal Services Configuration*.



Terminal Services Configuration Console

Highlight *Connections* and double-click on *RDP-tcp* to launch the **RDP-tcp Properties** window.



r-rep riopercies	?	
Remote Control Client Settings General Logon Settings	Network Adapter Permissions Sessions Environment	
Use this tab to set Terminal Services ti	meout and reconnection settings.	
Override user settings		
End a disconnected session:	1 minute	
A <u>c</u> tive session limit:	Never	
Idle session limit:	Never	
Override user settings	,	
 Override user settings When session limit is reached or control Disconnect from session End session 	onnection is broken:	
 Override user settings When session limit is reached or control Disconnect from session End session Override user settings 	onnection is broken:	
 Override user settings When session limit is reached or concerning Disconnect from session End session Override user settings Allow reconnection: 	onnection is broken:	
 Override user settings When session limit is reached or concerning Disconnect from session End session Override user settings Allow reconnection: Erom any client 	onnection is broken:	
 Override user settings When session limit is reached or construction Disconnect from session End session Override user settings Allow reconnection: Erom any client From previous client 	onnection is broken:	
 Override user settings When session limit is reached or ca Disconnect from session End session End session Override user settings Allow reconnection: From any client From previous client 	onnection is broken:	

RDP-tcp Properties

Select the **Sessions** tab. Check the *Override user settings* checkbox and set the *End a disconnected session* to 1 minute.

Check the *Override user settings* checkbox and set the *When a sessions limit is reached or connection is broken setting* to End Session.

Select **OK** to save the changes.

This will make every remote RDP user logoff when they disconnect.



10.3. Set Relaxed Security

Windows 2000 and Windows 2003 have a Full Security option that can interfere with HMI/SCADA operation. When the 200/2003 Full Security model is used all HMI users will need to be administrators. To allow users to run without being an administrator, set the terminal server to the Relaxed Security based on the NT 4.0 security model.

Open the Terminal Services Configuration console by selecting *Start > Programs > Administrative Tools > Terminal Services Configuration*.



Terminal Services Configuration Console

Highlight the *Server Settings* on the left and double-click the *Permission Compatibility* on the right.

Select the *Relaxed Security* radio button and select OK.



10.4. Apply Group Permissions

An iFix Users group must be created and the iFix users must be added and be granted access permission. It is recommended that iFix users be members of the **Power User** group.

Open the Computer Management console by selecting *Start > Programs > Administrative Tools > Computer Management*.

📮 Computer Management 📃 🗖 🗙				
📃 File Action <u>V</u> iew <u>W</u> indow H	elp		_ Ð ×	
Computer Management (Local) System Tools System Tools Configure Viewer Shared Folders Coal Users and Groups Users Coal Users Coal Users Coal Users Coal Users Coal Users Coal Users Coal Users Coal Users Coal Users Coal Users Coal Users Co	Name Administrators Administrators Backup Operators Distributed COM Users Guests Network Configuration Performance Log Users Performance Monitor U Power Users Print Operators Remote Desktop Users Philoperators Replicator Users DHCP Administrators DHCP Users HelpServicesGroup Fitx_Users IIS_WPG TelnetClientsvmware	Description Administrators have complete and u Backup Operators can override secu Members are allowed to launch, acti Guests have the same access as me Members in this group can have som Members of this group have remote Power Users possess most administr Members can administer domain prin Members in this group are granted t Supports file replication in a domain Users are prevented from making ac Members who have administrative a Members who have view-only acces Group for the Help and Support Center IIS Worker Process Group Members of this group have access t VMware User Group		

Computer Management

Right-click on *Groups* and select *New Group*.



New Group			? ×
<u>G</u> roup name:	iFix_Users		
Description:			
<u>M</u> embers:			
	- 1		
<u>. Add</u>	<u>R</u> emove		
		<u>C</u> reate	Cl <u>o</u> se

Add New Group

Name the group and add members.



iFix_Users Properties	? ×
General	
iFix_Users	
D <u>e</u> scription:	
Members:	
Suser1 Suser2 Suser3 Suser4 Suser5	
Add <u>R</u> emove	
OK Cancel Ap	ply

Group Membership

Use the *Add* button to add users.

Add the group to the RDP settings in the **Terminal Services Configuration** console.

Open the Terminal Services Configuration console by selecting *Start > Programs > Administrative Tools > Terminal Services Configuration*.



🚔 tscc - [Terminal Services Configuration\Connections]					
Eile <u>A</u> ction <u>V</u> iew <u>H</u> elp					
Terminal Services Configuration Connections ⊕- ⊖ Server Settings		Transport tcp	Type Microsoft RDP 5.2	Comment	

Terminal Services Configuration

Double-click on *RDP-tcp* to open the **RDP-tcp Properties**.



RDP-Tcp Propertie	s		? ×
General Remote Control	Logon Settings Client Settings	Sessions Network Adapter	Environment Permissions
<u>G</u> roup or user nam	ies:		
🚮 Administrator	s (GREEN\Administr	ators)	<u> </u>
IFix_Users (G	iREEN\iFix_Users)		
	SERVICE		
		A <u>d</u> d	<u>R</u> emove
Permissions for iFi	(Users	Allow	Deny
Full Control			
User Access			
Special Permiss	ions		H
		_	_
For special permissions or for advanced settings, Advanced			
	OK	Cancel	

TCP-rdp Properties

Select the **Permissions** tab. Add the new group by selecting the *Add* button.

Highlight the new group and set the **Full Control**, **User Access**, and **Guest Access** to *Allow*.

Select *OK* to accept changes.