

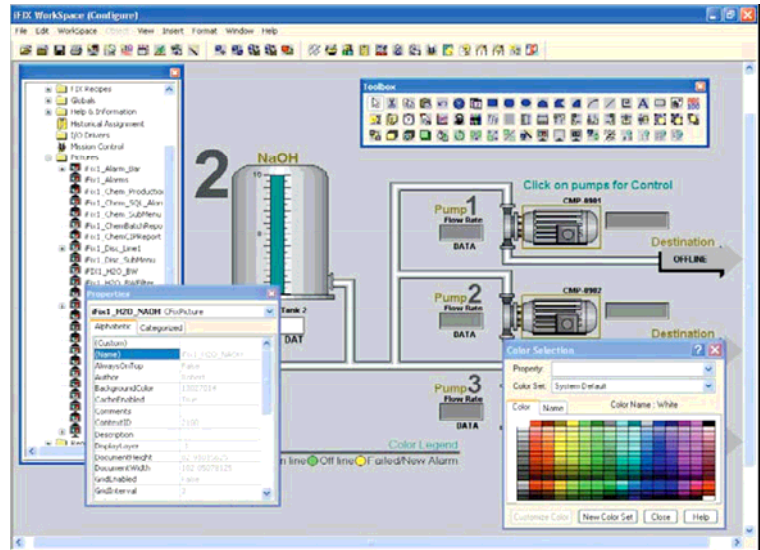
# PROFICY HMI/SCADA iFIX ADVANCED (iFIX 254)

## COURSE DESCRIPTION

The Proficy HMI/SCADA iFIX Advanced course is designed to pick up where the iFIX Fundamentals course ends. The course is intended to provide the student a base level of proficiency using some of the product's more advanced features. The student will become familiar with some of the tools and concepts available for optimizing and troubleshooting iFIX.

## WHO SHOULD ATTEND?

This course is principally designed for process, automation, or instrumentation engineers and system integrators who will be developing, configuring, and using applications created with iFIX.



## PREREQUISITES

Completion of Proficy HMI/SCADA iFIX Fundamentals course (iFIX 154) is a must! Participants should have a working knowledge of Windows 2000, Windows NT 4.0, and/or Windows XP operating systems. Familiarity with relational databases and VBA would be helpful, but not required.

## WHAT TASKS WILL BE TAUGHT IN THIS CLASS?

Upon completion of this Course, the student will be able to:

- Understand detailed architecture communication between iFIX SCADA Servers and iFIX iClient nodes.
- Configure iFIX to communicate with OPC Servers and configure OPC Clients to communicate with iFIX.
- Apply optimization techniques for I/O Drivers, Process Database, and graphics.
- Create Tag Groups, Key Marcos, ActiveX objects, and Global objects to enhance graphic screens.
- Configure iFIX to communicate with Relational Databases, including setting up ODBC, iFIX Database, iFIX alarms, and iFIX graphics using VisiconX.
- Design and build a system wide security strategy including Electronic Signatures.
- Create reports to display iFIX data using Access, Excel, and Crystal Reports.
- Understand and implement a SCADA Failover strategy.
- Understand how Terminal Services can be used with iFIX.

## COURSE FEE

The course fee is \$1995 USD. This includes two days of classroom training, use of CB Engineering's training computers, course manuals and lunch all four days.



## COURSE AGENDA

This is a four day course. Classes run from 8:30am until 4:30pm with a one-hour break for lunch.

### Architecture

COM, OLE, iCore  
iFIX Data Flow Architecture  
iFIX Configuration  
iFIX Alarm Architecture  
iFIX Alarm Configuration

### iFIX OPC Client I/O Driver

OPC Basics & Object Model  
OPC Interfaces  
Using OPC Client I/O Driver

### iFIX OPC Server I/O Driver

Review OPC Client  
OPC Server I/O Drivers  
OPC Server Interfaces  
OPC Driver I/O Functions  
OPC Driver Power Tool

### Process Database

PDB Review  
PDB Order of Solve  
Blocks and I/O Driver Polling  
Time & Exception Scanning  
Using Register Blocks  
Output Block Functionality

### Advanced Process Database

PDB Import & Export  
Database Dynamo Overview  
Momentary Digital Output  
Time Date Stamp Block  
Using Database Dynamos

### ODBC Basics

Introduction to ODBC  
Setting up ODBC Drivers  
Configuring Data Sources  
Configuring Alarms to ODBC  
Intro to Relational Databases:  
Overview of RDB  
Using Multiple Tables  
Defining Key Relationships  
Creating & Designing Tables

### iFIX Real Time ODBC Option

Introduction to SQL  
Using SQL statements  
ODBC Communication  
SQL Library & Error Tables  
SQL Background Task  
SQL Task Parameters

### Configuring the SQL Blocks

Understanding SQL Blocks  
SQL Trigger Block  
SQL Data Block

### VisiconX

VisiconX Concepts  
VisiconX Data Control  
VisiconX SQL Wizard  
VisiconX Grid Control  
VisiconX List & Combo Controls  
Using the Query Property

### VBA Review

iFIX VBA Implementation  
iFIX Objects  
VBA Scripting  
Using the VBA Editor  
iFIX Subroutines  
VBA Terminology

### VBA Automation in Reporting

VBA Automation  
References & Binding  
Create Object Function

### ActiveX

Overview of ActiveX  
ActiveX Graphic Objects  
Common ActiveX Controls  
Secure Containment  
Documents, Reports &  
Drawings

### Reporting using iFIX ODBC

Report Distribution  
iFIX ODBC Server Concepts  
iFIX SQL Test  
Using MS-Query  
iFIX ODBC Drivers

### Optimizing

Optimizing I/O Drivers  
Optimizing the PDB  
Pictures & Networking  
Historical Collection

### Troubleshooting

Alarm History and Status  
Network History & Diag.  
NB Test & TCP Test  
Mission Control & Poll Monitor

### SCADA Redundancy

Redundancy Architecture  
SCU Configurations  
Alarm Synchronization

### LAN Redundancy

Redundancy Architecture  
Configuring LAN Redundancy  
Updating Alarms after Failover

## COURSE DATES

Please visit our website at [www.cb-pacific.com](http://www.cb-pacific.com) for upcoming dates of all courses, and to register on-line. Alternatively, you can contact us at [info@cbeng.com](mailto:info@cbeng.com) or by phone toll-free at 1 (800) 992-2364.