HMI-SCADA iFIX Advanced

Course Description
The HMI-SCADA iFIX Advanced course concentrates on the skills and knowledge required to extend the core functionality of iFIX from GE Digital. In addition, there are a range of topics that discuss the integration of GE’s iFIX applications with external systems such as historians, relational databases, office and reporting applications as well as other automation applications.

Who Should Attend?
This course is designed for developers responsible for building and implementing full-featured HMI-SCADA iFIX systems. These topics focus on integration and programming and will be beyond the needs of most casual users.

Are There Any Prerequisites?
Completion of HMI-SCADA iFIX Fundamentals is a prerequisite for taking this course. Prior exposure to programming (in any language) is of benefit as is prior exposure to relational databases and SQL.

What topics will be covered in this course?
- Integrate iFIX with OPC servers and Clients
- Advanced configuration with Database Blocks
- Integrate iFIX with GE’s Historian
- Integrate iFIX with Relational Databases (RDBs)
- Use VisiconX to build graphical RDB tools for users
- Extend iFIX Alarm systems to RDBs and Historian
- Master Dynamo creation and maintenance
- Work with ActiveX components
- Develop schedules to automate workflows and processes
- Drive reports with iFIX
- Configure Server Fail-over and Redundancy
- Prepare iFIX for use with Terminal Server

Course Length  Suggested Class Size  Class Hours
4 days 10 students 8:00 am - 5:00 pm, daily
Course Agenda
(Schedule and content may vary.)

Day 1

Morning:

- **Review iFIX from GE Digital**
  Review the basic features and functions of GE's iFIX.

- **Review iFIX Architecture & Applications**
  Walk through the essentials of iFIX applications and the system architecture.

- **Introduction to OPC**
  Find out more about the OPC communication methods available to industrial control applications.

Afternoon:

- **OPC Clients**
  Learn more about the myriad ways of using OPC to connect iFIX sub-systems as data clients of other applications.

- **OPC Servers**
  Learn more about the myriad ways of using OPC to configure iFIX sub-systems as data servers.

Day 2

Morning:

- **Database Blocks Redux**
  Delve deeper into the Process Database and the blocks available to iFIX SCADA applications.

- **Integrate iFIX with Historian**
  Learn about the tools available for seamlessly integrating iFIX to GE’s Historian, including tools for both providing and retrieving data.

Afternoon:

- **Integrate iFIX with Relational Databases**
  Find out how GE’s iFIX can interoperate with relational databases for both read and write transactions.

- **Use iFIX Database Blocks with RDBs**
  Build the necessary infrastructure to communicate to RDBs at real-time via database blocks and services.

Day 3

Morning:

- **Use the Workspace to access RDBs**
  Combine programmatic and graphical methods within the Workspace to interact with RDBs.

- **Use VisiconX with RDBs**
  Build interactive displays to access RDBs using simple, graphical, wizard-based controls.

- **iFIX Alarm Archiving**
  Explore the different methods of archiving alarms to external systems for further analysis.

Afternoon:

- **Deploying ActiveX in iFIX**
  Create interactive user controls in displays.

- **Mastering Charts and Chart Groups**
  Extend trending functionality with extra developer know-how.

- **Dynamo Creation and Maintenance**
  Build easily maintained symbol libraries. Explore how to use them to maximize functionality while minimizing maintenance effort.

Day 4

Morning:

- **Schedules**
  Build schedule to automate routine tasks.

- **Elementary Reporting**
  Discover how to extend iFIX to meet your reporting needs.

Afternoon:

- **Enhanced Fail over**
  Walk through the iFIX Enhanced Failover features create high availability SCADA systems.

- **Supplemental Topics**
  Integrating Change Management
  iFIX with Terminal Services