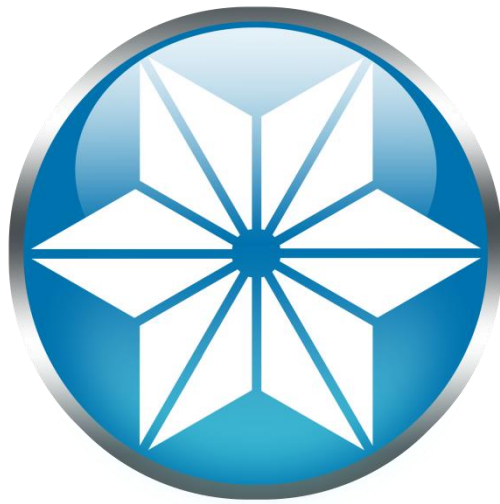


# White Star Software



## Course Synopses

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The spelling in this material is English and no apologies are made for missing "z" characters and additional "u" characters.

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# Persistence and Named Events

---

## Introduction

*Persistence and Named Events* is a continuation course for a GUI developer. In this course, you will learn how to further develop OpenEdge applications in the Application Development Environment using multiple windows. The course provides an introduction to the concepts of Persistence, Named Events, Method Libraries and Super Procedure stacks.

---

## Audience

This course is intended for experienced developers with prior programming experience using the OpenEdge Advanced Business Logic (ABL).

---

## Course goals

When you complete this course, you should be able to:

- ✓ Implement multi-window environments using Persistence.
  - ✓ Access procedures and functions inside other running procedures (method libraries).
  - ✓ Understand Named Events and when to use them.
  - ✓ Understand how the Super Procedure stack works and use it to increase the reusability of your procedures.
- 

## Prerequisites

Before you begin this course, you should be able to:

- ✓ Write GUI programs in OpenEdge ABL.
  - ✓ Using structured programming techniques.
  - ✓ Understand how to programmatically run other procedures.
  - ✓ Understand the use of widget handles and procedure handles.
  - ✓ Pass and receive parameters.
- 

## Duration

1 day

---

# Dynamic Query Essentials

---

## Introduction

*Dynamic Query Essentials* will give you practice in using dynamic database queries and dynamic buffers to create and populate dynamic temp-tables in order to retrieve data and pass that data between procedures.

---

## Audience

This course is aimed at those who can already use OpenEdge to create basic ABL programs and who need to be able to create more modular and more reusable code for their systems.

---

## Course Goals

Completing this course should enable you to:

- ✓ Create dynamic Queries
  - ✓ Create dynamic buffers
  - ✓ Create dynamic temp-tables
  - ✓ Use dynamic queries, dynamic buffers and dynamic temp-tables to pass data between procedures.
- 

## Prerequisites

Before you begin this course, you should:

- ✓ be able to use the tools in OpenEdge AppBuilder to build applications.
  - ✓ be familiar with the use of static queries, static buffers and static temp-tables.
  - ✓ appreciate thin client concepts including the separation of UI and business logic.
- 

## Duration

1 day.

---

# OpenEdge Coding for Performance

---

## Introduction

*OpenEdge Coding for Performance* shows how to write efficient code using both Event-Driven and Procedural paradigms for either Character or GUI environments. It will enable the developer to fine tune existing applications and write best of breed new applications.

---

## Audience

Developers who want to improve their coding techniques, the efficiency of their code and the performance of their systems.

---

## Course Goals

When you complete this course you will know how to:

- ✓ identify where and when to look for possible performance issues in your system.
  - ✓ create the most efficient queries possible using their current index structures.
  - ✓ use the most efficient access methods to minimise server and network traffic.
  - ✓ recognise when you have too few or even too many indexes.
  - ✓ ensure concurrent database access by controlling transaction scope and record scope.
  - ✓ Use OpenEdge tools to analyze code and query performance.
  - ✓ Pinpoint where your code problems are.
- 

## Prerequisites

Before you begin this course, you should

- ✓ be able to create OpenEdge applications using either event-driven or procedural methods.
  - ✓ be able to use OpenEdge queries to make database enquiries.
  - ✓ have a basic knowledge of how OpenEdge manages transactions in either the event-driven or procedural paradigms.
- 

## Duration

3 days.

---

# OpenEdge Client/Server for Developers

---

## Introduction

*OpenEdge Client / Server for Developers* is an intensive entry level course for developers wishing to use a Graphical User Interface. Here, you will learn how to develop OpenEdge applications using the various tools in OpenEdge' Application Development Environment including the AppBuilder, the Data Dictionary and the Section Editor. You will develop an application using graphical objects and OpenEdge ABL code. You will also learn how to write simple extracts, data loads and reports.

---

## Audience

This course is intended for Developers who have relatively little knowledge of ABL development with OpenEdge.

---

## Course goals

When you complete this course, you should be able to:

- ✓ understand how to manipulate tables and fields in the OpenEdge Data Dictionary
  - ✓ use the AppBuilder environment to build an ABL business application
  - ✓ retrieve, update, save, and delete data in an OpenEdge database.
  - ✓ understand the event-driven programming paradigm.
  - ✓ understand how database triggers and sequences work.
  - ✓ write reports utilising Headers, Footers and Aggregates
  - ✓ import and export data to other file formats.
- 

## Prerequisites

Before you begin this course, you should be able to:

- ✓ explain basic relational database structures including relationship types and indexes.
- 

## Duration

4 days.

---

# OpenEdge SQL92 Essentials

---

## Introduction

*OpenEdge SQL92 Essentials* will provide you with a basic understanding of the processes involved in setting up the SQL92 engine.

It will introduce the ODBC/JDBC requirements and setup, setting up a development environment and basic SQL syntax for table and data manipulation.

---

## Audience

This course is intended for all who want to administer Progress Version 9 or OpenEdge RDBMS 10 databases and for OpenEdge professionals assigned to install and maintain a SQL92 environment.

---

## Course goals

When you complete this course, you will be able to:

- ✓ Install, configure, and administer all the processes concerning the SQL92 engine.
  - ✓ Set up SQL Explorer, OpenEdge Architect's DB Navigator perspective or a third-party tool for SQL development.
  - ✓ Understand how database triggers and stored procedures work.
  - ✓ Manage the security of an SQL92 database.
- 

## Prerequisites

Before you begin this course, you should have:

- ✓ Hands-on experience with the OpenEdge RDBMS
  - ✓ A working knowledge of SQL92 syntax.
- 

## Duration

2 days.

---

# Debugging Seminar

---

## Introduction

This *Debugging Seminar* introduces you to basic Debugging techniques.

---

## Audience

This course is intended for ABL developers who need to use the best available tools and methods for debugging and optimising their code.

---

## Course goals

When you have completed this course, you should be able to:

- ✓ Debug new and existing code using a variety of techniques
  - ✓ Use OpenEdge Debugger in both Studio and Architect Environments
  - ✓ Monitor running programs using standard Progress utilities
  - ✓ Write ABL routines utilising Virtual System Tables and other techniques to monitor code execution and prevent memory leaks.
- 

## Prerequisites

Before you begin this course, you should have some experience with:

- ✓ Writing ABL code using any of the OpenEdge editors (AppBuilder, Architect or Procedure Editor).
- 

## Duration

1 day.

---

# OpenEdge Architect Essentials

---

## Introduction

OpenEdge Architect is a project-based development environment, first introduced with OpenEdge 10, that enhances developer productivity by providing a single development environment with tools to facilitate coding, debugging, testing, and maintenance of Advanced Business Logic (ABL) applications.

---

## Audience

This course is intended for experienced ABL programmers who already have a firm understanding of how to create OpenEdge applications and who need to use the new development environment. The material presented here is an essential prerequisite for developers intending to develop applications using the OpenEdge Object Oriented extensions, also introduced with OpenEdge 10.

---

## Course Goals

The course material is constantly updated and currently encompasses enhancements up to OpenEdge 10.2B

When you complete this course you will know how to:

- ✓ Use Architect to create and maintain code using Projects.
  - ✓ Use Architect to create and maintain databases and database schema.
  - ✓ Use Architect's Code Assist features to reduce coding errors.
  - ✓ Debug applications using the new Debugger interface.
  - ✓ Design Component Diagrams for ProDatasets and Temp-Tables.
  - ✓ Use Component Diagrams to generate code for ProDatasets and Temp-Tables.
  - ✓ Integrate AppBuilder into the Architect framework.
  - ✓ Use AppBuilder generated code (including menu structures) within a .NET form.
  - ✓ Use code created in Architect within AppBuilder GUI applications.
  - ✓ Use Architect's Meta Schema to track and analyse application code.
- 

## Prerequisites

Before you begin this course, you should be able to

- ✓ Use the ABL to write OpenEdge Applications
  - ✓ Work with AppBuilder to produce GUI applications
  - ✓ Use ProDatasets and Temp-Tables in applications
- 

## Duration

1 day.

---

# OO Extensions to OpenEdge ABL

---

## Introduction

*OO Extensions to OpenEdge ABL* shows how to use the Object-oriented Extensions to your OpenEdge Advanced Business Logic (ABL) to enhance the maintainability and expandability of business applications.

In this course you will learn how to create classes and objects and apply object-oriented programming techniques such as abstraction, inheritance, encapsulation, polymorphism, method overriding, interfaces, and delegation within your applications.

---

## Audience

This course is intended for experienced developers who want to use object-oriented programming techniques and principles in their business applications.

---

## Course Goals

When you complete this course you will be able to:

- ✓ Use the following Object-oriented Extensions to develop applications:
    - Classes and objects.
    - Interfaces.
    - Data members.
    - Methods.
  - ✓ Use the Object-oriented Extensions to the ABL to apply the following principles and techniques in their applications:
    - Encapsulation.
    - Polymorphism.
    - Method overriding / overloading.
    - Interfaces.
    - Delegation.
    - Inheritance
    - Structured Error Handling
- 

## Prerequisites

Before you begin this course, you should be able to:

- ✓ Use OpenEdge Studio or Architect to build business applications.
  - ✓ Use the Perspectives and Views within OpenEdge Architect.
- 

## Duration

1 day.

---

# OpenEdge GUI for .NET

---

## Introduction

OpenEdge GUI for .NET provides a new user interface option for ABL applications based on .NET forms and controls so that Developers can do all of their development in the ABL environment.

The ABL incorporates into its class structure the .NET class hierarchy, which allows a common structure for instantiating ABL classes and .NET classes using the ABL.

Adding .NET forms to an application provides flexibility since .NET forms can be used in the same application as ABL windows, with either one able to call the other. Existing legacy code may also be converted for .NET forms.

---

## Audience

This course is intended for experienced ABL programmers who already have a firm understanding of how to create OpenEdge applications and who need to use the new development environment.

---

## Course Goals

The course material is constantly updated and currently encompasses enhancements up to OpenEdge 10.2B

When you complete this course you will be able to:

- ✓ Understand the latest OpenEdge Enhancements.
  - ✓ Work with OpenEdge Architect Visual Designer.
  - ✓ Create and use Forms
  - ✓ Utilise Data Binding
  - ✓ Convert existing GUI applications for a .NET environment
  - ✓ Work with .NET Classes and controls
- 

## Prerequisites

Before you begin this course, you should be able to:

- ✓ Use OpenEdge Architect with ABL object-oriented extensions.
  - ✓ Use the Perspectives and Views within OpenEdge Architect.
- 

## Duration

1 day.

---

# Database Design Essentials

---

## Introduction

*Database Design Essentials* will instruct you in the methods for Data Analysis and Data Design in order to create new systems databases. This will not be some esoteric treatise. This aim is to start with data collection and end with a usable, expandable and flexible OpenEdge database with index design, data storage and internationalisation along the way.

---

## Audience

This course is intended for Developers or Designers.

---

## Course goals

When you complete this course, you should be able to:

- ✓ design and implement flexible efficient databases.
  - ✓ state how the OpenEdge architecture supports and stores databases and their indexes.
  - ✓ implement data validation and database integrity constraints
  - ✓ Be aware of issues for any future internationalisation
- 

## Prerequisites

Before they begin this course, students should be able to state:

- ✓ Where the database design phase of their project fits into the rest of that project
  - ✓ The constraints that their project standards may place upon any logical / physical design (for discussion purposes)
  - ✓ The likely platforms for their implementations.
- 

## Duration

3 days.

---

# DBA Essentials

---

## Introduction

*DBA Essentials* covers all the topics you need to administer OpenEdge databases.

The course details the OpenEdge RDBMS architecture, database administration tools, creating a database, database sizing, start up and shut down procedures. shared memory usage, recommendations on startup parameters, backup and restore of a database, using after-imaging for roll-forward recovery, tuning and dump and load.

---

## Audience

This course is intended for administrators of either Progress Version 9 or OpenEdge 10 databases.

---

## Course goals

When you complete this course, you should::

- ✓ have an understanding of OpenEdge RDBMS architecture.
  - ✓ be able to create databases using a variety of different methods.
  - ✓ start up and shut down databases.
  - ✓ be able to explain the pros and cons of using OpenEdge backup / restore utilities or system utilities
  - ✓ be able to perform online backups
  - ✓ explain after-imaging and its role in roll-forward recovery.
  - ✓ know how to manage after image extents
  - ✓ have a familiarity with which startup parameters affect database performance.
  - ✓ demonstrate an understanding of block sizes and records per block calculations.
  - ✓ know how to monitor database performance using system utilities and Progress supplied tools.
  - ✓ be familiar with all the options available for dumping and loading.
- 

## Prerequisites

Before you begin this course, you should:

- ✓ possess a working knowledge of the OS on which the course is being run.
- 

## Duration

4 days.

---

# Advanced Database Administration

---

## Introduction

*Advanced Database Administration* takes database administrators on to the next level. It covers the key tasks to enable students to manage a database for optimum performance.

---

## Audience

This course is intended for all who want to administer OpenEdge RDBMS 10 databases.

---

## Course goals

When you complete this course, you should be able to:

- ✓ Design and construct a storage area layout
  - ✓ Forecast the optimal number of extents for a database
  - ✓ Select the appropriate database block size for an operating environment
  - ✓ Calculate the optimal number of records per block size
  - ✓ Determine the appropriate migration strategy for an operating environment
  - ✓ Validate whether a programmatic database migration is warranted
  - ✓ Diagnose data corruption
  - ✓ Remove data corruption
  - ✓ Diagnose index corruption
  - ✓ Repair index corruption
- 

## Prerequisites

Before you begin this course, you should be able to:

- ✓ Understand the topics presented in the foundation course *DBA Essentials*
- 

## Duration

3 days.

---

# OpenEdge Replication Essentials

---

## Introduction

OpenEdge Replication plays a key role in the disaster recovery process, providing recovery of mission-critical data for applications at an alternate site with near zero latency.

OpenEdge Replication addresses the needs for continuous availability and minimal or no data loss.

*OpenEdge Replication Essentials* covers the creation of a Disaster Recovery Plan, procedures, and guidelines for installation and administration of *OpenEdge Replication* and *OpenEdge Replication Plus* on OpenEdge 10 databases.

---

## Audience

This course is intended for all who install or administer OpenEdge Replication on OpenEdge 10 databases.

---

## Course goals

When you complete this course, you should be able to:

- ✓ Create and maintain a comprehensive Disaster Recovery Plan for your business.
  - ✓ Explain how OpenEdge Replication offers complete data protection through automated, real-time, zero-latency failover and recovery.
  - ✓ Explain how OpenEdge Replication Plus helps improve performance with query access to the hot standby site.
  - ✓ Implement After-Imaging for your databases.
  - ✓ Implement OpenEdge Replication for your databases.
  - ✓ Recover from the loss of your live database.
- 

## Prerequisites

Before you begin this course, you should be able to:

- ✓ Create a database.
  - ✓ Start up and shut down a database.
  - ✓ Back up and restore a database.
  - ✓ Possess a working knowledge of either the UNIX or Windows operating system.
- 

## Duration

4 days.

---

# OpenEdge Auditing

---

## Introduction

*OpenEdge Auditing* will show you how to use the new OpenEdge auditing service in OpenEdge 10.1 to audit your OpenEdge ABL applications and OpenEdge RDBMS databases.

You will learn how to plan for an OpenEdge auditing implementation, define and configure audit policies to govern database, application, and internal audit events, and deploy the policies in the production environment. You will also learn how to manage audit data and generate audit reports.

---

## Audience

This course is designed for experienced ABL programmers and database administrators who are interested in auditing their applications and databases.

---

## Course goals

When you complete this course, you should be able to:

- ✓ Plan for an OpenEdge auditing implementation.
  - ✓ Manage audit privileges.
  - ✓ Audit database events.
  - ✓ Audit application events.
  - ✓ Configure audit policies.
  - ✓ Audit client sessions.
  - ✓ Manage audit data.
  - ✓ Design queries and reports.
- 

## Prerequisites

Before you begin this course, you should be able to:

- ✓ Develop ABL applications using the Procedure Editor.
  - ✓ Demonstrate a basic understanding of how to administer and deploy OpenEdge ABL applications.
  - ✓ Administer Progress Version 9 or OpenEdge databases.
- 

## Duration

2 days.

---

# HTML Essentials

---

## Introduction

*HTML Essentials*, as the course title implies, is a primer for HTML programming. The course provides the developer with the knowledge they will need when developing applications using WebSpeed technology. You will learn to write simple formatted HTML programs, create Web pages with text and images, organize data with HTML tables and organize Web pages with HTML frames.

In preparation for interactive use with WebSpeed you will also learn how to pass data using query strings and input data using HTML forms.

---

## Audience

This course is intended anyone who needs to create web pages or for aspiring WebSpeed programmers who need to top-up their HTML skills.

---

## Course Goals

When you complete this course you should be able to:

- ✓ Write a simple formatted HTML program.
  - ✓ Create a Web page with text and images.
  - ✓ Organise data with HTML tables.
  - ✓ Organise Web pages with HTML frames.
  - ✓ Pass data using query strings.
  - ✓ Understand the basics of Cascading Style Sheets.
  - ✓ Understand the use of Java Script.
  - ✓ Input data using HTML forms.
- 

## Prerequisites

Before you begin this course, you should have some experience with:

- ✓ Using Web Browsers such as Internet Explorer or Firefox
- 

## Duration

1 day.

---

# WebSpeed Essentials

---

## Introduction

*WebSpeed Essentials* introduces you to the WebSpeed development environment. You will learn how to use the various Progress tools included in AppBuilder to build Web enabled applications.

You will also learn how your business logic can be invoked from a Web Browser, how information is communicated and tracked across an intranet or internet connection, how to make best use of the Wizard programs provided by Progress and how to retain your application's current state to allow for multi-page documents. We will also discuss JavaScript techniques in order to further enhance your user interfaces

---

## Audience

This course is intended for OpenEdge developers who are using WebSpeed for the first time.

---

## Course goals

When you complete this course, you should be able to:

- ✓ Describe and set up the WebSpeed architecture and configuration.
  - ✓ Develop browser based applications using the major features of the WebSpeed development environment.
  - ✓ Produce HTML pages using a variety of WebSpeed techniques.
  - ✓ Manage program flow using Frames, JavaScript, Posting methods and default WebSpeed processing techniques
  - ✓ Handle input and output of data through HTML forms.
  - ✓ Manage state-persistence with hidden HTML fields and cookies, to maintain context across requests.
- 

## Prerequisites

Before you begin this course, you should be able to:

- ✓ Create a Web page with text and images.
  - ✓ Format HTML pages using tags.
  - ✓ Organize data with HTML tables.
  - ✓ Organize Web pages with HTML frames.
  - ✓ Pass data using query strings.
  - ✓ Create HTML input forms.
  - ✓ Write programs using the OpenEdge ABL and be familiar with ABL procedures, functions, and methods.
- 

## Duration

4 days.

# AppServer Essentials

---

## Introduction

Whether you are writing the latest SOA application or you just want to separate your business logic from your UI you will need to make your systems work with AppServer. *AppServer Essentials* covers what you need to know in order to design distributed applications, build and access distributed logic and test and deploy distributed logic. You will also learn about the various Operating modes for OpenEdge AppServers and which Operating mode will be the right choice for your application. Along the way we will discuss controlling transactions, integrating SmartObjects, fault tolerance and security issues.

---

## Audience

This course is intended for developers who are already familiar with building applications using OpenEdge Studio or Architect.

---

## Course goals

When you complete this course, you should be able to:

- ✓ design distributed AppServer applications
  - ✓ build, access, test and deploy distributed procedures
  - ✓ understand the various AppServer operating modes and decide which will work best for your application.
  - ✓ distribute business logic, validation and reports
  - ✓ understand distributed transaction processing.
  - ✓ access data across the AppServer boundary by accessing SmartDataObjects.
  - ✓ maintain state throughout successive AppServer calls
  - ✓ apply techniques to ensure fault tolerance
  - ✓ enable security for the AppServer
- 

## Prerequisites

Before you begin this course, you should be able to:

- ✓ use OpenEdge Studio or Architect to develop client/server applications.
  - ✓ run internal and external procedures both with and without parameters.
  - ✓ use handles for both processes and objects.
- 

## Duration

4 days.

---

# ProDataSets for Developers

---

## Introduction

OpenEdge Data Sets (ProDataSets) were first introduced with Progress OpenEdge 10. They allow the developer to exchange related data sets up and down the network and across AppServer boundaries while allowing easier tracking of changes to the data they contain.

*ProDataSets for Developers* teaches how separation of User Interface (UI) and business logic can be achieved by processes exchanging data using ProDataSets. The developer learns how to identify when and where to use ProDataSets and then practices incorporating ProDataSets into applications during hands-on exercises. Emphasis is placed on defining, populating, and performing data operations using ProDataSets.

The course includes an overview of the ProDataSet architecture, how User Interface independent applications are built using ProDataSets, how to control the default behaviour of ProDataSets, and how to transport ProDataSets from one application to another.

---

## Audience

This course is intended for developers of distributed applications who wish to take advantage of the many automated features available with ProDataSets.

---

## Course Goals

When you complete this course you will be able to:

- ✓ utilise ProDataSets when building business applications.
  - ✓ define ProDataSets
  - ✓ populate ProDataSets.
  - ✓ modify the contents of ProDataSets
  - ✓ control the behaviour of ProDataSets
- 

## Prerequisites

Before you begin this course, you should be able to:

- ✓ use OpenEdge Studio or Architect to build business applications.
  - ✓ define and use OpenEdge Queries
  - ✓ explain how to call other procedures and pass them data.
- 

## Duration

2 days.

---

# SOA1 – XML Essentials

---

## Introduction

*XML Essentials* provides ABL developers with the knowledge and skills essential for working with XML documents. Many of the most recent application environments utilize inter-application communication either within or outside of the Enterprise. The communication is typically based upon SOAP messages which contain XML documents. XML is the most widely-used format for transferring data from one application to another.

This course covers the basic concepts that a developer needs to know about XML, Document Type Definition (DTD) and XML Schema. A well-rounded background in these technologies is important prerequisite for developing an XML application using the ABL or for developing an application using a Service Oriented Architecture.

---

## Audience

This course is intended for OpenEdge developers needing to know more about XML and those who are beginning to explore Service Oriented Architecture.

---

## Course goals

When you complete this course, you should be able to:

- Describe why an Enterprise uses XML
  - Create an XML document
  - Create a Document Type Definition (DTD)
  - Create an XML Schema
  - Use the DOM to read and write XML
  - Use SAX to read XML
  - Understand how XML Stylesheets can be used from OpenEdge
  - Use XPath to query XML documents
  - Use XSLT to transform XML documents
- 

## Prerequisites

Before you begin this course, you should already have:

- ✓ Experience with developing in an ABL environment.
- 

## Duration

3 days.

---

# SOA2 – Exposing your Application to Web Services

---

## Introduction

In *SOA2 - Exposing your Application to Web Services*, you will learn the concepts, procedures, and guidelines used to set up your OpenEdge applications for access by Web Services client programs.

---

## Audience

This course is intended for administrators and/or programmers who are responsible for opening ABL applications to Web Services client access.

---

## Course goals

When you complete this course, you should be able to:

- ✓ Discuss the need to open up OpenEdge ABL systems to open (standards-based) client applications
  - ✓ Explain the architecture OpenEdge 10 uses for open clients
  - ✓ Learn how to set up the servers needed to host a Web Service with OpenEdge 10
  - ✓ Explain what the ProxyGen tool is, what it is used for, and what its inputs and outputs are
  - ✓ Model OpenEdge object structures using AppObjects, SubAppObjects and ProcObjects
  - ✓ Create a ProxyGen Project file and enter the object model
  - ✓ Generate ProxyGen output based on the object model
  - ✓ Debug any errors generated by ProxyGen
  - ✓ Provide ProxyGen output to Web Services application developers
  - ✓ Test and deploy the application
- 

## Prerequisites

Before you begin this course, you should be able to:

- ✓ Administer OpenEdge and AppServer applications
- 

## Duration

2 days.

---

# SOA3 – Exposing your Application to .NET Clients

---

## Introduction

In *SOA3 - Exposing your Application to .NET Clients*, you will learn the concepts, procedures, and guidelines used to set up your OpenEdge applications for access by .NET client programs.

---

## Audience

This course is intended for administrators and/or programmers who are responsible for opening ABL applications to .NET client access.

---

## Course goals

When you complete this course, you should be able to:

- ✓ Discuss the need to open up OpenEdge ABL systems to open (standards-based) client applications
  - ✓ Explain the architecture OpenEdge 10 uses for open clients
  - ✓ Explain what the ProxyGen tool is, what it is used for, and what its inputs and outputs are
  - ✓ Model OpenEdge object structures using AppObjects, SubAppObjects and ProcObjects
  - ✓ Create a ProxyGen Project file and enter the object model
  - ✓ Generate ProxyGen output based on the object model
  - ✓ Debug any errors generated by ProxyGen
  - ✓ Provide ProxyGen output to .NET application developers
  - ✓ Test and deploy the application
- 

## Prerequisites

Before you begin this course, you should be able to:

- ✓ Administer OpenEdge and AppServer applications
- 

## Duration

1 day.

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# SOA4 – Accessing Web Services from Open Edge

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## Introduction

*SOA4 – Accessing Web Services from Open Edge* provides experienced ABL developers who have used the XML-related ABL APIs, with the tools and information they need to write ABL code to access any Web service that utilizes the SOAP formats supported by OpenEdge.

The information and techniques presented in this course include basic Web services technologies and usage, how to invoke a Web service from the ABL exchanging both simple and complex data, how to access SOAP Headers and how to handle SOAP Faults.

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## Audience

This course is intended for ABL developers with experience with XML, DTDs, XML Schema and the XML-related ABL APIs. Students should have a solid understand of their application's use cases and how their application needs to utilise existing Web services as part of their ABL application.

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## Course goals

When you complete this course, you should be able to:

- ✓ Describe the Web service framework that is used in OpenEdge.
  - ✓ Generate the ABL WSDL documentation and use it as an aid in developing your ABL code which will access Web services.
  - ✓ Write ABL code which accesses a variety of Web services exchanging simple data.
  - ✓ Write ABL code which accesses a variety of Web services exchanging complex data.
  - ✓ Use the OpenEdge SOAP Viewer for examining SOAP messages.
  - ✓ Write ABL code which handles SOAP Faults.
  - ✓ Write ABL code which handles SOAP Headers.
- 

## Prerequisites

Before you begin this course, you should already have:

- ✓ Programming experience with the ABL
  - ✓ Experience with creating XML, DTDs and XML Schemas
  - ✓ Experience with the XML-related ABL APIs
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## Duration

3 days.

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# SOA5 – OpenEdge development with Sonic ESB

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## Introduction

*SOA5 – OpenEdge development with Sonic ESB* provides experienced ABL developers with the knowledge and skills to develop applications that use the Sonic Enterprise Service Bus (ESB). The ESB, together with the OpenEdge ESB Adapter, will enable your applications to provide and access services in a Services Oriented Architecture (SOA).

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## Audience

This course is intended for experienced ABL developers who have a solid understand of their application's use cases and how their application might use its existing business logic as a service in an SOA.

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## Course goals

When you complete this course, you should be able to:

- ✓ Describe how the Sonic Enterprise Service Bus (ESB) can be used for OpenEdge applications.
  - ✓ Use the Sonic Management Console to manage Sonic MQ.
  - ✓ Create and manage ESB containers using the Sonic Management Console and Sonic Workbench.
  - ✓ Install and configure the OpenEdge ESB Adapter.
  - ✓ Use the ABL to access OpenEdge Services using the ESB Adapter.
  - ✓ Create and deploy OpenEdge Services in the ESB.
  - ✓ Create and use XPath expressions.
  - ✓ Create and test XSLT Stylesheets using Sonic Workbench.
  - ✓ Create and use an XML Transformation Service configuration in the ESB.
  - ✓ Use the ABL for JMS messaging.
  - ✓ Use the XML Transformation Service using the ABL.
  - ✓ Create and initiate ESB Processes which use services implemented in the ABL.
- 

## Prerequisites

Before you begin this course, you should already be able to:

- ✓ Develop ABL applications.
  - ✓ Understand and use XML and XML Schema.
  - ✓ Develop ABL applications which access XML documents.
  - ✓ Manage processes in an AppServer environment.
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## Duration

3 days.

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# ADM1 SmartObjects Essentials

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## Introduction

*ADM1 SMARTOBJECT Essentials* introduces experienced developers to PROGRESS SMARTOBJECT technology and the development of ADM1 component based applications. In this introductory course you will learn the principles behind ADM1, how to build applications using reusable components, how to build those reusable components and how to use them in single and multiple window environments.

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## Audience

This course is intended for developers already experienced in the OpenEdge ABL.

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## Course goals

When you have completed this course, you should be able to:

- ✓ understand what the ADM is and what good things can happen to you when you use it.
- ✓ use the templates provided as standard to build SMARTOBJECTS
- ✓ link SMARTOBJECTS masters together to form screens and applications
- ✓ Control Paging and multiple screens

## Prerequisites

Before you begin this course, you should have some experience with:

- ✓ manipulating data with the OPENEDGE ABL
  - ✓ writing and executing internal procedures
  - ✓ user-interface triggers and events
  - ✓ passing parameters to internal and external procedures
  - ✓ using the pre-processor
  - ✓ using include files
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## Duration

1 day.

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# ADM1 SmartObjects for Developers

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## Introduction

*ADM1 SMARTOBJECTS for Developers* is intended as a continuation from *ADM1 SMARTOBJECT Essentials*. It covers basic customisation of the standard ADM, and introduces changes to standard SmartObject behaviour, manipulating SmartObject links and properties, business logic and validation and further enhancements to the standard UI.

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## Audience

This course is designed for developers who have already completed *ADM1 SMARTOBJECT Essentials* or who are thoroughly familiar with the subjects it contains.

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## Course goals

When you have completed this course, you should be able to:

- ✓ Customise default SmartObject behaviour by overriding standard procedures.
- ✓ Understand the processes involved during various input and output operations.
- ✓ Understand and customise SmartObject attributes.
- ✓ Understand and customise SmartObject links.
- ✓ Describe the default ADM1 transaction structure.
- ✓ Customise your ADM1 development environment.

## Prerequisites

Before you begin this course, you should have some experience with:

- ✓ Use the Progress ADM to build applications and application components.
  - ✓ Build applications using SmartObjects that Progress provides with their product, or SmartObjects provided by others in your company.
  - ✓ how SmartObjects promote encapsulation and reusability.
  - ✓ the ABL techniques that make SmartObjects work.
  - ✓ explain the different link types and when to use them to connect one SmartObject to another.
  - ✓ Use paging to build screens with multiple pages and child windows.
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## Duration

3 days.

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# ADM2 SmartObject Essentials

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## This course

*ADM2 SMARTOBJECT Essentials* introduces experienced developers to PROGRESS SMARTOBJECT technology and the development of ADM2 component based applications. In this introductory course you will learn the principles behind ADM2, how to build applications using reusable components, how to build those reusable components and how to use them in single and multiple window environments.

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## Audience

This course is designed for developers who are already familiar with OpenEdge programming.

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## Course goals

When you complete this course, you should be able to:

- ✓ use the Progress ADM to build applications and application components.
  - ✓ build applications using SmartObjects that Progress provides with their product, or SmartObjects provided by others in your company.
  - ✓ describe how SmartObjects promote encapsulation and reusability.
  - ✓ describe the recommended development process for building applications with SmartObjects.
  - ✓ describe the ABL techniques that make SmartObjects work.
  - ✓ explain the different link types and when to use them to connect one SmartObject to another.
  - ✓ use paging to build screens with multiple pages and child windows.
- 

## Prerequisites

Before you begin this course, you should be able to:

- ✓ Manipulate data using the OpenEdge ABL.
  - ✓ Use the AppBuilder to develop windows.
  - ✓ Develop event-driven applications and triggers.
  - ✓ Write and execute your own internal procedures.
  - ✓ Be able to run procedures persistently and understand the persistent model.
  - ✓ Be familiar with how the super procedure stack works.
  - ✓ Exposure to object-oriented concepts is also helpful.
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## Duration

1 day.

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# ADM2 SmartObjects for Developers

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## This course

*ADM2 SMARTOBJECTS for Developers* is intended as a continuation from *ADM2 SMARTOBJECT Essentials*. It covers basic customisation of the standard ADM2, and introduces changes to standard SmartObject behaviour, manipulating SmartObject links and properties, business logic and validation and further enhancements to the standard UI.

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## Audience

This course is designed for developers who have already completed *ADM2 SMARTOBJECT Essentials* or who are thoroughly familiar with the subjects it contains.

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## Course goals

When you complete this course, you should be able to:

- ✓ Customise default SmartObject behaviour by overriding standard procedures.
  - ✓ Customise SmartObject Links.
  - ✓ Understand and customise SmartObject attributes and properties.
  - ✓ Use Smart DataFields to enhance the application UI.
  - ✓ Customise your ADM2 development environment.
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## Prerequisites

Before you begin this course, you should be able to:

- ✓ Use OpenEdge ADM2 to build applications and application components.
  - ✓ Build applications using SmartObjects that Progress provides with their product, or SmartObjects provided by others in your company.
  - ✓ Describe how SmartObjects promote encapsulation and reusability.
  - ✓ Describe the recommended development process for building applications with SmartObjects.
  - ✓ Describe the ABL techniques that make SmartObjects work.
  - ✓ Explain the different link types and when to use them to connect one SmartObject to another.
  - ✓ Use paging to build screens with multiple pages and child windows.
- 

## Duration

3 days.

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