4GL Essentials

Duration

- 5 Days

Prerequisites

None

Course Description

This course aims to provide developers new to Progress with the fundamental knowledge of the language to begin development of applications. The course will lead you through the principles of programming in Progress. It does not cover user interface. This course is the first step for developers who are going to be developing Progress applications in any user interface.

Topics

Key topics in this course include:

- Introduction to setting up the Progress environment
  - Data dictionary
  - Records
  - Fields
  - Indexes
  - Sequences
- Retrieving data from a Progress database
  - Find
  - For Loops
  - Queries
  - Browsers
- Access subsets of data using queries
- Creating, updating and deleting records
  - Which statements should be avoided
- Managing transactions
  - Transaction Scope
  - Sub transactions
  - hanging scope
- Managing record locking
  - Optimistic and Pessimistic Locking
- Error trapping and response
  - Error Status
- Generating reports
  - Multiple output streams
  - Customising the look and feel of reports
  - Accumulation of totals and averages
- Developing business logic
  - Internal procedures
  - Structured logic procedures
  - Splitting business logic and user interface

Objectives

Formal product training will enable developers to make the most of their investment in Progress. By learning from the experts, developers will be taught the most efficient use of the 4GL and avoid picking up bad habits on the job.

This course will provide developers with the skills foundation to enable them to go on to work on any Progress based development. Focussing on the Progress language, the course will show

developers how to fetch and amend data in a Progress database. More importantly it will highlight how to control the volume of data read or retrieved enabling developers to write better and more efficient code.

Customers who have attended the course will return with:

- An increased confidence in their usage of Progress
- The ability to read, maintain and report on Progress data
- Understanding of Progress Language constructs

Applicable Progress Versions

All

Delivery Mechanism:

- Instructor Led

4GL Performance Tuning

Duration

- 3 Days

Prerequisites

This course is applicable for students who already know and use the 4GL in business applications. This course could be an excellent refresher for students who have experience of Progress (either formal or self-taught) and wish to brush up on how to use that experience to write more efficient code.

Course Description

This course is for developers who are already familiar with the 4GL, and who wish to improve their skill in writing efficient queries and transactions. It also provides techniques for tuning existing 4GL applications including an overview of tools available for tuning purposes.

Topics

This course is aimed at proficient coders. Some refresher topics are covered in the course.

The following topics are covered in this course.

- Selection of data retrieval methods
  - Network Issues
  - Joins
  - Field lists
  - Record cache
- Transaction review
  - What is a transaction
  - Setting scope
  - Locking
- Indexes
  - How indexes work
  - Index Brackets
  - Cross reference listings
  - Index reposition
- Identifying Issues
  - Application Profiler
  - Promon
  - VST

Objectives

The majority of performance problems on database systems are caused by inefficient code causing too many records to be retrieved from the database. The aim of this course is to show developers how Progress retrieves and updates records and to help ensure they do so as efficiently as possible in production applications.

This course will give developers a complete understanding of indexing rules, record retrieval and should result in their being able to produce faster applications with less issues caused by system growth.

Applicable Progress Versions

The course is taught using Progress version 9, but developers using all versions will benefit. The instructor will highlight any version specific information.

Delivery

Developing Applications in WebSpeed

Duration

- 4 Days

Prerequisites

Customers who attend this course should have prior experience of using the Progress 4GL. This experience can be gained on the 4GL Essentials course.

Course Description

This course introduces you to the WebSpeed development environment. You will learn about the tools included in the WebSpeed AppBuilder and about how to use the three methods of producing HTML Pages using WebSpeed. When you have completed this course, you will have a written a simple sample application and should be able to start designing and developing your own WebSpeed applications. This course will also cover commonly used JavaScript techniques you can use to enhance your application and migration concerns for re-using code from existing applications.

Topics

Key topics in this course include

- Setting up the WebSpeed Development Configuration
- Using the AppBuilder and other development tools
- WebSpeed Development File Types
- Using the WebSpeed File wizards to produce application files
- Using speedscript to develop application pages
- Determining the type of file to use
- Using advanced processing of input and output of data
- Using HTML framesets with WebSpeed
- Using Javascript techniques
- Additional programming techniques
- Building re-usable components

Objectives

Formal product training will enable developers to make the most of their investment in Progress. By learning from the experts, developers will be taught the most efficient use of WebSpeed and avoid picking up bad habits on the job.

Developing web applications can be fraught with danger. If you get it wrong, you can leave your web site and the computer it sits on open to hackers. This course teaches developers how to write applications, which are well written and secure.

Applicable Progress Versions

All

Delivery Mechanism

- Instructor Led

Developing Applications in WebSpeed

Duration

- 5 Days

Prerequisites

- The use of Progress 4GL to develop applications and access data

The courses, which will provide this required knowledge, are 4GL Essentials and Building SmartObject Applications.

Course Description

This is a course bundle comprising Distributed AppServer Application Administration and Distributed AppServer Application Development. By purchasing both together, customers can learn all that is needed to manage an AppServer development and get a discount in the price of taking the two courses separately.

Topics

Key topics in this course include

- Designing distributed logic components
- Trade-offs in designing for distributed business
- Where to code data access and business functions
- Which components to deploy on AppServer
- Building and deploying distributed components
- Grouping logic components into partitions for deployment on different platforms and in different combinations
- Managing trade-offs for using different AppServer modes
- Accessing distributed components from Progress clients
- Connecting and disconnecting from AppServer at runtime
- Identifying the programmes and components that need to reside on both client and AppServer

Objectives

Formal product training will enable developers to make the most of their investment in Progress. By learning from the experts, developers will be taught the most efficient use of the 4GL and avoid picking up bad habits on the job.

Writing n-tier applications can be daunting. Knowing where the best place to put business logic and how to split the application across multiple machines can have significant performance benefits on your application.

Customers who have attended the course will return with:

- An increased confidence in their usage of Progress
- The ability to split business logic and user interface code
- Knowledge of how much logic to distribute to which locations

Applicable Progress Version:

- All

Delivery Mechanism:

Distributed AppServer Applications Administration

Duration

- 3 Days

Prerequisites

- The use of Progress 4GL to develop applications and access data

The courses, which will provide this required knowledge, are 4GL Essentials and Building SmartObject Applications.

Course Description

This entry level course introduces system administrators and application developers to the configuration and management of distributed application environments using the Progress AppServer in the Windows and UNIX operating systems. During the course students learn how to configure AppServer using the Progress Explorer tool and command line utilities, including operating modes, AppServer security, and AppServer load balancing and fault tolerance. Students also learn how to deploy and test distributed business logic.

Topics

Key topics in this course include

- Configure the distributed environment using AppServer technology.
- Start and stop AppServer components.
- Deploy and test distributed logic.
- Configure an operating mode for the AppServer to meet application design requirements.
- Plan and implement server side security.
- Configure and deploy AppServers for fault tolerance and load balancing.

Objectives

Formal product training will enable developers to make the most of their investment in Progress. By learning from the experts, developers will be taught the most efficient use of the 4GL and avoid picking up bad habits on the job.

Writing n-tier applications can be daunting. Knowing where the best place to put business logic and how to split the application across multiple machines can have significant performance benefits on your application.

Customers who have attended the course will return with:

- An increased confidence in their usage of Progress
- The ability to split business logic and user interface code
- Knowledge of how much logic to distribute to which locations

Applicable Progress Version:

- All

Delivery Mechanism:

- Instructor Led

Distributed AppServer Application Development

Duration

- 2 Days

Prerequisites

- The use of Progress 4GL to develop applications and access data
- Confidence to work in an AppServer environment

The courses, which will provide this required knowledge, are 4GL Essentials and Building SmartObject Applications.

Course Description

This course for intermediate level application developers supplements *Distributed AppServer Application Administration* with information and techniques used to develop n-tier distributed applications. During the course you will learn how to write code to connect 4GL clients to an AppServer, use persistent procedures and super procedures on the AppServer, manage context on the AppServer, control transaction scope on the AppServer, and pass messages back to the client.

Topics

Key topics in this course include

- How to write code to connect 4GL clients to the AppServer using discrete 4GL statements or partitions.
- Structure your application to use persistent procedures and super procedures on the AppServer in stateless and state-free modes without binding the AppServer connection.
- Control transaction scope to ensure the desired degree of roll-back in the event of an error.
- Pass messages from the AppServer to the client.
- Manage context on the AppServer in stateless and state-free modes using flat files and context databases.

Objectives

Writing n-tier applications can be daunting. Knowing where the best place to put business logic and how to split the application across multiple machines can have significant performance benefits on your application. This course focuses on the development aspects of AppServer.

Customers who have attended the course will return with:

- An increased confidence in their usage of Progress
- The ability to split business logic and user interface code
- Knowledge of how to write applications which work in a distributed environment

Applicable Progress Version

All

Delivery mechanism

- Instructor led

Database Admin

Duration

- 4 Days

Prerequisites

A general knowledge of database concepts and operating systems.

Course Description

This course gives the delegate all of the information they need to manage a Progress database. It covers all of the tasks that a Progress Database administrator needs to know to do their job properly.

Topics

Key topics in this course include

- The Progress memory architecture
- How to create and modify database
- Tables and indexes
- Logical and physical database layouts
- Database management
- Basic tuning of the database and 4GL
- Database Security
- Backup and recovery techniques
- After Imaging
- Database Process

Objectives

Would you know what to do if your database crashed? Could you restore to this morning? To one minute before the crash? How long would it take to get back up and running? How can I check for potential upcoming problems?

This course gives the information, which any database admin needs to know in order to look after a Progress database

Customers who have attended the course will return with:

- Knowledge of how the Progress database works
- The ability to fix database issues
- The ability to monitor database and take appropriate corrective actions

Applicable Progress Versions

The course is taught using Progress version 9, but the instructor will point out when each feature was added to the database and highlight appropriate alternatives to strategies for those with older versions.

Delivery Mechanism

- Instructor Led
- Computer Based
- Web Based

ProDataSets

Overview
Introduction

This course guides students through the design and development of applications using Progress DataSets (ProDataSets). The developer learns how to identify when and where to use ProDataSets and then practices incorporating ProDataSets into applications during hands-on exercises. The course emphasizes defining, populating, and performing data operations using ProDataSets and sharing data with other applications.

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

Audience

This course is intended for application developers who design and build modern, distributed applications and wish to exchange data with other applications via XML. Students should have experience working with the Progress 4GL.

Prerequisites

Before you begin this course, you should be able to write procedures using the Progress 4GL. This includes all the static objects and Progress 4GL statements to:
• Run internal and external procedures
• Retrieve data from the database using queries
• Define and populate temp-tables
• Pass parameters to and from procedures
• Perform standard data operations
• Use table buffers
• Use object handles, attributes, and methods
• Understand how ROWID works
• Handle errors

The *4GL Essentials* course provides this prerequisite knowledge.

About-4 *Using ProDataSets*
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About This Course
2

Course Goals

When you complete this lesson you should be able to:
  Explain what a ProDataSet is
  Describe the benefits
  Define ProDataSets
  Populate ProDataSets
  Perform data maintenance operations
  Pass ProDataSets as parameters
  Customize the default behavior of ProDataSets
  Share data with other applications

Course goals
Course Goals
When you complete this course you should be able to:
• Explain what a ProDataSet is
• Describe the benefits of using ProDataSets to develop applications
• Use recommended techniques to incorporate ProDataSets in the design and implementation of applications
• Write Progress 4GL procedures that:
− Define ProDataSets
− Populate ProDataSets using data from multiple sources

– Perform data maintenance operations (e.g., Add, Delete, Modify) using ProDataSets
– Pass ProDataSets as parameters
– Customize the default behavior of ProDataSets
– Export ProDataSet data to XML files
– Import XML data into ProDataSets

OpenEdge Architect

With OpenEdge Architect you can quickly build business logic, manage application data sources, and seamlessly test and deploy code—all in a single environment. There's an open and extensible toolset to further enhance your productivity. In addition, the projectbased development environment offers an intuitive directory hierarchy assuring that you stay in sync as your projects evolve.

OpenEdge architect also simplifies the developer's life by providing a fully configurable workspace with role-based views on the software development artifacts. Whether you are an architect, developer, or DBA, you can easily configure and access a palette of taskappropriate

tools without leaving your workspace. If you play all three roles, you can easily move from one view to another, eliminating the difficulty of mastering multiple development environments.

Simply put, OpenEdge Architect is the most complete and diversified integrated development platform of its kind for building and managing service-oriented business applications. It is based on two decades of Progress experience in providing infrastructure for leading, diverse applications like ERP and financial trading, across varied industries such as retail, manufacturing, telecommunications, financial services, and more. Our goal at Progress Software is to maximize the benefits of information technology while minimizing its complexity. Here's a closer look at how OpenEdge achieves this goal.