



The Manta  
**Online Seminar  
Series**

Bringing the IBM i experts to you



[www.mantatech.com](http://www.mantatech.com)

October, 2009, Edition.

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**[www.mantatech.com](http://www.mantatech.com)**

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## The Manta Online Seminar Series

The Manta **Online Seminar Series** is a collection of online seminars by the world's leading IBM i experts. In keeping with Manta's tradition of bringing the training to you, each seminar is an online presentation that you can take at home or at work. The seminars are available worldwide, 24 hours a day, seven days a week. All you need is a PC with Internet Explorer, speakers, and a decent Internet connection.

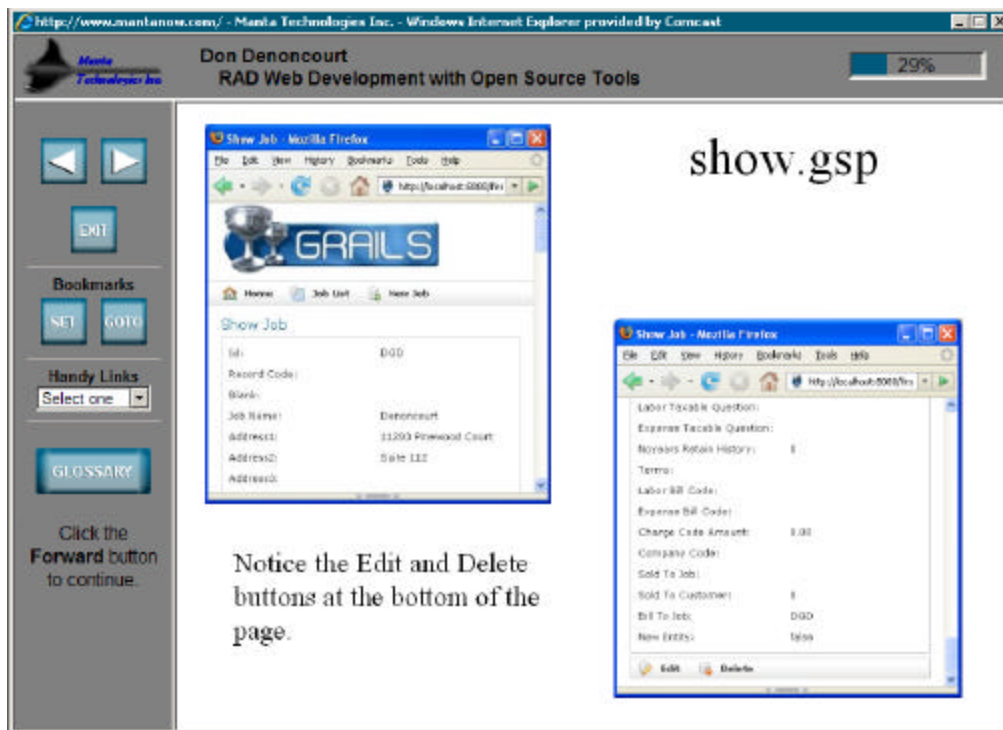
All seminars are delivered using Manta's online training delivery system, **MantaNow!** (CD delivery is not available.) As with traditional Manta courses, the seminars let you set a bookmark to return at a later time. Unless otherwise specified, each seminar is 50 to 90 minutes long. You have two days to complete each seminar. (The timer starts when you first access a seminar, not when you purchase it.)

In some cases, the seminars were developed exclusively for Manta. In other cases, the seminars are based on sessions that the speakers have recently given at national conferences. In all cases, you are getting the most up-to-date information from the leading experts in the field.

One of the major advantages of the seminar format is the ability to ask questions. In the case of the **Online Seminar Series**, answers to questions are provided via the Manta **Training Forum**, an online resource for IBM i students and trainers.

**Handouts** are an optional feature of many Manta seminars. Handouts are delivered as PDF files to the student's PC.

Because we are adding seminars on a weekly basis, you should visit our web site ([www.mantatech.com](http://www.mantatech.com)) for complete descriptions of the latest offerings.



The screenshot shows a web browser window titled "Don Denoncourt RAD Web Development with Open Source Tools" with a 29% progress indicator. The main content area displays "show.gsp" and a "Show Job" form. The form contains the following data:

id:	040
Record Code:	
Blank:	
Job Name:	Denoncourt
Address:	33203 Pinewood Court
Address:	State 112
Address:	

Below the form, the text reads: "Notice the Edit and Delete buttons at the bottom of the page." To the right, another browser window shows a "Labor Task" form with fields for "Expense Tabable Question", "Novaxis Retain History", "Terms", "Labor Bill Code", "Expense Bill Code", "Change Code Amount", "Company Code", "Sold To Job", "Bill To Customer", "Bill To Job", and "New ENTS".

A Sample Seminar Screen



## Ordering

You can place orders by phone, by mail, by fax, or by using our web site.

### Mail orders:

Manta Technologies Inc.  
6850 Vista Lodge Loop  
Castle Rock, CO 80108

**Phone orders:** 1-800-40-MANTA  
(1-800-406-2682)  
1-303-862-4562

**Fax orders:** 1-800-406-2682

**Web site:** [www.mantatech.com](http://www.mantatech.com)

**E-mail:** [sales@mantatech.com](mailto:sales@mantatech.com)

Major credit cards (American Express, VISA, MasterCard, Discover) and corporate purchase orders are accepted.

Prices listed in this catalog are in U.S. currency.

## Pricing

Unless specified otherwise, each seminar costs \$96 (USD) **per person**. Organizations that wish to train multiple students will need to purchase a "seat" for each one. Discounts are available for ten or more students in a given seminar. Please call for details.

Other discounts are available by ordering all of the seminars within a "seminar series," such as the **Using RDi** or the **Introduction to Linux** series. See the series description for the discount price.

When a handout is available for a seminar, it costs an additional \$10. (For multiple students in the same seminar, the organization must decide whether to purchase a handout for all students or for none.) Each handout is delivered automatically to the student's browser when he or she accesses the seminar.

## System Requirements

The Manta courseware is a browser-based application that will run on virtually any PC using Internet Explorer version 6.0 (or later). The courseware automatically checks your browser's configuration to ensure that it is set up as required to run the training.

### Take a Free Sample Seminar

A sample seminar is available at [www.mantatech.com](http://www.mantatech.com). Just select the "Take a Sample Seminar" link from the Table of Contents.

While you at the Manta web site, be sure to check out the current list of available seminars. Because we are adding seminars weekly, you may find new seminars that are not listed in this catalog.



**Joe Pluta**  
Pluta Brothers Design, Inc.

Joe Pluta has designed distributed architectures for the midrange platform for over twenty years. Joe's company, Pluta Brothers Design, develops tools that allow IBM i users to incorporate emerging

technologies seamlessly into their legacy systems, providing a direct path to new architectures. Joe moderates the JAVA400-L mailing list and is a member of IBM's JTOpen Core Team. You can find Joe's "Weaving WebSphere" column at [www.mcpressonline.com](http://www.mcpressonline.com), and he is a regular participant in mailing lists and newgroups on a wide range of topics surrounding the IBM i platform and Java in general. Since Eclipse was introduced as the new tooling for the next generation of business applications, Joe has been using the product in a real application environment, performing testing and reporting bugs up to the release of the most recent version of the software.

**The Using RDi Series**

**Order Number:** JPRD00

**Rational Developer for i (RDi)** is the newly announced replacement for WDSi. In this series of seminars, Joe covers everything you need to know to get started with RDi.

The series includes the following six seminars:

- ?? *Eclipse and the Rational Products for the IBM i*
- ?? *Eclipse and Rational Tool Fundamentals*
- ?? *Migrating from PDM to RDi (Remote Systems Explorer)*
- ?? *Migrating from SEU to RDi (The LPEX Editors)*
- ?? *Compiling and Debugging Using RDi*
- ?? *RDi Advanced Features*

**Approximate Study Time for the Entire Series:**  
6-7 hours

**Reference Materials**

A handout is available for each seminar in this series.

**Price**

The price of this series is \$480, a savings of \$96 over buying the seminars individually.

**Eclipse and the Rational Products for the IBM i**

*Order Number:* JPRD01

The application development tooling for the IBM i is very complex, especially the changes introduced in V6R1. This seminar will explain the new products and packages, how they relate to one another and how they fit within the larger scheme of the Rational product line and the even broader scope of Eclipse. Packaging and distribution will be addressed, including IBM's Installation Manager and how it works with the Eclipse software update process.

**Approximate Study Time:** 60 minutes

**Objectives**

After completing this seminar, you should be able to:

- ?? Describe the basic terminology of application development
- ?? Explain how the Eclipse and Rational products relate to one another
- ?? Explain the differences between V5R4 and V6R1 licensing
- ?? Describe the installation and update process for the Rational Tools for the IBM i

**Topic Outline**

- Application Development Terminology
- The Eclipse Project
- Rational Tools
- Old (V5R4 and prior) System i Products
- New (V6R1 and Beyond) IBM i Products
- Licensing and Entitlement
- Installation and Updates

**Audience**

This seminar is intended for IBM i programmers and their managers.

**Prerequisites**

There are no formal prerequisites for this seminar.

**Reference Materials**

A handout is available for this seminar.



## Eclipse and Rational Tool Fundamentals

**Order Number:** JPRD02

In this seminar, you will be introduced to the fundamental operation of the Rational Developer for i (RDi) tooling and the underlying Eclipse workbench. Examples of all of the basic components of the tooling will be presented: workbench, view, dialog, wizard, menu, preferences, perspectives, projects, and so on will all be covered. Common productivity-enhancing actions will be presented that can be used throughout all the products, such as context-sensitive menus and properties.

**Approximate Study Time:** 60 minutes

### Objectives

After completing this seminar, you should be able to:

- ?? Describe the basic concepts of the RDi and Eclipse tooling
- ?? Explain how workspaces are used
- ?? Define the following terms: perspective, view, menu, dialog, and wizard
- ?? Explain how common features like properties make you more productive

### Topic Outline

- Basic Concepts
- Workspaces
- Configurable Workbench
- Consistent Interface

### Audience

This seminar is intended for IBM i programmers looking to learn the new Rational Developer for i tooling.

### Prerequisites

Although there are no formal prerequisites for this seminar, *Eclipse and the Rational Products for the IBM i* is a good accompaniment.

### Reference Materials

A handout is available for this seminar.

## Migrating from PDM to RDi (RSE)

**Order Number:** JPRD03

This seminar explains how to use IBM's new graphical tool (Rational Developer for i) to perform all the day-to-day programming functions available in the green screen PDM product. From logging on to creating a working environment to managing source to searching and opening source members, this course covers everything you need to use the new tooling.

**Approximate Study Time:** 60 minutes

### Objectives

After completing this seminar, you should be able to:

- ?? Start Rational Developer for i
- ?? Connect to a host IBM i
- ?? Set up your sessions defaults
- ?? Manage your source code (libraries, files and members)
- ?? Create and maintain filters and filter pools
- ?? Use the search capabilities of the tool

### Topic Outline

- Introduction
- Connecting
- Managing your Source
- Filter Pools
- Searching

### Audience

This seminar is intended for IBM i programmers wanting to move from PDM to the new tooling.

### Prerequisites

You should have already completed the previous seminar in this series, *Eclipse and Rational Tool Fundamentals*, or have equivalent product knowledge.

### Reference Materials

A handout is available for this seminar.



## Migrating from SEU to RDi (LPEX Editors)

**Order Number:** JPRD04

This seminar explains how to use the LPEX editors within IBM's new graphical tool (Rational Developer for i) to edit program source. You'll be shown how to perform all the functions of the green screen SEU utility, as well as how to take advantage of all the unique productivity-enhancing features of the new LPEX editors, from Outline mode to content assist.

**Approximate Study Time:** 60 minutes

### Objectives

After completing this seminar, you should be able to:

- ?? Set up your environment to help you edit
- ?? Launch the editor from various parts of the tool
- ?? Create custom perspectives that provide you the most productive space
- ?? Describe both the older PDM-like line commands and the new LPEX features
- ?? Use the Outline View to quickly navigate your source code

### Topic Outline

- Initial Setup
- Launching the Editor
- Managing your Real Estate
- LPEX Editor Concepts
- The Outline View

### Audience

This seminar is intended for IBM i programmers wanting to move from SEU to the new tooling.

### Prerequisites

You should have already completed the previous seminar in this series, *Migrating from PDM to RDi (RSE)*, or have equivalent product knowledge.

If you are new to the Rational products, the other seminars contain additional useful introductory material.

- ?? *Eclipse and the Rational Products for the IBM i*
- ?? *Eclipse and Rational Tool Fundamentals*

### Reference Materials

A handout is available for this seminar.

## Compiling and Debugging in RDi

**Order Number:** JPRD05

In this seminar you'll see how to compile your IBM i objects using the Rational Developer for i (RDi). You'll see the unique capabilities of the tool, including specifying and saving different compile options. Then you'll be given a tour of the debugging facilities, from launching programs to setting breakpoints and watchpoints to using the new Service Entry Point concept.

**Approximate Study Time:** 60 minutes

### Objectives

After completing this seminar, you should be able to:

- ?? Use the verifier to quickly check your program syntax
- ?? Use the Error List view as your programming to-do list
- ?? Compile using standard compile commands
- ?? Create custom commands for compilation
- ?? Use the various views in the debugger, such as Breakpoints, Variables, and Debug
- ?? Set and manage both standard and watch breakpoints
- ?? Create service entry points to debug any kind of IBM i program

### Topic Outline

- Quick Recap
- Using the Verifier
- Compiling
- Debugging
- Service Entry Points

### Audience

This seminar is intended for IBM i programmers who want to use all the capabilities of the new RDi tool to make them more productive when creating and debugging their applications.



## **Prerequisites**

You should have already completed the previous two seminars this series:

?? *Migrating from PDM to RDi (RSE)*

?? *Migrating from SEU to RDi (The LPEX Editors)*

or have equivalent product knowledge.

If you are new to the Rational products, the other seminars contain additional useful introductory material.

?? *Eclipse and the Rational Products for the IBM i*

?? *Eclipse and Rational Tool Fundamentals*

## **Reference Materials**

A handout is available for this seminar.

## **RDi Advanced Features**

**Order Number:** JPRD06

This seminar provides a first look at the upcoming advanced features of the Rational Developer for i (RDi). The Screen Designer is the intended replacement for SDA, the venerable green screen tool for designing 5250 application screens. Screen Designer replaces the older CODE Studio graphical designer and integrates directly into the RDi workbench. The Application Diagrammer provides a graphical visualization of your application, including relationships between programs. Both tools are in their early stages, but will become important parts of your toolbox as they mature, so it will be to your benefit to be introduced to them now.

**Approximate Study Time:** 60 minutes

## **Reference Materials**

A handout is available for this seminar.



Four of the most popular and respected educators in the market, Susan Gantner, Skip Marchesani, Jon Paris and Paul Tuohy, team up with Manta to bring their renowned training expertise directly to developers' desktops. Based on sessions from their dynamic *RPG & DB2 Summit* conference, these online seminars feature practical, real-life tips and techniques specifically designed for RPG/DB2 programmers who want to innovate and progress their careers by optimizing the use of their company's IBM i applications.

These forward-thinking RPG advocates deliver sensible advice with encouragement, humor and a keen understanding of what it takes to nurture a successful career as a IBM i programmer today.



### Susan Gantner System i Developer

Susan Gantner is a member of Partner400, an iSeries education company and System i Developer, a

consortium of System i educators and the hosts of the RPG & DB2 Summit conferences.

Her career has spanned over 30 years in the field of application development. Beginning as a programmer developing applications for corporations in Atlanta, Georgia, she joined IBM in 1985 as a Systems Engineer. She worked at the IBM lab in Rochester, Minnesota for 5 years and later moved to the IBM Toronto Software Laboratory.

Susan left IBM in 1999 to devote full time to teaching and consulting. Her primary emphasis is on enabling customers to take advantage of the latest programming and database technologies on System i (AS/ 400 and iSeries). She is a regular speaker at COMMON conferences worldwide and at many other technical conferences around the world. She holds several Speaker Excellence medals as well as the Jim Sloan Technical Speaker award from COMMON North America.

### Set Your RPG /Free

**Order Number:** SGRP01

In V5R1, IBM "liberated" the RPG language. Logic statements can now be completely free format. However, it's not enough to simply understand the basic syntax rules for coding /Free format RPG logic. Coding in /Free forces RPG programmers to give up many of their old habits (and many of their familiar operation codes) and use newer, more productive coding techniques.

In this seminar, we'll explore some of these techniques and discuss their benefits. We'll also cover the basic syntax rules along with the advantages of /Free-form RPG.

**Approximate Study Time:** 75 minutes

#### Objectives

After completing this seminar, you should be able to:

- ?? Understand the basic syntax rules of /Free RPG and learn to love the semicolon!
- ?? Use the Built-in functions designed to replace numbered indicators and unsupported operation codes, including newer ways to manipulate dates and times
- ?? Discover alternatives for the defunct **MOVE** operation
- ?? Use prototypes to call programs without **PARM** or **PLIST**
- ?? Use new language features **ONLY** available in /Free form



## Topic Outline

- Why /Free?
- The basics of /Free syntax
- Coding without Numbered Indicators
- Unsupported Op-Codes and how to replace them
- Options Only available in /Free

## Audience

This seminar is intended for programmers with some experience with the RPG IV (aka, RPGLE or ILE RPG) language, but little or no experience with coding in /Free style logic.

## Prerequisites

The student should be experienced with programming on in RPG IV.

## Reference Materials

A handout is available for this seminar.



## Paul Tuohy System i Developer

Paul Tuohy has worked in the development of IBM midrange applications for 24 years. He has been IT manager of Kodak Ireland and technical director of Precision Software Ltd. He is currently CEO of ComCon, a midrange consultancy company. Paul has been lecturing at IBM Learning Services in Dublin for the last 18 years. He is the author of "Re-engineering RPG Legacy Applications" and "iSeries Navigator for Programmers" and he is one of the quoted industry experts in the IBM Redbook "Who knew you could do that with RPG IV?". Paul has won numerous speaker awards at Common conferences.



## RPG Skills for the New Millennium

**Order Number:** PTRP01

This seminar will guide an RPG programmer through the process of preparing for applications in the new millennium. In the move away from "green screen", what are the programming requirements? Where does RPG fit in and how does it change to meet new requirements?

**Approximate Study Time:** 60 minutes

### Objectives

After completing this seminar, you should be able to:

- ?? Differentiate what skills you must learn
- ?? Determine where new technologies fit in with your company's business requirements
- ?? Identify why/when you should look at technologies such as RPG IV, ILE, WDSC/RSE/RDi, HTML, eRPG, PHP, XML, Webfacing, VisualAge for RPG, Java and WebSphere

### Topic Outline

**Must Do:** these are the skills that every RPG Programmer must have.

**Should Do:** these are the skills that programmers should develop but some may be dictated by circumstance

**Might Do:** these are skills that will be determined by business decisions

### Audience

This seminar is intended for programmers and application developers working on an IBM i system.

### Prerequisites

While there are no formal prerequisites for this seminar, an understanding of RPG program development concepts is assumed.

### Reference Materials

A handout is available for this seminar.

## Considerations for Successful ILE Implementation

**Order Number:** PTIL02

Although it is very rare that the implementation of any two ILE projects are exactly the same, there are many ground rules that are required in all implementations. This seminar discusses some of the considerations for a successful ILE implementation, including how to control and manage the development environment, development tools to use, design considerations (Activation Groups, Binding Directories, using Service Programs), and documenting procedures.

**Approximate Study Time:** 60 minutes

### Objectives

After completing this seminar, you should be able to:

- ?? Understand the implications of an ILE project
- ?? Understand the requirements for the right tools
- ?? Understand the documentation requirements
- ?? Understand the implications for Prototyping, Activation Groups, Binding Directories and Binder Language

### Topic Outline

The Big Picture: an overview of an ILE project

The Right Tools: make sure you have the right tools for the job

Prototyping: the heart of an ILE application

It's all about subprocedures

Documentation

Defining ILE components

### Audience

This seminar is intended for programmers and application developers working on an IBM i system.

### Prerequisites

While there are no formal prerequisites for this seminar, an understanding of IBM i program development concepts is assumed.

### Reference Materials

A handout is available for this seminar.



**Jon Paris**  
**System i Developer**

Jon's S3X career started when he fell in love with the System/38 while working as a consultant. This love affair

ultimately led him to joining IBM's Toronto Laboratory, where he worked on the S/36, S/38 and AS/400 COBOL and RPG compilers. He played a major role in the definition of the new RPG IV language and in promoting its use with IBM Business Partners and users. He was also heavily involved in producing educational and other support materials and services related to other AS/400 programming languages and development tools, such as CODE/400 and VisualAge for RPG.

Jon left IBM in 1998 and together with his partner Susan Gantner, founded Partner400, a System i consulting company focused on education and mentoring services in the Application Modernization arena. They co-authored IBM's popular Redbook for RPG programmers, entitled: *Who Knew You Could Do That with RPG IV: A Sorcerer's Guide to System Access and More*. They are also technical editors and authors for IBM's *iSeries Magazine* and regular authors for the companion newsletter, *eServer Extra*.

## RPG in an XML World

**Order Number:** JPXM01

Whether using XML for web services or data interchange, dealing with XML documents from RPG presents some new and unfamiliar challenges.

This seminar will introduce you to the basics of XML syntax and show you how XML can easily be transformed into HTML and other forms. We will also show you an easy approach to XML generation and give you an overview of V5R4's Native RPG IV language support that can greatly simplify the parsing of XML documents from within your RPG programs. If you are new to the world of XML and your applications need to be able to read and understand XML, this session will give you a basic foundation in the main topic areas.

**Approximate Study Time:** 60 minutes

### Objectives

After completing this seminar, you should be able to:

- ?? Describe the basic syntax of an XML document
- ?? Understand the differences between XML and HTML
- ?? Know how XSL can be used to transform XML into HTML
- ?? Write a simple program to generate an XML document
- ?? Appreciate how the new RPG XML support can be used to parse XML documents

### Topic Outline

The basics of XML syntax

Comparison of XML and HTML

Transforming XML to HTML

Generating basic XML documents with IBM's CGIDEV2

Using RPG IV's **XML-INTO** support to parse simple XML documents

Suggestions for further study

### Audience

This seminar is designed for RPG programmers who need to understand the basics of XML and how to generate and parse XML documents from within RPG programs.

### Prerequisites

This seminar assumes you have a basic knowledge of RPG IV. Some exposure to the basics of HTML is helpful but not essential.

### Reference Materials

A handout is available for this seminar.



## Using RPG IV's Built-in XML Support

**Order Number:** JPXM02

RPG IV's native XML parsing support provides good news for those faced with processing XML documents from web services or data interchange. This support greatly simplifies the parsing XML within your RPG programs.

In this seminar we'll discuss the two types of XML parsing support offered in RPG and the new operation codes that provide that support. We will also provide you with a brief overview of V5R2's Nested Data Structure support which is an essential component of the XML support.

**Approximate Study Time:** 60 minutes

### Objectives

After completing this seminar, you should be able to:

- ?? Describe the differences between the two XML parser options offered, and when one might use one or the other
- ?? Understand the purpose of the **%XML** and **%HANDLER** Built-in Functions (BIFs)
- ?? Identify the RPG Data Structure(s) (DS) required to match the structure of an XML document

### Topic Outline

- Basic use of **XML-INTO** and the **%XML** BIF
- Handling more complex XML documents
- Using **%HANDLER** to process an XML document in "pieces"
- Defining a compound DS to match XML document structure
- Overview of limitations of **XML-INTO** support
- Introduction to the basics of XML-SAX

### Audience

This seminar is designed for RPG programmers who need to generate and parse XML documents from within RPG programs.

### Prerequisites

This seminar assumes you have a basic understanding of XML syntax to the level provided by *XML for RPG Programmers: Part 1 - An Introduction*. You should also know how to create compound (nested) data structures in RPG.

### Reference Materials

A handout is available for this seminar.



### Skip Marchesani System i Developer

Skip Marchesani retired from IBM after 25 years and is now a consultant with Custom

Systems Corp., an IBM Business Partner. Skip spent much of his IBM career working with the Rochester Development Lab on projects for S/38 and AS/400, and was involved with the development of the AS/ 400. He was part of the team that taught early AS/400 education to customers and IBM lab sites worldwide.

Skip is recognized as an industry expert on DB2 UDB for iSeries (aka DB2/400) and author of the book *DB2/400: The New AS/400 Database*, he specializes in providing customized education for any area of the iSeries and AS/400, does database design and design reviews, and general iSeries and AS/400 consulting for interested clients. He has been a speaker for user groups, technical conferences, and iSeries and AS/ 400 audiences around the world. Skip is one of Common's Gold Medal speakers and has received their Distinguished Service Award.

## I Didn't Know You Could Do that with SQL

**Order Number:** SMSQ01

Tired of writing one-time RPG or Cobol programs to do special or unique things with your tables and data? In many cases you can use SQL instead. In this seminar, you will learn valuable and time-saving techniques with SQL that let you avoid writing code.

You will learn how to use SQL to insert or remove characters in a string, use **Subquery** or **Subselect** in an SQL **SELECT**, **INSERT**, **UPDATE**, and **DELETE** statement to reference multiple tables without having to do a join of the tables involved. You will learn how to summarize data, identify potential duplicate rows in a table, and how to use **SOUNDEX** to search for character strings for which the sound is know but the precise spelling is not. This seminar is based on the SQL function available in IBM i, assumes you have a basic understanding of relational database concepts and SQL, and assumes you are familiar with using the **SELECT**, **INSERT**, **UPDATE**, and **DELETE** statements.

**Approximate Study Time:** 75 minutes

### Objectives

After completing this seminar, you should be able to:

- ?? Use SQL to insert or remove characters in a string
- ?? Use Subquery or Subselect in an SQL **SELECT**, **INSERT**, **UPDATE**, and **DELETE** statement to reference multiple tables without having to do a join of the tables involved
- ?? Summarize data with the **SELECT** statement using the **GROUP BY** and **HAVING** clauses
- ?? Identify potential duplicate rows in a table
- ?? Use **SOUNDEX** to search for character strings for which the sound is know but the precise spelling is not.

### Topic Outline

- Working with Edit Characters
- Basic Subselect
- Scalar Subselect
- Subselect and INSERT, UPDATE, & DELETE
- Subselect and CREATE TABLE
- Subselect and Derived Table
- Summarizing Data with SELECT
- Identifying Potential Duplicate Rows
- Search by Sound with SOUNDEX

### Audience

This seminar is intended for system programmers, application programmers, database administrators, and business analysts.

### Prerequisites

This seminar is based on the SQL function available in IBM i, assumes you have a basic understanding of relational database concepts and SQL, and assumes you are familiar with using the **SELECT**, **INSERT**, **UPDATE**, and **DELETE** statements.

You can satisfy these prerequisite by successfully completing the courses in the following Manta series:

- ?? *Working with DB2 UDB Databases*
- ?? *Using Structured Query Language (SQL)*

### Reference Materials

A handout is available for this seminar.



## Creating and Managing DataBase Objects Using SQL

**Order Number:** SMSQ02

Are you aware that IBM stated has stated that **all future enhancements** to DB2 for i would be made only via the SQL interface and that the native interface (CL, DDS, etc) would be stabilized? Do you know that almost all of the database enhancements since Versions 4 are available only through the SQL interface? Do you know that you can use SQL to create, manage and manipulate your database objects, or use a combination of both DDS and SQL? If the answer to any of these questions is, 'No', this seminar will show you how SQL can play a role in managing your DB2 database. You will explore the use of several SQL statements including **CREATE** and **DROP** to create and delete physical and logical files. You will also learn how to create and save SQL scripts that provide function similar to DDS and **CRTPF** or **CRTLF**. And, a combination of both DDS and SQL can be a vital tool.

**Approximate Study Time:** 90 minutes

### Objectives

After completing this seminar, you should be able to:

- ?? Describe how SQL can play a role in managing your DB2 for IBM i database
- ?? Identify the SQL statements including **CREATE** and **DROP** to create and delete tables, views, and indexes (physical and logical files)
- ?? Create and save SQL scripts that provide function similar to DDS and **CRTPF** or **CRTLF**

### Topic Outline

- Executing SQL on the i5 and iSeries
- Four Types of SQL Statements
- Data Definition Statements
- Understanding SQL Examples
- SQL Statement Examples
- Create a Physical File (Table) Using DDS
- Create a Table (Physical File) using SQL
- Differences Between **CRTPF** and **CREATE TABLE**
- Resolving the Differences
- Can SQL be Saved and Stored Like DDS?
- SQL Statement Processor
- System i Navigator
- Multi-Member Files

### Audience

This seminar is intended for system programmers, application programmers, database administrators, and business analysts.

### Prerequisites

This seminar is based on the SQL function available in IBM i, assumes you have a basic understanding of relational database concepts and SQL, and assumes you are familiar with using the **SELECT**, **INSERT**, **UPDATE**, and **DELETE** statements.

You can satisfy these prerequisite by successfully completing the courses in the following Manta series:

- ?? *Working with DB2 UDB Databases*
- ?? *Using Structured Query Language (SQL)*

### Reference Materials

A handout is available for this seminar.



## Don Denoncourt

Don Denoncourt is a Java, Linux, and OS/400 consultant and trainer. He is also the author of *Java Application Strategies for*

*iSeries and AS/400* (Midrange Computing, 2001) and *Understanding Web Hosting on Linux* (MC Press, 2002), and is the editor of *Java at Work* (MC Press, 2001). Don has been developing object-oriented applications for over a decade and has written dozens of articles on Java that have been published in a variety of magazines. Today, Don is a successful IT consultant, editor of *Eclipse Tips*, technical editor for *ePro Magazine*, and frequent contributor to *iSeries News*. Don is a consultant for Alterthough.com.

## RAD Web Development with Open Source Tools

### Order Number: DDWD01)

Undecided about what technology to use for Web development? Discover the Grails open-source framework that provides rapid application development for Web applications. This presentation will show you to generate a maintenance application for legacy IBM i files in 5 minutes. You will see how Grails is built on top of the best-of-breed Java frameworks.

The seminar describes how to program Grails with the intuitive JVM language called *Groovy*. You will also see how to use Eclipse, WDS, or RDi SOA as your IDE. Finally, the seminar also describes how to deploy Grails to any Web application server (such as WebSphere or Tomcat) on your favorite platform.

**Approximate Study Time:** 60 minutes

## Objectives

After completing this seminar, you should be able to:

- ?? Identify the steps required to install Grails
- ?? Use Grails to generate a maintenance application for legacy IBM i files
- ?? Describe the advantages of Grails in producing Web applications
- ?? Describe how Grails relates to other frameworks, such as Spring and Hibernate, and to Java
- ?? Compare Groovy Server Pages with JSPs and JSFs
- ?? Use Eclipse, WDS, or RDi SOA to develop Grails applications
- ?? Deploy a Grails application

## Topic Outline

- The Grails 5-Minute Challenge
- What Does Grails Give Us?
- Groovy and Grails History
- RPG to Grails Comparison
- Grails and DDS Validation
- Groovy Server Pages
- Grails IDE Support
- Deployment

## Audience

This seminar is for IBM i developers who are looking for a way to rapidly produce Web applications.

## Prerequisites

There are no formal prerequisites for this seminar. It is assumed, however, that you have an introductory knowledge of RPG and Java in the IBM i environment.

## Reference Materials

No handout is available for this seminar.



## Aaron Bartell

Aaron Bartell is a Senior Software Developer for Krengel Technology Inc. Aaron focuses much of his development in the area of web

services on the System i and also Java development/integration. He enjoys being part of the strong System i community through forum participation, article writing and providing open source software on his personal website <http://mowyourlawn.com>. Aaron lives with his wife and four children in southern Minnesota. Interesting fact about Aaron: He is the one and only Furry Java Llama.

## WDS*c* Tidbits of Goodies

**Order Number: ABWD01**

Have you been using WDS*c* and are looking for the little tidbits to make you even more productive? Or, maybe you are looking for **THE** reason to actually switch over from SEU? No matter the cause, see 40+ tips about what Aaron loves best in WDS*c* and how he customizes it to best suit his needs. The goal of this seminar is to help you become a more efficient user of the WDS*c* application and provide your company ROI for using the tool.

**Approximate Study Time:** 60 minutes

### Objectives

After completing this seminar, you will:

- ?? Have a much better idea of what WDS*c* offers outside of the base create, edit, save, compile feature sets
- ?? Have an understanding of how to become more efficient using the WDS*c* tooling to justify the expense of learning the tool and possibly the purchase of a more powerful PC if that is necessary

### Topic Outline

Debugging

Source visualization

Shortcut keys

Shortcut processes to modernizing your code

Tips on creating easily accessible code sections for insertion into your program to save on typing

Best practices for wading through complex control structures

Source filtering techniques to quickly traverse your code

And many more time saving techniques, tips and best practices!

### Audience

This seminar is intended for RPG programmers looking to further their efficiency in WDS*c* by learning about not-so-apparent features in WDS*c*, and also for those RPG programmers looking to justify the move to WDS*c*.

### Prerequisites

This course assumes you already have WDS*c* setup on your PC and you have an understanding of how to create a connection to the IBM i server. Note that this prerequisite is more denoting what is required to actually use the tips, but this seminar could also be consumed by somebody wanting to justify the use of WDS*c* for the first time.

### Reference Materials

A handout is not available for this seminar.



**Kim Greene**  
**Kim Green Consulting,  
Inc.**

Kim Greene is president of Kim Greene Consulting, Inc. specializing in Domino for i5 and iSeries consulting. Kim has over 10 years of experience with Domino and 20 years of experience with the AS/400, iSeries, and i5 platforms. Kim specializes in i5 Domino performance analysis and application tuning, problem determination, administration, migrations, enterprise integration, and custom Domino development. Other services offered include providing customized i5 Domino education and training for customers and business partners. Kim Greene Consulting, Inc. also provides consulting services for integrating Lotus Domino and Sametime with the IBM IP Telephony solution.

Kim is a frequent writer for technology magazines and speaks at many conferences worldwide. Prior to starting her own consulting business, she was employed at IBM Rochester, MN, where she worked in the PartnerWorld for Developers (PWD) organization helping IBM business partners incorporate Domino into their existing applications. Prior to working in PWD she worked on several areas of OS/400 performance in the AS/400 development laboratory.

Kim Greene has her DominoDiva blog where she shares information on various topics related to Lotus Domino. Check out her latest posts at:  
<http://www.bleedyellow.com/blogs/dominodiva>.

## **What's New in Domino Release 8**

**Order Number: KGDO01**

This seminar describes the new features and administration options that are available with release 8 of the Domino product. Not only will you learn about the new enhancements, you will also learn how to implement them.

**Approximate Study Time:** 70 minutes

### **Objectives**

After completing this seminar, you should be able to:

- ?? Know how and when to take advantage of the new Inbox maintenance feature and OOO service

- ?? Understand the Administration process rewrite and what it means to your Lotus Domino infrastructure
- ?? Understand the new database features and how to enable them
- ?? Know how and when to run the new server commands
- ?? Understand the DWA enhancements and know when to recommend the new "lite" interface to users
- ?? Implement the numerous messaging and policy enhancements offered in release 8
- ?? Better secure your Domino infrastructure with new features available in release 8
- ?? Understand the client installation options available
- ?? Know what is new for System i in Domino 8

### **Topic Outline**

New server features, including the OOO service

New database features

New server commands

Directory, DWA, messaging, policy, security, and web server enhancements

Client installation options

What's new on System i with Domino release 8

### **Audience**

The audience for this seminar includes IT managers and Lotus Domino administrators who are either looking for details on what Domino version 8 offers or are wishing to learn more about release 8 prior to upgrading to the latest release.

### **Prerequisites**

There are no formal prerequisites for this seminar. However, it is assumed that the student is familiar with the administration of Lotus Domino.

### **Reference Materials**

A handout is available for this seminar.



## Upgrading to Domino Release 8 on System i



## Greg Hintermeister IBM Corporation

Greg Hintermeister works at IBM as a user experience designer and is an IBM master inventor. He has

extensive experience designing user interaction for IBM Systems Director, IBM Virtualization Manager, System i Navigator, mobile applications, and numerous Web applications. Greg is a regular speaker at user groups and technical conferences. You can e-mail him at [gregh@us.ibm.com](mailto:gregh@us.ibm.com).

## IBM Systems Director - The Single Point of Control to Manage your Data Center

### Order Number: GHSD01

Whether you are a new or an experienced systems administrator, you will want to learn about *IBM Systems Director*.

This seminar shows how IBM Systems Director 6.1, IBM's strategic platform management solution, takes a giant leap from where IBM Director 5.20 was, and shows how it helps you manage your data center regardless of your previous IBM Director experience. This seminar walks through the new web-based user interface, and shows how you can manage Power Systems, System x, BladeCenters, and System z. Learn how IBM Systems Director can monitor the health and status of your systems, run life-cycle tasks on those systems, or even run automations based on events that are triggered from problems. Learn how to manage physical and virtual environments across Power System and System x platforms easier, along with managing AIX, Windows, IBM i, and Linux operating systems right from IBM Systems Director. In addition, you will learn how to manage configuration, updates (firmware and operating system), remote access, and even the energy usage of your systems.

**Approximate Study Time:** 60 minutes

### Objectives

After completing this seminar, you should be able to:

- ?? Understand the changes and benefits of IBM Systems Director
- ?? Know how to get started using IBM Systems Director
- ?? Use the Health Summary and Automation Plans
- ?? Navigate to and search for Power Systems resources and properties
- ?? View inventory and topology maps
- ?? View virtual environments, edit virtual resources, relocate virtual servers, and understand the concepts of configuring your systems
- ?? Know how energy usage can be monitored and changed

### Topic Outline

- Customer Focus
- Overview
- Setup and Getting Started
- Health, Status, Automation
- Navigating Power Systems
- Virtual and Physical Systems
- Energy Management

### Audience

This seminar is for new or experienced system administrators who are looking for better ways to manage their data center.

### Prerequisites

There are no formal prerequisites for this seminar. However, it is assumed that the student is familiar with general systems management concepts.

### Reference Materials

A handout is available for this seminar.



## Charles E. Colson

Chip's involvement with IT began with an Altos 8600 "super-microcomputer" running Microsoft *Xenix*. Since then, he has worked on, managed, and taught on UNIX-based systems including AT&T, IBM's AIX, Sun's SunOS and Solaris, HP-UX, Linux, SCO Xenix and UNIX, Gould, Pyramid, and probably some others. He has been involved in developing and delivering UNIX/Linux education on-and- off for 25 years.

## The Introduction to Linux Series

**Order Number:** CCLI00

The *Introduction to Linux* series is designed to teach users who are new to Linux or UNIX the skills they need to get started in this environment. This series is suitable for users of all Linux environments, including RedHat, SuSE, Debian, Caldera, and others. The series includes the following seven seminars:

- ?? *Basic Linux Commands & Utilities*
- ?? *The Linux File System*
- ?? *Linux Editing*
- ?? *Linux Shell Features*
- ?? *Linux Process and Session Control*
- ?? *Customizing Your Linux Environment and Access Permissions*
- ?? *Linux Commands for Text and Data Manipulation*

**Approximate Study Time:** 10-12 hours

### Audience

This series of seminars is intended for people who are new to the Linux system environment and those who are currently working with Linux and are now ready to extend their knowledge and mastery of the Linux system and its utilities. This series is also valuable to users who already have some familiarity with other UNIX-based environments and now need to make a transition to a Linux system.

### Prerequisites

The series assumes that you have experience as computer system user (preferably, on a system that uses a command line system). It also assumes that you are familiar with a standard PC-type keyboard.

### Reference Materials

A handout is available for each seminar in this series.

### Price

The price of this series is \$576, a savings of \$96 over buying the seminars individually.



## **Basic Linux Commands & Utilities**

**Order Number:** CCLI01

This seminar provides an introduction to the basic concepts and features of the Linux operating environment, including connecting to and communicating with Linux systems and using the Linux shell command interpreter. You will learn the commands for accessing, displaying, searching, and printing files; redirecting command output; creating command pipelines; using the online documentation; creating and changing passwords; and terminating a login session.

**Approximate Study Time:** 90 minutes

### **Objectives**

After completing this seminar, you should be able to:

- ?? Describe what "Linux" is and how it got that way
- ?? Describe the function of the Linux kernel
- ?? Identify Linux features
- ?? Describe how Linux is distributed
- ?? Enter Linux commands
- ?? Redirect command output and create command pipelines
- ?? Use basic commands to display, search, and print files
- ?? Use the online User's Manual
- ?? Set and change your password
- ?? Terminate your Linux session

### **Audience**

This seminar is intended for people who are new to the Linux system environment and those who are currently working with Linux and are now ready to extend their knowledge and mastery of the Linux system and its utilities. This seminar is also valuable to users who already have some familiarity with other UNIX-based environments and now need to make a transition to a Linux system.

### **Prerequisites**

The seminar assumes that you have experience as computer system user (preferably, on a system that uses a command line system). It also assumes that you are familiar with a standard PC-type keyboard.

### **Reference Materials**

A handout is available for this seminar.



## The Linux File System

**Order Number:** CCLI02

This seminar introduces the user to the structure of the UNIX/Linux hierarchical file system and the kinds of entities that populate it. You will learn the rules for file naming, the standard file system organization, and the purpose of the *login*, *HOME*, and *current* directories. You will also see the commands for navigating the file system, displaying file system information, creating and removing directories, manipulating files, and finding files and directories.

**Approximate Study Time:** 2 hours

### Objectives

After completing this seminar, you should be able to:

- ?? Describe the structure of the UNIX/Linux hierarchical file system and the kinds of entities that populate it
- ?? Apply the Linux rules for file naming
- ?? Identify the purpose of the *login*, *HOME*, and *current* directories
- ?? Use the **cd** and **pwd** commands to navigate the file system
- ?? Use the **mkdir** and **rmdir** commands to organize the file system
- ?? Use the **cp**, **mv**, **ln**, and **rm** commands to manipulate files
- ?? Use the **ls** and **file** commands to display file system information
- ?? Reference a set of file names using the shell's *File Name Generation* feature
- ?? Use the **find** command to search the file system for files and directories

### Audience

This seminar is intended for people who are new to the Linux system environment and those who are currently working with Linux and are now ready to extend their knowledge and mastery of the Linux system and its utilities. This seminar is also valuable to users who already have some familiarity with other UNIX-based environments and now need to make a transition to a Linux system.

### Prerequisites

The seminar assumes that you have experience as computer system user (preferably, on a system that uses a command line system). It also assumes that you are familiar with a standard PC-type keyboard.

You should have also completed the first seminar of this series:

?? *Basic Linux Commands & Utilities*

### Reference Materials

A handout is available for this seminar.



## Linux Editing

**Order Number:** CCLI03

This seminar is an introduction to the methods for creating and modifying ASCII text files in the Linux environment, emphasizing Linux's **vim** ("vi improved") editor. The seminar also looks at techniques for creating files that do not involve an editor.

**Approximate Study Time:** 60 minutes

### Objectives

After completing this seminar, you should be able to:

- ?? Create small files (and get started on large files) without using a text editing utility
- ?? Create and modify plain ASCII text files using Linux's **vim** ("vi improved") editor, by:
  - ?? Setting the **TERM** terminal information variable
  - ?? Using **vim** on existing and new files
  - ?? Using text input commands
  - ?? Changing and deleting text
  - ?? Searching text
  - ?? Searching-and-replacing text
  - ?? Copying, cutting, and pasting text
  - ?? Buffering input/output commands
  - ?? Setting **vim** editing options

### Audience

This seminar is intended for users who will be working in the Linux computer system environment and who need to know how to create new text files and modify existing files. This includes programmers, system and network administrators, and power users.

### Prerequisites

The seminar assumes that you have experience as computer system user (preferably, on a system that uses a command line system). It also assumes that you are familiar with a standard PC-type keyboard.

You should have also completed the first seminar of this series:

?? *Basic Linux Commands & Utilities*

### Reference Materials

A handout is available for this seminar.



## Linux Shell Features

**Order Number:** CCLI04

This seminar provides the user with an extensive look at many of the features that make Linux's *bash* shell a powerful, productive command environment and programming language, including: shell input/output management features and command pipelining; shell variables; command substitution; foreground and asynchronous "background" command execution; command grouping; and logical command lines. During this seminar, you will learn how to write simple shell programs, or *scripts*.

**Approximate Study Time:** 90 minutes

### Objectives

After completing this seminar, you should be able to:

- ?? Describe the evolution and purpose of the UNIX shells
- ?? Describe how input/output is managed in a shell
- ?? Use the following shell facilities:
  - ?? Command pipelines ("piping")
  - ?? Shell variables
  - ?? Command substitution
  - ?? Sequential commands and command grouping
  - ?? Asynchronous ("background") commands
  - ?? Shell "quoting"
  - ?? Conditional execution
  - ?? Create simple shell programs

### Audience

This seminar is intended for users who will be working in the Linux computer system environment and need to know the features of the Linux command interpreter — the *bash* shell. This includes all users, programmers, system administrators, and network administrators.

### Prerequisites

The seminar assumes that you have experience as computer system user (preferably, on a system that uses a command line system). It also assumes that you are familiar with a standard PC-type keyboard.

You should have also completed the first two seminars of this series:

- ?? Basic Linux Commands & Utilities
- ?? The Linux File System

The completion of *Linux Editing* is also recommended.

### Reference Materials

A handout is available for this seminar.



## Linux Process and Session Control

**Order Number:** CCLI05

This seminar explains the practical aspects of Linux processes. You will see how Linux creates processes in order to run jobs or execute commands. Other topics include foreground and background processes, monitoring processes with the **ps** command, using signals to control processes, shell's job control commands, configuring terminal/session interface features, and changing a process's user and group IDs.

**Approximate Study Time:** 60 minutes

### Objectives

After completing this seminar, you should be able to:

- ?? Describe how processes create processes
- ?? Describe the purpose of the process and parent process ID's
- ?? Monitor processes with the **ps** command
- ?? Send signals to processes using the **INT**, **QUIT**, and **kill** commands
- ?? Use **nohup** to run commands immune to hang-up
- ?? Use **stty** to set terminal I/O options
- ?? Use the **su** and **newgrp** commands to change effective IDs
- ?? Use **exec** to replace one program with another program in the same shell
- ?? Describe bash and C shell job control

### Audience

This seminar is intended for most Linux users, including all programmers, system administrators, and network administrators.

### Prerequisites

The seminar assumes that you have experience as computer system user (preferably, on a system that uses a command line system). It also assumes that you are familiar with a standard PC-type keyboard.

You should have also completed the previous seminars of this series:

- ?? *Basic Linux Commands & Utilities*
- ?? *The Linux File System*
- ?? *Linux Shell Features*

### Reference Materials

A handout is available for this seminar.



## Customizing Your Linux Environment and Access Permissions

**Order Number:** CCLI06

This seminar introduces additional features of the Linux *bash* shell and describes how Linux systems implement file, directory, and device access control. You will see how to set and change access permissions on things you own and how to specify a default preferred access permission set. It then shows you how to bring together what you learned in the previous seminars to custom-tailor your working environment.

**Approximate Study Time:** 70 minutes

### Objectives

After completing this seminar, you should be able to:

- ?? Describe how access control is implemented in Linux systems
- ?? Identify what kinds of access are granted by a Linux system and what operations the different kinds of access permit
- ?? Use the **chmod** command to change the permissions of your existing files and directories
- ?? Use the **umask** command to set the default permission modes for new files and directories that you create
- ?? List the events that occur when a shell process is started
- ?? List the files that the shell consults when starting up
- ?? Use shell special variables and the `~` operator
- ?? Identify bash shell options
- ?? Create and use command aliases
- ?? Customize the **.bash\_profile** and *environment* files

### Audience

This seminar is intended for Linux users who want to know how to customize their shell environments to their needs and preferences. This information, including how to change access permissions and defaults, is especially important to system administrators and managers who will need to configure environments for entire groups of users.

### Prerequisites

The seminar assumes that you have experience as computer system user (preferably, on a system that uses a command line system). It also assumes that you are familiar with a standard PC-type keyboard.

You should have also completed the first seminar of this series:

- ?? *Basic Linux Commands & Utilities*
- ?? *The Linux File System*
- ?? *Linux Shell Features*
- ?? *Linux Process and Session Control*

### Reference Materials

A handout is available for this seminar.



## Linux Tools for Text and Data Manipulation

**Order Number:** CCLI07

Perhaps the feature that most distinguishes Linux (and other UNIX) systems is the wealth of commands or utilities, each of which is really a special-purpose application for performing a particular kind of data processing task. This seminar teaches the use of Linux's most popular utilities for data processing, including **grep**, **sort**, **sed**, **awk**, **cut**, and **tr**, as well as additional capabilities of the **find** command for file system searching.

**Approximate Study Time:** 2 hours

### Objectives

After completing this seminar, you should be able to:

- ?? Use the **grep**, **fgrep**, and **egrep** commands to identify patterns of text in input
- ?? Use regular expression notation for more powerful specification of text patterns
- ?? Use the **sed** stream editor for in-line editing
- ?? Use the **awk** pattern scanning and reporting language for record processing
- ?? Use the **cut**, **tr**, and **paste** commands for text and data processing
- ?? Use the **cmp** command for comparing files
- ?? Use the **sort** command
- ?? Perform additional searches and actions using the **find** command

### Audience

This seminar is intended for Linux users whose jobs require the searching of file contents and/or command output for particular data values or patterns. These skills are particularly useful for programmers, system administrators, and network administrators.

### Prerequisites

The seminar assumes that you have experience as computer system user (preferably, on a system that uses a command line system). It also assumes that you are familiar with a standard PC-type keyboard.

You should have also completed the first seminar of this series:

- ?? *Basic Linux Commands & Utilities*
- ?? *The Linux File System*
- ?? *Linux Editing*
- ?? *Linux Shell Features*

### Reference Materials

A handout is available for this seminar.