

# **Oracle BI Publisher 11g R1: Fundamentals**

**Student Guide - Volume I**

D68420GC20

Edition 2.0

April 2013

D81643

**ORACLE®**

## **Authors**

Kasturi Shekhar  
Sindhu Rao

## **Technical Contributors and Reviewers**

Nikos Psomas  
Pradeep Sharma  
Lea Shaw

## **Editors**

Raj Kumar  
Daniel Milne

## **Graphic Designer**

Seema Bopaiah

## **Publishers**

Syed Imtiaz Ali  
Nita Brozowski

**Copyright © 2013, Oracle and/or its affiliates. All rights reserved.**

### **Disclaimer**

This document contains proprietary information and is protected by copyright and other intellectual property laws. You may copy and print this document solely for your own use in an Oracle training course. The document may not be modified or altered in any way. Except where your use constitutes "fair use" under copyright law, you may not use, share, download, upload, copy, print, display, perform, reproduce, publish, license, post, transmit, or distribute this document in whole or in part without the express authorization of Oracle.

The information contained in this document is subject to change without notice. If you find any problems in the document, please report them in writing to: Oracle University, 500 Oracle Parkway, Redwood Shores, California 94065 USA. This document is not warranted to be error-free.

### **Restricted Rights Notice**

If this documentation is delivered to the United States Government or anyone using the documentation on behalf of the United States Government, the following notice is applicable:

#### **U.S. GOVERNMENT RIGHTS**

The U.S. Government's rights to use, modify, reproduce, release, perform, display, or disclose these training materials are restricted by the terms of the applicable Oracle license agreement and/or the applicable U.S. Government contract.

### **Trademark Notice**

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

# Contents

## 1 Introduction to Oracle BI Publisher 11g

- Course Objectives 1-2
- Lesson Objectives 1-4
- Course Agenda: Day 1 1-5
- Course Agenda: Day 2 1-6
- Course Agenda: Day 3 1-7
- Overview of Oracle Fusion Middleware 1-8
- Overview of Oracle BI Foundation Suite 1-9
- Overview of Oracle BI EE 11g 1-10
- Functions of Reporting Systems 1-11
- Reporting Challenges 1-12
- Reporting Challenges: Diverse Business Document Requirements 1-13
- Reporting Challenges: Complex Infrastructure 1-15
- Reporting Challenges: Classic Reporting Tools Paradigm 1-16
- Introducing the Oracle BI Publisher Paradigm 1-18
- End-to-End View of BI Publisher 1-19
- Availability of BI Publisher 1-21
- Oracle BI Publisher Trial Edition 1-22
- BI Publisher as a Strategic Reporting Solution For All Oracle Applications 1-23
- BI Publisher in Oracle Applications 1-24
- BI Publisher on Oracle Exalytics In-Memory Machine 1-27
- Key Features and Benefits of BI Publisher 1-28
- Summary 1-30
- Quiz: Overview 1-31
- Quiz 1-32

## 2 BI Publisher: Technology and Architecture

- Objectives 2-2
- Revisiting BI Publisher 2-3
- BI Publisher Functional Components 2-4
- BI Publisher Layout Templates 2-6
- BI Publisher Multitier Architecture 2-7
- BI Publisher Enterprise Server Architecture 2-8
- BI Publisher Document Generation Process 2-10

- BI Publisher Supported Data Sources 2-13
- BI Publisher Underlying Technology 2-14
- BI Publisher Bursting Overview 2-15
- Downloading Government Forms 2-16
- Performance and Scalability 2-17
- Internationalization and Language Support 2-18
- BI Publisher Output Formats 2-19
- Summary 2-20
- Quiz: Overview 2-21
- Quiz 2-22

### **3 Getting Started with BI Publisher**

- Objectives 3-2
- Logging In to BI Publisher 3-3
- BI Publisher Home Page 3-5
- BI Publisher Global Header 3-7
- Setting Account Preferences 3-9
- Browsing the Catalog 3-11
- BI Publisher Repository Object Types 3-12
- Viewing Reports 3-14
- Managing Repository Objects 3-15
- Managing Favorites 3-17
- Creating Reports: Overview 3-18
- Launching the Report Wizard 3-19
- Step 1 – Select Data 3-20
- Step 1 – Options: Use Data Model 3-21
- Step 1 – Options: Upload Spreadsheet 3-22
- Step 1 – Options: Use Subject Area 3-23
- Creating a Report Using the Guide Me Workflow 3-24
- Step 2 – Select Layout 3-25
- Steps 3 and 4 – Create Chart 3-26
- Step 5 – Create Pivot Table 3-27
- Step 5 – Create Table 3-28
- Step 6 – Save Report 3-29
- Step 6 – View Report 3-30
- Editing the Report Layout 3-31
- Configuring Layout and Report Properties 3-32
- Configuring Layouts 3-33
- Configuring Layouts: The Layout Toolbar 3-34
- Setting Report Properties 3-35
- Setting Report Properties: General 3-36

Setting Report Properties: Caching 3-38  
Setting Report Properties: Formatting 3-40  
Setting Report Properties: Font Mapping and Currency 3-41  
Configuring Report Parameters in the Report Editor 3-42  
Summary 3-43  
Practice 3: Overview 3-44  
Quiz: Overview 3-45  
Quiz 3-46

## **4 Using Data Model Editor**

Objectives 4-2  
Introducing Sample Lite 4-3  
Introducing Sample Schemas 4-4  
Introducing Sample Schemas: HR Data Model 4-5  
Introducing Sample Schemas: OE Data Model 4-6  
Introducing Data Model Editor 4-8  
Examining Data Model Properties 4-10  
Supported Data Sources 4-12  
Private Data Sources: Overview 4-14  
Creating a Private Data Source 4-15  
Creating a Simple Data Model Based on a SQL Query Data Set 4-18  
Step 1: Defining Default Data Source and Output Options 4-19  
Step 2: Adding a SQL Query Data Set 4-20  
Step 3: Building a Query in Query Builder 4-21  
Step 3: Building a Query in Query Builder: Select Objects 4-22  
Step 3: Building a Query in Query Builder: Define Relations 4-23  
Step 3: Building a Query in Query Builder: Select Columns 4-24  
Step 3: Building a Query in Query Builder: Add Aliases and Conditions 4-25  
Step 3: Building a Query in Query Builder: View Results and Save Query 4-27  
Step 4: Saving the Data Model 4-28  
Step 5: Viewing Output and Saving Sample Data 4-29  
Step 5: Saving Sample Data and Exporting 4-30  
Creating a Report from Data Model Editor 4-31  
Describing Parameters and LOVs 4-32  
Adding Parameters 4-34  
Adding LOVs: SQL Query Type 4-35  
Additional Examples of Parameters 4-37  
Adding a Bind Variable to a Query 4-39  
Configuring Parameter Settings for a Report 4-41  
Viewing a Report with Parameters 4-43  
Adding LOVs: Fixed Type 4-47

Cascading Parameters 4-48  
Summary 4-49  
Practice 4: Overview 4-50  
Quiz: Overview 4-51  
Quiz 4-52

## **5 Working with Layout Editor**

Objectives 5-2  
Revisiting Layout Editor 5-3  
Opening Layout Editor 5-4  
Selecting a Predefined Template 5-6  
Layout Editor Interface 5-7  
Navigating the Layout Editor Interface 5-8  
Creating a Layout by Using a Basic Template 5-10  
Inserting a Layout Grid 5-12  
Working with Data Tables 5-14  
Inserting a Data Table 5-15  
Adding Data Fields 5-16  
The Table Tab and Dynamic Table Menus 5-17  
Formatting Data in a Table 5-18  
Adding Number and Date Formats 5-19  
Defining Groups and Subtotals 5-20  
Defining Sorts 5-21  
Applying Conditional Formats 5-22  
Defining a Table Filter 5-24  
Working with Charts 5-26  
Inserting a Chart 5-27  
Adding Data Fields to a Chart 5-28  
Editing Charts 5-29  
Editing Charts: Additional Tasks 5-30  
Practices 5-1 and 5-2: Overview 5-32  
Working with Repeating Sections 5-33  
Working with Text Items and Images 5-35  
Working with Lists 5-37  
Working with Gauges 5-38  
Working with Page Layout Features 5-39  
Saving a Layout 5-42  
Practice 5-3: Overview 5-43  
Advanced Features 5-44  
Working with Pivot Tables 5-45  
Creating Boilerplates: Predefined Layouts 5-46

Summary 5-48  
Practices 5-4 and 5-5: Overview 5-49  
Quiz 5-56

## **6 Using Template Builder to Create Templates**

Objectives 6-2  
Introducing Template Builder 6-3  
Installing Template Builder 6-4  
Exploring the Template Builder Interface 6-5  
BI Publisher Menus: Online 6-6  
BI Publisher Menus: Load Data 6-8  
BI Publisher Menus: Insert 6-9  
BI Publisher Menus: Preview and Tools 6-11  
BI Publisher Menus: Options 6-13  
Explaining the Relationship Between RTF and XML 6-15  
Creating an RTF Template Using Sample XML Data 6-17  
Step 1: Creating an RTF Template from a Sample Layout 6-18  
Step 2: Loading the Sample XML Data 6-19  
Step 3: Inserting Fields 6-20  
Step 4: Previewing Data 6-22  
Step 5: Inserting a Table 6-23  
Step 6: Viewing the Results 6-26  
Changing Field Properties 6-27  
Previewing the Table Data 6-28  
Practices 6-1: Overview 6-29  
BI Publisher Charts 6-30  
Adding a Chart to an RTF Template 6-31  
Step 1: Use Template Builder to Insert a Chart 6-32  
Step 2: Define a Chart 6-34  
Step 3: Preview the Chart 6-35  
Examining Pivot Table Support in Template Builder 6-36  
Examining Pivot Table Support in Template Builder: Results 6-37  
Practice 6-2: Overview 6-38  
Designing an RTF Template in Online Mode 6-39  
Step 1: Log On to BI Publisher 6-40  
Step 2: Opening the BI Publisher Report 6-41  
Step 3a: Defining the RTF Template: Add a Table 6-42  
Step 3b: Defining the RTF Template: Add a Chart 6-45  
Step 4: Previewing the Data by Using the Template 6-46  
Step 5: Uploading the Template and Viewing Layout 6-47  
Supported MS Word Native Formatting Features 6-48

Creating a New Report on BI Publisher Server Using Template Builder	6-49
Describing the Methods for Creating RTF Templates	6-50
Exploring the Basic Method: Example	6-51
Exploring the Form Field Method: Example – Form Fields in RTF Templates	6-52
Exploring the Form Field Method: Example – Insert a Field	6-53
Exploring the Form Field Method: Example – Insert a Table	6-54
Exploring the Form Field Method: Example – Completed Template	6-56
Exploring the Form Field Method: Example – Previewing the Report	6-57
Exploring Advanced RTF Template Techniques	6-58
Performing Grouping in the Table Wizard	6-59
Performing Sorting in the Table Wizard	6-60
Adding Running Totals in the Table Wizard	6-61
Adding Page and Section Breaks in the Table Wizard	6-62
Practice 6-3: Overview	6-63
Adding Page Numbers	6-64
Formatting Dates	6-65
Formatting Numbers	6-67
Applying Conditional Formats	6-69
Applying Conditional Formats: Results	6-70
Creating a Conditional Region	6-71
Adding Page-Level Calculations	6-72
Brought-Forward and Carried-Forward Totals	6-74
Adding Backgrounds and Watermarks	6-76
Drawings and Shapes	6-77
Practices 6-4 and 6-5: Overview	6-78
Introducing Excel Templates	6-79
Excel Template Builder	6-80
Examining a Sample Excel Template	6-82
Summary	6-83
Quiz: Overview	6-84
Quiz	6-85

## **7 BI Publisher Server: Administration and Security**

Objectives	7-2
Administration Page	7-3
Data Sources	7-5
Setting Data Sources: JDBC	7-7
Defining a JDBC Connection	7-8
Setting Data Sources: JNDI	7-10
Setting Data Sources: Files	7-12
Setting Data Sources: LDAP	7-13



Setting Data Sources: OLAP 7-15  
Viewing or Updating a Data Source 7-17  
BI Publisher Security Model: Security Center 7-18  
BI Publisher: Supported Security Models 7-19  
BI Publisher: Security Configuration 7-20  
Fusion Middleware Security for BI Publisher: Default Users 7-21  
Default Users: BISystemUser Account 7-23  
Administration Configurations by Using BISystemUser Account 7-24  
Fusion Middleware Security: Default Groups 7-25  
Fusion Middleware Security: Default Roles 7-26  
Fusion Middleware Security: Default Publisher Permissions by Default Role 7-27  
Fusion Middleware Security: BIAdministrator Role 7-28  
Fusion Middleware Security: BIAuthor Role 7-29  
Fusion Middleware Security: BIConsumer Role 7-30  
BI Publisher Roles and Permissions 7-31  
BI Publisher Folder Permissions 7-32  
BI Publisher Report Object Permissions 7-33  
Digital Signature: Overview 7-34  
Registering a Digital Signature 7-35  
Practice 7-1 and 7-2: Overview 7-36  
Delivery Options 7-37  
Delivery: Delivery Configuration 7-38  
Delivery: Print or Fax 7-39  
Delivery: Printing PDF 7-40  
Delivery: Email 7-41  
Delivery: WebDAV 7-42  
Delivery: HTTP Server 7-43  
Delivery: FTP Server 7-44  
Delivery: CUPS Server 7-45  
System Maintenance: Architecture Overview of Scheduling 7-46  
BI Publisher Scheduler Process Flow 7-47  
System Maintenance: Scheduling— Clustering Example 7-49  
Scheduler Configuration: Overview 7-50  
Scheduler Diagnostics: Overview 7-51  
Report Viewer Configuration: Overview 7-53  
Runtime Configuration: Overview 7-54  
Setting Runtime Properties 7-55  
Setting Runtime Properties PDF/A and PDF/X Output 7-56  
Defining Font Mappings 7-57  
Creating a Font Mapping 7-58  
Defining Currency Formats 7-59

Integrating with Oracle BI Presentation Services: Overview 7-60  
Configuring Integration with Oracle Endeca Server 7-61  
Summary 7-62  
Practice 7- 3: Overview 7-63  
Quiz: Overview 7-64  
Quiz 7-65

## **8 Scheduling and Bursting Reports**

Objectives 8-2  
Scheduling BI Publisher Reports 8-3  
Schedule Report Job: Overview 8-4  
General Options Tab 8-5  
Output Options Tab 8-6  
Schedule Options Tab 8-8  
Notification Options Tab 8-9  
Submitting the Job and Reviewing the Confirmation Details 8-10  
Manage Report Jobs: Overview 8-11  
Manage Report Jobs: Editing a Report Job 8-12  
Report Job History: Overview 8-15  
Report Job History: Details 8-17  
Downloading and Republishing 8-18  
Sending the Output to a New Destination 8-19  
Scheduling a Report with Trigger: An Overview 8-20  
Setting a Schedule Trigger 8-21  
Reviewing the Data Model That Contains the Trigger 8-22  
Creating a Job That Uses a Trigger 8-23  
Choosing the Trigger and Submitting the Job 8-24  
Opening Job Histories 8-25  
Bursting a Report 8-26  
Bursting: Key Concepts 8-27  
Adding a Bursting Definition 8-29  
Enabling a Report to Use a Bursting Definition 8-30  
Scheduling a Bursting Job 8-31  
Viewing Report Job History After Bursting 8-32  
Viewing Job History Details After Bursting 8-33  
Summary 8-34  
Practice 8: Overview 8-35  
Quiz 8-36

## **9 Performing Translations**

- Objectives 9-2
- Introducing Translation Types 9-3
- Translating Using a Localized Template 9-4
- Using the Localized Template Option: Process Overview 9-5
- Step 1: Designing the Localized Template 9-6
- Step 2: Uploading the Localized File to Template Manager 9-7
- Translating by Using XLIFF 9-8
- Structure of an XLIFF File 9-9
- XLIFF File Attributes 9-10
- XLIFF File Embedded Data Fields 9-11
- XLIFF File Elements 9-12
- Using the XLIFF Option: Process Overview 9-13
- Step 1: Generating the XLIFF File by Using Template Builder (Method 1) 9-14
- Step 1: Generating the XLIFF File from the Layout Properties Page (Method 2) 9-15
- Step 2: Translating the Strings 9-16
- Step 3: Previewing Using Template Builder 9-17
- Step 4: Uploading the Translation 9-19
- Managing XLIFF Translations on BI Publisher Server 9-20
- The Overall Translation Process 9-21
- Catalog Translations 9-22
- User Preferences 9-24
- Exporting the XLIFF File for a Catalog Folder 9-25
- Viewing the Exported XLIFF File 9-26
- Importing the XLIFF File for a Catalog Folder 9-27
- Locale Selection Logic at Run Time 9-28
- Summary 9-29
- Practice 9: Overview 9-30
- Quiz: Overview 9-31
- Quiz 9-32

## **10 Integrating BI Publisher with Oracle BI Enterprise Edition**

- Objectives 10-2
- Revisiting the BI Foundation Suite Model 10-3
- Oracle BI Publisher and Oracle BI EE Integration 10-4
- Configuring a JDBC Connection to BI Server 10-5
- Configuring Presentation Catalog Integration 10-6
- Configuring Presentation Services Integration 10-7
- Navigating Oracle BI EE 10-8
- Creating Objects from the Global Header 10-10

Reporting Against Oracle BI EE's Common Metadata Layer Using BI Publisher	10-11
Creating a Report Based on a BI EE Subject Area	10-12
Creating a Report Based on BI EE Subject Area	10-13
Creating a Report Based on a BI EE Subject Area	10-14
Viewing a Report Based on a BI EE Subject Area	10-17
Adding Parameters to BIEE Subject Area Reports	10-18
Adding Parameters to BI EE Subject Area Reports	10-20
Viewing BI EE Subject Area Reports with Parameters	10-21
Creating a Data Model and Report Based on a BI Server SQL Query: Process Overview	10-22
Step 1: Adding a SQL Query Data Set	10-23
Step 2: Selecting the Objects for the Query	10-24
Step 3: Viewing the Results and Saving the Query	10-26
Creating a Data Model and Report Based on an Oracle BI Analysis	10-27
Step 1: Adding an Oracle BI Analysis Data Set	10-28
Step 2: Defining XML Tag and Display Names	10-30
Step 3: Viewing and Saving Sample XML Data	10-31
Step 4: Creating a Report for the Analytic Data Source	10-32
Step 5: Viewing Your Report	10-33
Adding a BI Publisher Report to an Oracle BI EE Dashboard	10-34
Step 1: Logging In to Oracle BI EE and Editing Your Dashboard	10-35
Step 2: Adding a BI Publisher Report to Your Dashboard	10-36
Adding BI Publisher Reports to Your Dashboard	10-37
Running Your Dashboard	10-38
Integrating BI Publisher Security: Roles and Groups	10-39
Summary	10-40
Practice 10: Overview	10-41
Quiz: Overview	10-42
Quiz	10-43

## **11 Creating Data Models and BI Publisher Reports Based on Other Data Sources**

Objectives	11-2
Reviewing Supported Data Sources	11-3
Introduction to Web Services	11-4
HTTP (XML/RSS Feed) Data Source	11-5
Proxy Settings for Web Services and HTTP Data Sources	11-6
Creating a BI Publisher Report Based on External Web Services	11-8
Step 1: Defining a Parameter	11-9
Step 2: Defining a Web Service Data Set	11-10
Step 3: Viewing the Data	11-11

Creating a BI Publisher Report Based on HTTP (XML/RSS Feed) Data Sources	11-12
Step 1: Defining an HTTP Data Set	11-13
Step 2: Viewing the Data	11-14
Step 3: Viewing the Report	11-15
Creating a BI Publisher Report Based on an XML File	11-16
Step 1: Defining an XML File as a Data Set	11-17
Step 2: Viewing the Data	11-19
Step 3: Creating a Report	11-20
Creating a BI Publisher Report Based on an MS Excel Spreadsheet	11-21
Step 1: Defining an MS Excel Spreadsheet as a Data Set	11-23
Step 2: Viewing the Data	11-25
Step 3: Creating a Report	11-26
Creating a BI Publisher Report Based on CSV Data Set	11-27
Step 1: Defining a CSV File as a Data Set	11-28
Step 2: Viewing the Data	11-29
Step 3: Creating a Report	11-30
Summary	11-31
Practice 11: Overview	11-32
Quiz: Overview	11-33
Quiz	11-34

## **A Practice Solutions**

