Oracle Utilities: Configuration Tools for CCB - GUI Ed 2 LVC (GWW)

Oracle Utilities

DURATION	MODULES	COURSE CODE
5 Days	8 Lectures	—

Course Overview

This course instructs the attendees in changing or maintaining the front-end configuration of Customer Care and Billing Maintenance Objects, Business Objects, Scripts, Portals, and Zones.

What You Will Learn

Info Zones

- Switch Gears
- Practice 1-1: Log On
- Anatomy of All Pages
- Older MOs = Object Maintenance Newer MOs = Portal Maintenance
- Why Evolve?
- Portals Have Zones
- Portals Contain Zones
- Different Types of Zones
- All Info Zones Have a Similar Layout
- Explorer Zones: Common Features
- Virtually Everything Is Configurable
- Menu Button: Reset Zone
- Menu Button: Print Zone
- Menu Button: Export to Excel
- You Can Download Additional Columns
- Configurable Info Zones: Zone Help
- Zone Help
- Configurable Info Zones: Description Area
- Info Zones Frequently Describe What They Show
- Configurable Info Zones: End-User Filters
- Info Zones Can Have End-User Filters
- Configurable Info Zones: A Variety of Columns

- Many Different Types of Columns Can Be Shown
- You Can Control the Maximum Width of Each Column
- Colorful Columns
- HTML in String Columns
- Configurable Info Zones: A Variety of Sources
- Many Different Sources
- BO, BS, and SS Columns
- Configurable Info Zones: Hyperlinks, BPA Launching, and Broadcasting
- Columns Can Have Hyperlinks to Other Portals and Pages
- Rows Can Have Different Hyperlink Destinations
- Hyperlinks to Launch BPA Scripts
- Broadcasting Key Values to Other Zones
- Configurable Info Zones: Dragging and Dropping
- Dragging and Dropping
- The Drag-and-Drop Area Is Configurable
- Configurable Info Zones: Columns Have a Default Sort Order
- Ascending and Descending Order
- Configurable Info Zones: Work Lists
- Work Lists
- Working the List
- Viewing Entries
- Practice 1-2: Examine a Customized Control Central
- Review Questions

Query Zones

- A Portal Can Contain Query Zones
- Configurable Query Zones: Look-and-Feel
- Query Zones Look Almost Identical to Info Zones
- Configurable Query Zones: Security and Menu Access
- An Aside: Portal Security
- Adding Portals to Menus
- Practice 2-1: Add a Query Portal
- Configurable Query Zones: Zone Types and Zones
- Zone Types Versus Zones
- Zone Types and Zone ERD
- Zones Have Parameters
- Zone Parameters and Mnemonics
- Zone Parameter Validation
- Configuration Mode
- Practice 2-2: Add a Query Zone
- Configurable Query Zones: Dynamic SQL
- Avoid Database-Specific SQL Functions
- Conditional From and Where
- Configurable Query Zones: You Now Have Very Powerful Tools
- Check Your SQL Before Production

- Configurable Query Zones: Columns Are Much More Than FK References
- source=
- Tips Are in the Dashboard
- Configurable Query Zones: There’s Another Query Zone Type
- One Zone with Many Filters (and SQL Statements)
- Introducing the Multi-Query Zone Type
- The Pay Back
- Configurable Query Zones: Portal Preferences
- A User Has Portal Preferences
- Changing Portal Preferences
- Settings to Improve Response Time
- Suppress Most Portals
- Default Zone Order
- Zone Refresh Frequency
- Portals Preferences ERD
- Configurable Query Zones: Query and Info Zone Differences
- Additional Differences Between Info and Query Zones
- Configurable Query Zones: Zone Security
- Individual Zones Can Be Secured
- Portal and Zone Security and Portal Preferences
- Portal and Zone Security
- Configurable Query and Info Zones: Validating Filter Values Using Service Scripts
- Use Service Scripts to Validate Filters
- Reminder: A Service Script Defines its own API and logic
- Practice 2-3: Add Another Filter to Your Query Zone
- Configurable Query and Info Zones: Suppressing Zones Using Service Scripts
- Use Service Scripts to Suppress a Zone
- Configurable Query and Info Zones: Suppressing Rows Using Service Scripts
- Use Service Scripts to Include or Exclude Rows
- Configurable Query and Info Zones: Limit the Number of Rows
- Limit the Rows Retrieved from the Database
- Case Study
- Why Two Parameters
- Excel Downloads
- Configurable Info Zones: Changing Search Results Using Service Scripts
- Case Study
- Use Service Scripts as a Conditional Criteria
- Service Scripts to Show Different Rows
- Business Services: Using the Explorer Zone Service to Execute SQL in Plug-in and Service Scripts
- SQL in Plug-in and Service Scripts
- No Inline SQL in Plug-in and Service Scripts
- The Explorer Service Interprets Zone Parameters
- Create a Zone and a Business Service
- Naming Conventions
- Updates Aren’t Allowed
- Business Services: Organizing Your SQL Statements

- Multiple SQL Statements in a Single Zone
- Business Services: Dealing with Multiple Rows
- Dealing with Multiple Rows
- Review Questions

UI Maps

- UI Map Overview
- Map Zones
- HTML Primer
- Before We Start Discussing UI Maps
- What Are the Pieces?
- HTML: The Basic Elements
- HTML Skeleton
- Tables Allow for Easy Alignment
- HTML Elements Have Attributes (Just Like BO Elements)
- Special Oracle UI Map Attributes
- Other Elements: <input>
- Other Elements:
- Other Elements: <select>
- Dropdowns Aren’t Frequently Hard-Coded
- Putting It Together
- CSS: The Basic Elements
- Why CSS?
- Element CSS
- Extracting the CSS
- The New HTML
- Application of Common CSS
- References
- JavaScript: Just the Basics
- Another HTML Attribute
- Basic JavaScript Events
- A Basic JavaScript Function
- Completing Our Panel
- User Interface (UI) Maps: HTML and XML
- HTML (for Formatting) and XML (for Data Values)
- The Source of the HTML
- Explicit Object Map Zone Type
- BO Attributes Control the Formatting: Using Field Metadata
- BO Attributes Control the Formatting: Suppressing Elements
- BO Attributes Control the Formatting: Overriding Field Metadata
- Additional Attributes Are Sometimes Needed
- fkRef=
- Inserting Section Headers
- How This Works at Run Time
- Practice 3-1: Create a Map Zone to Display a Person Business Object

- User Interface (UI) Maps: Suppressing Zones Using Service Scripts
- Use Service Scripts to Suppress a Zone
- Practice 3-2: Suppress Your Map Zone Until a Person Is Broadcast
- User Interface (UI) Maps: UI Maps Contain Pre-specified HTML
- Some Base-Package UI Maps Are Not Generated at Run Time
- Defining the HTML Rather Than Rendering It in “Real Time”
- UI Map Metadata
- Runtime Logic Is Almost Identical
- Practice 3-3: Create a UI Map
- User Interface (UI) Maps: It Isn’t That Painful
- You Don’t Have to Write HTML from Scratch
- … But It’s Not a Magic Wand
- User Interface (UI) Maps: HTML Fragments
- HTML Fragments Allow Reuse
- User Interface (UI) Maps: Help Text
- The Help Icon Appears When There’s Help for a Section or a Field
- Help Text is Located in the Field Metadata
- Help Is Typically on Sections Rather Than Individual Fields
- Overriding Product Help Text
- Embedded Help Authoring Tool
- User Interface (UI) Maps: Populating the Dashboard
- Syncing the Dashboard
- Practice 3-4: Sync the Dashboard
- User Interface (UI) Maps: Consistency
- Enforcing Consistency
- User Interface (UI) Maps: UI Map Tips and Support
- UI Map Tips Dashboard Zone
- Valid HTML Attributes and Supported JavaScript Functions
- UI Map Standards
- Valid Schema Attributes and Node Names
- Use the Tips
- Practice 3-5: Explore the UI Map Tips
- User Interface (UI) Maps: Multiple BOs on a Map
- Elements from Multiple BOs on a Map
- Service Script Refresher
- Map Zone Refresher
- Map Zones and Service Scripts
- Refresher: A Service Script Defines Its API and Its Logic
- uiHints: An Alternate to UI Maps
- uiHints Overview
- uiHints Benefits
- Resources
- Practice 3-6: Explore uiHints
- Review Questions

BPA Scripts

- You've Been Using Many BPA Scripts
- A Different Type of Script
- UI-Oriented Scripts
- Invoking BPA Scripts
- The BPA Menu Has Two Functions
- A User's Favorite Scripts
- A User's Favorite Scripts Can Be Dictated
- The Favorite Scripts Zone Is Optional
- The BPA Area
- Review: The Elements of the User Interface
- There's One More Area – The BPA Area
- Refresher: Declaring Data Areas for BPA Scripts
- BPA Scripts: Defining Data Areas
- Naming Data Areas
- Same Thing
- BPA Step Types
- Refresher: Scripts Are Constructed of Steps
- Edit Data Recap
- Height Steps
- Display Text Steps
- Navigate to a Page Steps
- Invoke Map Steps
- Press a Button Steps
- Perform Steps
- Transfer Steps
- Move Data Steps
- The Implications of Common Dialogs
- Common Dialogs Mean Common BPA Scripts
- Scripts and UI Maps
- UI Maps Aren't Only for Display-Only Zones
- An Example
- Review: UI Map Metadata
- BPA Scripts: "Invoke map" Step Type
- How This Works at Run Time
- Pop-Ups Versus Page Area
- Which Target Area?
- Base-Package Patterns
- HTML in UI Maps Invoked by BPA Scripts
- Enforcing Consistency
- HTML Sources
- User Interface (UI) Maps: Dropdown Menus
- Simple Dropdowns on UI Maps
- Updating the Database
- A Strong Pattern: Invoke Map Steps Are Followed by a Step That Invokes a Server-Based Service

- Displaying Errors
- Highlighting the Field That’s in Error
- Favorite Links and BPA Scripts
- Favorite Links Can Reference a BPA Script
- Menu Items for BPA Scripts
- Navigation Options Can Reference a BPA Script
- Temporary Storage Is Initiated for Context Menus
- Advanced BPA Script Features: BPA Scripts on Info and Query Zones
- BPA Scripts on Query and Info Zones
- Context Menus Query and Info Zones
- Access Rights
- BPA Scripts Can Be Secured
- When Are Access Rights Checked?
- Advanced BPA Script Features: Learn via Experimentation
- This is Only the Beginning
- Review Questions

Additional UI Features and Tools

- Checkpoint
- Auditing Inquiries
- Case Study
- Use Service Scripts to Audit Inquiries
- UI Maps and Explorer Zones
- Another Use for UI Maps
- There Are Two Types of UI Maps
- It’s Hard to Tell the Difference
- How to Use a UI Map for Explorer Filters
- UI Maps in Query Zones in the Base-Package
- UI Maps and Idiosyncratic Dropdowns
- Practice 5-1: Create a UI Map Fragment
- Implementing Pop-Up Searches
- Case Study
- Only High-Volume Objects Warrant Pop-Up Searches
- All Explorer Zone Types Can Be Used
- Reusing the Same Pop-Up Search
- Idiosyncratic Pop-Up Searches
- Additional Information
- Actions in Explorers
- Executing an Action Against Multiple Rows
- Many Options
- Adding Links in Zone Headers
- Links in Zone Headers
- Zone Configuration
- Practice 5-2: Add a Link to Your Query Zone
- Overriding Base-Product Zone Parameter Values

- Overriding Base-Product Settings
- Help Text
- Help Text Summary
- Duplicating Zones
- Changing the Zone Type
- Debug Mode
- Debug Mode Enabled by Suffixing the URL With ?debug=true
- Dropdown List Descriptions Are Suffixed with Codes
- The Service Debugger When Many Zones Exist on a Portal
- Review Questions

Maintenance Patterns

- Predictable Patterns
- Pattern 1: All-In-One Portal — Used for Low-Volume Objects
- An All-In-One Portal
- Ancillary Zones Are Limited by Your Imagination
- The Edit Button Starts a BPA Script
- Menu Items
- The All-In-One Pattern Is for Low-Volume Objects
- Pattern 2: Separate Search Portal — Used for High-Volume Objects
- Search Portal Separate from Maintenance Portal
- Search Portal Characteristics
- Maintenance Portal Characteristics
- Menu Items
- Log Zones: Used for Objects with a Status
- Log Zone
- The Anatomy of a Maintenance Dialog
- The List of Metadata Objects
- As Agnostic as Possible
- Preventing the Proliferation of Metadata Objects
- MOs with Many BOs Are the Challenge
- An Agnostic Portal with an Agnostic Query Zone
- FK Ref’s Are the Key to Allowing Info or Query Zones to Be Agnostic
- Place the Portal on the Menu
- Check Point
- Separate Maintenance Portals
- Seeing More Details About a BO
- Use a BO Option to Define a BO’s Portal
- Back to the Query Zone
- Preventing the Proliferation of Portals and Zones
- Preventing the Proliferation of Portals and Zones
- Same Zone, Different Objects
- Set Up a BO Option to Define the Display UI Map
- Technical Execution
- Recap: Same Zone, Different Objects

- Display-Only Map Schema
- Check Point
- Practice 6-1: Explore a Zone and Its UI Map
- Agnostic Add BPA Scripts
- The Agnostic Add BPA Script Uses a Different UI Map
- Add / Update UI Map Schema
- The Agnostic Add BPA Script
- Reusing the Add Script
- Check Point
- Agnostic Edit BPA Scripts
- The Agnostic Edit BPA Script Uses the Same UI Map
- The Agnostic Edit BPA Script
- Agnostic Delete BPA Scripts
- The Agnostic Delete BPA Script
- Clarification
- Check Point
- Showing an MO’s Log
- If the MO Has a Status, It Has a Log
- Context Menus
- Check Point
- When Child MOs Exists
- The Search Entry Navigates to the Child Object’s Query Portal
- The “+” Entry Is the Same BPA Script As on the Main Menu
- Check Point
- Pre-Processing Service Scripts
- Tinkering with the Injected XML
- Declaring a Pre-Script
- Our Standard Schema Bundling Technique for Pre-Processing Scripts
- The Agnostic Maintenance BPA Script Is More Sophisticated Than Originally Explained
- Check Point
- Post-Processing Service Scripts
- We Frequently Update a Single BO from a UI Map
- Create a Similar Post-Script
- The Agnostic Maintenance BPA Script Is Even More Sophisticated
- Anticipating Site-Specific Enhancements
- Designing for Extensions
- BO Extendibility
- Most UI Components Are Delivered BO-Agnostic
- Practice 6-2: Create an All-In-One Portal
- Review Questions

Revision Control

- Revision Control Overview
- What It Is (And What It Is Not)
- Using Revision Control

- The Revision Control Zone
- Checked Out Objects Zone
- Revision Control Objects
- Object Revision MO
- Object Revision BO: States
- Revision Control Configuration: Steps to Enable Revision Control
- Revision Control Is Turned Off by Default
- Step 1: Enable the Checked Out Dashboard Zone
- Step 2: Plug-In the Revision-Control Algorithm
- Step 3: Set Up Application Security
- Practice 7-1: Object Maintenance and Revision Control
- Functionality Summary
- Automatic Versus Explicit Check Out
- Check In
- Revert Changes
- Revision Records
- Delete
- Restoring an Object to an Older Version
- Revision History Search
- Forcing a Check In
- Revision Control Configuration: Implementing Revision Control for Other MOs
- Enabling Revision Control for Other MOs
- Step 1: Create a Physical BO
- Step 2: Create an FK Reference
- Step 3: Turn On a Context-Sensitive Zone
- Step 4: Plug-In the Revision Control Algorithm
- Review Questions

Bundling

- Bundling Defined
- The Source Environment Has Export Bundles; The Target Environment Has Import Bundles
- How to Export and Import
- Step 1: Create an Export Bundle
- Step 1: Collecting Entities Method 1: Use the Export Bundle’s Entity Grid
- Step 1: Collecting Entities in Source Method 2: Use the Entity Search Zone
- Step 1: Collecting Entities in Source Method 3: Use the Current Bundle Zone
- Step 1: Collecting Entities in Source Method 4: Add to a Bundle During Check In
- Step 2: Snapshot the Entities in the Bundle
- Step 3: Copy the XML onto the Clipboard
- Step 4: Paste the XML in the Target
- Aside: Editing the Import Bundle Before Application
- Step 5: Apply the Import Bundle
- Warning: Owner Flags Must Match
- Don’t Forget: Set Up Application Security
- The Order of Entities
- A Bundle with Dependent Foreign Keys

- The System Handles Recursive FK
- When the Order Matters
- Recommended MO Order of Bundled Objects
- Practice 8-1: Export and Import a Bundle
- Bundling Configuration: Steps to Enable Bundling for an MO
- What Can Be Bundled?
- Step 1: Make the MO Eligible for Bundling
- Step 2: The Physical BO
- Step 3: Create an FK Reference
- Step 4: Add Zones
- Dealing with Recursive Relationships
- Step 5: Define the MO’s Bundling Add BO
- Setup Summary
- Bundle MOs and BOs
- The Same MO Is Used for Exports and Imports
- Export Bundle Business Object
- Import Bundle BO
- Review Questions