

## CVP Development and Scripting Part 2 (CVPDS Part 2)

### **COURSE OVERVIEW:**

CVPD Scripting-Part2 provides in-depth coverage and hands-on practice of the more advanced programming topics of Call Studio such as web services and parsing their results, javascript, modularizing large applications, writing a speech recognition application, and advanced event handling.

### **PREREQUISITES:**

CVPD Scripting Part 1 or Call Studio experience.

### **COURSE OUTLINE:**

#### **JavaScript: Add a large amount of functionality that was not formerly available:**

- String functions: substring, string length, string replace, toUpper, toLower, charAt, etc.
- Math functions: round, floor, ceiling, truncate, random numbers, etc.
- Date functions: date or time arithmetic, validate dates, create formatted date/time variables
- Customize alphanumeric strings for playback using Say It Smart
- Remove invalid characters from data that would otherwise cause errors upon returning it to ICM

#### **REST Web Service calls and XML: Learn to work with RESTful web services**

- Use Post Man to test RESTful web service interface
- Learn XPath syntax to parse XML response and test using Notepad++ and free online tools
- Learn XPath expressions that select specific data from XML arrays
- How to use the Studio REST Client Element and to parse XML responses in Studio
- Set fetching properties for the voice browser

#### **REST Web Service calls and JSON: JavaScript Object Notation (JSON) responses from web services**

- Learn JSON syntax, how to parse JSON responses, and test using JSONPath.com free online tools
- Learn JSON path expressions to select specific data from JSON arrays
- Use the Studio Rest Client element and JavaScript in Studio to parse JSON results

#### **SOAP Web Services: Understand how to invoke a SOAP and WSDL based web services**

- SOAPUI to test web service connection outside of Studio
- Using the Studio Web Services Element
- Learn to parse SOAP responses manually using XPath expressions

#### **Database: Use the SQL Database element in Studio**

- Select data and execute stored procedures on a SQL-based database
- Select multiple rows from SQL DB and parse the result using XPath expressions
- Event Handling to catch exceptions and switch to backup database

#### **Modularization and Multiple applications**

- SubFlows – Subroutines (or 'functions) for reusability and readability
- Subdialogs – Calling another Studio application as a subroutine
- Application Transfers – Go to another Studio application without returning

#### **Event Handling: Review of adding event handling globally, in subflows, or element-level**

- LastException variable
- Adding Your Own Event Handling for Java Exceptions, VoiceXML Events, Custom Exceptions
- Creating an Error Element to catch any unhandled exceptions

#### **Speech Recognition: Working with Nuance Speech Recognition**

- Understanding grammars: builtin, inline, external
- Using Studio Digits, Number, Currency, YesNoMenu elements, Confirm if necessary
- Studio Form Element to build a menu, invoke built-in grammars, point to URI-based grammars
- Work with multiple results (N-Best list) Global Commands (HotLinks)

#### **Record with Confirm**

- Learn to write a prompt recorder application to take a recording and allow re-recording
- FTP the recording to one or more media servers
- Understand voice browser cache algorithm
- Understand how to configure cache expiration times on IIS media server

#### **Courtesy Callback: How to customize Cisco Courtesy Callback**

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