CVPD: Cisco Unified Customer Voice Portal Developer

The CVPD course is a five day instructor-led , hands-on training course that teaches you everything you need to know about developing and debugging of self-service applications using the CVP Call Studio and CVP VXML Server. You will leave class an expert on CVP Call Studio applications and return to work prepared to begin your first project.

This course strongly emphasizes hands-on application development of IVR Self-Service applications using the Cisco CVP Call Studio and VXML Server.

Target Audience

CVPD is intended for the VUI designer to produce call flows, the application developer who will be writing applications that use CVP Studio and VXML Server. It is also recommended for technical support personnel who will be supporting this product.

Course Duration

5 days

Suggested Pre-requisites

The knowledge and skills that a student must have before attending this course are as follows:

- CVPI training course or have knowledge of the ICM/CVP architecture
- Some programming or IVR scripting experience.
- Students have either attended the Cisco® CVPI training course or have knowledge of the ICM/CVP architecture, as it will be introduced, but is not the focus of this course.

Course Objectives

After completing this course the student should be able to:

- Understand CVP software architecture and contact center integration
- Understand VXML Server operation and administration
- Build, execute, and debug CVP Call Studio applications, including:
- Writing full featured applications using ASR, DTMF, TTS, Prerecorded Audio
- Creating menus, collecting information from callers, confirming caller input, specifying custom input
- Using prompts appropriately
- Configuring Tomcat to use SQL databases with CVP Call Studio
- Understanding VoiceXML timers, enabling/disabling the terminating character, clearing pending DTMF tones
- Working with multi-language applications o Working with speech recognition in CVPCall Studio.

- Using Studio to create custom ASRgrammars, and how to save these to files for better ASR resource management.
- Writing CVP Call Studio Subroutines that you invoke from other Studio applications.
- Incorporating 'Global Commands' (eg. start over, agent, cancel, go back)
- Taking recordings from callers, including Emergency Broadcast Messages

- Handling and understanding VoiceXML events
- Creating an Error Element
- Creating variables, performing assignments and math calculations, using counters
- Incorporating code written in other languages, including Java, into your Studio application Maintain VXML Server Software
- Monitor performance and operation of VXML Server
- Understand and use CVP VXML Server Activity Logging
- Learn to configure Activity Logging to omit sensitive data
- Configure automated purging of old logs on VXML Server
- Enable Debug Logging of all VXML pages and exchanges with the gateway
- Completely understand Administrative Scripts on VXML Serve
- Directory structure and what needs to be backed up
- Overview of the full and stand alone CVP Deployment Models. Including an overview of ICM Scripts to route calls to Call Studio applications.

Course Content

- Overview of the full and stand alone CVP Architecture and Call Flow. An overview of ICM Scripts to route calls to Call Studio applications, including passing and receiving back data.
- Writing Studio graphical applications which include:
- Prompting Callers - using pre-recorded audio and text-to-speech; using Say it Smart to format spoken audio (speak as date, time, currency, etc), error prompting
- Menus
- Collecting caller input as digits, currency, building custom input
- Working with variables - global data, session data, element data
- Invoking Studio Subroutines from another Studio application
- Transferring control from one Studio application to another (Application Transfer)
- Using the Studio Debugger to test applications within Studio
- Using Say it Smart to convert data into spoken audio (speak as date, time, digits, etc)
- Studio Database element for interactions using SQL database
- Web Services Element
- Prompting and reprompting
- VXML properties as they apply to CVP Studio for timing, playing filler/hold music

- Catching events with the Studio Hotevent element to handle missing audio, ASR errors, etc
- Global commands (Hotlinks) to allow callers to say 'start over', 'go back', 'agent' at any time
- Handling errors to return data to ICM upon an unrecoverable error
- Understanding the VXML Root Document for setting global timers and properties
- Multi-Language applications using the Application Modifier element to change language during the call flow
- Using Studio Documenter to print Visio-like diagrams of the application

- Adding custom java components to extend Studio
- Returning data to ICM if the caller hangs up using Custom Java
- Using other Studio elements - Counter, Math
- Overview of CVP8 Courtesy Callback - Call flow, ICM and Studio script configuration, audio files, reporting server database.
- Administration is covered throughout the course:
- Configuring log file properties
- Using logs for debugging applications
- Enabling VXML logg