**XML Controlled Contact Center**

**Aka XCCC**

**Why use XML to control UCCX?**

**and**

**How it works.**

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# XCCC Features

* XCCC provides the following features:
  + Multiple contact centers.
  + Prompts (recorded messages) updatable via phone call
  + Web Status Board showing agent statistics and callers waiting in all queues.
  + Schedule changes via phone or web.
  + Easy configuration changes to the menu structure without changing UCCX scripts.
  + **A single script provides all of the above.**
* Contact center configuration specified in an XML file.
* No changes are required to the UCCX script when the menus change or a new contact center is implemented.
* Control Features
  + Queuing
  + Calls put on hold when no agents available
  + Optional message can be played when entering a queue hold.
  + Welcome message and optional general announcement message can be played when a caller comes in.
  + Each menu level can have one or two messages played.
  + Menu choices are 0,1,…9, #,\* and Timeout.
  + Each menu choice can pick on of the following:
    - Queue
    - Another Menu
    - Prompt
    - Outcall
    - Email
    - Message
    - Callback
    - Hangup
  + Contact Logging done by sending email.
  + Menu selections can place text into the logging email.
  + Queue holds can use a different menu for each pass thru the hold queue.
  + Selectable Queue hold cycle time.
  + Definable Queues.
  + Messages and callbacks can be selections in menus.
  + Caller ID used to ID employees from corporate/HR database.
  + Agent screen pops display employee information.
  + Debug
    - Sends email
    - Shows caller button selections
  + Two classes of users/callers - Normal and Premium
* Schedules
  + Holidays based on list in an XML file.
  + Schedules can include day of week and time of day or holiday.
  + Ability to bypass the schedule and force the contact center to be open or closed.
  + Multiple schedules can be configured.
  + Schedules are selectable via a web page or phone call.
  + Configuration via an XML file.
* Queues
  + Any number of queues
  + Defined in XML
  + Parameters
    - Name
    - Directory Number
    - Priority
    - Call Control Group

# Configuration Example

## Overview

* Two contact centers: CC1 and CC2
* Same copy of the script is used for both contact centers.
* The holiday schedule is common to the two contact centers, so only one copy is used. The Config.xml for each contact center names the folder holding the Holidays.xml file.
* Each contact center has its own set of prompts, passwords, pins, menus and schedules. These files are stored in separate folders named CC1 and CC2 in Documents and Prompts.
* Each contact center has five functions all provided by one script, XCCC.aep.
  + Contact Center
  + Phone number to update/record prompts.
  + Phone number to update schedules.
  + Web page for agent and queue status.
  + Web page to update schedules.
* Configuration Files
  + Config.xml
    - Prompt names, numbers and wav filenames.
    - Options such as location of the Holidays.xml file.
    - Startup options and schedules.
    - Menu structure.
  + Parameters.xml
    - Pins for updating standard and general announcement prompts.
    - Pin for updating the schedule via phone or web.
    - Username and password for access to files on the UCCX platform.
  + Control.xml
    - The current schedule option used by the Contact Center and updated by either the phone or web app.
  + Premium.xml
    - Contains employee IDs for special folks who get handled differently from a normal user.
  + Holidays.xml
    - List of holiday dates.

## UCCX Server Setup

### Files and Folders

#### Scripts

Common

XCCC.aep

#### Documents

CC1

Config.xml

Parameters.xml

Control.xml

ControlTemplate.xml

CC2

Config.xml

Parameters.xml

Control.xml

ControlTemplate.xml

Common

Holidays.xml

#### Prompts

CC1

\*.wav files

CC2

\*.wav files

### Applications

#### Contact Center #1

Name: CC1-ContactCenter

Script: Common/XCCC.aep

Parameters:

Debug: False

Path: CC1

Function: “ContactCenter”

Trigger: phone# 1a

Name: CC1-Prompts

Script: Common/XCCC.aep

Parameters:

Debug: False

Path: CC1

Function: “Prompts”

Trigger: phone# 1b

Name: CC1-Controls

Script: Common/XCCC.aep

Parameters:

Debug: False

Path: CC1

Function: “Controls”

Trigger: phone# 1c

Name: CC1-WebControls

Script: Common/XCCC.aep

Parameters:

Debug: False

Path: CC1

Function: “WebControls”

Trigger: http://uccx.domain:9080/CC1-WebControls

Name: CC1-StatusBoard

Script: Common/XCCC.aep

Parameters:

Debug: False

Path: CC1

Function: “StatusBoard”

Trigger: http://uccx.domain:9080/CC1-StatusBoard

#### Contact Center #2

Name: CC2-ContactCenter

Script: Common/XCCC.aep

Parameters:

Debug: False

Path: CC2

Function: “ContactCenter”

Trigger: phone# 2a

Name: CC2-Prompts

Script: Common/XCCC.aep

Parameters:

Debug: False

Path: CC2

Function: “Prompts”

Trigger: phone# 2b

Name: CC2-Controls

Script: Common/XCCC.aep

Parameters:

Debug: False

Path: CC2

Function: “Controls”

Trigger: phone# 2c

Name: CC2-WebControls

Script: Common/XCCC.aep

Parameters:

Debug: False

Path: CC2

Function: “WebControls”

Trigger: http://uccx.domain:9080/CC2-WebControls

Name: CC2-StatusBoard

Script: Common/XCCC.aep

Parameters:

Debug: False

Path: CC2

Function: “StatusBoard”

Trigger: http://uccx.domain:9080/CC2-StatusBoard

# Sample Files

## Config.xml

<Data>

<!-- Prompts are recorded using the XCCC Prompts function/application. -->

<!-- Pins used to control access are stored in the Parameters.XML file -->

<!-- Prompts 000 to 999 can be changed by the System Administrator using Pin#1 -->

<Prompts>

<Prompt Name="PressAnyKeyForCallBack" File="PressAnyKeyForCallBack.wav" ID="100" > </Prompt>

<Prompt Name="PressAnyKeyForMessage" File="PressAnyKeyForMessage.wav" ID="101" > </Prompt>

<Prompt Name="CallBackSentToAgent" File="CallBackSentToAgent.wav" ID="106" > </Prompt>

<Prompt Name="CallBackNumberIs" File="CallBackNumberIs.wav" ID="107" > </Prompt>

<Prompt Name="Confirmation" File="Confirmation.wav" ID="109" > </Prompt>

<Prompt Name="Disconnect" File="Disconnect.wav" ID="110" > </Prompt>

<Prompt Name="EnterEmployeeID" File="EnterEmployeeID.wav" ID="111" > </Prompt>

<Prompt Name="IsEmployeeID" File="IsEmployeeID.wav" ID="112" > </Prompt>

<Prompt Name="EnterPhoneNumber" File="EnterPhoneNumber.wav" ID="113" > </Prompt>

<Prompt Name="Hardware" File="Hardware.wav" ID="114" > </Prompt>

<Prompt Name="URFirst" File="URFirst.wav" ID="115" > </Prompt>

<Prompt Name="no\_input" File="no\_input.wav" ID="123" > </Prompt>

<Prompt Name="PlacingCallBackTo" File="PlacingCallBackTo.wav" ID="128" > </Prompt>

<Prompt Name="MessageSentToAgent" File="MessageSentToAgent.wav" ID="131" > </Prompt>

<Prompt Name="SayName" File="SayName.wav" ID="135" > </Prompt>

<Prompt Name="NumCallersAhead" File="NumCallersAhead.wav" ID="139" > </Prompt>

<Prompt Name="VMMenu" File="VMMenu.wav" ID="147" > </Prompt>

<Prompt Name="PleaseRecordMessage" File="PleaseRecordMessage.wav" ID="148" > </Prompt>

<Prompt Name="YouEntered" File="YouEntered.wav" ID="152" > </Prompt>

<Prompt Name="ContinueOrEnd" File="ContinueOrEnd.wav" ID="203" > </Prompt>

<Prompt Name="CallBackFailed" File="CallBackFailed.wav" ID="210" > </Prompt>

<Prompt Name="InvalidSelection" File="InvalidSelection.wav" ID="211"> </Prompt>

<Prompt Name="PlacingCall" File="PlacingCall.wav" ID="212"> </Prompt>

<Prompt Name="CallFailed" File="CallFailed.wav" ID="213"> </Prompt>

<Prompt Name="CallBackNumberIs" File="CallBackNumberIs.wav" ID="214"> </Prompt>

<Prompt Name="IfCorrect" File="Confirmation.wav" ID="215"> </Prompt>

<Prompt Name="EnterMessageNumber" File="EnterMessageNumber.wav" ID="216" > </Prompt>

<Prompt Name="InvalidMessageNumber" File="InvalidMessageNumber.wav" ID="217" > </Prompt>

<Prompt Name="PressPound" File="PressPound.wav" ID="218" > </Prompt>

<Prompt Name="TryAgain" File="TryAgain.wav" ID="219" > </Prompt>

<Prompt Name="PlayOrRecord" File="PlayOrRecord.wav" ID="220" > </Prompt>

<Prompt Name="EnterPin" File="EnterPin.wav" ID="221" > </Prompt>

<Prompt Name="SelectControlID" File="SelectControlID.wav" ID="222" > </Prompt>

<Prompt Name="Main" File="Main.wav" ID="223" > </Prompt>

<Prompt Name="Holding" File="Holding.wav" ID="224" > </Prompt>

<Prompt Name="BCEQualify" File="BCEQualify.wav" ID="225" > </Prompt>

<Prompt Name="UserIsPremium" File="UserIsPremium.wav" ID="226" > </Prompt>

<Prompt Name="InvalidApplication" File="InvalidApplication.wav" ID="227" > </Prompt>

<!-- Prompts 900 to 999 can be changed by the Service Desk Manager using pin#2 -->

<Prompt Name="Welcome" File="Welcome.wav" ID="900" > </Prompt>

<Prompt Name="GeneralAnnouncement" File="GeneralAnnouncement.wav" ID="901"> </Prompt>

<Prompt Name="QueueMcAfeeHold" File="QueueMcAfeeHold.wav" ID="902" > </Prompt>

<Prompt Name="QueueCatalystHold" File="QueueCatalystHold.wav" ID="903" > </Prompt>

<Prompt Name="QueueOtherHold" File="QueueOtherHold.wav" ID="904" > </Prompt>

<Prompt Name="QueuePasswordHold" File="QueuePasswordHold.wav" ID="905" > </Prompt>

<Prompt Name="QueueTestHold" File="QueueTestHold" ID="906"> </Prompt>

<Prompt Name="ClosedForHoliday" File="ClosedForHoliday.wav" ID="907" > </Prompt>

<Prompt Name="Closed" File="Closed.wav" ID="908" > </Prompt>

<Prompt Name="ClosedNoSvc" File="ClosedNoSvc.wav" ID="909" > </Prompt>

<Prompt Name="NoAgentsLoggedIn" File="NoAgentsLoggedIn.wav" ID="910" > </Prompt>

</Prompts>

<Options>

<ContactCenterName>CIT Service Desk</ContactCenterName>

<AuthenticateUser>Yes</AuthenticateUser>

<HolidaysFolder>Common</HolidaysFolder>

<EmailFrom>UCCX@battelle.org</EmailFrom>

<EmailToxxx>BCOIMSDCCNORMAL@battelle.org</EmailToxxx>

<EmailTo>Welch@battelle.org</EmailTo>

<EmailToDebug>Welch@battelle.org</EmailToDebug>

<EmailToAlert>Welch@battelle.org</EmailToAlert>

<QueueHoldTimer>10</QueueHoldTimer>

<QueueHoldMenu>Holding</QueueHoldMenu>

<PremiumQueueName>Premium</PremiumQueueName>

<NoAgentsMenu>OpenButNoAgents</NoAgentsMenu>

<EmployeeIDMenu>Open</EmployeeIDMenu>

</Options>

<!-- How XCCC starts up is controlled by the active Control ID. -->

<!-- For example, XCCC can act like it is closed, closed for holiday or just plain open. -->

<!-- The Control ID is stored in Controls.xml . -->

<!-- The Control ID is changed by using the XCCC/Controls application over the phone. -->

<!-- Prompt "SelectControlID" #222 is played by the XCCC/Controls application for the settings below. -->

<!-- Holidays are defined in the Holidays.xml file in folder <HolidaysFolder> listed above in <Options>. -->

<Controls>

<Control ID="1" Type="Schedule" ScheduleName="Schedule1" Desc="Standard 7am to 5pm schedule"> </Control>

<Control ID="2" Type="Schedule" ScheduleName="Schedule2" Desc="No schedule here yet. Don't use."> </Control>

<Control ID="3" Type="Menu" MenuName="Closed" Desc="Force closed"> </Control>

<Control ID="4" Type="Menu" MenuName="ClosedNoSvc" Desc="Force closed and no BCE"> </Control>

<Control ID="5" Type="Menu" MenuName="ClosedForHoliday" Desc="Closed for holiday"> </Control>

<Control ID="6" Type="Menu" MenuName="OpenButNoAgents" Desc="Open but no agents logged in"> </Control>

</Controls>

<Schedule1>

<TimeSlot Day="Mon" Start="0000" End="0659" MenuName="ClosedNoSvc"> </TimeSlot>

<TimeSlot Day="Mon" Start="0700" End="1659" MenuName="Open"> </TimeSlot>

<TimeSlot Day="Mon" Start="1700" End="2359" MenuName="Closed"> </TimeSlot>

<TimeSlot Day="Tue" Start="0000" End="0659" MenuName="Closed"> </TimeSlot>

<TimeSlot Day="Tue" Start="0700" End="1659" MenuName="Open"> </TimeSlot>

<TimeSlot Day="Tue" Start="1700" End="2359" MenuName="Closed"> </TimeSlot>

<TimeSlot Day="Wed" Start="0000" End="0659" MenuName="Closed"> </TimeSlot>

<TimeSlot Day="Wed" Start="0700" End="1659" MenuName="Open"> </TimeSlot>

<TimeSlot Day="Wed" Start="1700" End="2359" MenuName="Closed"> </TimeSlot>

<TimeSlot Day="Thu" Start="0000" End="0659" MenuName="Closed"> </TimeSlot>

<TimeSlot Day="Thu" Start="0700" End="1659" MenuName="Open"> </TimeSlot>

<TimeSlot Day="Thu" Start="1700" End="2359" MenuName="Closed"> </TimeSlot>

<TimeSlot Day="Fri" Start="0000" End="0659" MenuName="Closed"> </TimeSlot>

<TimeSlot Day="Fri" Start="0700" End="1659" MenuName="Open"> </TimeSlot>

<TimeSlot Day="Fri" Start="1700" End="2359" MenuName="Closed"> </TimeSlot>

<TimeSlot Day="Sat" Start="1700" End="2359" MenuName="Closed"> </TimeSlot>

<TimeSlot Day="Sun" Start="0000" End="1859" MenuName="Closed"> </TimeSlot>

<TimeSlot Day="Sun" Start="1900" End="2359" MenuName="ClosedNoSvc"> </TimeSlot>

<TimeSlot Day="Holiday" Start="0000" End="2359" MenuName="ClosedForHoliday"> </TimeSlot>

</Schedule1>

<Schedule2>

</Schedule2>

<Menus>

<!--

The "Open" menu shown next is a pseudo menu used by the UCCX script itself vs the caller on the telephone.

The UCCX script is aware of this menu which could have be named diffently because the name appears

in the <Options> section above as the <EmployeeIDMenu>. Caller ID and Employee ID information

is also handled in this menu.

The words "StandardUser" and "PremiumUser" must stay and are used by the XCCC Script.

The Prompts, Types and Names can be changed as needed to link to other menus. The parameter Prompt is

optional but will be the first message played to the caller if present. The parameter Prompt2 is also

optional and if present will be played after the first prompt parameter. The Desc (description)

parameter is used with the debug option.

-->

<Menu Name="Open" Prompt="Welcome" Prompt2="GeneralAnnouncement">

<Buttons>

<Button Key="StandardUser" Type="Menu" MenuName="Main" Desc="Std User starting in Main menu"> </Button>

<Button Key="PremiumUser" Type="Queue" QueueName="Premium" Desc="Premium user starting in the Premium queue"> </Button>

</Buttons>

</Menu>

<Menu Name="Main" Prompt="Main">

<Buttons>

<Button Key="1" Type="Queue" QueueName="Password" Desc="Password Queue"> </Button>

<Button Key="2" Type="Queue" QueueName="McAfee" Desc="McAfee Queue"> </Button>

<Button Key="3" Type="Queue" QueueName="Catalyst" Desc="Catalyst Queue"> </Button>

<Button Key="4" Type="Menu" MenuName="Hardware" Desc="Hardward Menu"> </Button>

<Button Key="5" Type="Queue" QueueName="Other" Desc="Other Queue"> </Button>

<Button Key="9" Type="Queue" QueueName="Test" Desc="Test queue"> </Button>

<Button Key="\*" Type="Menu" MenuName="Main"> </Button>

</Buttons>

</Menu>

<Menu Name="Hardware" Prompt="Hardware">

<Buttons>

<Button Key="1" Type="OutCall" Phone="918006333600" Desc="Outcall to HP"> </Button>

<Button Key="2" Type="Queue" QueueName="Other"> </Button>

<Button Key="\*" Type="Menu" MenuName="Main"> </Button>

<Button Key="Timeout" Type="Queue" QueueName="Other"> </Button>

</Buttons>

</Menu>

<Menu Name="Closed" Prompt="Closed">

<Buttons>

<Button Key="1" Type="Menu" MenuName="BCE" > </Button>

<Button Key="Timeout" Type="Hangup" > </Button>

</Buttons>

</Menu>

<Menu Name="ClosedNoSvc" Prompt="ClosedNoSvc">

<Buttons>

<Button Key="Timeout" Type="Hangup" > </Button>

</Buttons>

</Menu>

<Menu Name="ClosedForHoliday" Prompt="ClosedForHoliday">

<Buttons>

<Button Key="1" Type="Menu" MenuName="BCE" > </Button>

<Button Key="Timeout" Type="Hangup" > </Button>

</Buttons>

</Menu>

<Menu Name="BCE" Prompt="BCEQualify">

<Buttons>

<Button Key="1" Type="OutCall" Phone="58580" Desc="Business Critical Emergency"> </Button>

<Button Key="Timeout" Type="Hangup" > </Button>

</Buttons>

</Menu>

<Menu Name="Holding" Prompt="Holding">

<Buttons>

<Button Key="1" Type="Message" > </Button>

<Button Key="2" Type="CallBack" > </Button>

<Button Key="\*" Type="Menu" MenuName="Main" > </Button>

<Button Key="Timeout" Type="QueueHold" NextMenu="Holding" > </Button>

</Buttons>

</Menu>

<Menu Name="OpenButNoAgents" Prompt="NoAgentsLoggedIn">

<Buttons>

<Button Key="Timeout" Type="Hangup" > </Button>

</Buttons>

</Menu>

</Menus>

<Queues>

<Queue Name="Catalyst">

<Priority>6</Priority>

<CCG>9</CCG>

<DN>35000</DN>

<HoldPrompt>QueueCatalystHold</HoldPrompt>

</Queue>

<Queue Name="Password">

<Priority>6</Priority>

<CCG>6</CCG>

<DN>31000</DN>

<HoldPrompt>QueuePasswordHold</HoldPrompt>

</Queue>

<Queue Name="Premium">

<Priority>9</Priority>

<CCG>0</CCG>

<DN>34000</DN>

</Queue>

<Queue Name="Other">

<Priority>6</Priority>

<CCG>13</CCG>

<DN>33000</DN>

<HoldPrompt>QueueOtherHold</HoldPrompt>

</Queue>

<Queue Name="McAfee">

<Priority>6</Priority>

<CCG>12</CCG>

<DN>32000</DN>

<HoldPrompt>QueueMcAfeeHold</HoldPrompt>

</Queue>

<Queue Name="Test">

<Priority>5</Priority>

<CCG>10</CCG>

<DN>39560</DN>

<HoldPrompt>QueueTestHold</HoldPrompt>

</Queue>

</Queues>

</Data>

## Holidays.xml

<?xml version="1.0" encoding="ISO-8859-1"?>

<Holidays>

<HolidayExample>mm/dd/yyyy</HolidayExample>

<Holiday>06/01/2013</Holiday>

<Holiday>01/1/2013</Holiday>

<Holiday>05/27/2013</Holiday>

<Holiday>07/4/2013</Holiday>

<Holiday>09/2/2013</Holiday>

<Holiday>11/28/2013</Holiday>

<Holiday>11/29/2013</Holiday>

<Holiday>12/24/2013</Holiday>

<Holiday>12/25/2013</Holiday>

<Holiday>01/1/2014</Holiday>

<Holiday>05/31/2013</Holiday>

</Holidays>

## Parameters.xml

<Data>

<PromptsPin1>NNNNN</PromptsPin1> <!-- Use Pin1 for all prompts editting -->

<PromptsPin2>NNNNNNN</PromptsPin2> <!-- Use Pin2 for prompts 900 - 999 editting -->

<ControlsPin>NNNNNNNN</ControlsPin> <!-- Used to change controls.xml [just the schedule] -->

<Username>SERVERUSER</Username>

<Password>SERVERPASSWORD</Password>

</Data>

## Control.xml

<?xml version="1.0" encoding="UTF-8"?>

<Controls>

<ControlID>1</ControlID>

</Controls>

## ControlTemplate.xml

<?xml version="1.0" encoding="UTF-8"?>

<Controls>

<ControlID>%ControlID%</ControlID>

</Controls>

## Premium.xml

<Users>

<!-- Premium users - use employee ID for each premium user -->

<User ID="109142"> </User>

<User ID="119946"> </User>

<User ID="114900"> </User>

<User ID="39004"> </User>

<User ID="119946"> </User>

<User ID="661600"> </User>

<User ID="111762"> </User>

<User ID="119167"> </User>

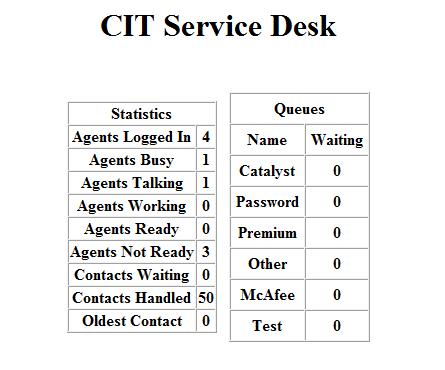
</Users>

# Web Pages

## XCCC Function=”StatusBoard”

URL=UCCXServer.domain:9080/CITSD-StatusBoard

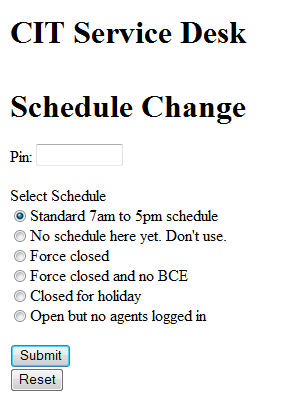
The list of queues is derived from the <Queues> section of the Config.xml file.



## XCCC Function=”WebControls”

URL=UCCXServer.domain:9080/CITSD-Controls

The schedule selections come from the <Controls> section of the Config.xml file.



# XML used in Config.xml

## Config.xml Menu

### Button Data

|  |  |  |
| --- | --- | --- |
| **Type** | **Parameter** | **Description** |
|  |  |  |
| CallBack |  | Record a message and get a call back number and present to agent when ready. |
| Email | To and Subject | Send one liner email for short message in the Subject. |
| Hangup |  | Hangup the call. |
| Menu | MenuName | Switch to a new menu. |
| Message |  | Record a message and wait til agent is ready and plays the message. |
| Outcall | Phone | Transfer call to phone number. |
| Prompt | PromptName | Play a prompt. |
| Queue | QueueName | Select a resource (agent or queue if no agent ready). |
| QueueHold | NextMenu | Place call on hold then go to a new menu if specified. |

### Menu Data

|  |  |
| --- | --- |
| **Parameter** | **Description** |
| Name | Name of the menu. Referenced by other menus, schedules and controls. |
| Prompt | Play a prompt if present. |
| Prompt2 | Play after first prompt if present. |