

UCCX BASED APPLICATION FOR HOLIDAY MANAGEMENT

¹Rajarankar Sruthi ²Dr.K.Nikitha

¹M.Tech Student, Department of CSE, GITAM UNIVERSITY, Village Rudraram, Mandal Patancheru, Dist Medak, Telangana, India.

²Assistant Professor, Department of CSE, GITAM UNIVERSITY, Village Rudraram, Mandal Patancheru, Dist Medak, Telangana, India.

ABSTRACT-The Holiday Management application enables the user to add/change their days to holiday schedule. This is performed with the help of a Script which allows the customer to interact with an IVR interface to manipulate their holiday schedule without knowing the scripting language.

The script primarily allows the customer to dial into the application and add or change a holiday entry for the Contact Center and secondarily it acts as a sub script which can be called from main scripts where it will check the XML document in the repository to determine if the current day is a holiday or not.

The holidays saved in “.xml” file which is uploaded to repository on the Windows Unified Contact Center Express (UCCX). If the customer is changing the script, it gets updated in xml file. The UCCX Script reads this xml file for call routing

1. INTRODUCTION:

The ability to add contact center functionality easily into the telephony environment for corporate call centers has been challenging. Traditional contact center solutions are very difficult to implement because of the additional hardware components involved and the complexity of the software needed to implement them. The work is done by highly trained/ skilled engineers who spend the majority of their time working with contact centers. The complexity makes the implementation a long process and the additional expertise makes the installation and maintenance expensive. Agents are also required to work at the location of the contact center equipment because the inherent limitations of the hardware prevent them from working remotely. It is very difficult to integrate the overall system with the corporate data because common interfaces are not readily available.

It is most difficult task for the engineer to know whether the current day is holiday or not. I mean while if they wanted to add/update holiday for

existing calendar. In many cases, it is a tough process. This process overcomes the troubles caused in contact center and helps us to Add holidays in a predefined schedule.

➤ Role of UCCX in Development of holiday Schedule:

Traditional Call Centers: They are Costly and Inefficient Call Handling - Dedicated facilities, equipment, personnel and call transport incurred the Operational inefficiencies and high costs

Inconsistent Service to Callers - Due to Configuration Limitation, Variations in Skills created a negative impact on service levels and caller satisfaction.

Inconsistent Reporting - Multiple Locations will have their dedicated Infrastructure. To generate the reports, which made it difficult to consolidate performance for management purposes since there was no centralized repository for call data and statistics.

Limited Operational Flexibility - Traditional ACD systems call routing was extremely limited, based primarily on after-hours and percentage allocation of inbound traffic without regard to customer need or agent expertise.

Limited Knowledge Sharing - Traditional ACD Systems did not support the knowledge base that agents needed such as automatic information displays (“screen pops”).

2. LITERATURE SURVEY

➤ Survey on Holiday Management:

The survey on Holiday management has been performed so that we can implement Scripting on a Contact Center using the CISCO UCCX editor and related tools is an area of specialization. Most engineers carry around a basic set of “start up” scripts to get a new UCCX off the ground, but most clients have contact center requirements that require CRM,

Website and advance database integration that requires some additional depth of expertise in the area of software development.

Altering call flow based on external data elements is an essential part of any contact center today. The need to retrieve data from sources outside of the script, or to update sources once the script completes has become the minimum daily adult requirement for contact center scripting.

There is a HolidayCheck script that has been kicking around the CISCO UCCX landscape forever. We first saw it in the Windows based UCCX before Version 8+. It is actually a great script as it demonstrates a number of Java elements that are outside the normal cut and paste scripting ability of many newbies.

You will need to understand XML, Xpath, String Manipulation, Date Constructors and some other advanced data handling options that this script uses to modify call flow based on the day being a holiday or not. For this reason, it makes for an excellent learning tool if you want to get in there and dig into the details.

The Script uses a simple XML data file containing a list of dates that are declared to be Holidays. Generally, the script is a sub flow, called on by a parent script to determine if we need to close for the day. The script first finds out what is the date today, then goes through the XML date list comparing each entry with today's date to make a holiday determination. If it gets through the entire date list without a match, the returned value is false.

If it finds a match the returned value is true. Very simple, however the process uses about every programming trick in the book and for that reason it is fun to learn how the script works. It is highly efficient using less than 15 lines of code.

We have also found the script to be useful for deriving other uses built on the same constructors. For example, finding out if we should be open or closed based on the time of day.

The Time of Day Java bean in the UCCX library is great if you want to open and close once on a particular day. If you want to open at 7AM, close at 11 for lunch, then open again at 1PM and close at 5, it is a bit more difficult. Creating an XML document with the schedule for a particular CSQ, is a lot more useful. In fact we can economize on script reuse by pulling CSQ details from a QueueOptions.xml file and dramatically alter the details of a specific CSQ

while reusing the same core script. XML is the way to fly, especially if you can use HTML and web technology to feed your script user specific call flow details like "call me back at this number" please.

- Survey on holiday script using IP contact center:

A contact center is a centralized office used for the purpose of receiving and transmitting a large volume of requests by telephone. A contact center is operated by a company to administer incoming product support or information inquiries from consumers. Outgoing calls for telemarketing, clientele, and debt collection are also made. In addition to a call center, collective handling of letters, faxes, and e-mails at one location is known as a contact center.

A contact center is often operated through an extensive open workspace for contact center agents, with work stations that include a computer for each agent, a telephone set/headset connected to a telecom switch, and one or more supervisor stations. It can be independently operated or networked with additional centers, often linked to a corporate computer network, including mainframes, microcomputers and LANs. Increasingly, the voice and data pathways into the center are linked through a set of new technologies called computer telephony integration (CTI).

- Survey using implementations of VOIP

Cost-effectiveness: Contact centers are extremely cost-sensitive and will be receptive to the reduced facility and overhead expenditures realized by consolidating two networks into one.

Increased reliability: Concerns of reliability of the data network are diminished, as a contact center agent is often dependent upon both the computer and the telephone. Furthermore, contact center PCs are carefully monitored to assure data availability, so failures caused by the PC itself are also reduced in number.

Heightened productivity: With the telephone embedded in the computer, agents need never divert their eyes away from the screen, saving precious seconds in responding to customers.

Added competitive advantage: Contact centers that adopt VoIP softphones are able to provide "click-to-talk" service, with its corresponding ease and convenience, to their customers.

Enhanced customer service: Again, the competitive nature of contact centers will require more comprehensive collection and storage of customer-related data, both written and verbal as integrated messaging. Once voice and data communications are on the same platform, this process becomes cheaper and easier.

From the most recent decade Researches have demonstrated their enthusiasm for the Holiday Management Application systems under enlightenment and created different Flowcharts. Some of them is as per the following:

3. PROPOSED SYSTEM

To overcome the problem of existing system, a fully functional contact center platform was set up, which can simulate any kind of complex environment like customer platforms. To maintain centralized management and privacy for the simulation environment, the team decided to introduce a Portal. With the help of user access management portal, we can Add or update holidays through dial-in Application using IP phones.

Enterprise Routing Service Center through its Cisco IP Voice team provides 24 x 7 x 365 days Monitoring and Technical support to its IPCC Customers on UCCX and UCCE platforms. In the process, it was identified, to have Simulation environment where the engineers can Add/update holidays.

Holiday Flow is to automate the call routing to a designated destination or Voice mail box or play some specialized prompts to let the caller know that call center is closed.

It helps at the time of emergency especially at the time whenever any disaster occurs in any contact center.

People can be trained on existing and advanced technologies by simulating an environment similar to production environment.

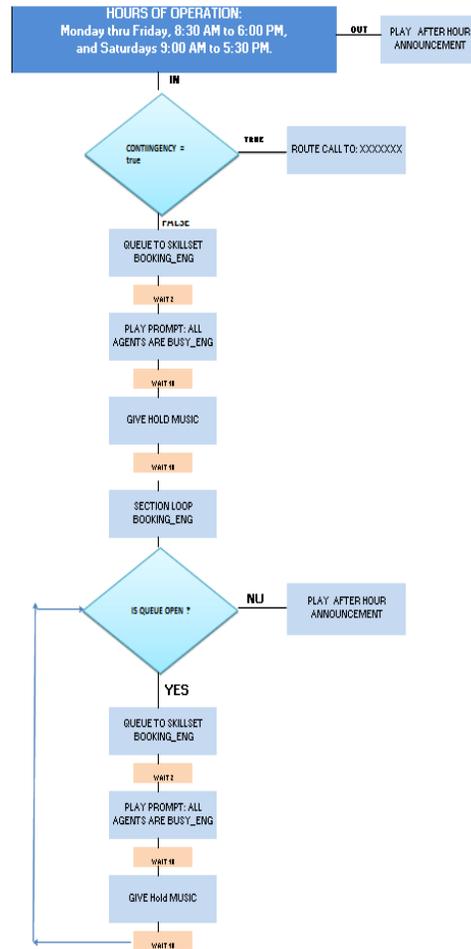


Fig 1. Flow chart for the basic call flow

4. EXPERIMENTAL RESULTS

Client has the operator groups isolated over the Territories/Zones, Their Customers given Unique Codes for higher administration at whatever time they call to the inside, they'll be made a request to enter the Code; Once Code Captures, the script will check against the XML database and returns the value. Bolstered the value i.e. Domain, the call are disseminated to the particular Agents, all through this procedure, Agents can likewise be given subtle elements like Code, Territory, classification of customer And so on

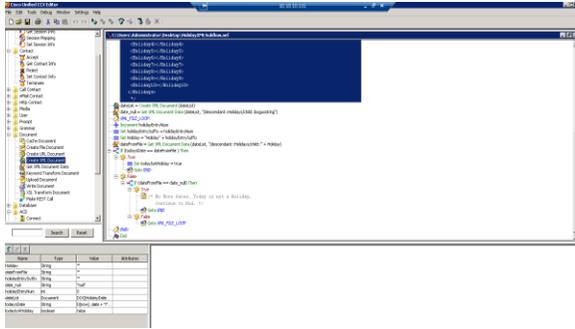


Fig 2. Execution of holiday check script

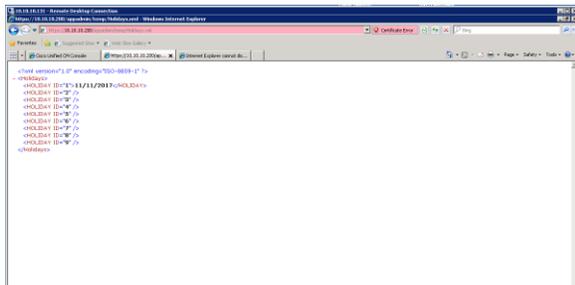


Fig 3. Holiday Uploaded in XML File

5. CONCLUSION

Reenactment condition is the consistent stage for testing client's stage. Client get to administration gives security to the contact focus stage servers by allowing 5 synchronic get to sessions to the recreation condition. It furthermore gives brought together administration, tracks every one of the progressions that are done on contact focus servers, keeps up whole stock of all Contact Center servers that are usual recreate customer circumstances. Recreation environment prove to be incredible blueprint for reenacting UCCX call streams of different clients. By exploitation UCCX stage a few issues reputed by UCCX clients were tried and settled at interims the required amount of time.

6. REFERENCES

- [1] <http://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-express/products-installation-and-configuration-guides-list.html>
- [2] http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_9_0/installation/guide/UCCX_BK_I296D4AC_00_install-guide-uccx.pdf
- [3] http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/admin/9_1_1/cmcfg/CUCM_BK_A34970C5_00_admin-guide-91.pdf
- [4] http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/8x/uc8x.html
- [5] http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/9x/uc9x.html
- [6] http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_9_0/installation/guide/UCCX_BK_I296D4AC_00_install-guide-uccx.pdf