

# IP Contact Center Call Flow Design Using UCCX

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**Abstract-** A contact focus is a brought together office utilized for sending and accepting huge volumes of solicitations by phone. It is worked by an organization to direct approaching item support or enquiry data from the client. For actualizing the client contact focuses, a Simulation Environment is kept up which is the ideal Blue-Print of client data. This Environment helps in blunder location, testing, redesigning, changing, and to discover brisk arrangements. Inside this Simulation Environment, an IP Contact Center arrangement is created utilizing Cisco Unified Contact Center Express (UCCX). Cisco UCCX is utilized to enhance profitability and clients encounters. It conveys a very secure, accessible, virtual, and advanced client connection administration answer for up to 400 specialists. It additionally offers advanced call directing and far reaching contact administration capacities which conveys system to-desktop PC communication reconciliation (CTI), and multichannel contact administration to contact focus operators over an IP organize. It is additionally used to see the status of operators and change in the continuous.

**Keywords:** Contact center, Unified Contact Center Express (UCCX).

## 1. INTRODUCTION

### 1.1 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).

IP Contact Center is the implementation of a Contact Center using VoIP. Using the location independence of IP, the IP Contact Center can be distributed, and the Contact Center application server can be located anywhere in the enterprise network. The service can be provided using IP Phones, or regular phones connected to Media Gateways.

PSTN breakout is very important in all IP Contact Center implementations, and can be achieved using a centralized media gateway resource, which provides PSTN connectivity to all agents.

Contact centers are driven by three concerns

- lowering costs,
- boosting agent productivity, and
- Improving customer service.

VoIP over softphones delivers on all three, enabling significant new capabilities and functionality for the contact center while reducing costs.

### 1.2 Why contact centres implement VoIP

Cost-effectiveness: Contact centres 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.

## **2. LITERATURE SURVEY:**

### **2.1 Introduction:**

The Project depends on the Cisco Contact Centre Technology otherwise called Customer Collaboration. Client Collaboration joins conventional Contact focus innovation and procedures with essential options in basic zones to empower organizations and associations to fabricate further associations with their clients - fortifying dedication and producing extra income. Client Collaboration enables organizations and associations to escape from the generally responsive method of customary call focuses and rather grasp an a great deal more proactive engagement display with their customers [1].

Cisco's Customer joint effort has been recognized By Gartner Incorporation which is the world's driving data innovation research and advisory organization. Gartner characterizes contact focus foundation as the items (gear, programming and administrations) expected to work call places for communication support and contact habitats for media support [2]. This sort of framework is utilized by client and representative administration and bolster focuses, inbound and outbound telemarketing administrations, help work area administrations, government-worked bolster focuses, and different sorts of organized interchanges operations.

Contact focus communications can be individuals helped or computerized self-benefit, utilizing intelligent voice reaction (IVR) and discourse acknowledgment innovations, for instance. These channels for association utilize both live operators and informing innovation and incorporate voice, Web, email, texting, Web visit, online networking, video and versatile devices [3]. Contact focuses require an extensive variety of capacities, models, elements and administrations to be viable. Three noteworthy structural methodologies that are normal in the market are incorporated "best-of-breed" parts, across the board packaged suites and administration based arrangements. They are offered as time division multiplexing circuit-exchanged arrangements, Internet Protocol (IP) - based arrangements (counting Session Initiation Protocol-based arrangements) and half breeds of the two [4].

### **2.2 Cisco Market Position:**

Cisco's contact focus offerings include: Unified Contact Centre Enterprise (UCCE), focusing on huge undertakings and those requiring propelled usefulness; Packaged Contact Centre Enterprise (PCCE), focusing on contact focuses that have less than 1,000 operators and need a littler IT impression than the full UCCE arrangement; and Unified Contact Centre Express (UCCX), focusing on little to fair size focuses with less than 400 specialists, or less than 100 operators when sold as a feature of Cisco's Business Edition 6000 interchanges platform[5]. A fourth offering, Cisco Unified Intelligent Contact Management (Unified ICM) Enterprise gives arrange level steering and can bolster multivendor situations. Cloud-based Cisco arrangements are likewise accessible through select channel accomplices on the organization's Hosted Collaboration Solution (HCS) stage.

Consider Cisco's contact focus offerings if your organization is focused on Cisco's Unified Communications Manager or inclines toward a conclusion to-end Cisco framework.

Cisco's Unified Contact Centre portfolio bolsters an expansive arrangement of usefulness, including call and outsider created interactive media steering, organize level directing, IVR/voice gateway capacities, and outbound dialling. Cisco's PCCE has seen solid early acknowledgment by organizations that don't require the scale or multifaceted nature of full UCCE solutions [6]. PCCE was presented in late 2011 and keeps on being improved with streamlined framework plan, execution and administration highlights. It offers call control, call directing, IVR and providing details regarding a solitary server, with discretionary usefulness, for example, sight and sound steering and call recording on extra servers [7].

Cisco has solid corporate brand acknowledgment and regard among IT chiefs and influencers. The organization offers wide worldwide reach and profoundly versatile arrangements, empowering it to address the necessities of extensive and geologically scattered companies [8]. A few of Cisco's key channel accomplices have solid contact focus counselling and framework combination aptitudes to convey exceptionally modified and complex contact focus arrangements. Clients that pick one of Cisco's more grounded channel accomplices can find that Cisco arrangements can bolster profoundly complex contact focus environments [9].

**3. PROPOSED WORK:**

To overcome the problem of existing system, a fully functional contact centre platform was set up, which can simulate any kind of complex environment similar to customer platforms. To maintain centralized management and privacy for the simulation environment, the team decided to introduce a Portal (A web portal which acts as an interface between engineers and the simulation environment). With the help of user access management portal, we can track all the changes that have been done on simulation environment, maintain inventory of all contact centre servers which are used to simulate customer scenarios.

Enterprise Routing Service Centre 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 a test Simulation environment where the engineers can replicate customer issues, test the new versions of the Application Software and Operating Systems released by OEM such as Cisco and Microsoft.

**3.1 IP Contact Center Call flow using UCCX:**

The IP contact center solution is provided in the Simulation environment using Unified Contact Center Express (UCCX). UCCX is one of the IP contact center solution that CCTS team is providing to the Customers, UCCX can support up to 400 agents. UCCX solution is only used for small enterprises. For implementing UCCX solution, Cisco Unified Communication Manager (CUCM), Unified Contact Center Express, IP Communicator (soft phone)/Hard IP phone, Cisco Supervisor Desktop (CSD), Cisco Agent Desktop (CAD), and Cisco Script Editor is required.

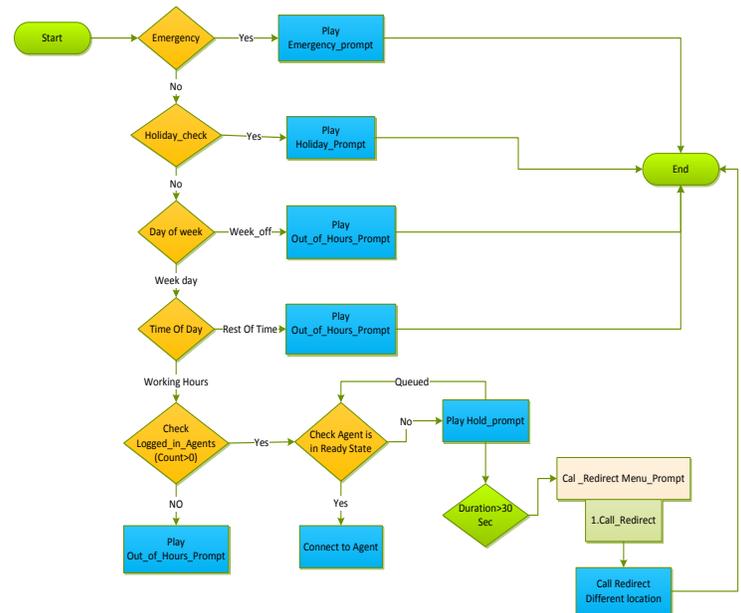


Fig 1. Script Call flow

**4. EXPERIMENTAL RESULTS:**

The UCCX provides the sophisticated call routing for the customer to the agent. It checks for the available logged in agents and routes the customers call to the respective agent.

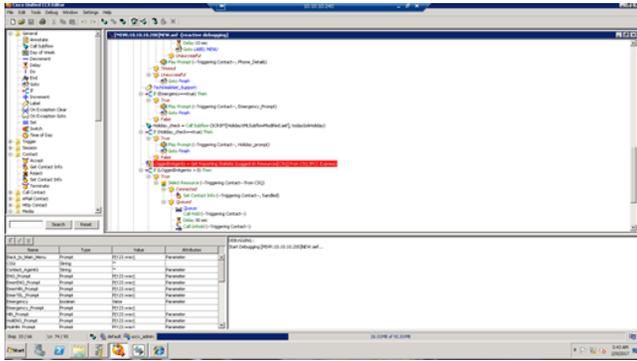


Fig 1. Checks for the logged in Agents

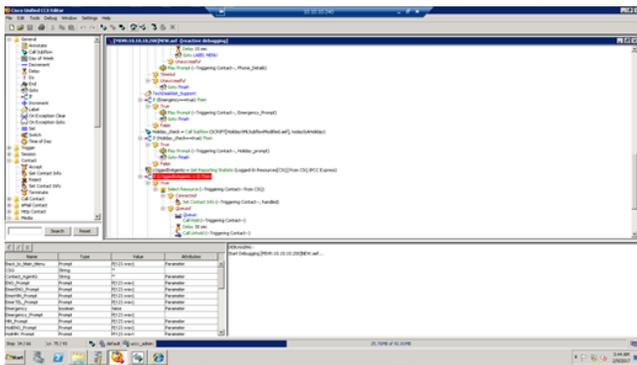


Fig 2. Agent connected to the Customer

## 5. CONCLUSION:

Simulation Environment serves as the seamless platform for testing customer's platform. User access management provides security to the contact centre platform servers by allowing five concurrent access sessions to the simulation environment. It also provides centralized management, tracks all the changes that have been done on contact centre servers, maintains entire inventory of all Contact Centre servers which are used to simulate customer scenarios.

Simulation environment proved to be perfect blueprint for simulating UCCX Call flows of different customers. By using UCCX platform many issues reported by UCCX customers were tested and resolved within the specified amount of time.

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