

CITY OF HOLLYWOOD



Unified Communications System

RFP-4398-14-JE

Due : May 29th, 2014 3:00PM

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RFP CHECKLIST

Please check each line item after the completion of the appropriate item.

- x I verify that the signature on page number one (1) is the signature of the person authorized to bind the agreement. (Preferably in blue ink)
- x I acknowledge reading and signing the Hold Harmless Statement.
- x I have included all information, certificates, licenses and additional documentation as required by the City in this RFP document.
- x I have checked for any addendums to this RFP, and will continue to check for any addendums up to the due date and time of this RFP.
- x I have submitted one (1) original and eight (8) copies and one (1) electronic copy (CD) of the entire proposal with addendums.
- x I have verified that the outside address label of my RFP package is clearly marked to include my company's name, address, RFP number and date of RFP opening.
- x I have read and completed (if applicable) the "Disclosure of Conflict of Interest".
- x I am aware that a Notice of Intent to award this bid shall be posted on the City's website at www.hollywoodfl.org and on the Procurement Services bulletin board in room 303 at City Hall, and that it is my responsibility to check for this posting. Also, I have provided my email address, as the City, at its discretion, may provide me information by such means regarding this procurement process.
- x I have submitted all supporting documentation for local preference eligibility, which must be received with the bid package prior to the bid opening date and time (if applicable).

NAME OF COMPANY: United Data Technologies

PROPOSER'S NAME: Mariana Lugaro Director of Sales Operations

PROPOSER'S AUTHORIZED SIGNATURE: 

DATE: 05-28-2014

 Submit Proposals To: City of Hollywood 2600 Hollywood Boulevard Hollywood, Florida 33020 Office of City Clerk, Room 221	CITY OF HOLLYWOOD, FLORIDA REQUEST FOR PROPOSALS PROPOSER ACKNOWLEDGMENT
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RFP Title: Unified Communications System RFP No.: RFP-4398-14-JE Service Required: A Cone of Silence is in effect with respect to this RFP. The Cone of Silence prohibits certain communications between potential vendors and the City. For further information, please refer to Section 30.15(F) of the City's Code of Ordinances.	Proposals must be received prior to 3:00 P.M., May 29, 2014 and may not be withdrawn within 90 calendar days after such date and time. Proposals received by the date and time specified will be opened in Room 303. All Proposals received after the specified date and time will be returned unopened. Procurement Services Contacts: Janice English or Joel Wasserman, or his designee Telephone No.: (954) 921-3345 or (954) 921-3290
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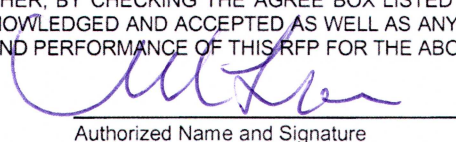
PROPOSER ACKNOWLEDGMENT

THIS FORM MUST BE COMPLETED AND SUBMITTED ALONG WITH THE COMPLETE PROPOSAL PRIOR TO THE DATE AND THE TIME OF PROPOSAL OPENING. THE PROPOSAL SUMMARY SHEET PAGES ON WHICH THE PROPOSER ACTUALLY SUBMITS A PROPOSAL AND ANY PAGES UPON WHICH INFORMATION IS REQUIRED MUST BE COMPLETED AND ATTACHED WITH ALL PAGES OF THE PROPOSAL DOCUMENT.

Proposer's Name: United Data Technologies	Fed. ID No. or SS Number 65-0566138
Complete Mailing Address: 8825 NW 21 Terrace Doral, Florida 33172	Telephone No.: 305-882-0435 Fax No.: 305-882-0436
Do You Have a Permanent Office Located in the City of Hollywood? Yes ☐ No ☒	E-Mail Address: justin.clary@udtonline.com
Indicate type of organization below: Corporation ☒ Partnership ☐ Individual ☐ Other	

ATTENTION: FAILURE TO SIGN (PREFERABLY IN BLUE INK) OR COMPLETE ALL RFP SUBMITTAL FORMS AND FAILURE TO SUBMIT ALL PAGES OF THE RFP DOCUMENT AND ANY ADDENDUMS ISSUED MAY RENDER YOUR RFP NON-RESPONSIVE.

THE PROPOSER CERTIFIES THAT THIS PROPOSAL IS BASED UPON ALL CONDITIONS AS LISTED IN THE PROPOSAL DOCUMENTS AND THAT HE HAS MADE NO CHANGES IN THE PROPOSAL DOCUMENT AS RECEIVED. HE FURTHER PROPOSES AND AGREES, IF HIS PROPOSAL IS ACCEPTED, HE/SHE WILL EXECUTE AN APPROPRIATE AGREEMENT FOR THE PURPOSE OF ESTABLISHING A FORMAL CONTRACTUAL RELATIONSHIP BETWEEN HIM AND THE CITY OF HOLLYWOOD, FLORIDA, FOR THE PERFORMANCE OF ALL REQUIREMENTS TO WHICH THIS PROPOSAL PERTAINS. FURTHER, BY CHECKING THE AGREE BOX LISTED BELOW AND BY SIGNING BELOW IN BLUE INK ALL RFP PAGES ARE ACKNOWLEDGED AND ACCEPTED AS WELL AS ANY SPECIAL INSTRUCTION SHEET(S) IF APPLICABLE. I AM AUTHORIZED TO BIND PERFORMANCE OF THIS RFP FOR THE ABOVE PROPOSER.


Authorized Name and Signature

Director of Sales Operations
Title

05-28-2014
Date

May 28, 2014

Janice English
Procurement
City of Hollywood
2600 Hollywood Boulevard
Hollywood, Florida 33020

Attention Office of City Clerk,

United Data Technologies (UDT) is proud to present our response to the City of Hollywood for Request for Proposal # RFP-4398-14-JE. UDT is a Florida-based, 100% minority owned company, with proven expertise in sales, deployment and support of comprehensive technology solutions for many State and Local government entities and educational institutions.

Since 1995 we have been leveraging I.T. best practices with our proven methodology for delivering and sustaining great service to over 500 customers through 60+ senior certified engineers (average over 10 years of field experience) and the support of the leading data center technology partners. UDT has become the Trusted Advisor in the Technology Industry.

Our dedicated Engineers will deliver the correct technology and service to the City of Hollywood to allow replacement of its hybrid PBX telephone/voicemail/911 premise identification system with a new Unified Communications platform. UDT understands and affirms that it will deliver the services as required in the scope of services as provided by City of Hollywood RFP request. UDT is in receipt of Addendum #1 dated May 16th, 2014.

The persons authorized to make representations on behalf of United Data Technologies related to this RFP Response are as follows:

Tony Cossio, Vice President of Public Sector Sales
Phone: 305-882-0435 Email: tony.cossio@udtonline.com

Jesus Pena, Vice President of Florida Sales
Phone: 786-271-4939 Email: jesus.pena@udtonline.com

Justin Clary, Account Manager
Phone: 305-496-5061 Email: justin.clary@udtonline.com

Our proposal provides a very seasoned local dedicated team to partner with the City of Hollywood. We look forward to providing formal presentations of our capabilities to City of Hollywood and beginning our long-lasting partnership.

Thank You,
Mariana Lugaro
Director of Sales Operations



UDT EXECUTIVE SUMMARY

ABOUT UDT

UDT is the industry leading solutions provider in the Southeast that is focused on public sector technology needs. Founded in 1995, our organization subscribes to a Total Solutions approach that includes consulting, design, engineering, product procurement, systems integration and support services. UDT takes the guesswork out of the process; creating customized integration plans and sketching out detailed, long-term strategies that line up right alongside our client's business objectives.

Headquartered in Miami, FL, UDT is recognized across the country as a leading integrator for Information Technology. UDT is very active in the vendor community, and currently is a member of or chairs advisory boards for Intel, HP, Cisco, and other leading and innovating organizations. Specializing in the public sector market, approximately 75 percent of UDT's revenue is generated from public sector in Florida. UDT currently provides products and services to the 5 largest school districts in Florida and in total supports well over half the districts in the state.

UDT's comprehensive customer centered approach to the City of Hollywood delivers a single source for planning, procurement and support.

For this RFP, UDT has partnered with Cisco as the preferred solution partner.

Cisco is the worldwide leader in networking for the Internet. Today, networks are an essential part of business, education, government, and home communications. Cisco Internet Protocol (IP)-based networking solutions are the foundation of these networks.

Cisco was founded in 1984 by a small group of computer scientists from Stanford University. Since the company's inception, Cisco engineers have been leaders in the development of IP-based networking technologies. Today, more than 73,000 employees worldwide continue driving this tradition of innovation with industry-leading products and solutions in the company's core development areas of routing and switching, as well as advanced technologies such as Application Networking, Data Center, Digital Media, Internet Protocol Interoperability and Collaboration System (IPICS), Mobility, Security, Storage Networking, TelePresence, Unified Communications, Video, and Virtualization.

Cisco has been at the heart of many historic changes in technology, and that continues to be true today. Now, at a time when the technology industry is going through a period of dramatic change, Cisco is the market leader in multiple areas. The company helped catalyze the industry's move toward IP and now that it is fully underway, the company is at the center of fundamental changes in the way the world communicates.

Cisco hardware, software, and service offerings are used to create Internet solutions that allow individuals, companies, and countries to increase productivity, improve customer satisfaction, and strengthen competitive advantage. The Cisco name has become synonymous with the

Internet, as well as with the productivity improvements that Internet business solutions provide. At Cisco, our vision is to change the way people work, live, play, and learn.

The emergence of the network as a platform is changing the entire value chain of technology and placing the network squarely at the center of innovation. The explosion of devices connected to the Internet is, of course, being fueled by more and more services and tasks being handled online, from phone calls to personalized searches to downloading videos, games, and other forms of entertainment.

In this environment, the network is evolving as a secure platform for delivering the customized and personalized experience that 21st century users expect — whether that means delivering new services as a carrier, boosting productivity for businesses of any size, or looking for real-time, personalized entertainment and services as a consumer. As an increasingly intelligent network evolves into a platform, users will be able to communicate from any device and in whatever mode they choose.

Cisco is leading the transition to a network-centric technology environment. By combining its core strength (IP) with intelligence, the company is creating a powerful communications platform to serve as the basis for the convergence of data, voice, video, and mobile communications in a secure, integrated architecture.

WHY CISCO?

Cisco has a long history of joining disparate networks into a common infrastructure. We have successfully provided solutions in networking environments that were not natively IP or open source infrastructures. For various classes of users (e.g., telecommuters, remote offices, enterprise), Cisco has standardized its core network infrastructure. Cisco's efforts within the data center include virtualization and consolidation for reduced server footprint, physical and network infrastructure, and power consumption. Cisco's efficient network designs have paralleled the school's objectives of reducing applications, networks, servers, and operating expenses and increasing server utilization.

Cisco brings corporate stability, unparalleled technical support, training, and feature-rich integrated capabilities and hardware. As an industry innovator, Cisco has remained stable through economic downturns. Specific resources we offer that could benefit the school include:

- World-class 24/7 Technical Assistance Center (TAC) support
- More trained and cleared engineers
- Access to training through Cisco and third-party training facilities
- Annual Research and Development (R&D) budget of over \$5 billion
- Hardware/software lifecycle cost reduction through product longevity and Cisco's commitment to support for 5 years after products have been declared end of life
- Rich ecosystem of solution partners

UDT RESPONSE TO CITY OF HOLLYWOOD RFP-4398-14-JE

Contact Center Solution Requirements/Architecture

Requirement:

The City of Hollywood's contact center requires flexible call control, comprehensive reporting and management, agent desktop capabilities and options for multi-media, CRM, workforce planning and quality assurance solutions. Our goals are to increase customer service responsiveness, improve agent handling efficiency and optimize management of the center with a centrally deployed application that can meet scalability requirements.

UDT Response:

Multi-media – Standard features of Contact Center Express Premium including inbound voice, IVR, database access, email contact routing, customer chat routing, and social media monitoring.

CRM – Cisco Contact Center Express tightly integrate with many prominent CRM vendors including Sales Force, SAP, and Microsoft Dynamics.

Workforce Planning – Cisco's Workforce Management product can be added to the solution, providing advanced agent scheduling and capacity planning based on measured call volumes.

Quality Assurance – Cisco Contact Center Express provides quality assurance through the Advanced Quality Management product suite that can be added on to the base solution. Features of the solution provided are agent compliance audio recording and agent desktop screen capture supplying supervisors the ability to evaluate agent interactions utilizing customized evaluation forms.

Requirement:

Proposer design should accommodate 80 agents with the ability to scale to 160 agents, without the need for additional equipment.

UDT Response:

The system proposed accommodates 80 agents. To scale the solution to support 160 or more, simply add licenses for the incremental user counts. The system supports up to 400 agents.

In addition to other specifications set forth herein, the contact center solution must meet the following minimum requirements:

Requirement:

- Be configured as Voice over IP contact center

UDT Response:

Yes. Cisco Unified Contact Center Express (Unified CCX) is a Voice over IP (VoIP)-based Customer Contact Center solution (supporting agents with IP-based telephony endpoints) that

meets the needs of midmarket and enterprise branch offices or companies that need easy-to-deploy, easy-to-use, secure, virtual, highly available, and sophisticated customer interaction management for up to 400 agents.

Cisco Unified Contact Center Express supports powerful, agent-based service as well as fully integrated self-service applications, resulting in reduced business costs and improved customer response. The solution provides a sophisticated Automatic Call Distributor (ACD), Interactive Voice Response (IVR), Computer Telephony Integration (CTI), and agent and desktop services as well as offering the flexibility to scale to larger, more demanding environments. Cisco Unified Contact Center Express ensures your business rules for inbound and outbound voice, email, web chat, and customer interaction management help deliver each contact to the right agent the first time. Please review Cisco UCCX data sheet in link below:

<http://www.cisco.com/c/en/us/products/collateral/unified-communications/unified-communications-manager-callmanager/data-sheet-c78-730660.html>

Requirement:

- Supervisor must be able to function as agents without the need for additional licenses.

UDT Response:

Yes. Each Cisco Unified Contact Center Express seat provides optimal flexibility in your contact center by providing full licensing to use the seat as either an agent or a supervisor seat. Enhanced and Premium agent seats can be either workstation or Cisco Unified IP Phone-based agent stations. Standard seats provide a Cisco Unified IP Phone Agent IP Phone-based agent station. Each seat provides full licensing for Cisco Finesse, Cisco Agent Desktop or Cisco Unified IP Phone Agent, Cisco Supervisor Desktop, and Cisco Desktop Administrator. For the Enhanced and Premium versions, Cisco Supervisor and Agent Desktop include on-demand recording in addition to full licensing. With the Enhanced and Premium versions, even if a workstation failure occurs, an agent is fully licensed to continue working through the Cisco Unified IP Phone Agent. Please review Licensing section in link below:

<http://www.cisco.com/c/en/us/products/collateral/unified-communications/unified-communications-manager-callmanager/data-sheet-c78-730660.html>

Requirement:

- Must provide full functionality of database integration, and call recording. This must be able to be accomplished natively.

UDT Response:

Data Base Integration is supported only with UCCX Premium agents.

The Unified CCX server can interoperate with any JDBC-compliant database. Databases tested and supported by Cisco are listed in Cisco Unified CCX Software and Hardware Compatibility Guide, which is available at:

http://www.cisco.com/en/US/products/sw/custcosw/ps1846/products_device_support_tables_list.html

Data retrieved from databases can be used with the conditional routing capabilities to provide customer profile-based routing and queuing. Database integration also provides the ability to offer complete self-service applications to callers. Database views are not supported using the Unified CCX Editor database steps, but database views can be accessed using Voice XML or Java logic modules Table 5 in link below:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/design/guide/UCCX_BK_DF6A995E_00_design-guide/UCCX_BK_DF6A995E_00_design-guide_chapter_00.html#UCCX_RF_I1516045_00

For Call Recording, each user license is for a named (not concurrent) user. For example, a contact center with three shifts of 100 agents and supervisors needs 300 named user licenses. Each person in a shift of 100 users uses the license associated with them during their shift.

Quality Management is licensed on a per-named-user basis and these licenses need to be purchased separately. With the QM licenses, all the server software required with the exception of the Windows operating system (Microsoft Windows) and database software (Microsoft SQL) for the QM server is provided, which must be purchased off the shelf.

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/design/guide/UCCX_BK_DF6A995E_00_design-guide/UCCX_BK_DF6A995E_00_design-guide_chapter_00.html#UCCX_RF_Q45AE8DE_00

Requirement:

- Must be standard 'off the shelf' version of native product, no modified solution by a third party will be accepted.

UDT Response:

Yes. Cisco Unified Contact Center Express offers an integrated, full-featured solution for managing customer voice contacts while retaining all the benefits of fully converged Cisco Unified Communications deployment. It delivers sophisticated call routing, management, and administration features for departmental, enterprise branch office, or small to medium-sized enterprise customer care needs.

Cisco Unified Contact Center Express offers ease of installation, configuration, and application hosting, as well as reduced business application integration complexity, ease of agent administration, increased agent flexibility, and network hosting efficiencies. With all these features, Cisco Unified Contact Center Express continues the evolution toward a true Customer Interaction Network.

<http://www.cisco.com/c/en/us/products/collateral/unified-communications/unified-communications-manager-callmanager/data-sheet-c78-730660.html>

Requirement:

- Be a single 'box' on which SIP, PRI and session border control functions. Equipment must be by a single manufacturer from end to end.

UDT Response:

Cisco Unified Contact Center Express provides a secure, highly available, and easy to deploy customer interaction management solution for up to 400 agents. This integrated “contact center in a box” is intended for both formal and informal contact centers.

Unified CCX provides options to address multiple contact center functional areas such as:

- Inbound voice
- Outbound campaign
- Agent email
- Inbound web chat.

Other components included are:

- Web-based reports
- Cisco desktops
- Web-based Finesse desktops
- Cisco Agent and Supervisor desktops.

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/design/guide/UCCX_BK_DF6A995E_00_design-guide/UCCX_BK_DF6A995E_00_design-guide_chapter_00.html#UCCX_RF_O003FDCA_00

The Cisco Unified CCX solution is tightly integrated with Cisco Unified Communications Manager and Cisco Business Edition 6000 (BE 6000) which provide Call Control capabilities using protocols such as SIP and PRI and session border control functions using Cisco Voice Gateways.

Requirement:

- The solution needs to be virtualized; frontend/backend and any database with which it interfaces.

UDT Response:

Yes. You can deploy the UCCX components and other UC applications on a Cisco Unified Computing Systems (UCSs) or any other equivalent specification-based third-party virtual servers with the supported deployment models.

For more information, see the *Virtualization DocWiki* located here:
[http://docwiki.cisco.com/wiki/Virtualization for Cisco Unified Contact Center Express](http://docwiki.cisco.com/wiki/Virtualization_for_Cisco_Unified_Contact_Center_Express)

Requirement:

- Provide intelligent routing of customer contacts based on group routing or agent skills and preferences, source/destination, contact center performance or data-directed routing.

UDT Response:

Yes. Cisco Unified Contact Center Express (Unified CCX) is an IP-based Automated Call Distribution (ACD) system that queues and distributes incoming calls to Unified CCX agents, who can be groups of Unified CM users for Unified CM integration.

You can use Unified CCX applications to route calls to specific agents. You can also integrate Unified CCX with Unified IP IVR to gather caller data and classify incoming calls.

Unified CCX includes a web-based real-time and historical reporting system that you can use to monitor system, Contact Service Queue (CSQ), and resource performance.

The Unified CCX system consists of the following major components:

- Resource Manager—Application program that monitors Unified CCX agent phones and allows you to organize agents into resource groups or skills-based partitions according to the types of calls each group can handle.
- CSQ—Application program that places incoming calls in a queue and distributes them to the appropriate set of agents as the agents become available.
- Unified CCX Agent Desktop—Application program that Unified CCX agents run on their desktop computers to log in to the system, change Unified CCX state, and monitor status.

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/configuration/guide/UCCX_BK_W1AF9DDD_00_uccx-admin-guide-10-0/UCCX_BK_W1AF9DDD_00_uccx-admin-guide-10-0_chapter_01.html#UCCX_RF_U08EB2A9_00

Requirement:

- Provide a single GUI-based management tool with visual, click-and-drag configuration and real-time changes.

UDT Response:

Yes. The Unified CCX provides a multimedia (voice, data, and web) IP-enabled customer-care application environment using VoIP technology that allows your Cisco Unified Communications network to share resources with your data network.

All the management functions can be accessed via a single interface using a web browser located on any computer on the IP network to configure and administer your applications with the Unified CCX Administration web interface.

The Unified CCX Administration web interfaces, that is, Cisco Unified CCX Administration and Cisco Unified CCX Serviceability, together allow you to:

- Configure and monitor overall system functions, applications, and subsystems
- Access a wide variety of system tools
- Perform many other administrative tasks.

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/configuration/guide/UCCX_BK_W1AF9DDD_00_uccx-admin-guide-10-0/UCCX_BK_W1AF9DDD_00_uccx-admin-guide-10-0_chapter_010.html#UCCX_RF_U5FB88F6_00

Requirement:

- Provide user-customizable real-time and statistical reporting for contact center activities.

UDT Response:

Unified CCX users can access reports using Cisco Unified Intelligence Center and Cisco Finesse. Unified Intelligence Center is a comprehensive, end-to-end reporting solution for Unified CCX. You can access Historical and Live Data reports.

With Unified Intelligence Center, you can complete the following tasks:

- Generate and view reports
- Filter data in the reports by setting parameters
- View help for a report
- Pop out the report in a new browser
- Create and view dashboards
- View permalinks for reports and dashboards
- Configure thresholds for grid data cells.

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/user/guide/UCCX_BK_U5857F73_00_unified-ccx-report-user-guide/UCCX_BK_U5857F73_00_unified-ccx-report-user-guide_chapter_01.html#UCCX_CN_O926D6DC_00

Both Historical and Live Data reports can be provisioned using CUIC.

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/user/guide/UCCX_BK_U5857F73_00_unified-ccx-report-user-guide/UCCX_BK_U5857F73_00_unified-ccx-report-user-guide_chapter_01.html#UCCX_RF_RA48BE0F_00

Requirement:

- Provide agent GUI desktop application with integrated call handling and contact information, performance feedback and real-time presence and collaboration tools.

UDT Response:

Cisco Desktop Services provide Cisco Agent Desktop (CAD) and IP Phone Agent (IPPA) for agent use, and Cisco Supervisor Desktop (CSD) for supervisor use.

The following link describes the Cisco Agent Desktop features that are available in each Unified CCX package:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/design/guide/UCCX_BK_DF6A995E_00_design-guide/UCCX_BK_DF6A995E_00_design-guide_chapter_00.html#UCCX_RF_CC1ACC1B_00

In addition to CAD, Cisco Finesse is provided as part of UCCX 10.0 new features, which is the next generation browser-based agent and supervisor desktop for Unified CCX. Finesse is an alternative to Cisco Agent Desktop, Cisco Supervisor Desktop, and Cisco Desktop Administrator. Finesse is available with Enhanced and Premium license packages and provides typical inbound voice contact center functionality. It supports Unified Communications Manager-based silent monitoring and workflow-based recording with MediaSense and Work Force Optimization (WFO).

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/design/guide/UCCX_BK_DF6A995E_00_design-guide/UCCX_BK_DF6A995E_00_design-guide_chapter_00.html#UCCX_RF_W3D3AFF2_00

CAD agents and supervisors communicate with each other through the chat services built into the desktop applications. If you have deployed Cisco IM and Presence in their environments, agents and supervisors can use these same desktop applications to see the presence status of SMEs as well as other critical members of the enterprise, and to initiate chat sessions with them.

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/design/guide/UCCX_BK_DF6A995E_00_design-guide/UCCX_BK_DF6A995E_00_design-guide_chapter_010.html#UCCX_RF_C5523F5D_00

Requirement:

- Support remote agents and supervisors (e.g., remote site, home office, mobile agent, etc.).

UDT Response:

With the Extend and Connect feature, Unified Contact Center Express agents and supervisors can work from a remote location using any device.

This feature gives the user (agent or supervisor) the flexibility to answer or make calls using devices that are connected to the PSTN or to mobile or other PBX networks. Extend and Connect functions by leveraging CTI remote device and persistent connection features of Cisco Unified Communications Manager (CUCM).

You can enable the Extend and Connect feature through the Cisco Jabber client by selecting only the Extend mode. This feature provides the following connections:

- CTI remote device—CTI remote devices are Unified CCX off-cluster devices for users that can be connected to any of the third-party networks, such as PSTN, mobile, or PBX.
- Persistent connection—Unified CCX users use this feature to set up a persistent call connection to a remote destination. The advantage of this connection is that call establishment to the remote destination is much faster.

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/configuration/guide/UCCX_BK_W1AF9DDD_00_uccx-admin-guide-10-0/UCCX_BK_W1AF9DDD_00_uccx-admin-guide-10-0_chapter_011001.html#UCCX_TP_EDCEF605_00

For more information about the Extend and Connect feature, see:

http://www.cisco.com/en/US/docs/voice_ip_comm/cucm/admin/9_1_1/ccmfeat/CUCM_BK_C3E0EFA0_00_cucm-features-services-guide-91_chapter_0110010.html

Requirement:

- Provide music/announcements on hold and while in queue.

UDT Response:

Yes. Please review “General IVR Features” under Table 5 of link below:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/design/guide/UCCX_BK_DF6A995E_00_design-guide/UCCX_BK_DF6A995E_00_design-guide_chapter_00.html#UCCX_RF_I1516045_00

Cisco UCCX can play messages to callers, prompts through Cisco Unified Communications Manager Music on Hold server, or .wav file.

Requirement:

- Support scalability requirements of up to 160 active agents.

UDT Response:

Cisco Unified Contact Center Express (Unified CCX) meets the needs of mid-market and enterprise branch offices or companies that need easy-to-deploy, easy-to-use, secure, virtual, highly available, and sophisticated customer interaction management for up to 400 agents.

<http://www.cisco.com/c/en/us/products/collateral/unified-communications/unified-communications-manager-callmanager/data-sheet-c78-730660.html>

Requirement:

- 100% virtualized.

UDT Response:

Yes. As mentioned in a previous response, you can deploy the UCCX components and other UC applications on a Cisco Unified Computing Systems (UCSs) or any other equivalent specification-based third-party virtual servers with the supported deployment models.

For more information, see the *Virtualization DocWiki* located here:

[http://docwiki.cisco.com/wiki/Virtualization for Cisco Unified Contact Center Express](http://docwiki.cisco.com/wiki/Virtualization_for_Cisco_Unified_Contact_Center_Express)

Requirement:

- Support concurrent agents.

UDT Response:

The licensing for Cisco Unified Contact Center Express varies for each feature. Licenses are either concurrent or named-user licenses. All packaging depends on the number of users with the exception of the Inbound Voice High Availability server software option.

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/design/guide/UCCX_BK_DF6A995E_00_design-guide/UCCX_BK_DF6A995E_00_design-guide_chapter_00.html#UCCX_RF_PD0F772B_00

Requirement:

The contact center application must also support options for fully integrated multi-media support, CRM integration, multi-site networking, IVR integration and other applications and functionality to enhance contact center productivity.

Proposer should confirm that the contact solution proposed complies with the requirements set forth above and include a brief overview of the solution. Proposer should include how the contact center solution will assist The City of Hollywood in reaching its stated goals.

UDT Response:

All the above mentioned features and functionalities are supported by Cisco Unified Contact Center Express Solution as referred by the resource links below:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/design/guide/UCCX_BK_DF6A995E_00_design-guide/UCCX_BK_DF6A995E_00_design-guide_chapter_00.html#UCCX_RF_PD0F772B_00

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/configuration/guide/UCCX_BK_W1AF9DDD_00_uccx-admin-guide-10-0/UCCX_BK_W1AF9DDD_00_uccx-admin-guide-10-0_chapter_01.html#UCCX_RF_UC62A0D3_00

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/design/guide/UCCX_BK_DF6A995E_00_design-guide/UCCX_BK_DF6A995E_00_design-guide_chapter_00.html#UCCX_RF_U35C454E_00

<http://www.cisco.com/c/en/us/products/collateral/unified-communications/unified-communications-manager-callmanager/data-sheet-c78-730660.html>

Call Routing and Control

The contact center solution must be able to support the following call routing capabilities:

Requirement:

- Groups

UDT Response:

Cisco UCCX solution does support group-based call routing capability as per the below url:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_9_0/configuration/guide/UCCX_BK_U767AC77_00_uccx-admin-guide/UCCX_BK_U767AC77_00_uccx-admin-guide_chapter_0111.html#UCCX_TP_R1BAC7DF_00

Requirement:

- Agent skills / skill preferences

UDT Response:

Cisco UCCX solution also supports group-based call routing as per the below url:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_9_02/design/guide/UCCX_BK_C39FDB35_00_cisco-unified-contact-center-express/UCCX_BK_C39FDB35_00_cisco-unified-contact-center-express_chapter_01.html

Requirement:

- Source/destination routing

UDT Response:

Source/Destination based routing is also support with Cisco UCCX solution as per:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_9_02/design/guide/UCCX_BK_C39FDB35_00_cisco-unified-contact-center-express/UCCX_BK_C39FDB35_00_cisco-unified-contact-center-express_chapter_01.html#UCCX_RF_C854EBF3_00

Requirement:

- Caller input and/or database lookup

UDT Response:

Cisco UCCX supports caller input based routing as per:

http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_8_0/design/guide/uccx80srnd.pdf

Requirement:

- Real-time conditions and/or performance criteria

UDT Response:

Cisco UCCX does support Performance Real-time conditions/Performance criteria as per:

http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_8_5/configuration/guide/uccx85rtmt.pdf

Requirement:

The solution must also be capable of supporting remote or mobile agents and supervisors as an integrated part of the solution, including for routing. Proposer should describe the routing features proposed, as well as which routing features are optional based on the requirements above. Proposer should also describe how multi-media features are integrated into the routing scheme (i.e. Is there one routing engine for all media? How do various media queue? How is media integrated into the contact center, etc.).

UDT Response:

Unified CCX supports remote agents (for example, at-home agents) using Cisco Unified IP Phone over a broadband Internet connection. The Cisco Voice and Video Enabled IPsec VPN (V3PN) ADSL or Cable connection can use a Cisco 800 Series router as an edge router to the broadband network. The Cisco 800 Series router can provide the remote agent with V3PN, Encryption, Network Address Translation (NAT), Firewall, Cisco IOS Intrusion Detection System (IDS), and QoS on the broadband network link to the Unified CCX campus. Remote agent V3PN aggregation on the campus is provided via LAN to LAN VPN routers. More information at:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_9_02/design/guide/UCCX_BK_C39FDB35_00_cisco-unified-contact-center-express/UCCX_BK_C39FDB35_00_cisco-unified-contact-center-express_chapter_010.html#UCCX_RF_R2D06DF6_00

Unified Contact Center Express support for powerful, agent-based service, as well as fully integrated self-service applications, results in reduced business costs and improved customer response by providing sophisticated and distributed Automatic Call Distributor (ACD), Interactive Voice Response (IVR), Computer Telephony Integration (CTI), and agent and desktop services while offering the flexibility to scale to larger, more demanding environments.

Cisco Unified Contact Center Express helps ensure your business rules for inbound and outbound voice, email, and web chat; and customer interaction management helps ensure that each contact is delivered to the right agent the first time. More information at: <http://www.cisco.com/c/en/us/products/collateral/unified-communications/unified-communications-manager-callmanager/data-sheet-c78-730660.html>

Agent Desktop Client Requirements

Requirement:

The City of Hollywood requires an integrated agent desktop client for contact handling. Agents must be able to sign on at different workstation locations while retaining customized settings.

UDT Response:

Read and Understood.

Standard features of the agent desktop application must include:

Requirement:

- Softphone telephony features.

UDT Response:

A Softphone telephony feature is included. Reference: http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_9_02/design/guide/UCCX_BK_C39FDB35_00_cisco-unified-contact-center-express/UCCX_BK_C39FDB35_00_cisco-unified-contact-center-express_chapter_01.html

Requirement:

- The ability to view an individual or contact center performance statistics.

UDT Response:

This is also supported as per: http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_9_02/design/guide/UCCX_BK_C39FDB35_00_cisco-unified-contact-center-express/UCCX_BK_C39FDB35_00_cisco-unified-contact-center-express_chapter_01.html

Requirement:

- Presence and collaboration capabilities, such as team lists, other agents' status, directory functionalities, etc.

UDT Response:

It is supported as per:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_9_02/design/guide/UCCX_BK_C39FDB35_00_cisco-unified-contact-center-express/UCCX_BK_C39FDB35_00_cisco-unified-contact-center-express_chapter_01.html

Requirement:

Proposer should confirm compliance and describe agent desktop capabilities, including the specifications for a customer-provided PC.

UDT Response:

These can be found at the below url:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_9_02/design/guide/UCCX_BK_C39FDB35_00_cisco-unified-contact-center-express/UCCX_BK_C39FDB35_00_cisco-unified-contact-center-express_chapter_01.html

Multi-media Agent Features

Requirement:

The agent desktop should be able to support multi-media contacts. Proposer should describe how multimedia is integrated into the agent desktop and what features are available.

UDT Response:

Agent desktop supports multi-media and below url can be referred to for the list of features:

<http://www.cisco.com/c/en/us/products/collateral/unified-communications/unified-communications-manager-callmanager/data-sheet-c78-730660.html>

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_9_02/design/guide/UCCX_BK_C39FDB35_00_cisco-unified-contact-center-express/UCCX_BK_C39FDB35_00_cisco-unified-contact-center-express_chapter_01.html

Supervisor Desktop Client

Supervisor Desktop Client Requirements

The City of Hollywood requires an integrated supervisor desktop client for managing the contact center. The supervisor desktop application must provide the ability to view performance in summary and detailed levels, real-time and historical.

As standard features, supervisors must also be able to:

Requirement:

- Create and access real-time and historical reports from a single interface across the local and wide area networks.

UDT Response:

Comply. Next-generation reporting provides historical and real-time reports and dashboards with flexible presentation options using Cisco Unified Intelligence Center.

<http://www.cisco.com/c/en/us/products/collateral/unified-communications/unified-communications-manager-callmanager/data-sheet-c78-730660.html>

Requirement:

- Adjust the amount of detail provided and the order in which information is presented in standard report templates.

UDT Response:

Comply. Use existing out-of-the-box reports to view historical and Live Data reports, or create custom reports based on the information you want to track.

<http://www.cisco.com/c/en/us/products/collateral/unified-communications/unified-communications-manager-callmanager/data-sheet-c78-730660.html>

Requirement:

- Define alarms and alerts for monitoring contact center performance.

UDT Response:

Comply. Cisco Unified Serviceability alarms provide information on runtime status and the state of the system, so you can troubleshoot problems that are associated with your system; for example, to identify issues with the Disaster Recovery System. Alarm information, which includes an explanation and recommended action, also includes the application name, machine name, and so on, to help you perform troubleshooting. If you have clusters, this is even true for problems that are not on your local Cisco Unified CCX.

You configure the alarm interface to send alarm information to multiple locations, and each location can have its own alarm event level (from debug to emergency). You can direct alarms to the Syslog Viewer (local syslog), Syslog file (remote syslog), an SDI trace log file, or to all destinations.

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_9_02/configuration/guide/UCCX_BK_U959FE01_00_unified-serviceability-admin-guide/UCCX_BK_U959FE01_00_unified-serviceability-admin-guide_chapter_011.html#CUCM_TP_A2F373F0_00

Requirement:

- Re-queue calls in response to real-time conditions, reserve calls for specific agents and change priority of multiple calls simultaneously.

UDT Response:

Comply. Cisco Unified CCX allows supervisors to use administrative capabilities to dynamically re-skill agents.

<http://www.cisco.com/c/en/us/products/collateral/unified-communications/unified-communications-manager-callmanager/data-sheet-c78-730660.html>

Requirement:

Proposer should confirm compliance and describe supervisor desktop capabilities, including the specifications for a customer-provided PC.

UDT Response:

Comply. Supervisor features:

- The ability to monitor critical performance metrics, record calls, and send team messages allows managers to coach, train, and encourage agent behavior so that agents consistently perform their job functions and process calls efficiently.
- The ability to chat with individual members or the entire team allows supervisors to coach agents, resolve problems, and instantly communicate business changes.
- Supervisors can silently monitor calls to listen for coaching opportunities.
- Supervisors can initiate call recording for later review and training.
- They can interrupt an agent's call using Barge In to interact with both the caller and the agent to help resolve a concern.
- Supervisors can remove an agent from a call using the Intercept feature, so the supervisor and caller can complete the call on their own while the agent handles another customer request.
- Supervisors can change an agent's state from their desktops in a situation where agents may forget to make themselves available to take calls after a break or neglect to log out when they are away from their workstations for an extended period.
- Supervisors can log out missing agents or make unintentionally idle agents ready to take calls. They can change an agent's skill profile in real time, so they can manage their agent teams and support contact center management objectives.
- Supervisors can remotely monitor agents and administer skills from Android or Apple mobile devices.

<http://www.cisco.com/c/en/us/products/collateral/unified-communications/unified-communications-manager-callmanager/data-sheet-c78-730660.html?cachemode=refresh>

For Supervisor desktop specification, refer to Software and Hardware Compatibility Guide for Cisco Unified Contact Center Express and Cisco Unified IP IVR:

http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_compatibility/matrix/crscomtx.pdf

Real-time Reporting

Requirement:

The supervisor desktop application must provide ability to view real-time performance in summary and detailed levels. Information displays must provide agent, group and queue status, as well as active contact status. Supervisors must be able to monitor specific agents or groups, and view information for a user-specified period.

UDT Response:

Read and Understood.

Requirement:

Proposer should confirm compliance and describe real-time reporting and monitoring capabilities.

UDT Response:

Comply. The real-time displays contain the information you need to manage your teams and agents. Real-time displays include the following:

- Agent – Agent vs. Team Summary (page 30)
- Agent Contact – Active Call (page 33)
- Agent Contact – Active E-Mail (page 33)
- Agent Contact – Enterprise Call History (page 34)
- Agent Contact – Enterprise Data (page 35)
- Agent Logs – Call (page 35)
- Agent Logs – State (page 35)
- Agents – Team State (page 36)
- Agents – Team Summary (page 37)
- E-Mail CSQ – Assigned (page 38)
- E-Mail CSQ – Detail (page 39)
- E-Mail CSQ – Queued (page 40)
- E-Mail CSQ – Resolved (page 41)
- E-Mail CSQ – Summary (page 42)
- E-Mail CSQ – Team Summary (page 43)
- Voice CSQ – Detail (page 45)
- Voice CSQ – Summary (page 46)

- Voice CSQs – Team Summary (page 48).

http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/user/guide/csd100ccxug.pdf

Historical Reporting

Requirement:

The supervisor desktop application must provide access to historical reporting. Historical reports must cover agents, groups and queues (including abandoned and answered contacts). The system must be able to record call "events", agent "events" and their durations from the time a call enters the contact center system until it is disconnected.

Proposer should confirm compliance and provide a historical reporting overview, including a list of standard contact center reports, along with a brief description of their content. Describe how reports are scheduled and run. Proposer should also describe any customization options available.

UDT Response:

Comply.

Agent Logs – Call

- The Call display is available when you select the Logs node underneath a specific agent's name in the Agents tree. This display presents a history of the calls made and received by the agent during the current session. By default, the data displayed is sorted in ascending order by time of day. The data in the report can be refreshed manually by clicking the Refresh button on the toolbar.

Agent Logs – State

- The State display is available when you select the Logs node underneath a specific agent's name in the Agents tree. This display presents a history of the ACD states the agent transitioned through during the current session. By default, the data displayed is sorted in ascending order by time of day. The data in the report can be refreshed manually by clicking the Refresh button on the toolbar.

http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/user/guide/csd100ccxug.pdf

Supervisor Multi-media Features

Requirement:

The supervisor desktop should be able to support multi-media contacts. Proposer should describe how multimedia is integrated into the supervisor desktop including what features are available for real-time and historical reporting. Indicate which multimedia options have been proposed.

UDT Response:

For the reporting, Unified Intelligence Center is the reporting solution for Unified CCX. Unified Intelligence Center is a comprehensive, end-to-end reporting solution. You can access Historical reports and Live Data reports. Refer to the links below for more details. Multi-channel support is more for an agent's customer engagement and you can have Agent Email and Web chat if you have Unified CCX Premium licenses with SocialMiner deployed.

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/design/guide/UCCX_BK_DF6A995E_00_design-guide/UCCX_BK_DF6A995E_00_design-guide_chapter_010.html#UCCX_CN_RCE50DEF_00

<http://www.cisco.com/c/en/us/products/collateral/customer-collaboration/unified-contact-center-enterprise/data-sheet-c78-729766.html>

Contact Center Management

The contact center solution must provide a single, easy-to-use, GUI-based desktop management tool for system administration and contact center managers. The solution must provide:

Requirement:

- Visual multi-media call flow configuration tool

UDT Response:

Comply – The Cisco Desktop Workflow Administrator is a GUI-based tool which allows administrators and supervisors to define new workflows. That includes dialing options for customers as well as dedicated wrap-up codes for each work flow.

http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/user/guide/cda100ccxug.pdf

Requirement:

- Ability to reconfigure call flows without taking application out of service.

UDT Response:

Partially comply – the Cisco Agent Desktop client application has to be restarted when the administrator defines a new work flow in order to be updated with the made changes. However, there is no need of restarting the servers and ongoing calls are not affected.

http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/user/guide/cda100ccxug.pdf

Requirement:

- Ability to adjust configuration parameters based on real-time conditions (e.g., number of agents available for email, outbound dialing, and web collaboration, if appropriate).

UDT Response:

Comply – Unified CCX supports routing based on caller input to menus, real-time queue statistics, time of day, day of week, ANI, dialed number, and processing of data from XML text files. Thus, a properly configured system can even react automatically to specific conditions without the need of adjusting any parameters.

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/design/guide/UCCX_BK_DF6A995E_00_design-guide/UCCX_BK_DF6A995E_00_design-guide_chapter_00.html#UCCX_RF_AD3AFADE_00

Requirement:

- Ability to configure integrated message prompts, performance messages and digit collection.

UDT Response:

Comply – Administrators can specify specific actions based on provided rules and occurred events. The rules can refer to digits entered by the caller in response to IVR prompting (“collected digits”), call duration, current time, etc.

http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/user/guide/cda100ccxug.pdf

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/configuration/guide/UCCX_BK_W1AF9DDD_00_uccx-admin-guide-10-0/UCCX_BK_W1AF9DDD_00_uccx-admin-guide-10-0_chapter_01001.html

Requirement:

- Configuration synchronization with associated communication platform.

UDT Response:

Comply – The Cisco Unified CCX solution is tightly integrated with Cisco Unified Communications Manager and Cisco Business Edition 6000 (BE 6000). Cisco Unified CCX transparently integrates information from Cisco Unified Communications Manager and integrates with the Cisco Unified Communications Manager web-based administration to provide cross access and a common interface.

<http://www.cisco.com/c/en/us/products/collateral/unified-communications/unified-communications-manager-callmanager/data-sheet-c78-730660.html>

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/configuration/guide/UCCX_BK_W1AF9DDD_00_uccx-admin-guide-10-0/UCCX_BK_W1AF9DDD_00_uccx-admin-guide-10-0_chapter_0100.html

Requirement:

- Real-time system reliability and IT monitoring.

UDT Response:

Comply – Unified CCX generates alert messages to notify the administrator when a predefined condition is met, such as when an activated service fails to start. The system sends alerts as email or displays alerts as a popup message on RTMT.

RTMT contains preconfigured and user-defined alerts that support alert modifications. Although you can perform configuration tasks for both types, you cannot delete preconfigured alerts (whereas you can add and delete user-defined alerts). Predefined alerts are configured for perfmon counter value thresholds as well as event (alarms) notifications.

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/maintain_and_operate/guide/UCCX_BK_U6CBFEB9_00_unified-ccx-operations-guide/UCCX_BK_U6CBFEB9_00_unified-ccx-operations-guide_chapter_01.html#UCCX_RF_R1557FFE_00

Requirement:

Proposer should confirm compliance and provide an overview of the system management tool including specifications for a customer-provided PC.

UDT Response:

The CCX administration is completely based on a web interface which can be accessed from any standards-based browser. Cisco recommends to have a screen resolution of 1024x768 pixels or higher.

The CCX administration tool allows you to perform the following tasks:

- User management
- Agent Desktop/Finesse management – defining what applications and features are available to agents and supervisors as well as workflow management
- Skill management – definition of skill sets and skill ranking
- System management – server and database management for the whole system like setting up recovery tasks, alarms, monitoring, etc.

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/configuration/guide/UCCX_BK_W1AF9DDD_00_uccx-admin-guide-10-0.html

When using Cisco Agent Desktop, the supervisor/manager can create workflows and prompts for the teams using the Agent Administrator and Desktop Workflow Administrator application.

The minimum requirements are:

- Windows XP SP3 or Windows 7

- 500 MHz
- 256MB RAM (Win XP)/1GB RAM (Win7 32 bit)/2GB RAM (Win7 64 bit)
- 650 MB HDD.

http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/installation/guide/cad100ccxig.pdf

http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/user/guide/cda100ccxug.pdf

Contact Center Options

Optional features available must include, at a minimum:

Requirement:

- Automated announcements (including queue specific announcements such as estimated wait time), caller navigation menus and digit collection for incoming voice calls.

UDT Response:

Comply. Basic Prompt and Collect IVR. Basic IVR ports provide a queue point, custom messaging and prompting, caller input collection, and processing via DTMF decoding. Decoded DTMF input may be used for both routing and screen pop purposes. Basic call controls such as terminate, transfer, and place call are also supported as part of the basic IVR functionality.

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/design/guide/UCCX_BK_DF6A995E_00_design-guide/UCCX_BK_DF6A995E_00_design-guide_chapter_00.html#UCCX_RF_PD0F772B_00

Requirement:

- Message-board support.

UDT Response:

Comply – Wallboards.

Unified CCX supports wallboard reporting. Obtain the wallboard from a Cisco-approved vendor from Cisco Marketplace:

<https://marketplace.cisco.com/>

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/design/guide/UCCX_BK_DF6A995E_00_design-guide/UCCX_BK_DF6A995E_00_design-guide_chapter_010.html

Requirement:

- Integration to third-party applications, such as IVR, CRM, workforce management applications and quality monitoring systems.

UDT Response:

Comply – Advanced CTI. Advanced CTI functionality allows call data to be passed to other Windows-based desktop applications (for example, CRM applications) for an application screen pop on ringing. Passing data to other applications is performed through keystroke macros that are then associated with specific call events such as call ringing or call release. With keystroke macros and HTTP put/get commands, no programming is required to develop a screen pop application.

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/design/guide/UCCX_BK_DF6A995E_00_design-guide/UCCX_BK_DF6A995E_00_design-guide_chapter_00.html

Requirement:

- Multi-site networking.

UDT Response:

Multiple Cisco Unified CCX Clusters Integrated with a Single Cisco Unified Communications Manager Cluster.

You can integrate multiple Unified CCX clusters with a single Cisco Unified Communications Manager cluster.

Note:

There is no limit to the number of Unified CCX clusters supported with a single Unified CM cluster as long as the combined agent phones, CTI ports, and CTI route points that are utilized by all Unified CCX clusters are used to size Unified CM.

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/design/guide/UCCX_BK_DF6A995E_00_design-guide/UCCX_BK_DF6A995E_00_design-guide_chapter_01.html

Requirement:

Proposer should state their ability to meet these optional requirements and provide a brief overview of options available.

UDT Response:

Comply. Unified CCX is available in three different packages: Standard, Enhanced, and Premium. Different packages provide varying levels of customer interaction management channel options and capability within a contact channel. For more detailed information, refer to product data sheets, feature guides, and end user documentation for each type of Unified CCX

customer contact interaction management at the following URL:
<http://www.cisco.com/en/US/products/sw/custcosw/ps1846/index.html>

Table 1. Unified CCX Packages

<i>Feature</i>	<i>Premium</i>	<i>Enhanced</i>	<i>Standard</i>	<i>Optional</i>
Inbound voice	Yes	Yes	Yes	No
Integration with Cisco Unified Presence Server	Yes Included	Yes Included	Yes Included	Yes
Blended Preview Outbound Dialer	Yes Included	No	No	No
Outbound IVR	Yes	No	No	Yes
Agent E-Mail	Yes (CAD)	No	No	No
Web Chat	Yes Included	No	No	No
Inbound Voice High-Availability Option	Yes	Yes	No	Yes
Outbound Voice	Yes (CAD)	No	No	No
Call Recording	Yes	Yes	Yes	Yes
Quality Management Option	Yes	Yes	No	Yes
Advanced Quality Management Option	Yes	Yes	No	Yes
Workforce Management Option	Yes	Yes	No	Yes

Unified CCX deployments must have all product components and optional features of the same package type. Mixing components or options from different packages is not supported.

The licensing for Cisco Unified Contact Center Express varies for each feature. Licenses are either concurrent or named-user licenses. All packaging depends on the number of users with the exception of the Inbound Voice High Availability server software option.

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/design/guide/UCCX_BK_DF6A995E_00_design-guide/UCCX_BK_DF6A995E_00_design-guide_chapter_00.html

Contact Center Architecture

Requirement:

The proposed contact center solution must be modular, scalable and capable of supporting numerous configuration requirements (e.g., multi-media, remote agents, various CRM integrations, etc.).

Proposer should describe the software and hardware architecture of the proposed contact center solution, including integration with the softswitch, maximum capacities and any customer-provided servers or

equipment required. Proposer should also include an overview of the licensing structure for the contact center solution and how to add application options and users.

UDT Response:

Cisco Unified Contact Center Express delivers a highly secure, available, virtual, and sophisticated customer interaction management solution for up to 400 agents. In addition to sophisticated call routing and comprehensive contact management capabilities, Cisco Unified Contact Center Express includes an embedded reporting solution that offers a comprehensive view of contact center statistics at a glance. It provides Automatic Call Distributor (ACD), Interactive Voice Response (IVR), Computer Telephony Integration (CTI), and agent and desktop services with integrated outbound call management capabilities as well as offering the flexibility to scale to larger, more demanding environments. Multichannel capabilities include handling voice, email, web chat, and social media inquiries.

Cisco Unified Contact Center Express seat provides optimal flexibility by providing full licensing to use the seat as either an agent or a supervisor seat. Enhanced and Premium agent seats can be either workstation or Cisco Unified IP Phone-based agent stations. Standard seats provide a Cisco Unified IP Phone Agent IP Phone-based agent station. Each seat provides full licensing for Cisco Finesse, Cisco Agent Desktop or Cisco Unified IP Phone Agent, Cisco Supervisor Desktop, and Cisco Desktop Administrator; for the Enhanced and Premium versions, Cisco Supervisor and Agent Desktop include on-demand recording in addition to full licensing. With the Enhanced and Premium versions, even if a workstation failure occurs, an agent is fully licensed to continue working through the Cisco Unified IP Phone Agent.

UCCX can be part of a virtualized deployment where multiple Cisco Unified Communications applications can be deployed on the same server.

UCCX Data Sheet:

<http://www.cisco.com/c/en/us/products/collateral/unified-communications/unified-communications-manager-callmanager/data-sheet-c78-730660.html?cachemode=refresh>

Virtualization:

http://docwiki.cisco.com/wiki/Virtualization_for_Cisco_Unified_Contact_Center_Express

Endpoints

In addition to other specifications set forth, the Proposer's proposed endpoints must meet the following minimum requirements:

Requirement:

- **Standards:** The SIP endpoints included as part of the proposal must conform to IETF SIP standards as well as other industry standards, as previously specified in the **RFP**.

UDT Response:

Cisco 7821, 7841 and 8945 – IP phones use SIP protocol as the signaling protocol as described in the Administration Guide: SIP is the Internet Engineering Task Force (IETF) standard for multimedia conferencing over IP. SIP is an ASCII-based application-layer control protocol (defined in RFC 3261) that can be used to establish, maintain, and terminate calls between two or more endpoints.

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cuippph/7821_7841_7861/10_1/english/admin_guide/PA2D_BK_AB3F74DA_00_admin-7821-7841-7861-10_0/PA2D_BK_AB3F74DA_00_admin-7821-7841-7861-10_0_chapter_01.html

Requirement:

- **Flexibility:** A variety of SIP phones must be available. The City of Hollywood requires the flexibility to choose from basic to high-end capability based on end user and/or location requirements. Any phone proposed must be supported across the entire enterprise. Additionally, all endpoints must be VoIP and SIP capable. Please describe clearly how a possible migration to SIP would be achieved on an endpoint if this endpoint does not currently have SIP capabilities.

UDT Response:

All Cisco 3900, 6900, 7800, 8800, 8900, 9900, DX and SX series phones and Telepresence endpoints are SIP capable. All phones included in this proposal are SIP capable and supported across an enterprise.

For a complete list of all available Cisco phones please refer to:

http://www.cisco.com/c/dam/en/us/products/collateral/collaboration-endpoints/unified-ip-phone-7940g/prod_brochure0900aecd800f6d4a.pdf

Requirement:

- **Investment Protection:** All SIP endpoints must be capable of firmware/software downloads to support future requirements. Please describe how firmware updates to endpoints are done and define the level of support needed for this update.

UDT Response:

Most commonly, and by default, IP phones upgrade their images using TFTP, which is a UDP-based protocol, from TFTP servers integrated into one or more of the call processing platforms. With this arrangement, all the phones obtain their images directly from these TFTP servers.

Firmware Load Information window in Cisco Unified Communications Manager Administration enables you to quickly locate devices that are not using the default firmware load for their device type.

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/collab10/collab10/endpnts.html#wp1156354

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/admin/10_0_1/ccmcfg/CUCM_BK_C95ABA82_00_admin-guide-100/CUCM_BK_C95ABA82_00_admin-guide-100_chapter_01001011.html

Requirement:

- End User Feature Support: The SIP endpoints must provide support for the End User Features set forth in the table in section.

UDT Response:

Cisco complies.

Requirement:

Proposer should confirm that the solution meets the minimum requirements set forth above. Proposer should clearly state any areas of non-compliance.

UDT Response:

Cisco complies.

Endpoint Description:

Requirement:

The City of Hollywood requires availability of a variety of models (e.g., speaker/nonspeaker, display/non-display, etc.). Proposer should provide a brief description, with pictures, of available SIP phones offered by the Proposer.

UDT Response:

Complies. Please refer to Attachment A for a full description of proposed phones.

Requirement:

QoS Requirements

As previously specified, the Proposer's solution (including SIP phones) must support industry standard QoS requirements. Proposer should describe standards-based support, including:

Plug & play registration capabilities.

How VLAN segmentation and prioritization of desktop PC and VoIP traffic is accomplished using the phone's Ethernet switch and a single data cable to the wiring closet, including how the SIP phone places itself in the correct Voice VLAN.

Support for Layer 3 QoS based on the RFC 2474 standard for DiffServ. Explain if phones support more than one DiffServ code point.

Support for LLDP-Med (Link Layer Discovery Protocol-Media Endpoint Discovery) for simplification of auto-configuration and network management.

UDT Response:

All Cisco phones proposed support CDP and 802.1Q/p standards, and can be configured with an 801.1Q VLAN header containing the VLAN ID overrides configured by the Admin VLAN ID.

Plug and play registration capabilities:

The Cisco IP Phone requires Cisco Unified Communications Manager to handle call processing. You need to ensure that Cisco Unified Communications Manager is set up properly to manage the phone and to properly route and process calls.

Before you install the Cisco IP Phone, you must choose a method for adding phones to the Cisco Unified Communications Manager database.

By enabling auto-registration before you install the phones, you can:

- Add phones without first gathering MAC addresses from the phones.
- Automatically add a Cisco IP Phone to the Cisco Unified Communications Manager database when you physically connect the phone to your IP telephony network. During auto-registration, Cisco Unified Communications Manager assigns the next available sequential directory number to the phone.
- Quickly enter phones into the Cisco Unified Communications Manager database and modify any settings, such as the directory numbers, from Cisco Unified Communications Manager.
- Move auto-registered phones to new locations and assign them to different device pools without affecting their directory numbers.

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cuipph/7821_7841_7861/10_1/english/admin_guide/PA2D_BK_AB3F74DA_00_admin-7821-7841-7861-10_0/PA2D_BK_AB3F74DA_00_admin-7821-7841-7861-10_0_chapter_011.html#CUIP_TK_A0CEAB73_00

How VLAN segmentation and prioritization of desktop PC and VoIP traffic is accomplished using the phone's Ethernet switch and a single data cable to the wiring closet, including how the SIP phone places itself in the correct voice VLAN.

The Cisco IP Phone contains an internal Ethernet switch, enabling forwarding of packets to the phone, and to the computer (access) port and the network port on the back of the phone.

If a computer is connected to the computer (access) port, the computer and the phone share the same physical link to the switch and share the same port on the switch. This shared physical link has the following implications for the VLAN configuration on the network:

- The current VLANs might be configured on an IP subnet basis. However, additional IP addresses might not be available to assign the phone to the same subnet as other devices that connect to the same port.
- Data traffic present on the VLAN supporting phones might reduce the quality of VoIP traffic.
- Network security may indicate a need to isolate the VLAN voice traffic from the VLAN data traffic.

You can resolve these issues by isolating the voice traffic onto a separate VLAN. The switch port to which the phone connects would be configured for separate VLANs for carrying:

- Voice traffic to and from the IP phone (auxiliary VLAN on the Cisco Catalyst 6000 series, for example)
- Data traffic to and from the PC that connects to the switch through the computer (access) port of the IP phone (native VLAN).

Isolating the phones on a separate, auxiliary VLAN increases the quality of the voice traffic and allows a large number of phones to be added to an existing network that does not have enough IP addresses for each phone.

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cuipph/7821_7841_7861/10_1/english/admin_guide/PA2D_BK_AB3F74DA_00_admin-7821-7841-7861-10_0/PA2D_BK_AB3F74DA_00_admin-7821-7841-7861-10_0_chapter_01.html#CUIP_RF_V70A4C0D_00

Support for Layer 3 QoS based on the RFC 2474 standard for DiffServ. Explain if phones support more than one DiffServ code point.

When configuring network-level Quality of Service (QoS), Cisco desk phones can be trusted and their packet markings honored. By default, these endpoints mark their voice media and signaling packets with appropriate Layer 3 values (voice media as DSCP 46 or PHB EF; call signaling as DSCP 24 or PHB CS3), which match Cisco QoS recommendations for appropriate voice media and signaling marking, to ensure end-to-end voice quality on a converged network. While many Cisco desk phones support the attachment of a desktop computer, Cisco desk phones are capable of separating the voice and data traffic, placing voice traffic onto the voice VLAN and data traffic from the desktop onto the data VLAN. This enables the network to extend trust to the phone but not to the PC port of the phone.

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/collab10/collab10/endpnts.html#wp1363726

Cisco 7841 IP phones support CDP and 802.1Q/p standards, and can be configured with an 801.1Q VLAN header containing the VLAN ID overrides configured by the Admin VLAN ID.

Cisco 7841 IP Phone supports LLDP-MED on the SW port to communicate information such as: Voice VLAN configuration, Device discovery, Power management and Inventory management.

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cuipph/7821_7841_7861/10_1/english/admin_guide/PA2D_BK_AB3F74DA_00_admin-7821-7841-7861-10_0/PA2D_BK_AB3F74DA_00_admin-7821-7841-7861-10_0_chapter_01.html#PA2D_RF_N761A431_00

Power Requirements

Requirement:

The City Of Hollywood requires that all SIP phones conform to IEEE 802.3af Power over Ethernet (PoE) standards. Proposer should confirm compliance and provide information on any attributes of the SIP phones that can assist the City of Hollywood in saving on energy costs.

UDT Response:

Yes. All Cisco IP Phones provide 802.3AF POE support except for wireless handset.

- Wireless IP Handsets (N/A).

http://www.cisco.com/c/en/us/products/collaboration-endpoints/ip-phones/product_comparison.html#~adv-endpoints

Acoustic Requirements

Requirement:

All SIP speakerphone models proposed must be full duplex. Additionally, all SIP phones should support the G.722 wideband codec, silence suppression (VAD) and echo cancellation to ensure the highest voice quality. Proposer should confirm compliance to these minimum requirements.

UDT Response:

Most Cisco IP Phones will support VAD and echo cancellation, especially those with standard speakerphone capabilities. G.722 codec support is standard across all IP phones. Phone information should be sought on an individual series/type basis.

http://www.cisco.com/c/en/us/products/collateral/collaboration-endpoints/unified-sip-phone-3900-series/guide_c07-685702.pdf

<http://www.cisco.com/c/en/us/support/docs/voice-unified-communications/ip-softphone/5261-tuning-voice-for-ip-phone.html>

Applications Support Requirements

Requirement:

Proposer should offer SIP phone models that support integrated application support for LDAP directories, a customized phonebook, call log and open standards customizable application download via XML, JAVA, HTML and WML. Proposer should confirm which models support these capabilities and describe integrated functionality.

UDT Response:

Yes. Directory access applies regardless of whether Unified CM or other Unified Communications applications have been integrated with a corporate directory for user provisioning and authentication.

Cisco Unified IP Phones equipped with a display screen can search a user directory when a user presses the Directories button on the phone. The IP phones use Hyper-Text Transfer Protocol (HTTP) to send requests to a web server. The responses from the web server contain specific Extensible Markup Language (XML) objects that the phone interprets and displays.

All IP Phones support XML.

http://www.cisco.com/c/en/us/products/collateral/collaboration-endpoints/unified-sip-phone-3900-series/guide_c07-685702.pdf

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/collab10/collab10/directry.html#wp1044856

Add-on Functionality

Requirement:

Proposer should offer SIP phone models that support add-on adapters or modules to expand the phone's functionality (e.g., additional buttons, etc.). Describe adapters and modules available.

UDT Response:

Yes. Cisco 9900 series IP Phones support key expansion modules:

http://www.cisco.com/c/en/us/products/collateral/collaboration-endpoints/unified-ip-color-key-expansion-module/data_sheet_c78-565427.html

For 7900 series IP Phones, the following 7915/16 is supported:

http://www.cisco.com/c/en/us/products/collateral/collaboration-endpoints/unified-ip-phone-expansion-module-7916/data_sheet_c78-468673.html

<http://www.cisco.com/c/en/us/products/collaboration-endpoints/unified-ip-phone-expansion-module-7915/index.html>

Other add-on modules include power injectors.

Additional SIP Phone Attributes

Requirement:

Proposer should describe the attributes, other than those detailed above, that distinguish your SIP phones, including any planned enhancements to the SIP phones that may be of interest to The City of Hollywood, and expected timeframes for release. Additionally the Proposer should indicate the end date of manufacturer endpoint proposed.

UDT Response:

With Intelligent Proximity for Mobile Voice, users of the Cisco DX Series and select models of the Cisco IP Phone 8800 Series can wirelessly synch iOS and Android mobile devices when you come in close proximity of these endpoints. You can easily access and import contacts and call history from personal mobile devices to these endpoints, simplifying the call management process.

In addition, you can move the audio path from your mobile device during a call in progress to these endpoints, taking advantage of the endpoints' superior audio quality.

Cisco Intelligent Proximity is available today on DX series and in Q3CY14 on the Cisco 8800 series phones.

Intelligent Proximity:

<http://www.cisco.com/c/en/us/products/collaboration-endpoints/intelligent-proximity.html>

There is currently no End of Sale planned for the phones included in this proposal.

SIP Soft Phones

The City Of Hollywood requires a SIP soft phone for users. SIP soft phone capabilities must meet the following minimum requirements:

Requirement:

- Customizable graphical user interface (GUI)

UDT Response:

Cisco Jabber Desktop allows some customization allowing users to add Buddy Lists/Groups to more efficiently manage contact lists, change IM window theme for a customized look and feel, customize emoticons, and add embedded tabs to the GUI. The main GUI interface is not customizable since Jabber is available on a number of platforms. Windows, MAC, Android, iOS, users will be presented with the same look and feel for Jabber regardless of platform. This will allow administrators to train end users once for any and all instances of Jabber.

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/jabber/Windows/9_7/JABW_BK_C4C679C9_00_cisco-jabber-for-windows-97/JABW_BK_C4C679C9_00_cisco-jabber-for-windows-97_chapter_01000.html

Requirement:

- Call control features (e.g., hold, transfer, MWI, etc.)

UDT Response:

Yes.

Requirement:

- Dialing via the keypad, address books, call lists, using drag/drop or copy/paste

UDT Response:

Yes.

Requirement:

- LDAP integration

UDT Response:

Yes.

Requirement:

- Call lists (missed calls, received calls, attempted calls)

UDT Response:

Yes.

Requirement:

- Post-connect DTMF dialing

UDT Response:

Yes.

Requirement:

- Access to online help

UDT Response:

Yes online help is available via “Help” Menu.

Requirement:

- Video Support

UDT Response:

Yes.

Requirement:

Proposer should confirm compliance with the requirements and describe soft client capabilities, including but not limited to mobility, call handling features and video support. Provide graphics, where applicable, depicting the GUI interface. Also, provide the minimum customer-provided PC requirements for supporting the SIP soft phone.

UDT Response:

Cisco Jabber client is available on many platforms including mobile, providing full mobile Audio/IM/VM/Video capabilities. For GUI and requirements, please consult the following data sheet (Jabber for Windows):

http://www.cisco.com/c/en/us/products/collateral/unified-communications/jabber-windows/data_sheet_c78-704195.html

Analog Devices**Requirement:**

The City of Hollywood intends to reuse existing analog devices (e.g., fax, analog phones, etc.) Proposer should confirm that the proposed configuration has been sized to support the required analog devices and describe how the analog phones connect to the system.

UDT Response:

You can connect analog devices to our Unified CM through a voice gateway.

Cisco analog gateways are available on the following products and series:

- Cisco Voice Gateways VG204, VG224, and VG350
- Cisco Integrated Services Routers Generation 2 (ISR G2) 1900, 2900, and 3900 Series with appropriate PVDMs and service modules or cards.

Details can be found here:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/collab10/collab10/gateways.html#wp1043687

Other Devices**Requirement:**

Proposer should describe other SIP devices available from the Proposer that support end users (e.g., wireless handsets not requiring adjunct wireless system, PDAs, etc.).

UDT Response:

Cisco is compliant with any 3rd party SIP Compliant Device

Financial Requirements**Payment Options**

Requirement:

Proposer shall offer methods of payment to include leasing options. These options must encompass hardware, software (major and minor releases) and maintenance cost for the life of the lease.

UDT Response:

[Please see Appendix A for Pricing Information](#)

Payment Schedule**Requirement:**

Proposer must include payment schedules available with the proposed leasing options.

UDT Response:

[Please see Appendix A for Pricing Information](#)

FINANCING**Requirement:**

The City of Hollywood currently has a leasing agreement with its telephony provider and we are in the seventh year of a ten year leasing and maintenance structure. This agreement offers the option of a dollar buyout upon completion of the leasing terms. The proposal must be able to provide options of a buyout of the existing lease whereby the City retains ownership of its current system. A creative option to repackage a new payment structure is desired, and this new payment must be equal to, or less than rates currently being paid by the City of Hollywood for leasing and annual maintenance of the current system.

Included as Attachment A is a copy of the payment schedule remaining on the lease of the current phone system and associated maintenance cost which shows the total average monthly payment currently incurred.

UDT Response:

[Please see Appendix A for Pricing Information](#)

PROPOSAL EXECUTIVE SUMMARY**Requirement:**

Briefly describe the key elements of your proposal. Highlight any major features, functions, or areas of support that differentiate your product or service offering from your competitors'.

UDT Response:

[Cisco Unified Communications Manager \(CUCM\) is the call-processing engine of the proposed solution, extending voice and video features to network devices such as IP phones, telepresence](#)

endpoints, media-processing devices, gateways, and multimedia applications. Fully integrated instant messaging and presence services are also included. Additional services such as Unified Contact Center Express (UCCX) which provides high-quality call center capabilities, including agent-based services as well as fully integrated self-service applications, sophisticated and distributed Automatic Call Distributor (ACD), Interactive Voice Response (IVR), and Computer Telephony Integration (CTI).

Below is the link to the datasheet of the proposed solution:

<http://www.cisco.com/c/en/us/products/collateral/unified-communications/business-edition-7000/data-sheet-c78-730649.html>

VENDOR FINANCIAL INFORMATION

Requirement:

Please provide copies of your Company's audited annual financial statements for the past three fiscal years, including all financial notes and disclosures that are attached to the audited financial report. If audited financial reports are not available, then please provide the company's unaudited financial reports signed and dated by an authorized Officer of the company who would be able to attest to the authenticity of the financial information under penalties of law. The unaudited financial report should include at the minimum, a complete and accurate: Balance Sheet, an Income and Expense Statement, a Cash Flow Statement and a Statement of Retained Earnings and all attached financial notes and disclosures for the fiscal year(s) as furnished. Please note that quarterly interim financial reports may be required for the current fiscal year as well. In addition, if your Company enters into an agreement with the City of Hollywood, the agreement will require your Company to provide copies of your annual audited or unaudited financial reports, including all attached financial notes and disclosures upon the City of Hollywood's written request.

UDT Response:

Please find attached in Exhibit A – UDT Financials

VENDOR BACKGROUND

Requirement:

Provide a brief overview and history of your organization, highlighting specific experience in projects of this type. Key individual expertise should be set forth in detail.

Describe the organizational structure of your company and provide the following information:

- A corporate organizational chart, including subsidiaries, affiliates, list of the board of directors

UDT Response:

Henry Fleches Co-Founder, President, & CEO

Henry Fleches is the President and CEO of UDT. He co-founded the company with his high school friend, Gerard Amaro.

Henry launched UDT in 1995, building it from a start-up to a leader in Managed IT Solutions. Under Henry's leadership and vision, UDT has flourished to become a



leader of Managed IT Solutions. He credits his business savvy and know-how to his father. Henry follows the motto of “doing the right thing, and then doing things right.” It is in this spirit that he and Gerard are involved not only with UDT, but a variety of youth programs and charitable scholarship organizations around the community.

Henry was honored in 2011 as the Hispanic Business Enterprise Chair for the US Hispanic Chamber of Commerce, as well as other accolades. Some of these include The American Dreamer Award, Movers and Shakers, CRN Fast Growth, among many others. He also leads the way with consumer advocacy within the technology industry by Chairing HP’s Public Sector Advisory Council, as well as sitting on the Intel Corporation’s Advisory Council.

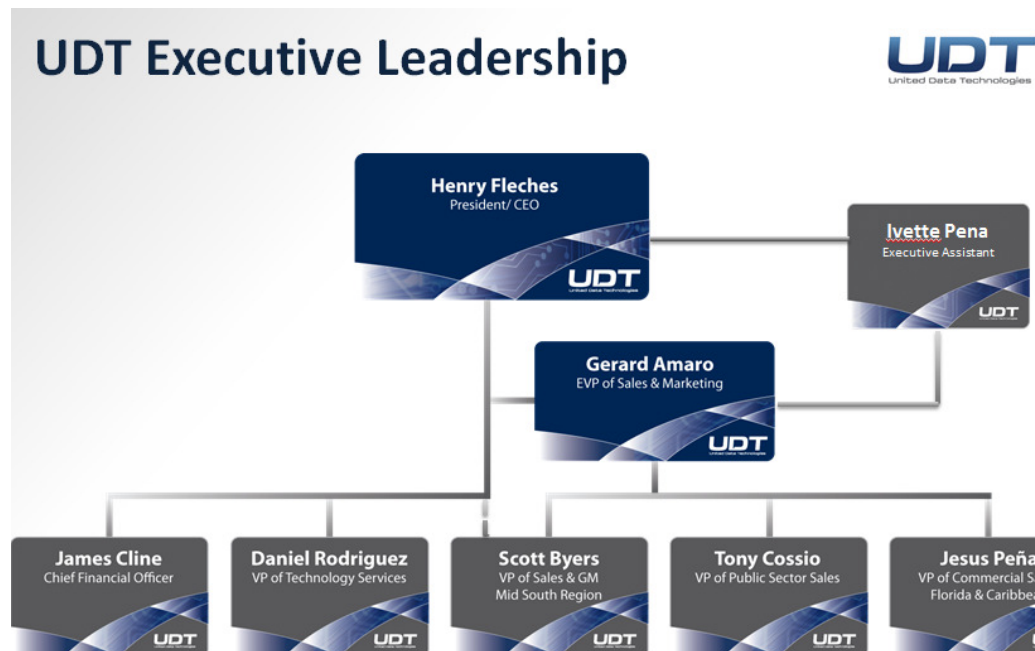
Today, Henry is involved with the operations, finances, sales, and marketing of UDT. He and his family live in Miami Lakes, Florida.

Gerard Amaro

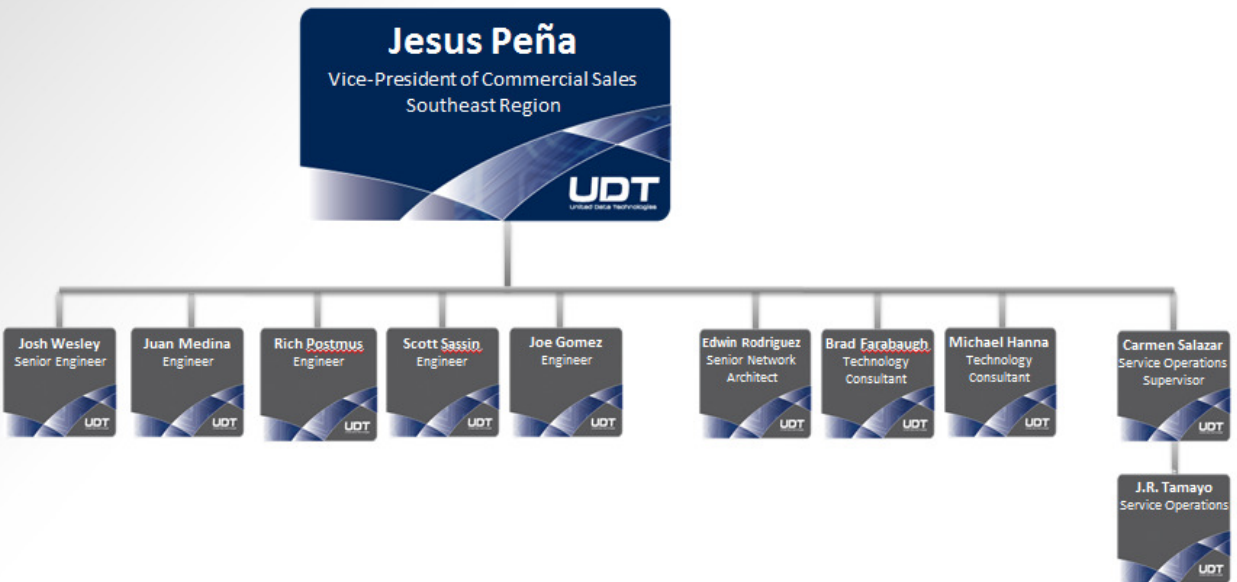
Co-Founder, Executive Vice President of Sales and Marketing

From founding UDT with his friend Henry in 1995, Gerard has been an integral and strategic part of the company. From an engineer to a business solutions counselor, he has been involved with addressing customers’ needs.

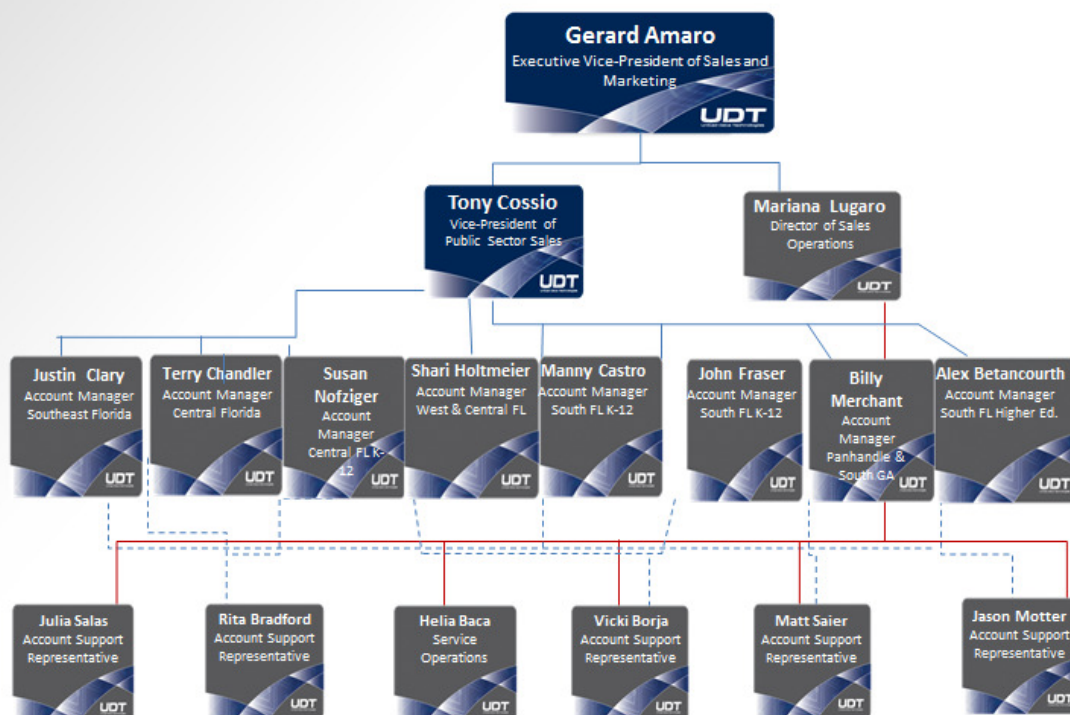
Currently Gerard manages the UDT sales force, including sales strategy, revenue generation, marketing, training, and development. He and his family live in Davie, Florida



UDT Professional Services - Southeast



UDT Public Sector Organization



Reference Accounts

Requirement:

Please provide three current customers' contact information, each from a different company. If possible, include references where your company is providing services similar in size and scope to what is being requested in this RFP. Include the following for each reference:

- Company name
- Customer Contact with phone number and email address
- Brief overview of the type of product or services provided

UDT Response:

REFERENCE # 1	
Name of customer	Lake County Public Schools
Address	201 West Burleigh Tavares, FL 32778
Contact name	Glen Reubelt – IT Manager
Telephone	352-253-6712
Email address	reubeltg@lake.k12.fl.us
Brief overview of the type of product or services provided	District wide CISCO Voice over IP phone (VOIP) system to include voice gateways, routers, switches, fax/analog support, VOIP phones, and unified communication licenses. Also includes school core switches, a District redundant core, a District redundant firewall and CIPA content filtering (Iron Port). Also included 100 hours of UDT services (bucket of hours to be used as needed for planning, implementation, support, etc.)
Name of customer	Ocean Bank
Address	780 NW 42 nd Avenue Miami, Florida 33126
Contact name	Rital Garcia-Docal
Telephone	305-569-5426
Email address	rdocal@oceanbank.com
Brief overview of the type of product or services provided	UDT successfully deployed a 650 UC project at Ocean Bank which is headquartered in Miami, FL. The deployment consisted of moving all users off of a legacy Avaya environment onto a Cisco UC environment. The project consisted of over 400 users at the bank's main office and the remaining users throughout the bank's 19 remote branches.
Name of customer	Akerman LLP
Address	495 N Keller Rd Ste 300 Maitland, FL 32751

Contact name	Danny Rhinehart
Telephone	407-254-3580
Email address	Danny.rhinehart@akerman.com (Preferred)
Brief overview of the type of product or services provided	Corporate wide UC deployment to replace legacy Siemens phone system. Deployed to 20 locations 1800+ phones (Cisco UC Phone 7975G & 6921) Cisco Unified Communications Manager (Call Manager), Corporate wide switch refresh (Catalyst 3750x) Cisco VG224 Analog Gateway, Cisco Integrated Services Routers (2921, 2951, 3945)

Future Plans

Requirement:

Please set forth in detail a description of future company plans for growth and expansion. Such description should highlight any current discussions for the sale to or acquisition by any other company or any material change in ownership under consideration.

UDT Response:

The Company current has no plans for any sale, merger or change in ownership. The Company's growth plans include continuing to open additional office locations in the Southeastern United States, hiring additional sales persons in new and existing locations, and funding all growth from internally generated capital.

Proposed IP/SIP Communications System

Requirement:

-Provide a brief description of the proposed system. Include diagrams if desired.

UDT Response:

The proposed solution provides several components: a call processing system, a messaging system and IM and presence engine, a call center system, and additional services. These components are fully integrated together in order to provide collaboration services. Virtualization with Cisco Collaboration allows deployments to run one or multiple Cisco Collaboration application instances as virtual machines on the same physical server through a hypervisor. This has obvious benefits over traditional deployments where the applications are directly running on the hardware platform. The link below described the features and the applications that can be integrated in the proposed solution:

<http://www.cisco.com/c/en/us/products/collateral/unified-communications/business-edition-7000/data-sheet-c78-730649.html>

Requirement:

-What are the model names and version numbers of all relevant components of the proposed system?

UDT Response:

The main components of the solution are listed below, as well as the version and a link to the product datasheet:

- Cisco Unified Communication Manager IM&P (CUCM IM&P) version 10:
<http://www.cisco.com/c/en/us/products/collateral/unified-communications/7800-series-media-convergence-servers/datasheet-c78-729927.html>
- Cisco Unity Connection (UCX) version 10:
<http://www.cisco.com/c/en/us/products/collateral/unified-communications/unity/data-sheet-c78-729872.html>
- Cisco Unified Contact Center Express (UCCX) version 10:
<http://www.cisco.com/c/en/us/products/collateral/unified-communications/unified-communications-manager-callmanager/data-sheet-c78-730660.html>

Requirement:

-Describe how your solution can be used to decrease time to market, improve customer responsiveness, or increase end-user productivity.

UDT Response:

Cisco's Unified Communications System can decrease the amount of time the City of Hollywood provides services to its residents by reducing the amount of time it takes to add new features, applications, and services to the system. Once the centralized architecture is deployed, adding services is as simple as adding an application. Once the new application is online and integrated, the application is available to all facilities within the City allowing any site to begin immediately providing the service to the public. Responsiveness to the public is improved through this rapid provisioning capability. With the advanced communications tools provided to end users including Cisco Jabber for everyone, city employees will be better connected improving overall internal communications with the effect of better serving the public.

With limited resources, demands for greater efficiency and responsiveness, less travel but more public interaction, the need to move faster and with more accuracy to become an on-demand business - these are the complexities of today's environment and the reasons why Cisco Unified Communications and Collaboration are more relevant than ever. With Cisco unified communications, organizations can obtain up to 2 hours of more productive work from individuals each day.¹ Cisco unified communications also enables teams to be more productive and effective.

¹Chadwick Martin Bailey, 2008

IP/SIP Communications System Architecture

Requirement:

-Provide a brief description and discussion of your system architecture.

UDT Response:

The proposed solution is based on a virtualized environment which reduces the server footprint. There are several deployment models where call processing are located in the single LAN or MAN networks (campus), centralized or distributed. The clustering technology used in Cisco Unified Communications Manager (Unified CM) allows for up to three servers to provide backup for each other. This allows high availability within the system.

Details on the architecture system can be found at this location:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/collab10/collab10/models.html#wp1384624

Requirement:

-Describe your philosophy on open architecture and your ability to support other vendors' equipment.

UDT Response:

The proposed solution used standard protocols to interoperate with third-party application. SIP is widely used across all our solution components to facilitate integration. In addition, SIP is used to provide integration with third- party presence server such as Microsoft Lync:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/collab10/collab10/presence.html#wp1085047

Finally, the Cisco gateways can be used to interconnect with TDM systems by using standard protocol such as QSIG to provide a smooth migration.

Requirement:

-Provide a diagram of the system architecture.

UDT Response:

Below is a link to a general architecture for Cisco Unified communication and collaboration:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/collab10/collab10/ovarchit.html#wp1053714

Requirement:

-Describe your company's experience with building intelligent network infrastructures.

UDT Response:

Please see Reference chart

Requirement:

-How does your proposed intelligent network infrastructure support end-to-end QoS? In a converged network supporting voice, broadcast video, H.323 video, and data, how are QoS issues resolved?

UDT Response:

Cisco provides end-to-end QoS with the following parameters:

- Consistent performance and management standards across the LAN and WAN networks
- The lowest-possible latency for voice applications
- The ability to limit bandwidth consumption by large data transfers during times of traffic congestion
- Reserved bandwidth for real-time voice and video, critical business applications, and signaling
- Class-Based Weighted-Fair Queuing (CBWFQ) policy roadmaps that scale to meet the needs of a global network
- Low Latency Queuing (LLQ) to add a strict priority queue to the CBWFQ scheduler and to handle voice and interactive-video applications without performance degradation
- The ability to standardize and minimize device configurations to ensure consistent results across all Cisco locations.

http://www.cisco.com/web/about/ciscoitwork/network_systems/qos_in_the_network_web.html

Requirement:

-How do LAN switches recognize voice traffic to guarantee QoS?

UDT Response:

Packet classification features provide the capability to partition network traffic into multiple priority levels or classes of service. For example, by using the three precedence bits in the Type of service (ToS) field of the IP packet header—two of the values are reserved for other purposes—you can categorize packets into a limited set of up to six traffic classes. After you classify packets, you can utilize other QoS features to assign the appropriate traffic handling policies including congestion management, bandwidth allocation, and delay bounds for each traffic class.

Packets can also be classified by external sources; that is, by a customer or by a downstream network provider. You can allow the network to accept the classification or override it and reclassify the packet according to a policy that you specify.

Packets can be classified based on policies specified by the network operator. Policies can be set that include classification based on physical port, source or destination IP or MAC address, application port, IP protocol type, and other criteria that you can specify by using access lists or extended access lists.

You can use Cisco IOS QoS Policy-Based Routing (PBR) and the classification features of Cisco IOS QoS CAR to classify packets. You can use Border Gateway Protocol (BGP) policy propagation to propagate destination-based packet classification policy throughout a large network via BGP routing updates. This section gives a brief description of these features.

http://www.cisco.com/c/en/us/td/docs/ios/12_2/qos/configuration/guide/fqos_c/qcfintro.html#wp1001004

Requirement:

-How does the intelligent network infrastructure recognize voice traffic at the WAN edge and guarantee QoS across WAN links?

UDT Response:

QoS policies required on WAN aggregators include queuing, shaping, selective dropping, and link-efficiency policies in the outbound direction of the WAN link. Traffic is assumed to be correctly classified and marked (at Layer 3) before WAN aggregator ingress. Layer 3 markings (preferably DSCP) are media independent and traverse the WAN media, whereas Layer 2 CoS is lost when the media switches from Ethernet to WAN media.

Best-Effort class is the default class for all data traffic. Only if an application has been selected for preferential or deferential treatment is it removed from the default class. Because many enterprises have several hundreds, if not thousands, of data applications running over their networks, adequate bandwidth must be provisioned for this class as a whole to handle the sheer volume of applications that default to it. It is recommended that at least 25 percent of a WAN link's bandwidth be reserved for the default Best-Effort class.

http://www.cisco.com/c/en/us/td/docs/solutions/Enterprise/WAN_and_MAN/QoS_SRND/QoS-SRND-Book/WANQoS.html#pgfId-96344

Requirement:

-How does your system provide for Call Admission Control to guarantee that LAN/WAN links are not oversubscribed?

UDT Response:

Cisco's Call Admission Control is based on two theories from which a customer can choose:

- Topology-unaware call admission control — Based on a static configuration within the call processing agent.
 - After assigning all the devices located at each branch office to the corresponding site entity, the administrator usually configures a maximum number of calls (or a maximum amount of bandwidth) to be allowed in or out of that site.
 - Each time a new call needs to be established, the call processing agent checks the sites to which the originating and terminating endpoints belong, and verifies whether

there are available resources to place the call (in terms of number of calls or amount of bandwidth for both sites involved). If the check succeeds, the call is established and the counters for both sites are decremented. If the check fails, the call processing agent can decide how to handle the call based on a pre-configured policy. For example, it could send a network-busy signal to the caller device, or it could attempt to reroute the call over a PSTN connection.

- Topology-aware call admission control — Based on communication between the call processing agent and the network about the available resources.
 - ❑ We define as topology-aware call admission control any mechanism aimed at limiting the number of simultaneous calls across IP WAN links that can be applied to any network topology and can dynamically adjust to topology changes.
 - ❑ To accomplish these goals, topology-aware call admission control must rely on real-time communications about the availability of network resources between a call processing agent (or IP-based PBX) and the network. Because the network is a distributed entity, real-time communications require a signaling protocol.
 - ❑ The Resource Reservation Protocol (RSVP) is the first significant industry-standard signaling protocol that enables an application to reserve bandwidth dynamically across an IP network. Using RSVP, applications can request a certain amount of bandwidth for a data flow across a network (for example, a voice call) and can receive an indication of the outcome of the reservation based on actual resource availability.
 - ❑ In the specific case of call admission control for voice or video calls, an IP-based PBX can synchronize the call setup process with RSVP reservations between the two remote sites and can make a routing decision based on the outcome of the reservations. Because of its distributed and dynamic nature, RSVP is capable of reserving bandwidth across any network topology, thus providing a real topology-aware call admission control mechanism.

[http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/9x/uc9x/cac.html#Call Admission Control Principles](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/9x/uc9x/cac.html#Call_Admission_Control_Principles)

Requirement:

-Explain how the intelligent network architecture provides power to IP phones over the Ethernet. Can the network automatically detect the presence of the IP phones? If so, how is this done, and what are the benefits of this feature?

UDT Response:

PoE Overview:

<http://www.cisco.com/c/en/us/support/docs/voice-unified-communications/unified-ip-phone-7900-series/97869-poe-requirement-faq.html>

Cisco Discovery Protocol (CDP) is the protocol that identifies if the device connected to the Cisco Switch is a Cisco IP Phone. If it is, this protocol then finds out if the device supports PoE

and also aids in providing the Voice VLAN requirements:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/9x/uc9x/security.html#Voice_and_Video_VLANs

Survivable Remote Site Telephony

Requirement:

-Does your solution support remote office phones from a centralized phone system? If so, how does this work and what equipment is required at the remote site?

UDT Response:

Yes, multisite deployments with centralized call processing endpoints are remotely located from the call processing service, across a QoS-enabled Wide Area Network (WAN). Due to the limited quantity of bandwidth available across the WAN, a call admission control mechanism is required to manage the number of calls admitted on any given WAN link, to keep the load within the limits of the available bandwidth. On-net communication between the endpoints traverses either a LAN/MAN (when endpoints are located in the same site) or a WAN (when endpoints are located in different sites). Communication outside the enterprise goes over an external network such as the PSTN, through a gateway or Cisco Unified Border Element (CUBE) Session Border Controller (SBC) that can be co-located with the endpoint or at a different location (for example, when using a centralized gateway at the main site or when doing Tail End Hop Off (TEHO) across the enterprise network).

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/collab10/collab10/models.html#Multisite_Deployments_with_Centralized_Call_Processing

Requirement:

-Are applications also available to users at remote sites?

UDT Response:

Yes, in the above deployment model, other Unified Communications services such as voice messaging, presence, and mobility are often hosted at the central site as well to reduce the overall costs of administration and maintenance.

Requirement:

-Describe what local survivability capabilities are provided for remote sites during a WAN outage (for remote sites hosted off of a central server).

UDT Response:

Yes, by leveraging Survivable Remote Site Telephony (SRST) or Enhanced SRST on a Cisco IOS router in each branch location, basic IP telephony services can be maintained for the desk phones when connectivity to the centralized call processing platform is lost. However, the set of

available user-facing features is much smaller when a device is registered to SRST than when the phone is registered to Unified CM.

http://www.cisco.com/c/en/us/products/collateral/unified-communications/unified-survivable-remote-site-telephony/data_sheet_c78-678873.html

IP Addressing and VLAN Support

Requirement:

-Explain how you can provide easy addressing of the IP phones without having to change the addressing scheme of the existing IP data network.

UDT Response:

Yes, with voice VLANs, a DHCP server can be assigned to the VLAN with a range of open IP addresses that are available for the new IP phones that are to be registered. Once the phones connect to the switch, the DHCP server will provide the IP addresses in the provided range to the new IP phones giving them IP addresses.

http://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst3550/software/release/12-1_19_ea1/configuration/guide/3550scg/swvoip.html

Requirement:

-Can IP phones share existing Ethernet ports with data devices, or do the IP phones require additional Ethernet ports to be added by the customer to support voice?

UDT Response:

Yes, our 7841 have a PC and LAN switchport on the back of the unit.

The phone has a 10/100BASE-T (the Cisco IP Phone 7821 and 7861) or a 10/100/1000BASE-T (the Cisco IP Phone 7841) Ethernet connection through two RJ-45 ports, one for the LAN connection and the other for a downstream Ethernet device connection like a PC.

<http://www.cisco.com/c/en/us/products/collateral/collaboration-endpoints/unified-ip-phone-7800-series/data-sheet-c78-729488.html?cachemode=refresh>

Requirement:

-Do your phones have a built-in switch to support automatic VLAN? Please comment in detail about your VLAN support.

UDT Response:

With CDP Protocol, the switch will tell the IP phone which VLAN it should connect to for voice and which VLAN it should connect the PC connected to the IP phone for data.

As the Cisco IP Phone powers on, the Cisco switch delivers voice VLAN information to the IP phone using CDP as a delivery mechanism. The Cisco IP Phone now knows what VLAN it should use.

<https://supportforums.cisco.com/document/104191/ip-phone-boot-process>

http://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst3750x_3560x/software/release/12-2_55_se/configuration/guide/3750xscg/swvoip.html

Requirement:

-Under what circumstances would a phone outage affect the PC communicating to the network?

UDT Response:

During an outage, the PC connected to the back of the IP phone switchport will lose connectivity. Once the IP phone comes back online, the PC will receive connectivity once the boot-up process of the IP phone is complete.

Requirement:

-The City of Hollywood needs to ensure that the U.C. maintains a high level of 'up time', and to this end needs to have four levels of failure before critical mass is reached. A configuration with active/active state is highly desired. Please describe in detail how your proposal addresses this along with load balancing.

UDT Response:

Cisco CUCM has numerous redundancy measures that can be taken into effect for different layers of up time. They are listed below along with the links.

- Redundant Subscriber nodes:
http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/collab10/collab10/callpros.html#wp1151647
- CUCM SRST Redundancy:
http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/collab10/collab10/callpros.html#wp1153542
- Your customer can also position subscribers over the WAN for location redundancy:
http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/collab10/collab10/models.html#wp1043996
- Gateway failover and fallback:
http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/admin/10_0_1/ccmsys/CUCM_BK_SE5FCFB6_00_cucm-system-guide-100/CUCM_BK_SE5FCFB6_00_cucm-system-guide-100_chapter_0100110.html#CUCM_TP_G6CDB2C5_00

The above are all options that the customer can take to add onto their CUCM cluster; all of the UC applications will operate normally if all of their requirements are achieved.

Additional information regarding redundancy can be found here:
http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/collab10/collab10/models.html#wp1116121

Requirement:

The proposed solution must fully support 3,000 IM and presence clients and the Proposer must specify the maximum supported clients per server and entire system; with 50 percent of them being able to upgrade to full UC suite offering, video softphone capabilities, desktop sharing and document sharing.

UDT Response:

The proposed solution fully supports 3,000 IM & Presence users with 100% of them being full UC capable while maintaining a 1:1 redundancy. The maximum per cluster being 45,000 full UC or 75,000 IM&P only users with a 1:1 redundancy.

-In terms of support for open industry standards, which of the following standards do you support in your proposed solution? If the standard is not currently supported, indicate in the "Availability Date" column when you expect to support it.

RECOMMENDATION	STATUS	AVAILABILITY DATE
1.G.711	Available Cisco CUCM 10.x supports all industry standards, including audio codec G.711. http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/collab10/collab10/media.html#wp1225749	
2.G.726	Available G.726 is supported in CUCM to save bandwidth. http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/collab10/collab10/vmessage.html#wp1095847	
3.G.728	Available G.728 is supported in CUCM 9.x. http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/9x/uc9x/video.html#wp104970	
4.G.729	Available http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/9x/uc9x/video.html#wp104970	
5.G.729a	Available http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/9x/uc9x/video.html#wp104970	
6.H.323 V2	Available http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/trouble/9_0_1/CUCM_BK_T863AF_5C_00_troubleshooting-guide-cucm-90.pdf	

7.T.120	Available http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/9x/uc9x/video.html#wp1047243	
8.Q.931	Available	
9.802.1d	Available. The spanning tree protocol is one of the basic protocols supported by cisco switches and routers, and any application connected to them works well. http://www.cisco.com/c/en/us/products/collateral/interfaces-modules/high-speed-wan-interface-cards/product_data_sheet0900aecd8016bf0b.html	
10.802.1p	Available http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/collab10/collab10/netstruc.html	
11.802.1q	Available http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/collab10/collab10/netstruc.html	
12.802.3	Available. The power over Ethernet standard is supported by Cisco endpoints. http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/collab10/collab10/endpnts.html	
13.SNMP	Available http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/service/9_0/rtmt/CUCM_BK_CCC892E7_00_cucm-managed-services-guide-90/CUCM_BK_CCC892E7_00_cucm-manager-managed-services-guide_chapter_0100.html	
14.FAX - Group 3	Available http://www.cisco.com/c/en/us/td/docs/ios/voice/fax/configuration/guide/15_1/vf_15_1_book/vf_cfg_t38_fxrlly.html#wp1174451	
15.FAX - Group 4	Available http://www.cisco.com/c/en/us/td/docs/ios-xml/ios/voice/fax/configuration/15-mt/vf-15-mt-book.pdf	
16.T.37	Available http://www.cisco.com/c/en/us/td/docs/ios-xml/ios/voice/fax/configuration/15-mt/vf-15-mt-book/vf-fxmdm-oip-ov.html#GUID-54AE3248-DC41-4F1C-B99B-18088E9FAC38	

17.T.38	Available http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/admin/10_0_1/ccmfeat/CUCM_BK_F3AC1C0F_00_cucm-features-services-guide-100/CUCM_BK_F3AC1C0F_00_cucm-features-services-guide-100_chapter_0100100.html#CUCM_RF_IBF83_F96_00	
18.IP Precedence	Available http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/collab10/collab10.pdf	
19.Differentiated Services	Available http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/admin/10_0_1/ccmsys/CUCM_BK_SE5FCFB6_00_cucm-system-guide-100/CUCM_BK_SE5FCFB6_00_cucm-system-guide-100_chapter_0101011.html#CUCM_RF_D98E_DE54_00	
20.RSVP	Available http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/admin/10_0_1/ccmfeat/CUCM_BK_F3AC1C0F_00_cucm-features-services-guide-100/CUCM_BK_F3AC1C0F_00_cucm-features-services-guide-100_chapter_0100100.html#CUCM_RF_IBF83_F96_00	
21.Weighted Fair Queuing	Available http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/collab10/collab10.pdf	
22.CBW FQ	Available http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/collab10/collab10.pdf	
23.PQWFQ	Available http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/collab10/collab10.pdf	
24.RED	Available http://www.cisco.com/c/en/us/td/docs/ios-xml/ios/qos_conavd/configuration/15-mt/qos-conavd-15-mt-book/qos-conavd-cfg-wred.html	

25.Weighted RED	Available http://www.cisco.com/c/en/us/td/docs/ios-xml/ios/qos_conavd/configuration/15-mt/qos-conavd-15-mt-book/qos-conavd-cfg-wred.html	
26.RTP	Available http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/admin/10_0_1/ccmfeat/CUCM_BK_F3AC1C0F_00_cucm-features-services-guide-100/CUCM_BK_F3AC1C0F_00_cucm-features-services-guide-100_chapter_0100100.html	
27.CRTP	Available http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/collab10/collab10.pdf	
28.RTCP	Available http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/collab10/collab10.pdf	
29.RTSP	Available http://www.cisco.com/c/en/us/products/collateral/customer-collaboration/mediasense/data_sheet_c78-729477.html	
30.Policy Based Routing	Available http://www.cisco.com/c/en/us/products/collateral/routers/3900-series-integrated-services-routers-isr/white_paper_c11-636065.html	
31.Committed Access Rate	Available http://www.cisco.com/c/en/us/td/docs/ios/qos/configuration/guide/15_1/qos_15_1_book/config_car.html	
32.IPv6	Available http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/admin/10_0_1/ccmfeat/CUCM_BK_F3AC1C0F_00_cucm-features-services-guide-100/CUCM_BK_F3AC1C0F_00_cucm-features-services-guide-100_chapter_0100100.html	
33.MGCP	Available http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/admin/10_0_1/ccmsys/CUCM_BK_SE5FCFB6_00_cucm-system-guide-100/CUCM_BK_SE5FCFB6_00_cucm-system-guide-100_chapter_0100110.html	
34.H.225	Available http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/admin/10_0_1/ccmsys/CUCM_BK_SE5FCFB6_00_cucm-system-guide-100/CUCM_BK_SE5FCFB6_00_cucm-system-guide-100_chapter_0100110.html	

	guide-100_chapter_0100110.html	
35.H.245	Available http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/admin/10_0_1/ccmsys/CUCM_BK_SE5FCFB6_00_cucm-system-guide-100/CUCM_BK_SE5FCFB6_00_cucm-system-guide-100_chapter_0100110.html	
36.TCP/IP	Available http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/port/10_0_1/CUCM_BK_T537717B_00_tcp-port-usage-guide-100/CUCM_BK_T537717B_00_tcp-port-usage-guide-100_chapter_01.html	
37.UDP/IP	Available http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/port/10_0_1/CUCM_BK_T537717B_00_tcp-port-usage-guide-100/CUCM_BK_T537717B_00_tcp-port-usage-guide-100_chapter_01.html	
38.DHCP	Available http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/admin/10_0_1/ccmsys/CUCM_BK_SE5FCFB6_00_cucm-system-guide-100/CUCM_BK_SE5FCFB6_00_cucm-system-guide-100_chapter_01010.html#CUCM_RF_D89E3296_00	
39.DCL	We presume DCL is referred to be Data Control language or Digital Command Language neither of which are supported or have any relevance to a UC solution.	
40.DNS	Available http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/collab10/collab10.pdf	

Systems Reliability and Availability Requirement:

-Does the system support clustering? If so, across how many systems?

UDT Response:

Yes, A Unified CM cluster may contain as many as 20 server nodes, of which a maximum of eight call processing subscribers or four Unified CM subscribers pairs (nodes running the Cisco CallManager Service) are allowed for a maximum of 40,000 devices. The other server nodes within the cluster may be configured as a dedicated database publisher, dedicated TFTP subscriber, or media resource subscriber.

In case more subscribers are required for the deployment, a megacluster can be considered. It provides more device capacity through the support of additional Unified CM subscriber nodes, with a maximum of eight Unified CM subscriber pairs (1:1 redundancy) per megacluster, thus allowing for a maximum of 80,000 devices.

This information can be consulted in this link, throughout the chapter:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/collab10/collab10/callpros.html#wp1156290

Requirement:

-What is the highest number of IP devices currently supported under a single instance of the software?
How many IP devices are supported by a cluster?

UDT Response:

Yes, the highest number of IP devices currently supported under a single instance is 10,000 devices (using the 10K OVA). A standard cluster supports up to 40,000 devices and a megacluster supports up to 80,000 devices.

This information can be consulted in this link:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/collab10/collab10/callpros.html#wp1156290

Requirement:

-Does the system have a web-based or GUI-based administration tool? Is this included in the base price?

UDT Response:

Yes, it is provided a web-based application to perform configuration tasks for Cisco Unified Communications Manager servers.

More information can be consulted in this link:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/admin/10_0_1/ccmcfq/CUCM_BK_C95ABA82_00_admin-guide-100/CUCM_BK_C95ABA82_00_admin-guide-100_chapter_01.html#CUCM_RF_CA101DE6_00

Requirement:

-Can a single instance of the administration tool be used to manage all systems within an enterprise simultaneously?

UDT Response:

Yes, all instances of call processing under the same cluster will be managed via the same web-based application. Below is a summary of the various applications and functions that compose the CUCM administration tool.

- Cisco Unified Communications Manager Administration—Shows as default when you access Cisco Unified Communications Manager. Use Cisco Unified Communications Manager Administration to configure system parameters, route plans, devices, and much more.
- Cisco Unified Serviceability—Takes you to the main Cisco Unified Serviceability window that is used to configure trace files and alarms and to activate and deactivate services.
- Cisco Unified OS Administration—Takes you to the main Cisco Unified OS Administration window, so you can configure and administer the Cisco Unified Communications Manager platform. You must log out from any other application before you can log in to this application.
- Disaster Recovery System—Takes you to the Cisco Disaster Recovery System, a program that provides full data backup and restores capabilities for all servers in a Cisco Unified Communications Manager cluster. You must log out from any other application before you can log in to this application.
- Cisco Unified Reporting—Takes you to the main Cisco Unified Reporting window where you can generate system reports.

More information can be consulted in this link:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/admin/10_0_1/ccmcfq/CUCM_BK_C95ABA82_00_admin-guide-100/CUCM_BK_C95ABA82_00_admin-guide-100_chapter_01.html#CUCM_RF_CA101DE6_00

Requirement:

-How does the system provide for fault tolerance? Identify the components that can be duplicated in your system. Fully describe the systems redundancy capability. Is it "hot standby redundancy", "shared redundancy", etc.

UDT Response:

Yes, components that can/should be duplicated are:

- Hardware Platform High Availability: You should select the call processing platform based not only on the size and scalability of a particular deployment, but also on the redundant nature of the platform hardware. When possible, choose platforms with dual power supplies to ensure that a single power supply failure will not result in the loss of a platform. Plug platforms with dual power supplies into two different power sources to avoid the failure of one power circuit causing the entire platform to fail. The use of dual power supplies combined with the use of Uninterruptible Power Supply (UPS) sources will ensure maximum power availability.

- **Network Connectivity High Availability:** With Unified CM, high availability for the network connectivity is attained at the host level by configuring the hypervisor virtual switch with multiple uplinks and thus by using multiple physical ports on the hardware platform. Therefore, a single virtual NIC defined in the OVA setting is sufficient. If you are using the VMware vSphere virtual switch, for example, configure NIC teaming for the switch uplinks. Also connect those multiple ports to a minimum of two upstream switches to provide resiliency if an upstream switch fails.
- **Unified CM High Availability:** Unified CM provides the following call processing redundancy configuration options or schemes:
 - ❑ **Two to one (2:1)** — For every two primary call processing subscribers, there is one shared secondary or backup call processing subscriber.
 - ❑ **One to one (1:1)** — For every primary call processing subscriber, there is a secondary or backup call processing subscriber.

These redundancy schemes are facilitated by the built-in registration failover mechanism within the Unified CM cluster architecture, which enables endpoints to re-register to a backup call processing subscriber node when the endpoint's primary call processing subscriber node fails. With 1:1 redundancy, multiple primary call processing subscriber failures can occur without impacting call processing capabilities. With 2:1 redundancy, on the other hand, only one of the primary call processing subscribers out of the two primary call processing subscribers that share a backup call processing subscriber can fail without impacting call processing. However, if the total number of endpoints registered across both primary subscribers and the traffic to those two primary subscribers are within the capacity limits of the backup subscriber, then the backup subscriber is able to handle the failure of both primary subscribers.

- The 1:1 redundancy scheme provides the below capabilities:
- **Load sharing** — The registration and call processing load is distributed on multiple server nodes, which can provide faster response time.
- **Faster failover and failback** — Because all devices (such as IP phones, CTI ports, gateways, trunks, voicemail ports, and so forth) are distributed across all active subscribers, only some of the devices fail-over to the secondary subscriber if the primary subscriber fails. In this way, you can reduce by 50 percent the impact of any server node becoming unavailable.
- To plan for 50/50 load balancing, calculate the capacity of a cluster without load balancing, and then distribute the load across the primary and backup subscribers based on devices and call volume. To allow for failure of the primary or the backup server node, do not let the total load on the primary and secondary subscribers exceed that of a single subscriber node.

More information can be consulted in this link:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/collab10/collab10/callpros.html#wp1151647

Requirement:

-Explain in detail how a switchover occurs in a redundant system.

UDT Response:

Yes, a Cisco Unified Communications Manager group comprises a prioritized list of up to three Cisco Unified Communications Managers. Each group must contain a primary Cisco Unified Communications Manager, and it may contain one or two backup Cisco Unified Communications Managers. The order in which you list the Cisco Unified Communications Managers in a group determines the priority order.

Cisco Unified Communications Manager groups provide both redundancy and recovery:

- **Failover**—Occurs when the primary Cisco Unified Communications Manager in a group fails, and the devices reregister with the backup Cisco Unified Communications Manager in that group.
- **Fallback**—Occurs when a failed primary Cisco Unified Communications Manager comes back into service and the devices in that group reregister with the primary Cisco Unified Communications Manager.

Under normal operation, the primary Cisco Unified Communications Manager in a group controls call processing for all the registered devices (such as phones and gateways) that are associated with that group.

If the primary Cisco Unified Communications Manager fails for any reason, the first backup Cisco Unified Communications Manager in the group takes control of the devices that were registered with the primary Cisco Unified Communications Manager. If you specify a second backup Cisco Unified Communications Manager for the group, it takes control of the devices if both the primary and the first backup Cisco Unified Communications Managers fail.

When a failed primary Cisco Unified Communications Manager comes back into service, it takes control of the group again, and the devices in that group automatically reregister with the primary Cisco Unified Communications Manager.

You associate devices with a Cisco Unified Communications Manager group by using device pools. You can assign each device to one device pool and associate each device pool with one Cisco Unified Communications Manager group. You can combine the groups and device pools in various ways to achieve the desired level of redundancy.

More information can be consulted in this link:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/admin/10_0_1/ccmsys/CUCM_BK_SE5FCFB6_00_cucm-system-guide-100/CUCM_BK_SE5FCFB6_00_cucm-system-guide-100_chapter_0111.html

Requirement:

-In redundant systems, how are databases synchronized?

UDT Response:

A cluster comprises a set of Cisco Unified Communications Managers servers that share a common database. When you install and configure Cisco Unified Communications Manager, you specify which servers belong to the same cluster.

A cluster comprises the first node (publisher) and subsequent nodes (subscribers). The first node in a cluster contains the database, which is automatically installed when you install Cisco Unified Communications Manager on the first node. Cisco Unified Communications Manager uses all subsequent nodes in the cluster for database replication.

After you add the subsequent node to the Server Configuration window in Cisco Unified Communications Manager Administration and install Cisco Unified Communications Manager on the subsequent node, the node contains a replicate of the database that exists on the first node.

After you add, update, or delete configuration in Cisco Unified Communications Manager Administration, Cisco Unified Serviceability, or the Cisco Unified Communications Self Care Portal, Cisco Unified Communications Manager writes the configuration update to the database on the first node in the cluster and then updates the database replicates on the subsequent nodes.

For more information see:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/admin/10_0_1/ccmsys/CUCM_BK_SE5FCFB6_00_cucm-system-guide-100/CUCM_BK_SE5FCFB6_00_cucm-system-guide-100_chapter_0110.html#CUCM_RF_D009C472_00

Requirement:

-Identify each component that is duplicated in your proposal. In the pricing section, redundancy and fault tolerance must be included.

UDT Response:

In addition to hardware redundancy (i.e., redundant power supplies on servers and voice gateways, as well as high availability configuration on redundant servers and gateways), Cisco offers application redundancy in its Call Processing, IM and Presence, and UCCX (Contact Center Express), providing seamless failover and high availability for all applications. More information can be found in the link for the previous question. For UCCX redundancy and high availability, this deployment model incorporates redundant Unified CCX engine, database, recording, and monitoring components using Cisco Agent Desktop.

Link:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cust_contact/contact_center/crs/express_10_0/design/guide/UCCX_BK_DF6A995E_00_design-guide/UCCX_BK_DF6A995E_00_design-guide_chapter_01.html#UCCX_RF_T956587F_00

Requirement:

-What is the anticipated mean time between failures (MTBF) of the components quoted in this RFP?

UDT Response:

- For the 7841 IP Phone: 408,114 hours predicted MTBF
- For the 3900 series ISR G2 routers: 209,820 hours predicted MTBF
- For the BE7K Servers: 47,219 hours (for a single server), 2,229,632,027 hours (cluster).

Requirement:

-How would you provide redundancy and disaster recovery ensuring no single point of failure for our entire voice network? Please detail recovery methodology including recovery times and outages.

UDT Response:

As far as redundancy goes in the network, by deploying redundant servers and voice gateways in a high availability configuration, you can ensure that a single point of hardware failure will not result in failure of the voice network. In the event that the WAN connection goes down and a branch/remote location loses its connection to the main CUCM cluster, running Cisco Survivable Remote Site Telephony (SRST) on the gateway routers will provide a failover for users to make and receive calls via their PSTN connection (more info about SRST):

http://www.cisco.com/c/en/us/products/collateral/unified-communications/unified-survivable-remote-site-telephony/data_sheet_c78-678873.html

For disaster recovery, Cisco Unified Communications Manager Administration has a Disaster Recovery System (DRS) that provides full data backup- and restore-capabilities for all servers in a Cisco Unified Communications Manager cluster. The Disaster Recovery System allows you to perform regularly scheduled automatic or user-invoked data backups. The Disaster Recovery System performs a cluster-level backup, which means that it collects backups for all servers in a Cisco Unified Communications Manager cluster to a central location and archives the backup data to physical storage device. For more information on the DRS System, including recovery methodology, please see the following link:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/drs/10_0_1/CUCM_BK_D220A91D_00_disaster-recovery-system-cucm-100/CUCM_BK_D220A91D_00_disaster-recovery-system-cucm-100_chapter_011.html

Requirement:

-In consideration of a full-scale rollout of voice over IP, which would include our remote sites, please describe how voice services are maintained at these remote sites if there is an outage at the remote site.

UDT Response:

As mentioned in the previous response, in the event that a remote site loses its WAN connection back to the main site, a voice gateway with Survivable Remote Site Telephony (SRST) deployed will allow the remote site to seamlessly transition to its PSTN connection. All incoming and outgoing calls will be routed via the PSTN, ensuring that the remote location has continuous telephony service. More information about how SRST works can be found here:

http://www.cisco.com/c/en/us/products/collateral/unified-communications/unified-survivable-remote-site-telephony/data_sheet_c78-678873.html

Requirement:

-What virus and intrusion protection comes with your product?

UDT Response:

Cisco Security Agent provides intrusion detection and prevention for the Cisco Unified Communications Manager cluster. Cisco Systems provides it free of charge as a standalone security agent for use with servers in the Cisco Unified Communications Manager voice cluster. The agent provides platform security that is based on a tested security rules set (policy), which has rigorous levels of host intrusion detection and prevention. The agent controls system operations by using a policy that allows or denies specific system actions before system resources are accessed.

Cisco's Unified Communications Operating System is based on Redhat SELinux. Cisco has hardened the operating system beyond the hardened capabilities of the base OS to meet stringent Department of Defense standards.

Red Hat Enterprise Linux includes an enhancement to the Linux kernel called SELinux, which implements a Mandatory Access Control (MAC) architecture that provides a fine-grained level of control over files, processes, users and applications in the system.

Requirement:

-How often is it maintained and enhanced?

UDT Response:

There is no fixed plan or schedule on maintenance and enhancement release for Cisco Unified Communications Manager.

Requirement:

-What is your response time to the identification of new viruses and attacks?

UDT Response:

SELinux is an integrated security enhancement to the Linux operating system. SELinux is integrated with Red Hat Enterprise Linux (RHEL) as a standard feature.

Linux has two forms of access control:

- Discretionary Access Control (DAC) — The standard Linux owner-group-world permission mode.

- Mandatory Access Control (MAC) — The SELinux security enhancement. MAC adds additional labels, or categories, to all file system objects and restricts the level of control that users have over those system objects.

Reference:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/rel_notes/8_6_1/delta/delta.html#wp2072133

Requirement:

-How do you monitor new viruses and intrusions?

UDT Response:

Refer to above response.

Requirement:

-What toll fraud protection is available? How is it monitored?

UDT Response:

External Call Transfer Restrictions feature which allows you to configure gateways, trunks, and route patterns as OnNet (internal) or OffNet (external) devices at the system level. By setting the devices as OffNet, you can restrict the transferring of an external call to an external device and thus help prevent toll fraud.

Reference:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/admin/9_1_1/ccmfeat/CUCM_BK_C3E0EFA0_00_cucm-features-services-guide-91/CUCM_BK_C3E0EFA0_00_cucm-features-services-guide-91_chapter_011011.html

Requirement:

-Describe any UPS or "battery" back-up capabilities for the proposed system. Can these capabilities benefit a redundant system? Please explain.

UDT Response:

Not applicable

Advanced Routing Features

Fully describe your advanced routing features. Please be sure to include a discussion of the following applications:

Requirement:

- Amount and type of routing plans.

UDT Response:

The dial plan is one of the key elements of a Unified Communications system, and an integral part of all call processing agents. Generally, the dial plan is responsible for instructing the call processing agent on how to route calls. Specifically, the dial plan performs the following main functions:

- Endpoint addressing
 - Reachability of internal destinations is provided by assigning Directory Numbers (DNs) to all endpoints (such as IP phones, fax machines, and analog phones) and applications (such as voicemail systems, auto attendants, and conferencing systems).
- Path selection
 - Depending on the calling device, different paths can be selected to reach the same destination. Moreover, a secondary path can be used when the primary path is not available (for example, a call can be transparently rerouted over the PSTN during an IP WAN failure).
- Calling privileges
 - Different groups of devices can be assigned to different classes of service, by granting or denying access to certain destinations. For example, lobby phones might be allowed to reach only internal and local PSTN destinations, while executive phones could have unrestricted PSTN access.
- Digit manipulation
 - In some cases, it is necessary to manipulate the dialed string before routing the call; for example, when rerouting over the PSTN a call originally dialed using the on-net access code, or when expanding an abbreviated code (such as 0 for the operator) to an extension. Digit manipulation is also used to adapt the local dialing habits of a user to the global routes used to select a path for a call. For example, a French user may dial 0 00 1 212 555 1234 to call a number in New York. That same number is reachable to a caller in Chicago by dialing 9 1 212 555 1234. Both localized user inputs can be translated to a global form of +1 212 555 1234, so that a single route is used to select a path for the call.
- Call coverage
 - Special groups of devices can be created to handle incoming calls for a certain service according to different rules (top-down, circular hunt, longest idle, or broadcast). The dial plan information covered in this section applies to any Unified Communications deployment model; in particular, when deploying multi-site systems, the system designer should pay close attention to the site-specific dialing habits as well as site-specific routing of calls, such as the use of a gateway co-located with a specific group of users.

Reference:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/9x/uc9x/dialplan.html

Requirement:

- Types of trunks supported in routing scheme

UDT Response:

For details about the trunk support with Cisco UCM refer to:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/admin/9_0_1/ccmsys/CUCM_BK_CD2F83FA_00_cucm-system-guide-90/CUCM_BK_CD2F83FA_00_system-guide_chapter_0101001.html

Requirement:

- Queuing and overflow capabilities.

UDT Response:

Unified CM provides call queuing natively to users so that callers can be held in a queue until hunt members are available to answer them. Callers in a queue receive an initial greeting announcement followed by music on hold or tone on hold. If the caller remains in queue for a period of time, a secondary announcement is played at a configured interval until the call can be answered—or until the maximum wait timer expires.

Reference:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/admin/9_0_1/ccmfeat/CUCM_BK_CEF0C471_00_cucm-features-services-guide-90/CUCM_BK_CEF0C471_00_cucm-features-and-services-guide_chapter_0111.html

Requirement:

- Use of authorization codes on individual routes.

UDT Response:

Forced Authorization Codes (FACs) and Client Matter Codes (CMCs) which allow you to manage call access and accounting. CMC assists with call accounting and billing for billable clients, while Forced Authorization Codes regulate the types of calls that certain users can place.

Client matter codes force the user to enter a code to specify that the call relates to a specific client matter. You can assign client matter codes to customers, students, or other populations for call accounting and billing purposes. The Forced Authorization Codes feature forces the user to enter a valid authorization code before the call completes.

Reference:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/admin/9_0_1/ccmfeat/CUCM_BK_CEF0C471_00_cucm-features-services-guide-90/CUCM_BK_CEF0C471_00_cucm-features-and-services-guide_chapter_0111.html

Requirement:

- Describe how your system handles digit deletion and insertion regarding the North American Dialing Plan. Include system limitations.

UDT Response:

The first step in the call routing process, after receiving the input from the calling entity, is to uniquely identify the dial habit used. In the case of alphanumeric dialing, this is a trivial task because in this case, we typically only need to differentiate between fully qualified SIP URIs and non-fully qualified SIP URIs. This can easily be achieved through a simple lexical analysis of the dialed string.

The case of numeric dialing needs a little more attention, especially if the dialed digits are entered digit-by-digit. In this case, the call control receives the destination from the calling entity digit-by-digit, and part of selecting the correct route to the destination is to determine the exact time when enough digits have been received and the call can be routed without having to wait for expiration of an inter-digit timeout.

Although all of these dialing habits share the identical initial digit 9, international dialing and the first emergency dialing string can easily be distinguished as soon as the second digit (0 or 9) is dialed. As soon as the third digit is dialed, dialing 911 and dialing a national destination do not overlap any more because the North American Numbering Plan (NANP) does not allow any NPA codes (numbering plan area codes) starting with 1.

Reference:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/collab09/clb09/dialplan.html

Requirement:

- Describe the route filtering method

UDT Response:

Route filters, along with route patterns/hunt pilots, use dialed-digit strings to determine how a call is handled. Route filters only apply when you configure a pattern that contains the (@) wildcard. When the route pattern/hunt pilot contains the @ wildcard, Cisco Unified Communications Manager routes calls according to the numbering plan that is specified in the Numbering Plan drop-down list box. The route filter window that Cisco Unified Communications Manager displays varies according to the numbering plan that you select.

Reference:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/admin/9_1_1/ccmcfg/CUCM_BK_A34970C5_00_admin-guide-91/CUCM_BK_A34970C5_00_admin-guide-91_chapter_011111.html

Requirement:

-Describe the Dial Plan structure.

UDT Response:

The dial plan is one of the key elements of a Unified Communications and Collaboration system, and an integral part of all call processing agents. Generally, the dial plan is responsible for instructing the call processing agent on how to route calls. Specifically, the dial plan performs the following main functions:

- Endpoint addressing
 - For destinations registered with the call processing agent, addresses are assigned to provide reachability. These internal destinations include all endpoints (such as IP phones, video endpoints, soft clients and analog endpoints) and applications (such as voicemail systems, auto attendants, and conferencing systems).
- Path selection
 - Depending on the calling device and the destination dialed, a path to the dialed destination is selected. If a secondary path is available, this path will also be considered if the primary path fails.
- Calling privileges
 - Different groups of devices can be assigned to different classes of service, by granting or denying access to certain destinations. For example, lobby phones might be allowed to reach only internal and local PSTN destinations, while executive phones could have unrestricted PSTN access.
- Manipulation of dialed destination
 - On the path from the dialing device to the dialed destination, the dial plan can apply manipulations to the dialed destination. For example, users in the US might dial 9011496901234 to reach a destination in the PSTN in Germany, while a user in France might be able to reach the same destination by dialing 000496901234. This dialed destination would need to be presented as 011496901234 to a PSTN trunk on a gateway in the US and as 00496901234 to a PSTN trunk on a gateway in France.
- Presentation of information about identities involved in the call
 - During session establishment and also while in the call, on both the calling and the called device, information about the other device is displayed. Depending on call state and direction, this includes calling, diverting, alerting, and connected party information. The dial plan can define mappings that influence the format and content of information displayed.

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/collab09/clb09/dialplan.html

Requirement:

-Describe the Dial Plan configuration options.

UDT Response:

Refer to the answer above.

Requirement:

-Is the system compliant with the North American Numbering Plan (NANP)?

UDT Response:

Yes. System is compliant with NANP dial plan.

Reference:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/admin/9_1_1/ccmcfg/CUCM_BK_A34970C5_00_admin-guide-91/CUCM_BK_A34970C5_00_admin-guide-91_chapter_0101110.html#CUCM_TK_SC222F50_00

Emergency Services

Requirement:

-If emergency-911 municipal services are mandated for commercial systems, is your proposed system in compliance today?

UDT Response:

Cisco Unified Communications Solution is compliant to 911 emergency services through additional product called Cisco Emergency Responder Solution. Cisco Emergency Responder is a software appliance that enhances emergency calling from Cisco Unified Communications Manager. It helps ensure that Cisco Unified Communications Manager sends emergency calls to the appropriate Public Safety Answering Point (PSAP) for the caller's location, and that the PSAP can identify the caller's location and, if necessary, return the call. Cisco Emergency Responder can also notify customer security personnel of an emergency call in progress and the caller's location.

<http://www.cisco.com/c/en/us/products/collateral/unified-communications/emergency-responder/data-sheet-c78-729891.html>

Requirement:

-Identify the system's ability to redirect callers who dial "911" or "9+911" to a predetermined location; i.e., security desk, operator's console, etc.

UDT Response:

Yes, possible through configuring dial plan element to route all dialed 911/9.911 calls to internal destination rather than external municipal office. All it requires is to configure Calling Search Space and Partitions in order to achieve this.

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/admin/10_0_1/ccmsys/CUCM_BK_SE5FCFB6_00_cucm-system-guide-100/CUCM_BK_SE5FCFB6_00_cucm-system-guide-100_chapter_01110.html

Requirement:

-Describe how the system identifies location information of an IP or SIP phone and makes a 9-1-1 call.

UDT Response:

It is possible only by implementing Cisco Emergency Responder Solution.

- Automatic location of IP phones by MAC or IP address
 - ❑ Eliminates the need for administrators to update location when an IP phone is relocated
 - ❑ Keeps track of IP phones powered down by Cisco EnergyWise technology
 - ❑ Uses secure SNMPv3 communication with LAN access switches and Cisco Unified Communications Manager
 - ❑ Tracks devices that are configured with E.164 numbers.

<http://www.cisco.com/c/en/us/products/collateral/unified-communications/emergency-responder/data-sheet-c78-729891.html>

Requirement:

-How often does the PS-ALI database need to be updated after new phones are added to the system, or phones move?

UDT Response:

Identification of caller location to PSAPs by Emergency Location Identification Numbers (ELINs) eliminates the need to update the Automatic Location Information (ALI) database when an IP phone is relocated.

<http://www.cisco.com/c/en/us/products/collateral/unified-communications/emergency-responder/data-sheet-c78-729891.html>

Proposed System Cabling

Requirement:

-Provide information on the cable type (fiber, copper, other) number of pairs I strands required between buildings.

UDT Response:

Fiber 6 Strands

Requirement:

-Does your cabling requirement take into account redundancy, disaster recovery, and single points of failure?

UDT Response:

Yes the proposed solution does include redundancy.

Requirement:

-Is there a preferred manufacturer for your proposed system required cabling?

UDT Response:

No

Requirement:

-How many pairs of wires are needed to support the specified instruments, terminals and consoles?

UDT Response:

4 Pair

Requirement:

-Identify and describe the distance limitations and wire gauge limitations to your station equipment, consoles, administrative terminals, etc.

UDT Response:

100 Meters

System Administration Requirements

Requirement:

-Describe the system administration tool(s) available to meet the following requirements.

UDT Response:

A web-browsable interface to the configuration database provides the capability for remote device and system configuration. This interface also provides access to HTML-based online help for users and administrators.

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/admin/10_0_1/ccmsys/CUCM_BK_SE5FCFB6_00_cucm-system-guide-100/CUCM_BK_SE5FCFB6_00_cucm-system-guide-100_chapter_01.html#CUCM_TP_B4B8AF45_00

Cisco Prime Collaboration Deployment is an application designed to assist in the management of Unified Communication applications. It allows the user to perform tasks such as migration of older software versions of clusters to new virtual machines, fresh installs, and upgrades on existing clusters.

Cisco Prime Collaboration Deployment has four primary, high-level functions:

- Migrate an existing cluster of Unified Communication (UC) servers to a new cluster (this may be MCS to virtual or virtual to virtual).
- Perform operations on existing clusters (8.6.1 or higher). Examples of these operations include:
 - Upgrade
 - Switch version
 - Restart.
- Changing IP addresses or Hostnames in the cluster on existing Release 10.x clusters.

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/pcdadmin/10_5_1/CUCM_BK_U35347D2_00_pcd-administration-guide-1051/CUCM_BK_U35347D2_00_ucmap-administration-guide-1051_chapter_00.html

Cisco Unified Communications Operating System Administration allows you to configure and manage the Cisco Unified Communications Operating System. Administration tasks include the following examples:

- Check software and hardware status
- Check and update IP addresses
- Ping other network devices
- Manage NTP servers
- Upgrade system software and options
- Manage node security, including IPSec and certificates
- Manage remote support accounts
- Restart the system.

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/cucos/10_0_1/CUCM_BK_C2F2626C_00_cucm-os-admin-guide-100/CUCM_BK_C2F2626C_00_cucm-os-admin-guide-100_chapter_01.html

The Cisco Unified Real-Time Monitoring Tool, which runs as a client-side application, monitors the real-time behavior of your system components. Unified RTMT uses Hypertext Transfer Protocol Secure (HTTPS) and Transmission Control Protocol (TCP) to monitor the following:

- System performance
- Device status
- Device discovery
- Computer Telephony Integration (CTI) applications.

Unified RTMT can connect directly to devices through HTTPS to troubleshoot system problems.

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/service/10_0_1/rtmt/CUCM_BK_CA30A928_00_cisco-unified-rtmt-administration-100/CUCM_BK_CA30A928_00_cisco-unified-rtmt-administration-100_chapter_01.html

Cisco Unified Serviceability, a web-based troubleshooting tool, provides the following functionality:

- Saves alarms and events for troubleshooting and provides alarm message definitions.
- Saves trace information to log files for troubleshooting.
- Monitors real-time behavior of components through the Cisco Unified Real-Time Monitoring Tool (Unified RTMT).
- Provides audit capability by logging configuration changes to the system by a user or as a result of the user action. This functionality supports the Information Assurance feature of Cisco Unified Communications Manager and Cisco Unity Connection.
- Provides feature services that you can activate, deactivate, and view through the Service Activation window.
- Generates and archives daily reports; for example, alert summary or server statistic reports.
- Allows Cisco Unified Communications Manager, IM and Presence Service, and Cisco Unity Connection to work as a managed device for Simple Network Management Protocol (SNMP) remote management and troubleshooting.
- Monitors the disk usage of the log partition on a node (or all nodes in the cluster).
- Monitors the number of threads and processes in the system; uses cache to enhance the performance.
- Cisco Unified Communications Manager only: Generates Cisco Unified Communications Manager reports for Quality of Service, traffic, and billing information through Cisco Unified Communications Manager CDR Analysis and Reporting.

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/service/10_0_1/admin/CUCM_BK_CDDBCDEB_00_cisco-unified-servicability-merge-100/CUCM_BK_CDDBCDEB_00_cisco-unified-servicability-merge-100_chapter_01.html

Requirement:

-Is the system administration application accessible from any workstation on the LAN/WAN?

UDT Response:

Yes, it can accessible from both LAN/WAN.

Requirement:

-Is the system administration application accessed through a standard web browser? What Windows OS clients can it run on?

UDT Response:

Yes. A web-browsable interface to the configuration database provides the capability for remote device and system configuration. This interface also provides access to HTML-based online help for users and administrators.

You can access Cisco Unified Communications Operating System by using the following browsers (**Table 2**):

Table 2. Supported Browsers for Cisco Unified Communications Operating System

<i>You can access Cisco Unified Communications Operating System with this browser...</i>	<i>...if you use one of these operating systems</i>
Microsoft Internet Explorer 8	■ Microsoft XP SP3 ■ Microsoft Vista SP2 [or later service pack (SP)] ■ Microsoft Windows 7 with the latest SP
Mozilla Firefox 3.x	■ Microsoft XP SP3 ■ Microsoft Vista SP2 (or the latest SP) ■ Microsoft Windows 7 with the latest SP ■ Apple Mac OS X with the latest SP
Safari 4.x	■ Apple Mac OS X

Ensure the URL of the Cisco Unified Communications Operating System node (https://node_name) is included in the browser “Trusted Site Zone” or the “Local Intranet Site Zone” for all product features to work correctly.

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/cucos/10_0_1/CUCM_BK_C2F2626C_00_cucm-os-admin-guide-100/CUCM_BK_C2F2626C_00_cucm-os-admin-guide-100_chapter_01.html#CUCM_RF_BEE0D05E_00

Requirement:

-Can moves and changes be "batched"; that is, can block copy changes be made to a number of subscribers or class of service simultaneously?

UDT Response:

Yes. The proposed solution supports batch changes. Cisco Unified Communications Manager Bulk Administration (BAT) gives the administrator a fast and efficient way to add, update, or delete large numbers of phones in batches, rather than performing individual updates through Cisco Unified Communications Manager Administration.

The BAT Tool is documented here:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/bat/10_0_1/CUCM_BK_CDB9A6A4_00_cucm-bulk-administration-guide-100/CUCM_BK_CDB9A6A4_00_cucm-bulk-administration-guide-100_chapter_01.html

Requirement:

-Can administration of multiple remote sites be done through a centralized workstation? Is there any limit to how many workstations are supported?

UDT Response:

Yes. The proposed solution supports administration of multiple remote sites via a centralized workstation. You access the Cisco Unified Communications Manager Administration program from a PC that is not the web server or has Cisco Unified Communications Manager installed. Multiple remote sites can thus be managed from a single workstation whose only requirement is to be on the network, and be able to reach all devices at remote sites via IP connectivity.

Web browser administration is documented here:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/admin/10_0_1/ccmcfq/CUCM_BK_C95ABA82_00_admin-guide-100/CUCM_BK_C95ABA82_00_admin-guide-100_chapter_01.html#CUCM_RF_CCF77A9E_00

Requirement:

-How is security provided to prevent unauthorized access to the administration application? How many levels of security can be defined? Is there any limit to the number of administrative users that can be given access passwords? Can some administrative users be defined with "view-only" permissions? Can different individuals be given individualized permission levels?

UDT Response:

The proposed solution supports the user of roles and user groups to prevent unauthorized access to the administration application.

There is no limit to the number of administrative users that can be given access to the system administration.

The proposed solution provides the flexibility of allowing individual users to be given individualized permissions level. This is essentially achieved by assigning individuals unique roles that provide unique access privileges. Roles and user groups provide multiple levels of security to Cisco Unified Communications Manager Administration and to other applications.

The system groups the resources that are available to Cisco Unified Communications Manager Administration and to other applications into roles. A role includes a collection of resources for an application, such as Cisco Unified Communications Manager Administration. The following types of roles exist:

Standard roles — Default roles that get created automatically with Cisco Unified Communications Manager installation; you cannot modify or delete standard roles, but you can copy them to create custom roles, which allows you to modify them for your preferences.

Each role contains a group of resources, with privileges assigned to each resource. For most applications with graphical user interfaces, such as Cisco Unified Communications Manager Administration, privileges allow you to perform tasks, such as viewing or updating data, in a specific window or a group of related windows, which are defined as resources in the Role Configuration window. For example, for the Standard CCM Feature Management role, you can view and configure message waiting in the Message Waiting Configuration window in Cisco Unified Communications Manager Administration. For each role that is associated with Cisco Unified Communications Manager Administration, the specified privilege allows a certain level of access to each of the resources (windows). For example, privileges specify the following access in Cisco Unified Communications Manager Administration.

Assignment of some users — Read-Only access is possible.

- **Read** - Allows users in a user group to view data in specific windows (defined as resources), but the user(s) cannot modify data in the window. Buttons such as Insert, Delete, Update, and Reset do not display.
- **Update** - Allows users in a user group to view and modify data in certain windows (defined as resources for the role). Users with the update privilege can perform operations such as Insert, Delete, Update, and Reset.

More details around application security and roles and user groups can be found here:
http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/admin/10_0_1/ccmsys/CUCM_BK_SE5FCFB6_00_cucm-system-guide-100/CUCM_BK_SE5FCFB6_00_cucm-system-guide-100_chapter_0100.html

Requirement:

-Explain how the administrator would reload the database if they needed to restore a previous configuration.

UDT Response:

The proposed solution uses a backup and restore system called Disaster Recovery System (DRS). The DRS, which can be invoked from Cisco Unified Communications Manager Administration, provides full data backup and restore capabilities for all servers in a Cisco Unified Communications Manager cluster. The Disaster Recovery System allows you to perform regularly scheduled automatic or user-invoked data backups.

The DRS performs a cluster-level backup, which means that it collects backups for all servers in a Cisco Unified Communications Manager cluster to a central location and archives the backup data to physical storage device.

Details are documented here:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/drs/10_0_1/CUCM_BK_D220A91D_00_disaster-recovery-system-cucm-100/CUCM_BK_D220A91D_00_disaster-recovery-system-cucm-100_chapter_01.html

Requirement:

-Is there a limit to the number of administrators that can be logged on to the system at one time?

UDT Response:

The proposed solution does not impose a software limit on the number of administrators that can be logged in the system at one time.

Requirement:

-Does the administrative application system have an alternate form of access if the primary access is unavailable?

UDT Response:

Yes. The proposed solution is typically accessed via the web-based system configuration page. Alternatively, the system may be accessed from the CLI. You can access the Cisco Unified Operating System remotely or locally:

- From a web client workstation, such as the workstation that you use for Cisco Unified Operating System Administration, you can use SSH to connect securely to the Cisco Unified Operating System.
- You can access the Cisco Unified Operating System CLI directly by using the monitor and keyboard that you used during installation or by using a terminal server that is connected to the serial port. Use this method if a problem exists with the IP address.

More details available here:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/cli_ref/10_0_1/CUCM_BK_CBEED39F_00_cucm-cli-reference-guide-100/CUCM_BK_CBEED39F_00_cucm-cli-reference-guide-100_chapter_01.html

Requirement:

-Does the administrative application have on-line help? If yes, describe.

UDT Response:

The proposed solution has online-help. A web-browsable interface to the configuration database provides the capability for remote device and system configuration. This interface also provides access to HTML-based online help for users and administrators.

Requirement:

-Does the system have a web-based or GUI-based administration tool? Is this included in the price?

UDT Response:

Web-based GUI administration tool is included, no additional cost.

Requirement:

-Can a single instance of the administration tool be used to manage all systems within an enterprise simultaneously?

UDT Response:

A single instance of the administration tool can be used to manage all components.

Requirement:

-Describe the database used to administer the IP PBX and populate the telephone tables. Describe how this database might be integrated with the City of Hollywood's current email, NT, and HR databases.

UDT Response:

Cisco UC Suite of applications will integrate with the City of Hollywood's LDAP directory to provide single sign on and directory integration. This provides for a single enterprise-wide directory and password management point across all UC applications. Email integration will be via Unified Messaging where all voicemails will be delivered and synchronized to a user's email thus providing users with the flexibility of a single inbox.

The database is also fully Open Database Connectivity Standard compliant (ODBC) providing for a standards-based programming middleware API interface. Custom integration to any external application is simplified via ODBC.

In addition, Cisco provides for a fully open development environment via an AXL/XML programming interface, allowing for complete customization and development of Cisco Unified Communications Manager. The AXL API provides a mechanism for inserting, retrieving, updating, and removing data from the Unified CM database by using an Extensible Markup Language (XML) Simple Object Access Protocol (SOAP) interface. This approach allows a programmer to access the database by using XML and receive the data in XML form, instead of by using a binary library or DLL.

System Monitoring and Diagnostics

Requirement:

-What diagnostic tools are available? Does the system support the Windows 2008 or 2012 Event Log? What diagnostic reports are available to aid in isolating faults? Can diagnostics be remotely accessed? Are the system's diagnostic tools SNMP compliant?

UDT Response:

Cisco's Unified Communications applications provide a number of management tools, offering administrators flexibility to match organizations staffing levels and skill sets.

A web-based administration and management interface is supported by all major browsers. The web-based GUI interface provides all necessary management functionality via simple point and clicks.

Customers can also leverage Cisco Real Time Monitoring Tool (RTMT) for monitoring and troubleshooting. RTMT is included and runs as a client-side GUI application, uses HTTPS and TCP to monitor system performance, device status, device discovery, CTI applications, and voice messaging ports. RTMT can connect directly to devices via HTTPS to troubleshoot system problems.

RTMT allows you to perform the following tasks:

- Monitor a set of predefined management objects that monitor the health of the system and generate email alerts for when objects exceed a threshold
- Collect and view traces and Syslogs in various default viewers that exist in RTMT
- Work with performance-monitoring counters.

As an additional management option, Cisco's Prime Collaboration Manager Standard is included, providing essential provisioning and assurance management.

Cisco Prime Collaboration Standard Feature Overview:

- Web-enabled single interface for fault and performance monitoring of core Cisco Unified Communications Manager Cisco TelePresence systems
- "At-a-glance" predefined and customizable performance dashboards to monitor short-term performance metric trends

- Real-time alarm browser to display faults and allow administrators to take action to troubleshoot or escalate the problem
- UC cluster components search and status capability: Quick search for UC cluster-associated inventory (phones, trunks, and more) and real-time status dashboard
- Customizable alerts based on performance thresholds allows administrator to add new threshold-based alerts for selective and focused monitoring
- Email notification enables on-demand and automated escalations for alerts.

For additional automation, deeper diagnostic capabilities, and long-term reporting, customer may upgrade to Cisco Prime Collaboration Advanced.

Please refer to the Cisco Prime Collaboration Data Sheet for reference:

http://www.cisco.com/c/en/us/products/collateral/cloud-systems-management/prime-collaboration/data_sheet_c78-729645.html

Given all the above tools are client side tools, i.e., client application or browser based, all tools are remotely accessible from any device, desktop or mobile, that has access to the City of Hollywood data network. Administrators can manage the Cisco UC suite via a mobile device with a standard browser, no dedicated terminal required.

Cisco UC suite fully supports SNMP and Syslog alerting.

Requirement:

-What remote diagnostics are available? Can administrators see and access any alarms or alerts on the system from remote terminals?

UDT Response:

All diagnostics, troubleshooting, and reporting tools available are GUI browser based or client side GUI based which allows them to run on any device supporting a browser. This includes Windows, MAC, or Linux desktops or any Android or iOS mobile device. No dedicated terminal is required.

Remote diagnostics are available either via a web browser interface, RTMT client side GUI interface, SNMP, Syslog alerts, or configurable email alerts when performance metrics exceed a configured threshold.

Requirement:

-Describe the system monitoring report(s) available from the IP PBX. If monitoring reports are not supported with the current proposed product, state when they will be available in a released product, and what the expected limitations of these reports will be at that time.

UDT Response:

Monitoring can be performed by either Real Time Monitoring Tool (RTMT) or Cisco Unified Prime Collaboration Standard, allowing administrators to match tools with skill set and comfort levels.

RTMT will monitor system performance, device status, device discovery, and CTI applications for Cisco Unified Communications Manager. RTMT can connect directly to devices via HTTPS to troubleshoot system problems. For additional details on Monitoring the System and Performance Counters, please refer to the Cisco Unified Real-Time Monitoring Tool Administration Guide:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/service/10_0_1/rtmt/CUCM_BK_CA_30A928_00_cisco-unified-rtmt-administration-100.pdf

Additionally, Cisco's Prime Collaboration Manager Standard is included, providing essential provisioning and assurance management. For additional automation, deeper diagnostic capabilities, and long-term reporting, customer may upgrade to Cisco Prime Collaboration Advanced.

Prime Collaboration Manager Standard features include:

- Web-enabled single interface for fault and performance monitoring of core Cisco Unified Communications Manager Cisco TelePresence systems
- “At-a-glance” predefined and customizable performance dashboards to monitor short-term performance metric trends
- Real-time alarm browser to display faults and allow administrators to take action to troubleshoot or escalate the problem
- UC cluster components search and status capability: Quick search for UC cluster-associated inventory (phones, trunks, and more) and real-time status dashboard
- Customizable alerts based on performance thresholds allows administrator to add new threshold-based alerts for selective and focused monitoring
- Email notification enables on-demand and automated escalations for alerts.

Cisco Prime Collaboration includes well over 110 canned reports that can be generated on demand or on a scheduled basis. The most common reports are listed here as a small sample of available reports:

- UC Performance Monitor Dashboards
- Unified CM and Unity Connection
- System Summary
- CallManager Summary
- Call Activity

- Gateway Activity
- SDL Queue
- Cisco TFTP
- CPU and Memory
- Disk Usage
- CTI Manager
- Heartbeat
- SIP Activity
- Process
- Database Summary
- Phone Summary
- Device Summary
- IM and Presence Summary
- Cisco Jabber Summary
- Learned Patterns
- Port Monitor.

In addition to the pre-packaged reports, customers can customize their own dashboards, provide proactive alerts on user-defined performance thresholds, and customize their own reports. For a complete list of all reports, please refer to:

http://www.cisco.com/c/en/us/td/docs/net_mgmt/prime/collaboration/10-0/assurance/advanced/guide/Cisco_Prime_Collaboration_Assurance_Guide_Advanced_10/bk_assurance_guide_advanced_chapter_010100.html

and:

http://www.cisco.com/c/en/us/td/docs/net_mgmt/prime/collaboration/10-0/assurance/advanced/guide/Cisco_Prime_Collaboration_Assurance_Guide_Advanced_10/bk_assurance_guide_advanced_chapter_010101.html

Requirement:

-For each of the following system monitoring items listed below, respond with a "Yes" if the proposed IP PBX monitoring reports can support this feature. If the answer is "Partly Yes", then define exactly what is supported and what is not supported, and when you expect the IP PBX to be able to support this feature. If the answer is "No", then state when you expect the IP PBX to be able to support this feature.

Feature	YES	NO	Availability Date
Status Trunking	Yes		

Real-time traffic	Yes		
Status of all routing components	Yes		
Status of all remote components	Yes		
Status of individual stations	Yes		
Status of all gateway ports	Yes		
Provide call trace capability	Yes		

Requirement:

-Describe the system alarms and alarm notification available from the IP PBX.

UDT Response:

Alarms can be set on any user-defined performance threshold. This can be configured via Cisco Prime Collaboration and/or Real Time Monitoring Tool (RTMT), providing administrators the flexibility to select tools that more closely match skill set and comfort level. Alarm delivery and notification is generally done via SMTP, but Syslog and SNMP monitoring is also supported.

There are well over 2000 performance metrics that can be alarmed on. All performance metrics can be located here:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/service/10_0_1/rtmt/CUCM_BK_CA_30A928_00_cisco-unified-rtmt-administration-100.pdf

Section: Performance Counters and Alerts, pages 173 through 411.

IP TELEPHONY SYSTEM HARDWARE AND SOFTWARE

System Hardware

KEY REQUIREMENTS

Requirement:

GATEWAYS.

A single gateway is desired, and should be able to handle five PRI's with the ability to grow to accommodate ten. This needs to be accomplished, without the need to change the original gateway, or add more gateways for growth. The gateway should also be able to function as a SBC, as well as host FXS/FXO, PRI, T1-CAS and provide survivability.

UDT Response:

PSTN access, PBX integration, analog/fax support, and Cisco Unified Survivable Remote Site Telephony (SRST) services are provided by Cisco Integrated Services Router (ISR) and/or Cisco VG Series gateways. The Cisco ISR Gateway will support multiprotocol, multiservice functionality to include all PSTN access services: SIP, H.323, MGCP, SIP, SCCP, SIP Session Border Controller (SBC), PRI, T1, FXS, and FXO. This provides support for all SRST, TDM, and IP trunking functionality and analog support from a single product. Cisco ISR gateways can scale to 2500 SIP Border Element sessions, 32 T1/PRI's (with roadmap to 40), 1500 SRST endpoints, or 144 FXS ports. The Cisco VG series gateways are special-purpose Cisco ISR gateways providing support specifically for analog stations. Cisco VG gateway port densities range from 2 ports to 144 ports on a single purpose-built gateway.

TELEPHONY CALL CONTROL

Requirement:

The City of Hollywood requires that the U.C. environment must be able to have survivability and provide the following full features during failover:

- Video
- SIP Trunking
- SIP Lineside functions
- Session Manager
- Telephony

The proposed solution must have a four level redundancy architectural design before total system failure is experienced.

UDT Response:

Cisco acknowledges and complies. All requested features are available during failover and/or survivability.

Cisco Unified Communications Manager endpoints and gateways support a five-level redundancy architecture, exceeding the requested minimum.

VOICE MAIL.

Requirement:

Active/active and load balanced.

UDT Response:

Cisco acknowledges and complies. Voicemail is active/active load balanced.

CONTACT CENTER.

Requirement:

Active/standby.

UDT Response:

Cisco acknowledges and complies. Contact Center is active/standby with no interruption to the agent during a failover. Cisco provides stateful failover for Contact Center.

Requirement:

Call preservation is paramount, and must be maintained, and to that end failover must be less than three seconds (less than industry standards).

UDT Response:

Cisco acknowledges and complies.

Requirement:

-Describe in detail the hardware platform supporting the solutions in the small, medium, and large deployment scenarios. Include whether the solution uses open-market industry standards—based hardware (with specifications) or is a closed (proprietary) platform.

UDT Response:

Hardware platform is based on industry-standard Intel based servers. All server hardware components are industry standard and openly available in the market today. No proprietary hardware is used for the server platform. Intel based CPU/motherboard, Seagate/Western Digital HDDs, Intel Network Adapters. Hypervisor is standard off-the-shelf VMware ESXi 5.x with no customization.

Requirement:

-What equipment will have to be purchased to support the proposed solution?

UDT Response:

Please see attached Bill of Materials. Customer will not need to provide anything outside of the attached Bill of Materials.

Requirement:

-Can the solution work on a customer-specified platform, or is a specific vendor platform required?

UDT Response:

Cisco supports customer-provided server hardware and hypervisor as long as the provided hardware meets or exceeds required specifications.

Requirement:

-What is the model name and number of the proposed IP call processing system (gatekeeper)?

UDT Response:

Cisco Unified Communications Manager 10.5.

Requirement:

-Describe the IP call processing hardware platform in detail. Is it based on industry standard hardware, or is it proprietary?

UDT Response:

Hardware platform is based on industry-standard Intel-based servers. All server hardware components are industry standard and openly available in the market today. No proprietary hardware is used for the server platform. Intel based CPU/motherboard, Seagate/Western Digital HDDs, Intel Network Adapters. Hypervisor is standard off-the-shelf VMware ESXi 5.x with no customization. No proprietary hardware is utilized for call processing.

Requirement:

-What standard components are included on the call-processing platform? What components are optional?

UDT Response:

Standard components include routing of inbound voices calls, blended preview outbound calls, inbound email, and inbound chat with the inclusion of the MediaSense server license, which is optional. Any additional database integration customizations or connectors to CRM systems would be optional.

Requirement:

-What is the maximum user capacity of the proposed IP communications system? Provide a description of how scalability is achieved. For example, describe what is required to scale from 100 users to over 25,000 users.

UDT Response:

Scalability is achieved by adding additional Communication Manager call control servers (virtual machines) to the existing cluster. In a standard 8-node cluster with a 1:1: redundancy model, we would scale to 40,000 endpoints. Specific device type or device protocol is not relevant. IP phone, analog devices, room-based video systems, or third-party video devices all account for one device each. Additional hardware would be needed if the City of Hollywood required additional geographic redundancy and/or existing hardware resources are already maximized.

Requirement:

-What is the maximum number of simultaneous conversations supported by the proposed system? Is the system non-blocking for voice calls?

UDT Response:

Maximum system capacity is not measured by the number of simultaneous conversations, as this traffic is direct from endpoint-to-endpoint. This allows for greater scalability as Communications Manager provides signaling (call setup and call teardown) services and is not a direct path for conversations. Therefore, maximum capacity of a standard 8-node cluster is measured in Busy Hour Call Completion (BHCC). That is, the maximum number of completed calls during the busiest hour of the entire system, i.e., BHCC, is rated at 240,000.

Requirement:

-What is the maximum number of busy hour call attempts supported by the proposed system?

UDT Response:

Maximum number of Busy Hour Call Attempts (BHCA) assumes all attempted calls are completed, so BHCA, in a standard 8-node cluster, is 240,000.

Requirement:

-Describe all the gateways the vendor can provide to support connectivity to legacy TDM equipment and the Public Switched Telephone Network (PSTN). Be sure to include a description of the gateway options available for analog station and trunk and digital trunk connectivity.

-Identify all PRI services that you support: ANI, call-by-call, DNIS.

UDT Response:

PSTN access, PBX integration, analog/fax support, and Cisco Unified Survivable Remote Site telephony (SRST) services are provided by Cisco Integrated Services Router (ISR) and/or Cisco

VG Series gateways. The Cisco ISR Gateway will support multiprotocol, multiservice functionality to include all PSTN access services: SIP, H.323, MGCP, SIP, SCCP, SIP Session Border Controller (SBC), PRI, T1, FXS, and FXO. This provides support for all SRST, TDM, and IP trunking functionality and analog support from a single product. Cisco ISR gateways can scale to 2500 SIP Border Element sessions, 32 T1/PRI (with roadmap to 40), 1500 SRST endpoints or 144 FXS ports. The Cisco VG series gateways are special-purpose Cisco ISR gateways providing support specifically for analog stations. Cisco VG gateway port densities range from 2 ports to 144 ports on a single purpose built gateway.

Voice and video hardware-based transcoding, Media Termination Points (MTPs), and conferencing services can also be provided via PVDMs modules within the Cisco ISR Gateway. Conferencing resource capacity will depend on the number of available PVDMs, but resources can be pooled together with hardware resources given priority over software resources or vice versa if desired.

Requirement:

-Identify all PRI feature and signaling options.

UDT Response:

Cisco supports all of the following PRI signaling options and the associated features for each type of signaling.

- primary-ni2 National ISDN-2 Switch type for the U.S. (PRI)
- primary-4ess Lucent 4ESS switch type for the U.S.
- primary-5ess Lucent 5ESS switch type for the U.S.
- primary-dms100 Northern Telecom DMS-100 switch type for the U.S.
- primary-dpnss DPNSS switch type for Europe
- primary-net5 NET5 switch type for UK, Europe, Asia and Australia
- primary-ni National ISDN-1 Switch type for the U.S. (BRI)
- primary-ni2c The Cisco NAS-SC switch type based on NI2C
- primary-ntt Japanese ISDN PRI switches
- primary-qsig QSIG switch type
- primary-ts014 TS014 switch type for Australia (obsolete)
- primary 31 Channels.

For specific signaling integration with different manufacturers' implementation, Cisco provides interoperability tests that identify the specific features supported for each integration. The full list can be obtained at the Cisco Unified Communications Manager Interoperability portal on Cisco Connection Online.

http://www.2mul.com/c/en/us/solutions/enterprise/interoperability-portal/networking_solutions_products_genericcontent0900aec805b561d.html

Requirement:

-Identify all the PRI features that the proposed system has supported at working customer sites.

UDT Response:

Cisco is the industry leader regarding PBX and PSTN interoperability. All of the identified PRI features are working at various customer sites. References can be provided as requested.

-Please provide a list of PBXs and Central Office switches to which your PRI trunk has been successfully connected.

UDT Response:

Cisco Communications Manager and Cisco ISR gateways are fully compliant with industry standards and, as such, can successfully interoperate with any other standards-based switch. In effect, Cisco can interoperate with any and all third-party switches that are PRI standards-compliant. In addition, Cisco provides interoperability and integration documents for a subset of the most common third-party switches. A full list of interoperability guides can be located here: http://www.cisco.com/c/en/us/solutions/enterprise/interoperability-portal/networking_solutions_products_genericcontent0900aec805b561d.html

and:

http://www.cisco.com/c/en/us/solutions/enterprise/interoperability-portal/networking_solutions_products_genericcontent0900aec805bd0e4.html

Requirement:

-Does the Proposer support H.323-compliant gateways from other manufacturers?

UDT Response:

Cisco will support the H323 trunk to the third-party gateway. The actual third-party gateway will not be supported by Cisco.

Requirement:

Does the system have a web-based or GUI-based administration tool? Is this included in the base price?

UDT Response:

Cisco's Unified Communications applications provide a number of management tools, offering administrators the flexibility to match organizations' staffing levels and skill sets. All tools are web based/GUI based and are included in the proposal unless specifically listed as an option.

A web based administration and management interface is supported by all major browsers. The web based GUI interface provides all necessary management functionality via simple point and clicks.

Customers can also leverage Cisco Real Time Monitoring Tool (RTMT) for monitoring and troubleshooting. RTMT is included and runs as a client-side GUI application, uses HTTPS and TCP to monitor system performance, device status, device discovery, CTI applications, and voice messaging ports. RTMT can connect directly to devices via HTTPS to troubleshoot system problems.

RTMT allows you to perform the following tasks:

- Monitor a set of predefined management objects that monitor the health of the system and generate email alerts for when objects exceed a threshold
- Collect and view traces and Syslogs in various default viewers that exist in RTMT
- Work with performance-monitoring counters.

As an additional option, Cisco's Prime Collaboration Manager Standard is included providing essential provisioning and assurance management.

Cisco Prime Collaboration Standard Feature Overview:

- Web-enabled single interface for fault and performance monitoring of core Cisco Unified Communications Manager Cisco TelePresence systems
- "At-a-glance" predefined and customizable performance dashboards to monitor short-term performance metric trends
- Real-time alarm browser to display faults and allow administrators to take action to troubleshoot or escalate the problem
- UC cluster components search and status capability: Quick search for UC cluster-associated inventory (phones, trunks, and more) and real-time status dashboard
- Customizable alerts based on performance thresholds allows administrator to add new threshold-based alerts for selective and focused monitoring
- Email notification enables on-demand and automated escalations for alerts.

For additional automation, deeper diagnostic capabilities, and long-term reporting, customer may upgrade to Cisco Prime Collaboration Advanced.

Please refer to the Cisco Prime Collaboration Data Sheet for reference:

http://www.cisco.com/c/en/us/products/collateral/cloud-systems-management/prime-collaboration/data_sheet_c78-729645.html

Requirement:

-Can a single instance of the administration tool be used to manage all systems within an enterprise simultaneously?

UDT Response:

Yes. Cisco's Prime Collaboration Manager Standard is included, providing essential provisioning and assurance management. Cisco Prime Collaboration Standard is a web-based GUI platform providing a more holistic Unified Communications view and can be used as a single pane of glass to manage the UC infrastructure.

System Software

Requirement:

-Which software package is being proposed? Please provide the release and version?

UDT Response:

Cisco Collaboration Solution 10. This encompasses Cisco Unified Communications Manager 10, Cisco Unity Connection 10, Cisco Prime Collaboration 10, and Cisco Contact Center Express 10.

Requirement:

-Is this the most recent release of this software? When is the next software release due?

UDT Response:

Yes, this is the most recent release of the software. Cisco Collaboration 11 has a target due date of Spring 2015.

Requirement:

-Does the system main memory utilize RAM and/or ROM, or other?

UDT Response:

System utilizes RAM.

Requirement:

-How does your company provide future software releases? How are software upgrades performed?

UDT Response:

Future software releases are made available electronically on www.cisco.com for customers to download as needed.

Software upgrades can be performed with little to no impact to users. Cisco Unified Collaboration products have a two-partition architecture; an active primary partition and an

inactive secondary partition. New software can be uploaded to the inactive partition at any time, with no user impact. To enable the new software, an application reboot is required performing a partition swap making the active partition inactive and vice-versa. Application resets can be scheduled after hours to reduce user impact. In the rare event a rollback is necessary, reverting back to the prior partition and software is as simple as performing an application reboot.

Requirement:

-When system or station software updates are performed, must the system be shut down, or can these types of activities take place in an on-line environment?

UDT Response:

All software upgrades can be done with the system on-line with little to no user impact. User impact will be determined by the actual upgrade procedure the customer decides to use.

Requirement:

-How frequently do you back-up the operating software, which includes up-to-date moves and changes? Is a copy secured off-site, and how frequently is that copy updated?

UDT Response:

Cisco recommends a full system backup every 24 hours; however, customers can select to backup on their own schedules and also define how many backup copies to actively maintain before re-writing. System backups are pushed to a network location, giving customers flexibility for onsite or off-site storage.

Requirement:

-What non-proprietary open systems computer telephony (CTI) applications are available with the proposed system?

UDT Response:

Cisco desktop solutions offer customers a choice, ranging from out-of-the-box CTI solutions to pre-integrated solutions with leading CRM vendors, to desktop tools that allow for fully customized CTI implementations. Any of the desktop solutions used will take advantage of the fault-tolerant, carrier-class architecture of the Cisco Unified Intelligent Contact Management and Unified Contact Center Enterprise or Hosted applications:

- Cisco Agent Desktop¹: A feature-rich “out-of-the-box” agent desktop.
- Cisco CTI Toolkit: A software toolkit for building a customized agent and supervisor desktop application, customizing a standard desktop, or developing an integration to a home-grown or third-party CRM or other application.

- Cisco Unified CRM Connectors: A set of prebuilt integrations with major CRM applications, such as SAP, Siebel, Salesforce, Microsoft Dynamics CRM, and others. In fact, these CRM connectors have all been built using the CTI Toolkit.

Requirement:

-What is your plan of record for developing CTI applications?

UDT Response:

As part of the Cisco Technology Developer Program, many partners have used Cisco CTI Toolkit to integrate their own or third-party agent CRM and desktop applications with Cisco Unified Intelligent Contact Management and Cisco Unified Contact Center Enterprise or Hosted. Through the Cisco Technology Developer Program, partners offer these solutions to customers.

Requirement:

-What Telephony Application Programming Interface (TAPI) applications do you support or currently offer?

UDT Response:

Unified CM exposes sophisticated call control of IP telephony devices and soft-clients via the Computer Telephony TAPI interface. Cisco's Telephone Service Provider (TSP) and Wave Driver interface enables custom applications to monitor telephony-enabled devices and call events, establish first- and third-party call control, and interact with the media layer to terminate media, play announcements, and record calls.

Requirement:

-What Java Telephony Application Programming Interface (JTAPI) applications do you support or currently offer?

UDT Response:

Cisco Unified JTAPI serves as a programming interface standard developed by Sun Microsystems for use with Java-based computer-telephony applications. Cisco JTAPI implements the Sun JTAPI 1.2 specification with additional Cisco extensions. You use Cisco JTAPI to develop applications that:

- Control and observe Cisco Unified Communications Manager phones
- Route calls by using Computer-Telephony Integration (CTI) ports and route points (virtual devices).

Basic telephony APIs that are supported comprises conference, transfer, connect, answer, and redirect APIs.

A package of JTAPI interfaces, located in the javax.telephony.* hierarchy, defines a programming model by which Java applications interact with telephony resources.

Cisco Unified JTAPI gets used in a contact center to monitor device status and to issue routing instructions to send calls to the right place at the right time, to start and stop recording instructions while retrieving call statistics for analysis; and to screen-pop calls into CRM applications, automated scripting, and remote call control.

Cisco Unified JTAPI, used in an enterprise environment, combines user availability, location, and preferences for a uniquely tailored environment for presence-based routing. For example, in a financial environment, market data, business logic, and call control combine in a browser-based application to enable brokers and analysts to respond to rapid changes in the global financial markets.

In a healthcare environment, call control, doctor/patient lookup, and emergency response team paging combine in a browser-based console. Further, in a hospitality environment, caller data gets linked with POS systems to automate room or restaurant reservations, dispatch taxis, and schedule wakeup calls.

Requirement:

-Do you have a partner program for third-party applications development?

If so, list certified example offerings.

UDT Response:

Yes, Cisco Developer Network is a partner developer program.

For details please refer to:

<https://developer.cisco.com/site/devnet/home/index.gsp>

Cisco Developer Network is an interactive developer community offering coordinated development tools, access to hundreds of APIs, documentation and framework for Software Development Kits (SDKs) while offering a sandbox and discussion forums as support. Developers and partners are free to develop their own applications within the framework of the SDKs with no formal Cisco certification process.

Requirement:

-Describe how the system supports workers who may perform their job from more than one location.

UDT Response:

Cisco Unified Communications Manager can fully integrate mobile devices (Android, iOS) as native IP endpoints providing for directory integration, Visual Voicemail, Instant Messaging and Presence, as well as full voice and video call control functionality. This gives the mobile worker a seamless UC experience, regardless of physical location.

Additionally, for users that have multiple office locations or that share office space, Extension Mobility (EM) can be leveraged across IP Phones. Extension Mobility feature allows users to configure any IP phone as their own on a temporary basis, by logging into that phone. Once a user logs in, the phone adopts the user's individual profile including line numbers, speed dials, service links, and other user-specific information.

Conferencing

Requirement:

-If your system supports Meet-Me conferencing, how many parties to a conference and how many simultaneous conferences to a resource? Describe the resources and their limitations.

UDT Response:

Cisco provides two options for Ad-Hoc/Meet-Me conferencing.

Software Conference Bridge:

Each Cisco Communications Manager Subscriber provides a software conference bridge supporting 128 conference streams by default. This provides for 42 simultaneous three-party conference calls (or combinations thereof) per server. In an 8-node cluster, this would scale to 336 three-party conference calls by default. CUCM can also be configured to support 256 conference streams per server in a non-default configuration.

Hardware Conference Bridge:

Hardware conferencing is provided via PVDM (Voice and Video DSPs) resources installed in Cisco ISR Voice Gateways. PVDMs provide conferencing and/or transcoding resources which become important for calls across a WAN where lower bandwidth codecs are desired.

The number of hardware conferences supported will depend on the number of PVDM resources available to CUCM. For example, one PVDM3 with 256 channels can host 528 conference streams with a maximum of 64 participants in any given conference. One can therefore have several combinations of conferences as long as any given conference doesn't exceed 64 participants. As an example, the following combinations would be supported:

- 66 conferences of 8 participants
- 8 conferences of 64 participants and 1 conference of 16 participants.

Each Cisco ISR is capable of supporting four PVDM3-256 resources which would then scale to 2112 streams with a maximum of 64 participants in any given conference. CUCM supports 2100 gateways across the cluster, which would allow to further scale conferencing resources.

PVDM3 resources are also capable of video transcoding and conferencing supporting 96 video calls on a 256-channel PVDM. As previously described, each Cisco ISR gateway supports four PVDM3-256, thus scaling this out accordingly.

Most customers deploy both the software-based conference bridge and the hardware-based PVDM resources in the same environment and combine them at the administrator's convenience. CUCM can be configured to pool all resources yet prioritize hardware over software (or vice versa) and video over voice only resources, thus allocating the most appropriate resource where needed.

Requirement:

-Is there password protection and entry and exit tones?

UDT Response:

Entry and exit tones are supported.

Requirement:

-Is there a scheduling package for managing defined capacities?

UDT Response:

Meet-Me conferencing is considered ad-hoc conferencing and, thus by definition are not scheduled conference bridges; hence, no scheduling package is required.

Requirement:

-What hardware and software resources are required?

UDT Response:

For software-based conference resources, this is native to Cisco Unified Communications Manager and no additional hardware or software is required.

For hardware-based conferencing, additional PVDM modules can be added to increase hardware-based conferencing resources.

Requirement:

-How many simultaneous conference calls can be scheduled? How many participants are supported per conference?

UDT Response:

Cisco provides two options for Ad-Hoc/Meet-Me conferencing.

Software Conference Bridge:

Each Cisco Communications Manager Subscriber provides a software conference bridge supporting 128 conference streams by default. This provides for 42 simultaneous three-party conference calls (or combinations thereof) per server. In an 8-node cluster, this would scale to

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- 66 conferences of 8 participants
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Most customers deploy both the software-based conference bridge and the hardware-based PVDM resources in the same environment and combine them at the administrator's convenience. CUCM can be configured to pool all resources yet prioritize hardware over software (or vice versa) and video over voice only resources, thus allocating the most appropriate resource where needed.

Requirement:

-Describe how the City of Hollywood employees from non-company telecommuting locations can (a) gain authorized access to the IP PBX to make calls to (b) local or (c) long distance calls.

UDT Response:

Cisco Unified Communications Manager can fully integrate mobile devices (Android, iOS) as native IP endpoints providing for directory integration, Visual Voicemail, Instant Messaging and Presence, as well as full voice and video call control functionality. This gives the remote worker a seamless UC experience regardless of physical location.

Ability to make local or long distance calls is determined by an individual's class of service. Administrators can define a class of service specific to every line or to the individual device as a whole.

System Features

For the following features, use the table to indicate their availability. Note if any of these features are optional or result in additional charges.

FEATURE	YES	NO	OPTIONAL/ COST
Answer/Answer Release	Yes		
Application Sharing	Yes		
Attendant Console	Yes		
Audio Volume Adjust	Yes		
Auto Echo Cancellation	Yes		
Automated Call-by-call Bandwidth Selection	Yes		
Automated Phone Installation Configuration	Yes		
Automatic Phone Moves	Yes		
Call Detail Records	Yes		
Call forwarding (Off Premise)	Yes		
Call forwarding (Ring and/or No Answer)	Yes		
Call forwarding (Self Directed)	Yes		
Call Hold / Release	Yes		
Call Park / Pickup	Yes		

Call Transfer	Yes		
Call Waiting	Yes		
Calling Line ID Line and Name	Yes		
Chat	Yes		
Conference (unicast)	Yes		
Conference (multicast)	Yes		
Direct Inward Dialing	Yes		
Direct Outward Dialing (DOD)	Yes		
Distinctive Ringing (internal vs. external call)	Yes		
Distinctive Station Ringing Pitch		No	
Event Logging and Reports	Yes		
Event Viewer Interface	Yes		
External SMDI Interface	Yes		
File Transfer	Yes		

H.323 V2 RAS Support	Yes		
IP Phones set IP Precedence Bit	Yes		
IP Routable	Yes		
IP-based Integrated Messaging	Yes		
JTAPI	Yes		
Last Number Redial	Yes		
License Management	Yes		
Multiple Calls Per Line Appearance	Yes		
Multiple Line Appearances	Yes		
Number Portability	Yes		
Performance Monitor Interface	Yes		
PRI Protocol Support (NI-2 and EuroISDN)	Yes		

Privacy (prevent barge in on bridged extension)	Yes		
Redundant Call Managers	Yes		
Remote Process Control	Yes		
Ringer Pitch Adjust		No	
Ringer Volume Adjust	Yes		
Shared Extensions on Multiple Phones	Yes		
Single Button Collaborative Computing / Virtual Meetings	Yes		
Speakerphone Mute	Yes		
Speed Dial (Auto-Dial)	Yes		
System Events on Windows NT Event Viewer		No	
TAPI 2.1	Yes		
Toll and Nuisance Number (900,976,970,550,540 exchanges) Restriction	Yes		

Tone On Hold	Yes		
Video	Yes		
Visual Message Displays (All digital telephones) (name, extension, etc.)	Yes		
Web Administration	Yes		
Web Documentation	Yes		
Web-based Speed Dial (Auto-Dial) Directory	Yes		
Whiteboard	Yes		

Station Hardware and IP Softphone

Requirement:

-What methods are available for disposition of blocked calls (announcements, reorder, queuing, others)?

UDT Response:

Announcements or reorder tones are available.

Requirement:

-Provide a description of each IP telephone available with the proposed system

UDT Response:

Cisco 7821

The Cisco IP Phone 7821 is a two-line endpoint that is designed for information workers and managers. Featuring four context-sensitive soft keys and a white high resolution backlit display measuring 396x162 pixels.

Cisco 7821 Feature Overview:

- Power over Ethernet (PoE) Class 1

- A high-resolution 3.5-inch graphics and greyscale display with a resolution of 396 x 162
- Integrated IEEE 10/100 switch to support traffic from a co-located PC and reduce your cable infrastructure costs
- Dedicated fixed keys for common functions such as hold, transfer conference, messaging, directory, and a two-way navigation button
- Full wideband audio (G.722) support throughout the handset, headset, and speakerphone for superior clarity.
- Full duplex speakerphone
- Electronic hook-switch control for added flexibility in managing personal calls when using third-party headsets
- A wall-mount option for common areas such as cafeterias and shipping and receiving docks, or where desk space is limited.

Please refer to the Cisco 7821 Data Sheet for a full list of features:

<http://www.cisco.com/c/en/us/products/collateral/collaboration-endpoints/unified-ip-phone-7800-series/data-sheet-c78-729488.html>

Cisco 7841

The Cisco IP Phone 7841 is a multiline full featured gigabit phone that supports wideband audio for high definition voice quality.

Cisco 7841 feature overview:

- Power over Ethernet (PoE) Class 1 endpoint and [Cisco EnergyWise](#) to help reduce your energy costs and carbon footprint
- Enhanced flexibility and customization with a field-replaceable bezel option
- Integrated IEEE 10/100/1000 switch to support traffic from a co-located PC and reduce your cable infrastructure costs
- Dedicated fixed keys for common functions such as hold, transfer conference, messaging, directory and a two-way navigation button
- Full wideband audio (G.722) support throughout the handset, headset, and speakerphone for superior clarity
- Full duplex speakerphone
- Electronic hook-switch control for added flexibility in managing personal calls when using third-party headsets
- A wall-mount option for common areas such as cafeterias and shipping and receiving docks, or where desk space is limited.

Please refer to the Cisco 7800 Series Data Sheet for a full list of features:
<http://www.cisco.com/c/en/us/products/collateral/collaboration-endpoints/unified-ip-phone-7800-series/data-sheet-c78-729488.html?>

Cisco 8945

The Cisco Unified IP Phone 8945 is a multiline voice and video gigabit phone that supports wideband audio for high definition voice quality.

Cisco 8945 feature overview:

- Video enabled integrating voice and video into a 5-inch backlit display
- Power over Ethernet (PoE) Class 2 endpoint and [Cisco EnergyWise](#) to help reduce your energy costs and carbon footprint
- Full duplex speakerphone
- Bluetooth support
- Integrated IEEE 10/100/1000 switch to support traffic from a co-located PC and reduce your cable infrastructure costs
- Dedicated fixed keys for common functions such as hold, transfer, conference, messaging, directory, and a two-way navigation button; Tri color LED lines; programmable feature keys.
- Full wideband audio (G.722) support throughout the handset, headset, and speakerphone for superior clarity
- Electronic hook-switch control for added flexibility in managing personal calls when using third-party headsets
- Context sensitive soft keys for improved ease of use
- Native VPN client support.

The Cisco Unified IP Phone 8945 is a fully enabled video phone with a built-in, high-quality video (VGA or 640 x 480 pixel) camera with 30 frames per second rates, for both encoding and decoding. The Cisco Unified IP Phone 8945 renders video on its high-resolution, 5-inch diagonal, fully backlit, VGA-quality display. For additional features, please refer to the Cisco 8945 Data Sheet:

http://www.cisco.com/c/en/us/products/collateral/collaboration-endpoints/unified-ip-phone-8945/data_sheet_c78-649595.html

Requirement:

-Do you offer an IP softphone?

UDT Response:

Cisco Jabber Desktop is a full-featured Instant Messaging and Presence (IM&P) voice and video softphone. Cisco jabber is available for Windows, MAC, Android or iPhone/iPad devices.

Requirement:

-Provide a general description of the IP softphone and its features and capabilities.

UDT Response:

Cisco Jabber is a unified communications application that lets you be more productive from anywhere on a broad array of devices. Find the right people, see if and how they are available, and collaborate using your preferred method. Cisco Jabber streamlines communications and enhances productivity by unifying presence, instant messaging, video, voice, voice messaging, desktop sharing, and conferencing capabilities securely into one client on your desktop. It offers flexible deployment models, is built on open standards, and integrates with commonly used desktop applications. You can communicate and collaborate effectively from any place where you have an Internet connection

Cisco Jabber can help you:

- Reduce communication delays by providing presence information so you can see when your colleagues are available
- Accelerate team performance by instantly expanding one-on-one conversations to group chats or multiparty audio, video, and web conferences
- Collaborate directly from Microsoft Outlook by viewing a contact's availability and simply clicking to IM or call
- Limit the costs of business travel and phone calls by communicating with IM; audio, video, and web conferencing; or IP telephony.

Cisco Jabber for Windows:

http://www.cisco.com/c/en/us/products/collateral/unified-communications/jabber-windows/data_sheet_c78-704195.html

Cisco Jabber for MAC:

http://www.cisco.com/c/en/us/products/collateral/unified-communications/jabber-mac/data_sheet_c78-688461.html

Requirement:

-What PC operating system is required for the IP softphone?

UDT Response:

Windows XP, Vista, Windows 7, 8

Cisco Jabber is supported on Windows or MAC desktop platforms.

Requirement:

-What are the PC requirements for the IP softphone?

UDT Response:

Cisco Jabber for Windows (**Table 3**):

Table 3. Cisco Jabber for Windows

<i>Operating system</i>	■ Microsoft Windows 7, 32-bit, 64-bit ■ Microsoft Windows 8, 32-bit, 64-bit ■ Microsoft Windows 8.1, 32-bit, 64-bit (excluding MediaNet/MSI)
<i>Minimum CPU speed and type</i>	■ Mobile AMD Sempron Processor 3600+ at 2 GHz ■ Intel Core 2 CPU T7400 at 2.16 GHz
<i>Installed RAM</i>	■ 2-GB RAM
<i>Free physical memory</i>	■ 128 MB
<i>Disk space</i>	■ 256 MB
<i>Graphics processing</i>	■ DirectX11
<i>I/O ports</i>	■ When using USB cameras and audio devices, USB 2.0 is required

Cisco Jabber for MAC (**Table 4**):

Table 4. Cisco Jabber for MAC

<i>Disk space</i>	300 MB of available disk space
<i>Hardware</i>	Intel Core 2 Duo or later processors in any of the following Apple hardware: ■ Mac Pro ■ MacBook Pro (including Retina Display model) ■ MacBook ■ MacBook Air ■ Mac ■ Mac Mini
<i>Memory</i>	1 GB of RAM
<i>Software</i>	Mac OS X Lion Version 10.7.4 (or later) or Apple OS X Mountain Lion Version 10.8.1 (or later)

Requirement:

-What standards are supported by the IP softphone?

UDT Response:

Cisco Jabber is a fully compliant voice and video SIP endpoint.

Requirement:

-Does the IP softphone support teleconferencing applications like Microsoft Lync or does it include an industry standard compatible application?

UDT Response:

Unfortunately, Microsoft Lync is based on a proprietary protocol limiting true native integration. As part of this proposal, Cisco is including the industry leader collaboration solution, Cisco WebEx.

The proposed solution can also be configured to interoperate with MS Lync to support both voice and video calling with IM&P federation, if so desired.

Requirement:

-Is a physical IP phone required in addition to the IP softphone?

UDT Response:

No. Users can select a standalone softphone as their only voice and video device or a softphone can be one of the many devices for that user.

Requirement:

-Can the user set up conference calls by dragging and dropping the participants from a list on their display or from a directory? Can the user place a call by dragging and dropping the party to be called from a directory?

UDT Response:

Users can initiate conference calls by dragging and dropping participants into a Jabber IM&P session. Users can view presence information and click-to-communicate (Instant messaging, voice and video calling) from within the MS Office suite of products.

Requirement:

-Is the graphical user interface configurable by the user? Describe which features can be customized.

UDT Response:

Cisco Jabber Desktop allows some customization, allowing users to add Buddy Lists/Groups to more efficiently manage contact lists, change IM window theme for a customized look and feel, customize emoticon, and add embedded tabs to the GUI. The main GUI interface is not customizable; since Jabber is available on a number of platforms, Windows, MAC, Android, iOS, users will be presented with the same look and feel for Jabber regardless of platform. This will allow administrators to train end users once for any and all instances of Jabber.

Requirement:

-Does the IP softphone include an integrated help function?

UDT Response:

Integrated help is included.

Requirement:

-Does the IP softphone maintain a call history log (separate from the system CDR)?

UDT Response:

Yes. Call history log is maintained for IM session, dialed, missed, and received calls.

Requirement:

-Are shared extensions supported on the IP phones? Explain how these work in a call coverage application.

UDT Response:

Yes. Shared extensions are supported across all IP phones. Call coverage will be determined by the call coverage path of the actual extension. Cisco offers flexibility down to the extension level for administrators/users to define call coverage path.

Requirement:

-Do the phones require manual labeling of features or lines?

UDT Response:

No manual labeling is required. All proposed phones have active high-resolution screens.

Requirement:

-Do the phones support pushing of URL content?

UDT Response:

Yes. Phones support pushing XML content via a URL.

Requirement:

-Can the phones be configured to point to a primary and backup server for redundancy?

If "Yes" is answered to the above question, is failover automatic and how long does it typically take to connect to the backup server?

If yes, how many servers can the phone be configured to point to?

UDT Response:

Phones can be configured to support a primary and up to four backup servers for failover redundancy.

Failover is automatic and failover is on the order of 2-5 seconds by default. Failover and keep-alive timers are configurable, so this can be modified if required.

Five registration points are supported. Most customers will configure four servers and SRST as the last resort.

Requirement:

-How are software/firmware upgrades applied to the phones?

UDT Response:

Firmware upgrades are available on www.cisco.com. Customers download the respective firmware and upload to Cisco Unified Communications Manager. Once the firmware is uploaded, administrators can decide to globally apply a firmware upgrade or to apply new

firmware on a phone-by-phone basis. This gives administrators the ability to upgrade a small number of test phones in order to qualify that firmware for their environments if so desired. Firmware upgrades are done in the background to user functions so no user impact is experienced.

Requirement:

-Do phones support "log in" to use another person's phone and have your calls directed to that phone?

UDT Response:

Yes. Extension Mobility (EM) allows users to configure any IP phone as their own on a temporary basis, by logging into that phone. Once a user logs in, the phone adopts the user's individual profile including line numbers, speed dials, service links, and other user-specific information. Extension Mobility is native to Cisco Unified Communications Manager.

Requirement:

-Describe all methods for forwarding calls to cover positions, Voice Mail and the Operator. Identify how many cover points can be included in the call forwarding, hunting or cover path.

UDT Response:

Call forward can be invoked via an IP phone, Cisco Unified Communications Manager User Web Page, and via the Cisco Jabber client. Call forward to voicemail or an operator is supported.

Cisco Unified Communications Manager allows for a very granular configuration, on a per line basis, to define a coverage path. Internal vs. external calls can also have different coverage paths. Coverage paths can be configured as follows on a per-line basis:

- Forward Busy Internal
- Forward Busy External
- Forward No Answer Internal
- Forward No Answer External
- Forward No Coverage Internal
- Forward No Coverage External
- Forward on CTI Failure
- Forward Unregistered Internal
- Forward Unregistered External.

By default, Cisco will limit coverage path to 12 elements; however, that is configurable to allow up to 500 coverage points.

Requirement:

-Please describe the proposed system's speed dialing capabilities.

UDT Response:

Speed dials can be configured either by the administrator or end user and assigned to a specific phone button. For users requiring additional speed dials, users can leverage Abbreviated Dial or Personal Address Book.

Abbreviated dial allows users to configure up to 199 speed dials and recall the speed dial via an index code. Users select the Abbreviated Dial soft key and then the appropriate index code to initiate the speed dial.

Personal Address book allows users to setup a personal directory or to synchronize a user's Windows Address Book with Communications Manager. Once synchronized, users can access Personal Address Book entries directly from their phone via the Directories button.

Requirement:

-Identify any of your system's telephone sets that require local power. Is power required locally at the station? Please specify the power requirements for each type of set and if they require local or closet power. If power is lost (for any telephone type), is the telephone set completely disabled or, is support services such as LCD/LED devices disabled?

UDT Response:

None of the proposed IP phone sets require local power, they are all PoE-capable. The Cisco 7821 and the Cisco 7841 are class 1 PoE devices. The Cisco 8945 is a class 2 PoE device.

If power is lost, the phone becomes completely disabled.

Requirement:

-Please describe the type of headsets available for all IP phones.

UDT Response:

Cisco IP Phones come with a standard 4-wire headset port to support most third-party headsets. Actual headsets would need to be sourced from Plantronics or Jabra.

Requirement:

-Does your station equipment provide the following features?

FEATURE	YES	NO	OPTIONAL
Application Sharing	Yes		

Audio Volume Adjust	Yes		
Auto Echo Cancellation	Yes		
Call Forward Busy	Yes		
Call Forward No Answer	Yes		
Call Forward All Calls	Yes		
Call Hold / Release	Yes		
Call Park / Pickup	Yes		
Call Transfer	Yes		
Call Waiting	Yes		
Calling Line ID Line and Name	Yes		
Chat	Yes		
Conference (unicast)	Yes		
File Transfer	Yes		
Last Number Redial	Yes		
Meet Me Conference (multicast)	Yes		

Multiple Calls Per Line Appearance	Yes		
Multiple Line Appearances	Yes		
Prime Line Select	Yes		
Privacy	Yes		
Ringer Pitch Adjust		NO	
Ringer Volume Adjust	Yes		
Shared Extensions on Multiple Phones	Yes		
Single Button Collaborative Computing I Virtual Meetings	Yes		
Single Button Retrieve	Yes		
Speakerphone Mute	Yes		
Speed Dial (Auto-Dial)	Yes		
Video	Yes		
Whiteboard	Yes		

Requirement:

-Are the ethernet ports autosensing and auto-negotiable?

UDT Response:

Yes. Autosensing and auto-negotiating.

Requirement:

-Can your solution be configured for VLANs?

UDT Response:

Yes. VLANs are fully supported.

Requirement:

-Can your solution be configured for secondary VLANs? If so, describe how the configuration is accomplished.

UDT Response:

Yes. Upon boot-up, a Cisco IP Phone will use CDP or LLDP-MED to exchange capabilities with the network switch and identify the secondary or voice VLAN. This capabilities exchange process is the mechanism used for the phone to obtain the VLAN ID to be used. Once the phone obtains the designated voice VLN, it will configure itself for that VLAN and start communications with the call control.

Requirement:

-Is VLAN trunking supported, or multiple VLANs on a single interface?

UDT Response:

Multiple VLANs on a single interface is the definition of VLAN trunking. Yes, our solution supports VLAN trunking or multiple VLANs on a single interface.

Requirement:

-How does your system support power fail transfer?

UDT Response:

Selected Cisco gateways are capable of supporting power fail transfer by directly connecting a local analog station (FXS station) to the PSTN (FXO line) in the event of a power failure. This allows for users to dial outbound during a power failure.

IP Manager-Assistant

-Are there special features or configurations associated with Manager/Boss and Admin/Secretary telephones?

UDT Response:

The system includes many features to support Manager/Boss, Admin/Secretary environments including a feature called IP Manager Assistant (IPMA). The Cisco IP Manager Assistant feature enables managers and their assistants to work together effectively. This feature is comprised of a call routing service that enhances the phone capabilities for the manager, and the desktop interfaces for both the manager and the assistant. This service intercepts calls that are made to managers and routes them to selected assistants, managers, or other targets based on preconfigured call filters. The manager can change the call routing dynamically. For example, with a softkey press on the phone, the manager can instruct the service to route all calls to the assistant and can receive status on these calls.

Requirement:

-Is additional hardware or software required?

UDT Response:

The feature is provided by an included plugin. No additional hardware is required.

Managers

Requirement:

-Does the manager have a GUI application for setup or configuration?

UDT Response:

Yes. Managers can customize their feature preferences from the Manager Configuration window using a browser.

Requirement:

-Do managers have access to select assistants that will support their calls?

UDT Response:

The manager can change selected assistants by using the Cisco Unified IP Phone Services button.

Requirement:

-Are they accessible from Telephone, Application or both?

UDT Response:

They are accessible from the telephone or application.

Requirement:

-Can a manager select whether or not all calls will ring only on assistant's telephone?

UDT Response:

The manager can implement a filter which will determine whether or not calls ring on the assistant's telephone.

Requirement:

-Are they accessible from Telephone, Application or both?

UDT Response:

They are accessible from the telephone or application.

Requirement:

-If all calls are ringing only on assistant's telephone, does a manager have the ability to see who is calling for them?

UDT Response:

Yes. They are two modes of operation, shared line and proxy. In shared line mode, the manager has the ability to see who is calling them at the time the call is received.

Requirement:

-If so, can a manager intercept or take call from assistant's phone?

UDT Response:

Yes. The manager can intercept calls utilizing the Intercept Call phone softkey.

Requirement:

-Can the manager manually re-route an incoming call from his/her phone to the assistant?

UDT Response:

Yes. The manager can re-route a call from his/her phone to the assistant.

Requirement:

-Can managers configure filters to allow or disallow certain calls to be answered directly by the manager?

UDT Response:

Yes. The manager can implement filters which allow or disallow certain calls to be answered directly by the manager.

Requirement:

-Are they accessible from Telephone, Application or both?

UDT Response:

Filters can be enabled from the phone. Filter configuration is completed in a web browser.

Assistants**Requirement:**

-Does the assistant have a GUI application to support managers?

UDT Response:

Yes, assistants have a GUI application to support managers or can utilize an IP Phone Service to support managers.

Requirement:

-Can the assistant send an active call directly to manager's voicemail?

If yes, how many steps are involved?

UDT Response:

Yes. Assistants have the ability to route a call for a manager directly to the manager. They are accessible from the telephone or application.

Two, the assistant selects transfer and the voicemail option.

Requirement:

-Can the assistant send an active call directly to a manager?

If yes, how many steps are involved?

UDT Response:

Yes.

Two, the assistant selects transfer and the the manager's line key.

Requirement:

-Can assistant view the manager's status?

UDT Response:

Yes. The assistant has at-a-glance status information for each manager they support.

Requirement:

-Can assistant change or update manager's configuration?

UDT Response:

Yes. Assistants have access to a manager configuration via the configuration URL in a web browser.

Attendant Console**Requirement:**

The City Of Hollywood prefers a PC-based attendant console application rather than a traditional hardware console. Does your system offer a PC-based attendant console application? If so, please respond in detail to this section.

UDT Response:

Cisco offers customers different PC-based attendant console applications based on the system requirements. For the City of Hollywood, Cisco is proposing the Cisco Unified Attendant Console Standard. This console is a server-less console where the application installed on a user's system provides all functionality without the need for a separate, centrally located console server.

Requirement:

-Provide a description of the general capabilities and features of your PC-based attendant console application.

UDT Response:

Cisco Unified Attendant Console Standard enables you to do the following:

- Control calls on your local IP Phone, XMPP client (such as Jabber), or Cisco IP Communicator
- Make, answer, and end calls — hold and resume calls
- Blind/consult transfer calls to directory contacts or voicemail
- Direct transfers

- Join calls
- Set Call Forward on the operator phone
- Park calls
- Create and manage conference calls
- Import custom directories of contacts not in your Cisco Unified Communications Manager directory
- Create custom directories and export them to share with other operators
- See the line state and presence of each contact
- View call history.

Requirement:

-Is the PC-based attendant console application browser-based? What PC operating systems are supported?

UDT Response:

The console is provided via an installed application supporting the following operating systems.

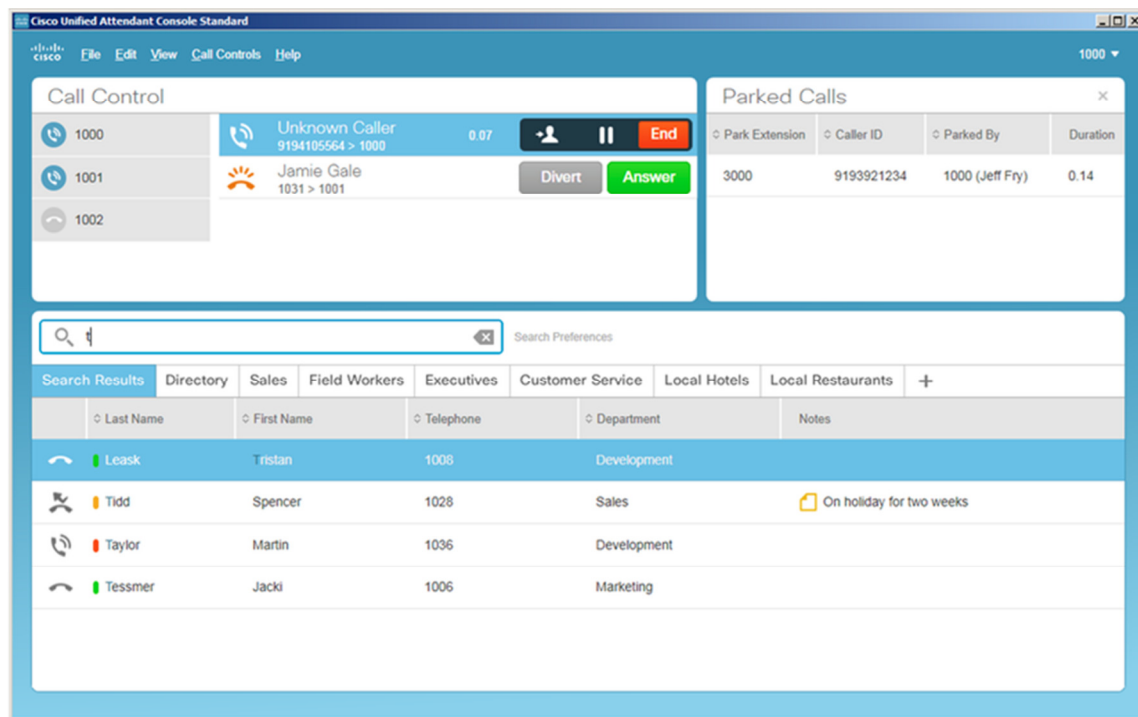
- Windows XP 32-bit
- Windows Vista 32-bit
- Windows 7 32-bit
- Windows 7 64-bit
- Windows 8 64-bit.

Requirement:

-Provide an illustration of the PC-based attendant console application GUI and describe its key features.

UDT Response:

Key features include a call control, **Figure 1**, which includes the user's controlled lines, active calls, and the call control functions that can be performed. Parked calls are tracked and displayed visually, providing the console user with the ability to determine what calls are parked, the park duration, what attendant parked the calls, and the caller ID of the calls. The call directory area of the console is customizable and can be pre-populated from a list of directory contacts, or the attendant console user can create their own directory tabs by either searching the LDAP directory or creating manual contacts and adding them to contact groups.



2629p001/a

Figure 1. Cisco Unified Attendant Console

Requirement:

-Does the PC-based attendant console have loop keys? How many loop keys are supported?

UDT Response:

The console has as many loop keys as there are directory numbers provided by line keys assigned to the associated phone of the console user. A console user utilizing a Cisco 7975 phone, for instance, would have the capability of supporting up to eight loop keys.

Requirement:

-Does the PC-based attendant console application have a busy lamp field (or equivalent)?

UDT Response:

Yes. All contacts associated with the system support Directory Enabled Presence showing on-hook or off-hook status. A console user can get at-a-glance BLF information for users populated in a directory tab or can search the directory for a user. The search result will contain that user's BLF information.

Requirement:

-Can the PC-based attendant console application access the corporate (LDAP) directory? Can the operator search the directory? Can the operator use the directory list to drag and drop incoming calls to the destination extension?

UDT Response:

Yes. The attendant console supports the corporate LDAP directory. The console operator may search the directory. Once search results are returned, a call can be directly transferred to contact in the results list and contacts in the results list can be dragged and dropped to a directory tab.

Requirement:

-Is the PC-based attendant console application a separately priced option? If so, what is the price?

UDT Response:

Yes. The console is priced on a per simultaneous logged in basis. Pricing is included in the Bill of Materials as part number L-CUAC10X-STND. The list price of the console is \$995 per instance.

Requirement:

-Do all of the PC-based attendant console applications that are running share the same information?

UDT Response:

All of the consoles share the common directory as well as common directory-enabled presence information as received from the system. All consoles have access to view any parked calls as well as what console operator parked a call, depending on the park ranges defined for the console operator.

Requirement:

-How many PC-based attendant console applications can be supported by the system?

UDT Response:

There is no limit to the number of console operators who can be active at one time on the system.

Requirement:

-What is the maximum number of simultaneous calls that can be handled by the PC-based attendant console application?

UDT Response:

The maximum number of calls is based on the number of lines the physical device or softphone associated with the console supports. The City of Hollywood can take advantage of hunt group

call queuing which supports up to 99 calls per hunt group to queue calls which cannot be answered by the attendant immediately.

System Reporting and Call Detail Reporting

Requirement:

-Describe how system CDR reporting is configured. How are these records accessed?

UDT Response:

System CDR reporting is stored in a CDR database on each system that supports active call control. Records are synchronized to the master CDR database on the system Publisher. The Publisher can be configured to push CDR records to a FTP/SFTP server or a Cisco Billing Partner application at regular intervals. The system also provides access to CDRs via the CDR onDemand Service. This is a SOAP/HTTPS-based service that runs on the CDR Repository server or node. It receives SOAP requests for CDR file name lists based on a user-specified time interval (up to a maximum of 1 hour) and returns all lists that fit the duration that the request specifies.

Users can also access CDR records through an export of the database or a portion of the database to a flat comma delimited file. Additionally, Cisco provides a tool named the CDR Analysis and Reporting Tool. This tool provides users with the ability to search for specific calls to users or directory numbers, as well as the ability to create basic reports in PDF format which can be mailed to department managers.

Requirement:

-What is the format of the CDR records? Can they be exported to an external application for analysis?

UDT Response:

CDR records are exported in a comma delimited format. Records can push CDR records to a FTP/SFTP server at regular intervals for analysis.

Requirement:

-Does your CDR package offer extensive functionality and ease of use similar to that of OfficeWatch XT?

UDT Response:

UDT is proposing Variphy as the comparable option

Requirement:

-Does the system have the capability to report by location and on a consolidated enterprise level? Provide examples.

UDT Response: Partner:

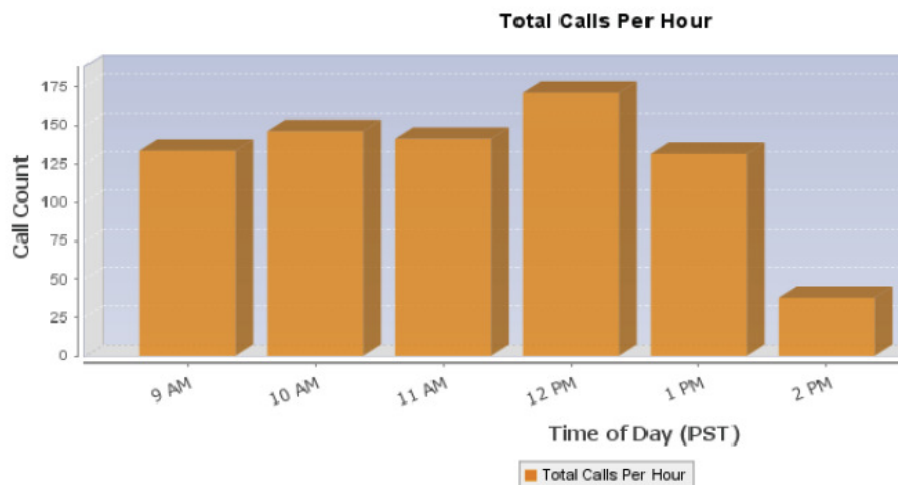
UDT is proposing Variphy

Requirement:

-What standard reports are included with the system?

UDT Response:

See sample reports below



View the number of calls per hour of the day over the searched time period

Total Calls Per Hour (PDT) By Originating End User

Originating End User	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	AVG	TTL
Baxter, Mitch (mbaxter)	0	0	0	1	0	0	.14	1
Green, Rachel (rgreen)	1	0	2	0	0	0	.43	3
Hawes, Chester (chawes)	0	2	0	1	0	4	1	7
Jackson, John (jjackson)	1	0	3	11	8	0	3.29	23
Smith, Courtney (csmith)	3	0	0	0	0	0	.43	3
Spears, Allison (aspears)	1	0	0	1	1	0	.43	3
Young, Jessica (jyoung)	0	3	2	3	1	0	1.29	9
TOTALS	6	5	7	17	10	4	7	49

Breakdown of call counts per hour by users name, devices, number

Call History

Where: Dialed (Original Called Party) Number Equals

When: Specify Custom Date/Time Range Below

1/19/2013 12:00 AM To 2/18/2013 11:59 PM

Time Zone: Jan 2013 Time (GMT-8)

Dialed (Original Called Party) Number

- Dialed (Original Called Party) Number
- Originating (Calling Party) Number
- Terminating (Final Called Party) Number
- Originating Or Terminating Number
- Originating Device Name
- Terminating Device Name
- Originating Or Terminating Device Name
- Global Call Identifier
- Originating Or Terminating Call Log Identifier
- Client Matter Code
- Forced Authorization Level
- Call Duration (Seconds)

Select All View Selected Export Selected To File

Original	Call Count (14)	Total Duration (24:08:25)
6961	3	12:02:37
21080	2	12:05:48

Search and Report on Call History in seconds
Multitude of search criteria and reporting options makes it easy

91	2	00:00:00
915713065758	1	00:00:00

Search and Report on Call History in seconds
Multitude of search criteria and reporting options makes it easy

91	2	00:00:00
915713065758	1	00:00:00

Time Range: Oct 18, 2012 12:00 AM - Nov 09, 2012 11:59 PM (PST)

Total Calls: 4

Total Duration: 00:31:35 Avg Duration: 00:01:34

Show/Hide Columns View Brief Format Export To File

Date/Time Origination	Calling Party Number	Original Called Party Number	Final Called Party Number	Call Duration (mm:hh:ss)	Originating CUCM Device Description	Originating CUCM End User Id	Originating IP Address
Nov 01, 2012 11:16:47 AM	<u>21010</u>	<u>911</u>	<u>911</u>	00:04:07	Jessica Young - 21010	jyoung	10.55.1.5
Nov 01, 2012 1:11:48 PM	<u>20720</u>	<u>911</u>	<u>911</u>	00:01:29	Mitch Baxter - 21080	mbaxter	10.46.24.13
Nov 08, 2012 1:18:04 PM	<u>20334</u>	<u>911</u>	<u>911</u>	00:00:13	John Jackson - 21020		10.46.27.14
Nov 08, 2012 8:33:43	<u>911</u>	<u>911</u>	<u>911</u>	00:00:26			10.55.1.5

Who dialed 911?
Easily identify who dialed emergency services and determining the length of the call

Search Criteria Summary

Search Criteria	Total Calls	Avg Duration	Total Duration
where Originating CUCM Department equals 'Admin'	560	00:02:06	19:45:09
where Originating or Terminating CUCM Department equals 'Sales'	93	00:01:58	03:03:11
where Originating or Terminating CUCM Department equals 'IT'	481	00:03:29	27:59:20
where Originating or Terminating CUCM Department equals 'Engineering'	297	00:06:29	32:09:04
where Originating or Terminating CUCM Department equals 'Reception'	168	00:06:51	19:13:17
where Originating or Terminating CUCM Department equals 'Staff'	0	00:00:00	00:00:00
TOTALS	1,599	00:03:50	102:10:01

View calls Summary by Department

Department such as Sales, IT, Reception, and Admin...

End User Summary

End User	Outbound Calls	Inbound Calls	Total Calls	Avg Duration	Total Duration
Jones, Maximus	146	22	168	00:01:58	05:32:31
Park, Gina	40	31	71	00:01:37	01:55:52

Jones, Maximus

Outbound Calls: 146 Inbound Calls: 22 Total Calls: 168 Avg Duration: 00:01:58 Total Duration: 05:32:31

Date/Time Origination	Calling Party Number	Final Called Party Number	Originating UCM End User Full Name (Last, First)	Originating UCM Device Type + Protocol	Originating UCM Device Pool + Location	Terminating UCM End User Full Name (Last, First)	Terminating UCM Device Type + Protocol	Terminating UCM Device Pool + Location	Call Duration (mm:hh:ss)
Jun 12, 2012 9:33:42 AM	5121	5102	Park, Gina	Cisco 8941 SCCP	DALLAS Hub_None	Jones, Maximus	Cisco 7940 SCCP	Default Hub_None	00:00:44
Jun 12, 2012 9:38:02 AM	5102	92684840	Jones, Maximus	Cisco 7940 SCCP	Default Hub_None				00:02:30
Jun 12, 2012 10:56:51 AM	5102	111634	Jones, Maximus	Cisco 7940 SCCP	Default Hub_None				00:03:53
Jun 12, 2012 11:22:39 AM	5102	5102	Jones, Maximus	Cisco 7940 SCCP	Default Hub_None	Park, Gina	Cisco 8941 SCCP	DALLAS Hub_None	00:04:12
Jun 12, 2012 11:22:39 AM	5102	99979403	Jones, Maximus	Cisco 7940 SCCP	Default Hub_None	Park, Gina	Cisco 8941 SCCP	DALLAS Hub_None	00:04:12
Jun 12, 2012 11:53:06 AM	5102	99979403	Jones, Maximus	Cisco 7940 SCCP	Default Hub_None				00:00:20

Say NO to manual spreadsheets!

CUCM End User information can be uniquely incorporated into your Call Reports

Schedule	
Type	Weekly v
Day Of Week	☐ Monday ☐ Tuesday ☐ Wednesday ☒ Thursday ☐ Friday ☐ Saturday ☐ Sunday
Start Time	8 v : 20 v PM v
Time Zone (Start Time)	America/Indiana/Marengo - Eastern Standard Time (GMT-5) v
Delivery Options	
Type	Email v
Email Recipients	☐ IT (it@variphy.com) ☐ Chris (chris@variphy.com) ☒ Support (support@variphy.com)

Automate it. Schedule it. Email it. Done

Automate your Call History Reporting by having it emailed on a scheduled basis

Requirement:

-How are customized reports generated?

UDT Response:

Please click on the link below to view Variphy's example CDR Reporting. You can easily customize the search criteria and appearances in seconds.

<http://www.variphy.com/cisco-call-reporting/reports/calls-by-department.pdf>

<http://www.variphy.com/cisco-call-reporting/reports/End-Users-Call.pdf>

http://www.variphy.com/cisco-call-reporting/reports/capacity_utilization.pdf

VOICE MAIL AND UNIFIED MESSAGES SYSTEM SPECIFICATIONS

Voice/Unified Messaging System Description and Support Options

Requirement:

-Describe in detail your voice/unified messaging product offering. Include an overview of the hardware, software, architecture, and components of the equipment proposed to meet The City of Hollywood's requirements.

UDT Response:

Cisco Unity Connection is a voicemail and unified messaging platform with a comprehensive feature set. With Cisco Unity Connection, you can access and manage voice messages in a variety of ways, using your email inbox, web browser, the Cisco Jabber messaging integration platform, Cisco Unified IP Phone, smartphone, tablet, and more. Cisco Unity Connection also provides robust speech-recognition features for when you are mobile, so you can manage your voice messages hands- and eyes-free.

Cisco Unity Connection is fully virtualized and will be hosted across two servers (virtual machines) in an active-active load balanced manner to provide redundancy and seamless failover. Capable of scaling up to 500 ports and 20,000 users per Cisco Unity Connection cluster, Cisco Unity Connection also provides Auto Attendant functionality for the enterprise. Underlying hardware is Cisco UCS C-240 Intel based server running VMWare Hypervisor and included in this proposal.

Features and Benefits:

- **Accelerate Collaboration**
 - ❑ Cisco Unity Connection is a powerful unified messaging system with many advanced capabilities that you can customize to increase your individual and team productivity. Respond quickly to colleagues and partners by using speech-activated tools. Easily prioritize and manage messages, access meetings on your calendar, and connect to colleagues simply by saying their names.
- **Access Voicemail Anytime and Anywhere**
 - ❑ Access your Cisco Unity Connection voice messages the way you prefer, whether from an IP phone, mobile phone, tablet, web browser, email client, or desktop client such as the Cisco Jabber platform. You can also use Cisco SpeechView to have your voice messages transcribed and delivered to your email inbox.
- **Reduce Total Cost of Ownership**
 - ❑ Enjoy the flexibility to deliver unified messaging, integrated messaging, or simply voicemail. The flexible user interface makes messaging more efficient for power users and occasional voicemail users alike. Cisco Unity Connection works in a variety of messaging environments using standard protocols.
- **Deploy a Reliable Solution**
 - ❑ With years of successful deployments, Cisco Unity Connection is a tested, reliable solution. Take advantage of redundancy to make sure you never miss a voicemail. Cisco Unity Connection uses a common set of management and serviceability tools designed to provide a consistent experience and to streamline the ongoing management and operation of a Cisco Unified Communications System.
- **Secure Your Messages**

- ❑ Security is a concern for most organizations, and mandatory for others. Cisco Unity Connection keeps your messages highly secure so someone outside your organization cannot play them.

- **Speech-Enabled Messaging**

- ❑ To increase the productivity of mobile workers, Cisco Unity Connection offers a natural and robust speech-activated user interface that allows you to browse and manage your voice messages using simple, natural speech commands.

The Speech Connect for Cisco Unity Connection feature is a built-in speech-enabled Automated Attendant that enables you to call other Cisco Unity Connection users or personal contacts by simply using your voice. To learn more, please refer to the data sheet at:

http://www.cisco.com/c/en/us/products/collateral/unified-communications/unity/prod_data_sheet0900aecd806ed7c9.html

The Cisco SpeechView feature converts voice messages to text and delivers the text version of the voice message to your email inbox, allowing you to read your voice messages and take immediate action. To learn more, please refer to the data sheet at: http://www.cisco.com/en/US/prod/collateral/voicesw/ps6789/ps5745/ps6509/ps10671/data_sheet_c78-609206.html.

- **Virtualize Your Environment**

- ❑ You can install Cisco Unity Connection 10.0 as a virtual machine on Cisco Unified Computing System (Cisco UCS), IBM, and HP platforms. Cisco Unity Connection 10.0 supports virtualization on Fibre Channel, Fibre Channel over Ethernet (FCoE), Small Computer System Interface over IP (iSCSI), and Network File Storage (NFS) storage area networks (SANs). For more information, please refer to: http://docwiki.cisco.com/wiki/Unified_Communications_Virtualization.

For a detailed list of all features, please refer to the Cisco Unity Connection Data Sheet: <http://www.cisco.com/c/en/us/products/collateral/unified-communications/unity/data-sheet-c78-729872.html?cachemode=refresh>

Requirement:

-What is the typical method of support for future software updates, and how are licensing upgrades handled?

UDT Response:

Future software releases are made available electronically on www.cisco.com for customers to download as needed.

Software upgrades can be performed with little to no impact to users. Cisco Unified Collaboration products have a two-partition architecture; an active primary partition and an inactive secondary partition. New software can be uploaded to the inactive partition at any time,

with no user impact. To enable the new software, an application reboot is required performing a partition swap making the active partition inactive and vice-versa. Application resets can be scheduled after hours to reduce user impact. In the rare event a rollback is necessary, reverting back to the prior partition and software is as simple as performing an application reboot.

Cisco Unity Connection licenses are perpetual, so there is no requirement to annually renew licenses. Licenses can be upgraded if additional users or functionality is required but, again, these licenses would be perpetual in nature.

Requirement:

-What hardware level support is available? Can the appropriate hardware for our design be purchased directly from Cisco or only from a third party?

UDT Response:

Hardware support is available 24x7x365 directly from Cisco Technical Assistance Center (TAC) with hardware replacement options ranging from 8x5xNDB through 24x7x2 onsite replacement.

As part of this proposal, Cisco is providing all necessary UCS C-240 servers for all applications. Cisco Collaboration Suite of products are also supported on HP or IBM servers as long as the technical specs meet or exceed application requirements.

Requirement:

-Voice mail must be active/active and load balanced. Describe how your solution achieves this.

UDT Response:

Compliant. Cisco Unity Connection uses clustering technology to synchronize real-time database state across all servers in a cluster. This allows for Unity Connection to function in an active/active fashion and users can be load balanced accordingly. When routing calls to Cisco Unity Connection, Cisco Unified Communications Manager will natively load balance calls across all ports across all Unity Connection servers. Leveraging clustering technology for real-time database synchronization, a Connection Subscriber can be serviced by any Connection server in the cluster.

Voice/Unified Messaging System Specifications

Requirement:

-How many ports are proposed to support The City of Hollywood's voice mail system? If additional ports are required in the future, how are these added? Explain how the system scales beyond the number of proposed ports.

UDT Response:

Cisco is proposing 200 total ports for the City of Hollywood's solution. Additional ports are added by allocating additional CPU cores within the hypervisor hosting Cisco Unity Connection. Voicemail ports are not licensed and limited only by the underlying availability of CPU processing. Cisco Unity Connection will scale to 500 ports in an active-active cluster pair.

Requirement:

-Are voice messages stored in an industry standard format? How many Mbytes of disk space are required for each hour of voice storage?

UDT Response:

Voice messages are stored in industry-standard WAV file format. Disk space will be dependent on the codec used. Cisco Unity Connection supports both G711uLaw and G.729a. A 1-minute voice message using G.711 is approximately 480KB. Using G729 would result in an approximate file size of 60KB for the same minute.

Requirement:

-What operating system does the voice mail/unified messaging system use?

UDT Response:

Cisco Unity Connection is based on the same Linux Unified Communications Operating System as Cisco Unified Communications Manager.

Requirement:

-Does the voice mail/unified messaging system support AMIS-A and/or VPIM for networking?

UDT Response:

VPIM is supported.

Requirement:

-Does the voice mail/unified messaging system support direct connectivity to Microsoft Exchange? If so, please explain how this functionality is supported.

UDT Response:

Single inbox, one of the unified messaging features in Cisco Unity Connection, synchronizes voice messages in Unity Connection and Exchange mailboxes. When a user is enabled for single inbox, all Unity Connection voice messages that are sent to the user are first stored in Unity Connection and are immediately replicated to the user's Exchange mailbox via standard SMTP. In addition, status changes (for example, from unread to read), changes to the subject line, and changes to the priority are replicated from Unity Connection to Exchange and vice versa, as

applicable. Cisco Unity Connection leverages the Exchange Web Services (EWS) API to maintain this real-time synchronization.

Single Inbox is configurable on a per-user basis so administrators can offer this service enterprise wide or to a select number of users.

Requirement:

-What database is used for the message store?

UDT Response:

IBM Informix.

Requirement:

-Once a voice mail is left, can it be forwarded to another user? Can the user append comments before forwarding the message to another user? Explain how this works.

UDT Response:

Yes. Once a message is left, users are given message-handling options with “Forward” being one of those options. Once a user selects to forward the message, they are presented with an opportunity to append comments or to forward without comments.

It is important to note that if the message is marked as secure, forwarding that message will not be allowed. Secure messages, by definition, are not capable of being shared and only intended for the original recipient.

Requirement:

-Is the voicemail/unified messaging system remotely accessible for both subscribers and administrators? Can the system be accessed from a standard touch-tone phone? What other types of clients and points of access are supported?

UDT Response:

Yes. Remote access via a web browser, touch-tone telephone, Cisco Jabber (desktop, Android, iPad, iPhone), Outlook/Exchange, and RSS reader are all supported.

Requirement:

-Specify if the ports on the proposed system are used in one direction or used for both incoming and outgoing call activities such as message notifications and voice application call handling. Can this be programmed under administrative control?

UDT Response:

By default, all ports are used for all functions unless specifically configured to a specific function. Cisco recommends administrators allocate ports to specific tasks for efficiency purposes, but this is not required for operation.

Requirement:

-Does the proposed system use analog or digital interface ports? If analog, include in your proposal the specific interface card required for the IP Communication system. If proposed ports are digital, provide all specifications that the telephone system must meet for proper operation. Is your offering truly an "IP/voice converged system"? Please explain, and use architectural diagrams if possible.

UDT Response:

Voicemail ports are virtual IP ports carried over a SIP trunk. Cisco Unified Communications Manager will create a SIP trunk to Cisco Unity Connection. Once this SIP trunk is configured, 200 virtual voicemail ports will be allocated and routed across this SIP trunk. To physically access these 200 ports, a voicemail pilot DN will be assigned as a pilot point to these virtual ports. Users will dial the pilot number (or press the Messages button on the IP phone) and be routed across the SIP trunk to Cisco Unity Connection on the next available virtual port.

There are no physical, hardware-based ports in the proposed solution as such, this is a pure IP-based architecture.

Voice Mail System — System Features

Requirement:

-Describe in detail the voice digitization technique and voice digitization rate used for recording users' speech.

UDT Response:

The system can be configured to store recorded names, prompts, greetings, and message in either G.729a or G.711uLaw format.

Requirement:

-Indicate the capacity limits that can be defined for a particular voice mailbox.

UDT Response:

The maximum recorded name length, maximum greeting length, and maximum message length for a caller can be defined for a user.

Requirement:

Indicate whether or not this is configurable by class of service.

UDT Response:

Yes.

Requirement:

-What is the length of the longest message that can be recorded by a caller?

UDT Response:

Sixty minutes.

Requirement:

-How many messages can be stored in a subscriber's mailbox?

UDT Response:

This maximum number of messages is determined by the maximum number of minutes allowed for a subscriber.

Requirement:

-What is the maximum total number of minutes of messages that can be stored in a single voice mailbox?
How is this controlled with your system?

UDT Response:

This is a system administrator setting and can vary as necessary depending on system storage requirements and capabilities.

The system will stop accepting messages when the maximum has been exceeded.

Requirement:

-Are users given any notification that these limits have almost been reached?

UDT Response:

Yes.

Requirement:

-Does the system provide an "end of recording" warning?

UDT Response:

Yes.

Requirement:

-Does the system provide user adjustable playback speed control (with full pitch preservation)?

UDT Response:

Yes.

Requirement:

-Does the system provide alternate system wide conversations? Please explain.

UDT Response:

Yes. The system provides users the ability to utilize alternate pre-defined system-wide conversations or to customize their own.

Requirement:

-Does the unified messaging system provide any text to speech capabilities? If so, please explain how a typical subscriber would take advantage of this feature.

UDT Response:

Yes.

A user configured for single inbox could have their voice messages read to them over the phone.

Requirement:

-Does the unified messaging system provide ASR and speech recognition features?

UDT Response:

Yes.

Requirement:

-Can system prompts be interrupted by experienced users?

UDT Response:

Yes. This is the system default. The administrator may choose to disable this feature.

Requirement:

In other words, is there a "fast path" for users?

UDT Response:

Yes.

Requirement:

Can system prompts be repeated?

UDT Response:

Yes.

Requirement:

-If a caller does not know a particular subscriber's extension number, can they "look up" the subscriber by "spelling" the name via touch tone input? Explain how the system would resolve the situation where one name has multiple entries (e.g., "Jones")?

UDT Response:

Yes.

The system would provide a list and ask the user to press a key when the user's recorded name is played.

Requirement:

-Does the voice mail system support multiple greeting? If yes, describe all available greetings.

UDT Response:

Yes. Standard – the standard greeting is used during normal operation, Alternate – the alternate greeting is enabled by users who are out of the office or on extended leave, Busy – the busy greeting is used when the call is forwarded due to the user's line being busy, Internal – the internal greeting is used when a call if from another line configured on the system, Closed – the closed greeting is used when the time of day is after the set business hours, and Holiday – the holiday greeting is used during days set as holidays.

Requirement:

-Are touch-tone keys dedicated to a specific function, or are they context-sensitive?

UDT Response:

Touch-tone keys are configurable by the system administrator. Depending on the function being performed, the keys are context sensitive.

Requirement:

-Does the voice mail system support a "zero out" to the attendant feature?

UDT Response:

Yes.

Requirement:

Is this feature configurable by class of service?

UDT Response:

Yes.

Requirement:

Can the "zero out" destination be a station rather than the attendant?

UDT Response:

Yes.

Requirement:

If the "zero out" destination is busy, or rings unanswered, will the call be re-directed?

UDT Response:

Yes.

Requirement:

-Describe the voice mail systems capabilities with regard to security features?

UDT Response:

The system provides many security features including the toll fraud prevention, secure communications between system servers, secure communications to endpoints including hard or softphones, secure administration, password and authentication rules, and secure messaging.

Requirement:

-Users should be required to enter a password to access their voice mailbox. What is the minimum and maximum password length? How is this configured? Can it be different for different classes of users?

UDT Response:

The system administrator sets the minimum password length using system authentication rules.

Authentication rules are setup by the system administrator.

Authentication rules are applied to user classes of service allowing different rules for different user classes if necessary.

Requirement:

-Does the system track failed password entries in a single session? Does the system automatically disconnect the caller after a configurable number of failed attempts?

UDT Response:

Yes.

Requirement:

-Does the system track failed password entries across multiple sessions? Does the system automatically lock out the user after a configurable number of failed attempts?

UDT Response:

Yes.

Requirement:

-Does the system log information about failed password attempts?

UDT Response:

Yes.

Requirement:

-Does the system require a system administrator password?

UDT Response:

Yes.

Requirement:

-How does your Voice Mail solution achieve active/active state and load balancing?

UDT Response:

The system is deployed as a cluster. Both servers in the cluster are active providing up to 500 total active ports between the two servers in the cluster. The cluster consists of a Publisher and a Subscriber. The servers in the cluster synchronize messages, user information, and all system configuration in an identical database.

Voice Mail System — User Features

-Can system subscribers conduct the following actions:

Requirement:

Pause and replay messages

UDT Response:

Yes.

Requirement:

-Record messages; send and mark "urgent", "private", etc.

UDT Response:

Yes.

Requirement:

-Transfer messages to other users and append them with their own comments

UDT Response:

Yes.

Requirement:

-Create their own distribution lists

UDT Response:

Yes.

Requirement:

-Edit / Modify their own distribution lists

UDT Response:

Yes.

Requirement:

-Dial internally by name I company directory

UDT Response:

Yes.

Requirement:

-Obtain user instruction through system prompts

UDT Response:

Yes.

Requirement:

-Record personal greetings. How many different greetings can they have?

UDT Response:

Yes. The user can have six different greetings: Standard, Alternate, Busy, Internal, Closed, and Holiday greeting.

Requirement:

-Modify own passwords.

UDT Response:

Yes.

Requirement:

-Set business days and hours for alternate greetings.

UDT Response:

Yes.

Voice Mail System — System Administration

Requirement:

-Is system administration done through a standard web-enabled GUI? If so, please explain the advantages of this type of administration over other methods?

UDT Response:

Yes. A web-enabled GUI eliminates the need for a thick client and provides access to system administration from an application already installed on administrators' systems.

Requirement:

-The system administrator should be able to perform the following actions: Add or modify a class of service. State what user permissions or characteristics within a class of service can be created or modified.

UDT Response:

Cisco complies. The administrator may create multiple classes of services to meet the needs of the City of Hollywood's user community.

Requirement:

-Set the minimum and maximum password length for a user.

UDT Response:

Yes.

Requirement:

-Set the maximum length of voice messages.

UDT Response:

Yes.

Requirement:

-Set the maximum failed login attempts before a user lockout from the mailbox.

UDT Response:

Yes.

Requirement:

-Assign default passwords for users, and reset passwords for users that have been locked out of their mailboxes.

UDT Response:

Yes.

Requirement:

-Set the "disk space remaining" warning level.

UDT Response:

Yes.

Requirement:

-Add, delete, or modify a user.

UDT Response:

Yes.

Requirement:

-Explain how the system administrator would perform a backup and restore on the voice messaging system.

UDT Response:

The system utilizes a tool called the Disaster Recovery Service. Backups are scheduled and occur automatically to a Secure FTP server. A system restore depends on the failure scenario. If recovery is required for only one server in the cluster, that server is rebuilt with its specific configuration. The system will rejoin the cluster upon restoration, receiving a fully synchronized database from the remaining server in the cluster. If a complete cluster requires restoration, the system publisher is rebuilt with its specific configuration. The database is restored from the latest backup saved on the Secure FTP server.

Requirement:

-Please explain the major features provided by your system that directly support administration of remote branch office users.

UDT Response:

The system supports a feature called Survivable Remote Site Voicemail (SRSV). While the centralized server is primarily used for all voicemail users, SRSV can be deployed at critical locations to provide survivability for users' mailboxes at that location as well as auto attendant functionality. Other than the initial setup of the SRSV system, there is no administration required except to define the groups of users that are supported at that location on the central system.

IP CONTACT CENTER SYSTEM SPECIFICATIONS

This section is to provide an overview of the vendor's proposal and its architecture, and experience in the manufacturing, installation, and support of the type of system proposed. It also covers how the vendor will provide an intelligent network infrastructure to support the **IP** Contact Center system.

Hardware Configuration

Requirement:

-What is the model name and number of the proposed **IP** Contact Center Solution?

UDT Response:

Cisco Unified Contact Center Express version 10.

Requirement:

-Describe your integrated IVR functionalities, as well as "media" on hold capabilities.

UDT Response:

The integrated IVR provides advanced prompt-and-collect capabilities as well as the ability to handle Automated Speech Recognition (ASR) and Text to Speech (TTS) with approved integration with ASR/TTS provider. The media on hold capabilities are provided by Unified Communications Manager.

Requirement:

-What is the maximum number of agents supported in a single group?

UDT Response:

The maximum number of agents supported on a single agent team is 20. This does not apply to Skills, the system maximum of 400 agents can all be part of a Contact Service Queue (CSQ).

Requirement:

-What is the maximum number of simultaneous conversations supported by the proposed system? Is the system non-blocking for voice calls?

UDT Response:

UCCX 10 supports a maximum of 400 concurrently logged-in agents, so 400 simultaneously active customer calls is the limit.

Requirement:

-What email integration does your system support? Is email an integrated component of your system? If so, please describe.

UDT Response:

UCCX 10 Premium supports email contact routing and reporting as an integrated and core feature of the system.

Requirement:

-What web collaboration (co-browse, text chat, web callback) does your system support? Is Web-based support an integrated component of your system? If so, please describe.

UDT Response:

UCCX 10 Premium with SocialMiner integration supports web-based customer chat contact routing and reporting as a core feature of the system. Web callback can be achieved through scripting and configuration with the system also.

Requirement:

-What voice mail integration does your system support?

UDT Response:

UCCX 10 integrates tightly with the Unity voicemail product in Unified Communications Manager.

System Software**Requirement:**

-Which software package is being proposed? Please provide the release and version?

UDT Response:

UCCX 10.0.1 SU1.

Requirement:

-Is this the most recent release of this software? When is the next software release due?

UDT Response:

UCCX 10.0.1 SU1 is the most current. The next version, 10.5, is currently targeted for a summertime 2014 release.

Requirement:

-How does your company provide future software releases? How are software upgrades performed?

UDT Response:

Cisco publishes information about software releases on our website, Cisco.com, and upgrades are available to eligible customers through the Product Update Tool, also accessible from the Cisco website.

Requirement:

-When system or station software updates are performed, must the system be shut down, or can these types of activities take place in an on-line environment?

UDT Response:

Software updates should be performed in a scheduled maintenance window to prevent service interruptions.

Requirement:

-How frequently do you back-up the operating software, which includes up-to-date moves and changes? Is a copy secured off-site, and how frequently is that copy updated?

UDT Response:

Backups are performed by the customer, and can be stored locally or off-site as required.

Requirement:

-What non-proprietary open systems computer telephony (**CTI**) applications are available with the proposed system?

UDT Response:

N/A.

Requirement:

-What Telephony Application Programming Interface (TAPI) applications do you support or currently offer?

UDT Response:

N/A.

Requirement:

-What Java Telephony Application Programming Interface (JTAPI) applications do you support or currently offer?

UDT Response:

N/A.

Agent Station Hardware and Software

Requirement:

-Do **IP** agent phones work on standard Ethernet port? Provide details on all models supported with specific mention of the models that have a built-in switch to connect agent desktop.

UDT Response:

Agent phones can be either hardware or software based. **Figure 2** illustrates the compatible phones:

Endpoint Devices

Cisco Unified IP Phones for Cisco Agent Desktop	Cisco Unified IP Phones for Cisco IP Phone Agent	Cisco Unified IP Phones for Desktop / Endpoint Monitoring	Cisco Unified IP Phones for Cisco Finesse ¹¹
SCCP Phones • Cisco IP Communicator ¹ • Cisco IP Phone 6911 • Cisco IP Phone 6921 ² • Cisco IP Phone 6941 ² • Cisco IP Phone 6945 ³ • Cisco IP Phone 6961 ² • Cisco IP Phone 7911G • Cisco IP Phone 7925G • Cisco IP Phone 7931G ⁴ • Cisco IP Phone 7940G • Cisco IP Phone 7941G • Cisco IP Phone 7941G-GE • Cisco IP Phone 7942G • Cisco IP Phone 7945G • Cisco IP Phone 7942G • Cisco IP Phone 7960G • Cisco IP Phone 7961G • Cisco IP Phone 7962G • Cisco IP Phone 7965G • Cisco IP Phone 7970G • Cisco IP Phone 7971G-GE • Cisco IP Phone 7975G • Cisco IP Phone 7985G • Cisco IP Phone 8941 • Cisco IP Phone 8945 SIP Phones • Cisco IP Phone 6921 ⁵ • Cisco IP Phone 6945 ³ • Cisco IP Phone 7821 • Cisco IP Phone 7841 • Cisco IP Phone 7861 • Cisco IP Phone 7911G • Cisco IP Phone 7931G ⁴ • Cisco IP Phone 7941G • Cisco IP Phone 7941G-GE • Cisco IP Phone 7942G • Cisco IP Phone 7945G • Cisco IP Phone 7961G • Cisco IP Phone 7962G • Cisco IP Phone 7965G • Cisco IP Phone 7970G • Cisco IP Phone 7971G-GE • Cisco IP Phone 7975G • Cisco IP Phone 8961 • Cisco IP Phone 9951 • Cisco IP Phone 9971 • Cisco Jabber for Windows - Version 9.2.4, 9.6 ⁹ • Cisco IP Phone DX650	SCCP Phones • Cisco IP Phone 6921 ² • Cisco IP Phone 6941 ² • Cisco IP Phone 6945 ³ • Cisco IP Phone 6961 ² • Cisco IP Phone 7911G • Cisco IP Phone 7925G • Cisco IP Phone 7931G ⁴ • Cisco IP Phone 7940G • Cisco IP Phone 7941G • Cisco IP Phone 7941G-GE • Cisco IP Phone 7942G • Cisco IP Phone 7945G • Cisco IP Phone 7960G • Cisco IP Phone 7961G • Cisco IP Phone 7961G-GE • Cisco IP Phone 7962G • Cisco IP Phone 7965G • Cisco IP Phone 7970G • Cisco IP Phone 7971G-GE • Cisco IP Phone 7975G • Cisco IP Phone 8941 ⁶ • Cisco IP Phone 8945 ⁶ SIP Phones • Cisco IP Phone 6921 ⁵ • Cisco IP Phone 6941 • Cisco IP Phone 6945 ³ • Cisco IP Phone 7821 • Cisco IP Phone 7841 • Cisco IP Phone 7861 • Cisco IP Phone 7911G • Cisco IP Phone 7931G ⁴ • Cisco IP Phone 7941G • Cisco IP Phone 7941G-GE • Cisco IP Phone 7942G • Cisco IP Phone 7945G • Cisco IP Phone 7961G • Cisco IP Phone 7962G • Cisco IP Phone 7965G • Cisco IP Phone 7970G • Cisco IP Phone 7971G-GE • Cisco IP Phone 7975G • Cisco IP Phone 8941 • Cisco IP Phone 8945 • Cisco IP Phone 8961 • Cisco IP Phone 9951 • Cisco IP Phone 9971 • Cisco IP Phone DX650	SCCP Phones • Cisco IP Communicator ^{1, 7, 8} • Cisco IP Phone 6911 • Cisco IP Phone 6921 ^{2, 10} • Cisco IP Phone 6941 ^{2, 10} • Cisco IP Phone 6945 ³ • Cisco IP Phone 7911G ¹⁰ • Cisco IP Phone 7931G ⁴ • Cisco IP Phone 7940G • Cisco IP Phone 7941G ¹⁰ • Cisco IP Phone 7941G-GE • Cisco IP Phone 7942G ¹⁰ • Cisco IP Phone 7945G ¹⁰ • Cisco IP Phone 7960G • Cisco IP Phone 7961G ¹⁰ • Cisco IP Phone 7961G-GE • Cisco IP Phone 7962G ¹⁰ • Cisco IP Phone 7965G ¹⁰ • Cisco IP Phone 7970G • Cisco IP Phone 7971G-GE • Cisco IP Phone 7975G • Cisco IP Phone 8941 ¹⁰ • Cisco IP Phone 8945 ¹⁰ SIP Phones • Cisco IP Phone 6945 ³ • Cisco IP Phone 6961 ¹⁰ • Cisco IP Phone 7821 ¹⁰ • Cisco IP Phone 7841 ¹⁰ • Cisco IP Phone 7861 ¹⁰ • Cisco IP Phone 7911G ¹⁰ • Cisco IP Phone 7931G ⁴ • Cisco IP Phone 7941G ¹⁰ • Cisco IP Phone 7941G-GE • Cisco IP Phone 7942G ¹⁰ • Cisco IP Phone 7945G ¹⁰ • Cisco IP Phone 7961G ¹⁰ • Cisco IP Phone 7961G-GE • Cisco IP Phone 7962G ¹⁰ • Cisco IP Phone 7965G ¹⁰ • Cisco IP Phone 7970G • Cisco IP Phone 7971G-GE • Cisco IP Phone 7975G ¹⁰ • Cisco IP Phone 8961 ¹⁰ • Cisco IP Phone 9951 ¹⁰ • Cisco IP Phone 9971 ¹⁰ • Cisco Jabber for Windows - Version 9.2.4, 9.6 ⁹ • Cisco IP Phone DX650	SCCP Phones • Cisco IP Phone 6921 ² • Cisco IP Phone 6941 ² • Cisco IP Phone 7911G • Cisco IP Phone 7941G • Cisco IP Phone 7942G • Cisco IP Phone 7945G • Cisco IP Phone 7961G • Cisco IP Phone 7962G • Cisco IP Phone 7965G • Cisco IP Phone 8941 ¹² • Cisco IP Phone 8945 ¹² SIP Phones • Cisco IP Phone 6961 • Cisco IP Phone 7821 • Cisco IP Phone 7841 • Cisco IP Phone 7861 • Cisco IP Phone 7911G • Cisco IP Phone 7941G • Cisco IP Phone 7942G • Cisco IP Phone 7945G • Cisco IP Phone 7961G • Cisco IP Phone 7962G • Cisco IP Phone 7965G • Cisco IP Phone 7975G • Cisco IP Phone 8961 ¹² • Cisco IP Phone 9951 ¹² • Cisco IP Phone 9971 ¹² • Cisco Jabber for Windows - Version 9.6 ¹⁰ • Cisco IP Phone DX650

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Figure 2. Agent Phones

Requirement:

-Does the IP phone use a single directory that is common for the data network and allow display of name, extension browsing and dialing by press of a button?

UDT Response:

Yes, this feature is available through Unified Communications Manager.

Requirement:

-Please describe the agent desktop interface to manage and process agent incoming/outgoing contacts.

UDT Response:

The Agent desktop proposed is Cisco Agent Desktop (CAD) and is a Windows-based install designed to simplify and automate the contact center agent environment through the use of agent state controls such as Ready, Not Ready, Agent State logging for Login/Logout activities, and the ability to program workflow-specific actions and macros to assist with call resolution in the most efficient manner possible.

Requirement:

-Does your solution require a "hard phone" for the agent desktop to be VoIP enabled?

UDT Response:

No, the system supports softphones also.

-Do the agent IP phones support the following features

FEATURE	YES	NO	OPTIONAL
Audio Volume Adjust	Yes		
Auto Echo Cancellation	Yes		
Call Forward Busy	Yes		
Call Forward No Answer	Yes		
Call Forward All Calls	Yes		
Call Hold / Release	Yes		
Call Park / Pickup	Yes		
Call Transfer	Yes		
Call Waiting	Yes		
Calling Line ID Line and Name	Yes		

Chat	Yes		
Conference (unicast)	Yes		
Last Number Redial	Yes		
Ringer Pitch Adjust	Yes		
Ringer Volume Adjust	Yes		
Speakerphone Mute	Yes		
Speed Dial (Auto-Dial)	Yes		

Requirement:

-Can callers be presented with the option of leaving a message, and can this message be routed accordingly?

UDT Response:

Callers can be prompted to leave a message which would be stored in the associated voicemail box.

Requirement:

-Are pre-defined responses available as an agent tool in your solution? Please describe.

UDT Response:

For email contact routing, predefined templates can be configured to assist the agent with responses to commonly asked questions.

Requirement:

-Does your solution support remote agents or satellite offices? Please describe.

UDT Response:

Yes, UCCX 10 supports remote agents and supervisors as long as adequate network connectivity and bandwidth are available at the remote location.

Requirement:

-Please describe the supervisor capabilities of your solution, barge-in, silent monitoring, etc.

UDT Response:

Cisco Supervisor Desktop provides the following capabilities:

- The ability to monitor critical performance metrics, record calls, and send team messages allows managers to coach, train, and encourage agent behavior so that agents consistently perform their job functions and process calls efficiently.
- The ability to chat with individual members or the entire team allows supervisors to coach agents, resolve problems, and instantly communicate business changes.
- Supervisors can silently monitor calls to listen for coaching opportunities.
- Supervisors can initiate call recording for later review and training.
- They can interrupt an agent's call using Barge In to interact with both the caller and the agent to help resolve a concern.
- Supervisors can remove an agent from a call using the Intercept feature, so the supervisor and caller can complete the call on their own while the agent handles another customer request.
- Supervisors can change an agent's state from their desktops in a situation where agents may forget to make themselves available to take calls after a break or neglect to log out when they are away from their workstations for an extended period.
- Supervisors can log out missing agents or make unintentionally idle agents ready to take calls. They can change an agent's skill profile in real time, so they can manage their agent teams and support contact center management objectives.

Supervisors can remotely monitor agents and administer skills from Android or Apple mobile devices.

Call Routing and Reporting Software Functionality

Requirement:

-Does your system manage call routing from a single application for all Contact Center locations?

UDT Response:

Yes.

Requirement:

Can the following routing strategies be used with your proposed system?

	ROUTING	Yes or No
1	Application Based Routing and Reporting	Yes
2	Automatic Call Distribution	Yes
3	Call By Call Routing	Yes
4	Call Re-Routing Based on Wait Time	Yes
5	Call Re-Routing Based on Non-Answer	Yes
6	Conditional Routing based on Time of Day, Day of Week and Holidays	Yes
7	Conditional Routing based on Calls in Queue	Yes
8	Conditional Routing based on Caller Origin	Yes
9	Conditional Routing based on Dialed Number	Yes

10	Conditional Routing based on Caller Entered Digits (CED)	Yes
11	Directed Agent Routing (single agent selection)	Yes
12	Database Call Handling	Yes
14	Look Ahead Queuing	Yes
15	Look Back Queuing	Yes
17	Overflow (retains queue position)	Yes
18	Priorities	Yes
19	Skill-Based Routing	Yes
20	Build your own Strategy Routing	Yes

Requirement:

-Describe with detail your skills based routing algorithm? Does this apply to all media channels?

UDT Response:

For voice contacts, skills-based routing is available on the following system metrics:

- Longest available, most handled contacts, or shortest average handle time
- Most skilled, most skilled by weight, or most skilled by order

- Least skilled, least skilled by weight, or least skilled by order.

Requirement:

-Does your system provide agent proficiency setup?

UDT Response:

Yes.

Requirement:

-Are all contacts "queued" in the same fashion regardless of media type?

UDT Response:

No, Chat and Email contacts are queued differently than voice calls.

Requirement:

-Are routing priorities available with your solution and if so, how are they assigned to different media contacts?

UDT Response:

Priority levels are available to voice calls (10 levels are assignable) and contact types can be assigned priority when an agent is blended, or able to handle multiple types of contacts, such as Voice, Chat, and Email so that more real-time forms of contacts (voice and chat) are prioritized over email.

Requirement:

-How is the IVR functionality reflected in the reporting? Does it cause double pegging?

UDT Response:

IVR responses can be stored in system variables which allow reporting on which options were selected.

Requirement:

-Does your software provide reports for all agents across all locations?

UDT Response:

Yes.

Requirement:

-Does your software collect information through the entire life of the complete customer interaction and provide not only real time, but also historical reporting? Please provide detailed descriptions of all reporting capability.

UDT Response:

UCCX provides the following types of reports:

- Historical reports
 - These reports access past data from the historical data source to display information for the specified period of time. The refresh rate is 30 minutes. Historical reports display 8000 rows at a time.
- Live Data reports
 - These reports access current data from the Java Message Service (JMS) data source to display information about the current state of the contact center. The refresh rate is 3 seconds.

Requirement:

-Does your application support a web-view monitoring tool for read-only access to real time contact center performance reports and call routing scripts? Explain the features, functionality and reports that can be viewed through the web-view feature.

UDT Response:

Yes. The Live Data feature outlined above provides the ability to monitor real-time data on Agent performance, and Contact Services Queue activity through a web-based interface.

Requirement:

-Does your system offer the ability for an agent to record a conversation with a customer (for instance if a customer was being abusive)? Please describe how this feature would be activated.

UDT Response:

Yes. On-demand recording of agent conversations can be initiated from the Cisco Agent Desktop (CAD) and is triggered by a button configured on the user interface.

Computer Telephony Integration (CTI)

Requirement:

-Do you have screen-pop integration capability?

UDT Response:

Yes.

Requirement:

-Is CTI integration handled "out of the box," via toolkits, or integrated with CRM applications? Or does your system offer multiple options? If so, please describe.

UDT Response:

Yes. Essential customer information is presented to the agent through an enterprise data window and integrated screen pops "out-of-the-box." Screen pop to a third-party application can be achieved using the Cisco Agent Desktop powerful CTI work-flow engine that initiates a variety of integration actions with call metadata to other Windows and web-based applications with minimal additional configuration.

Requirement:

-Explain how your system can access database information for call routing decisions or screen pop data.

UDT Response:

The Unified CCX server can interoperate with any JDBC-compliant database. Databases tested and supported by Cisco are listed in Cisco Unified CCX Software and Hardware Compatibility Guide, which is available at:

http://www.cisco.com/en/US/products/sw/custcosw/ps1846/products_device_support_tables_list.html.

Data retrieved from databases can be used with the conditional routing capabilities to provide customer profile-based routing and queuing. Database integration also provides the ability to offer complete self-service applications to callers.

Requirement:

-Explain how your system delivers third-party call control from a CTI-enabled desktop.

UDT Response:

Third-party call control can be provided by a CRM connector to allow call control from within compatible CRM systems.

Requirement:

-Explain how your system delivers third-party agent state control from a CTI-enabled desktop.

UDT Response:

Third party agent state control can be provided by a CRM connector to allow agent state control from within a compatible CRM system.

Web Collaboration Functionality

Requirement:

The City Of Hollywood desires web collaboration functionality. Please describe your current web collaboration capabilities and include any plans for upgrades (if known).

UDT Response:

Cisco's UCCX Agent and Supervisor Desktop software, Reporting tools, and System Management portal all leverage web technologies; and the vision and direction of the product is to expand on these web-based capabilities in future releases.

E-mail Response Management**Requirement:**

-Please describe your current e-mail management capabilities. Include specific details on how your system interfaces with e-mail and with which systems it can interface.

UDT Response:

The UCCX email routing capabilities are designed to work with Microsoft Exchange.

Fax Management**Requirement:**

Please describe your current fax management capabilities. Include specific details on how your system interfaces with fax contacts and with which systems it can interface.

UDT Response:

The UCCX system is not natively designed to handle fax contacts, but this functionality can be provided by third-party software.

IMPLEMENTATION**Project Management****Requirement:**

Project Plan - Proposers are required to supply a complete description of the key activities required for the installation of the proposed system.

UDT Response:

Please find attached in Appendix B sample project plan. UDT will work with the City to define a final project plan and timelines during discovery phase.

Requirement:

Project Organization Chart - In the project plan, the Proposer will include a project organization chart with the reporting relationships of project team members and other key personnel. An escalation matrix should also be included.

UDT Response:

Please find below UDT Project Organization Chart. Also Included in Appendix C are complete biography information on each engineer assigned.

Carlos Marchini Technology Consultant CCIE 8825 NW 21 Terrace Doral, Florida 33172 Phone: 305-882-0435 cm@udtonline.com	Carlos manages the Southeast Florida Professional Services Organization. The engineers listed below report to Carlos. Carlos provides technical design and guidance as required.	Carlos is an Information Technology veteran with 20+ years' experience in the industry. Areas of expertise include Cisco routing/switching, security, unified communication, wireless, and data center technologies.
Rich Postmus Senior Network Engineer III 8825 NW 21 Terrace Doral, Florida 33172 Phone: 305-882-0435 x6034 Juan.hernandez@udtonline.com	Rich will be part of the team supporting the City of Hollywood IP Deployment. His expertise in Cisco's VoIP solutions, including voice messaging and call center (CCX) will assure a smooth deployment. Rich reports into Carlos Marchini.	Rich has over thirty years of experience in IT Technologies. Senior Network Engineer with excellent technical and communication skills, whether working with novice system administrators to expert engineers to top level management. Well versed in networking protocols and routing, including the design, configuration, and administration of LAN's and WAN's using private or public connectivity and including firewall design and configuration. Rich holds the following certifications:
Juan Hernandez Engineer 8825 NW 21 Terrace Doral, Florida 33172 Phone: 305-882-0435 x6034 Juan.hernandez@udtonline.com	Juan will be part of the team supporting the City of Hollywood IP Deployment. He holds proven technical skill-set, management and program development, team management and field enablement. Juan also reports into Carlos Marchini.	Juan is a Cisco Certified Engineer with over 10 years of experience, he has been involved in the pre-sales, design, IT development, implementation and support of advanced global network environments in the areas of Network Engineering, Unified Communications and Mobility.

Edwin Rodriguez Senior Network Architect CCIE 8825 NW 21 Terrace Doral, Florida 33172 Phone: 305-882-0435 Edwin.rodriquez@udtonline.com	Edwin will be part of the team supporting the City of Hollywood IP Deployment. Edwin has over 30 years' experience successfully directing a broad range of corporate IT initiatives while participating in planning and implementation of Network and information-security solutions in direct support of business objectives.	Mr. Rodriguez has hands-on experience leading all stages of Network, Voice, Wireless, Data Center, and security implementation efforts, including requirements definition, design, architecture, migrations, testing and support, and he is adept at developing effective operational and security policies and procedures, project documentation and milestones, and technical/business specifications.
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Requirement:

Transparency - It is essential that the installation of the new system be as transparent as possible to the users. There should be no telephone service interruptions, no interim changes in dialing procedures, and no perceived degradation in the quality of service.

UDT Response:

Understood and will be reviewed during the Discovery Phase

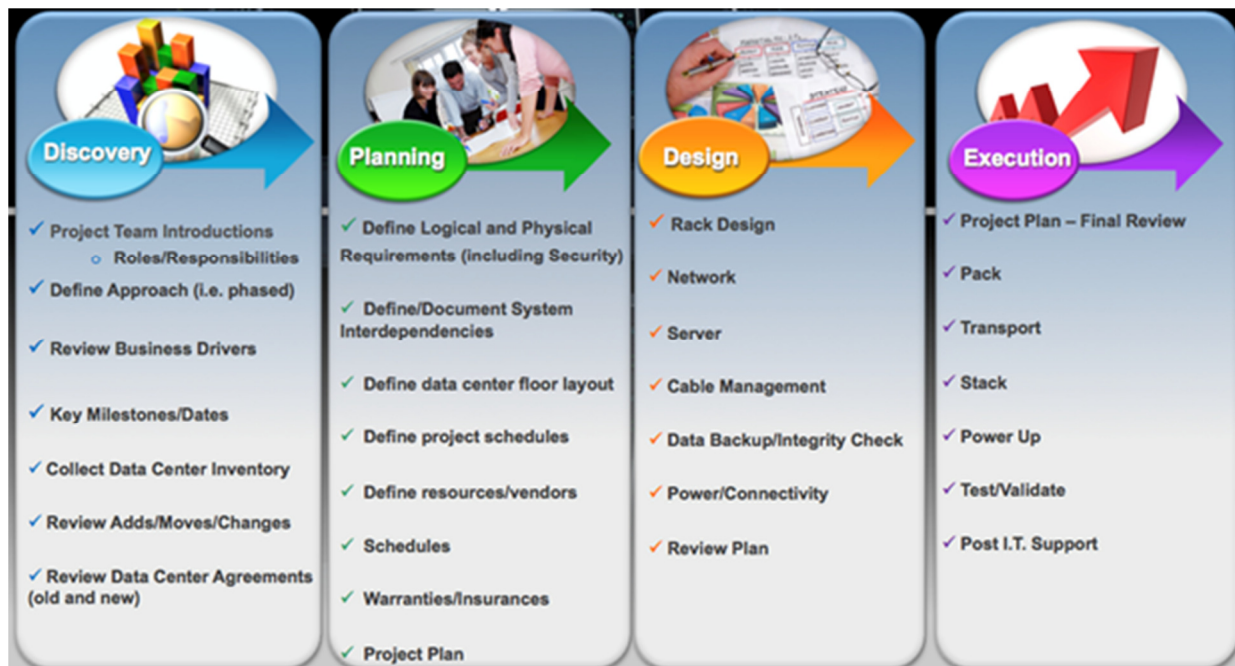
Requirement:

Responsibility Matrix and Project Schedule - A master project schedule must be included, along with a work responsibility matrix, identifying the tasks the vendor will perform and the tasks the City of Hollywood is expected to perform to successfully implement the new system.

UDT Response:

Master Project Schedule - UDT follows a four phase project methodology (Discovery, Planning, Design, and Execution) A Master Project Schedule will be designed during the Planning Phase after we have completed the initial phase Discovery. This is a crucial step in targeting critical key activities required for implementation of the proposed system. A Responsibility Matrix is included in the Statement of Work which identifies the tasks UDT will perform and the tasks the City of Hollywood is expected to perform.

In reference to UDT four phase project methodology:



Installation Requirements

Requirement:

Responsibility - The selected vendor is solely responsible for the complete turn-key engineering of the new telecommunications system and all interconnecting facilities.

UDT Response:

UDT has read and acknowledged

Requirement:

Initial Work - Vendor will perform station reviews, data base preparation, and original program initializations.

UDT Response:

UDT has read and acknowledged

Requirement:

Telco Coordination - Vendor will coordinate the ordering of all long-distance and local communications facilities as deemed necessary by the City of Hollywood. Ensure that WAN circuits are in place as required.

UDT Response:

UDT will coordinate with Telco provider to ensure accurate ordering and procurement of circuits

Facility Requirements

Proposers must furnish all space, power, and environmental requirements for the proposed telephone system and optional voice messaging equipment.

Requirement:

Space — Provide the physical dimensions of the proposed equipment.

UDT Response:

Please see attached data sheets for physical dimensions of the proposed equipment

Requirement:

Power - All power requirements, including any special conditioning or grounding requirements.

UDT Response:

UDT can work with the City to better define the power requirements after initial discovery phase.

Requirement:

Heat - Vendor must provide heat dissipation for proposed switchroom and the recommended safe temperature operating range for the proposed system.

UDT Response:

UDT can work with the City to better define the power requirements after initial discovery phase.

Requirement:

Floor Loading - Vendor must provide complete floor loading requirements.

VENDORS: ADD A TABLE FOR ENVIRONMENTALS.]

Training

Requirement:

-Requirements - The successful Proposer is required to conduct end-user training on the City of Hollywood premises, tailored specifically to The City Of Hollywood's particular requirements (e.g., console operator, message center operator, secretary, and professional).

Training class sizes will not exceed thirty (30) station users at a time.

10 ACD data retrieval training.

15 users will require ACD agent training.

-Training Plan - Vendor will also provide a training program and training materials for designated the City of Hollywood personnel who will train future employees.

-Description - For each product application proposed, provide a detailed description of the training the vendor will provide. (The cost of training must be included as part of the Proposer's response to the RFP)

-Materials - Reference copies of the training materials should be included as part of the Proposer's response to this RFP.

-A comprehensive training module is desired for internal staff from the City of Hollywood to be able to perform MACS, software integration and implementation of necessary upgrades, as well as System Administration. Proposer must describe in detail any training modules that are offered.

UDT Response:

Please find in Appendix D sample training material.

VENDOR SERVICE

Maintenance and Warranty

Requirement:

-A complete maintenance and warranty agreement including software assurance, must be included as part of the Proposer's proposal.

-Software upgrades must include major and minor support and must have full entitlement with no third party support or intervention.

UDT Response:

All Cisco OS software updates for licensed feature sets for the customer's covered platform are provided by Cisco SMARTnet. Software updates include bug fixes and maintenance, minor, and major releases within a feature set. There is no additional charge for updates as long as the product remains under Cisco SMARTnet coverage.

-One Year Warranty - The telephone system and all associated equipment in the Proposer's proposal must be warranted by the Proposer and by the manufacturer to be free of defects in equipment, software, and workmanship for a period of at least one year following system cutover.

-Defective Parts - During the warranty period and any subsequent maintenance agreement, any defective components shall be repaired or replaced at no cost to The City of Hollywood.

UDT Response:

If you have a Cisco product covered under Cisco SMARTnet Service and you have a product failure that is irreparable, Cisco provides advance hardware replacement to keep your network and business operating smoothly.

-Maintenance Personnel - All system maintenance during the warranty period and under any maintenance agreements shall be performed by the successful bidding organizational support and at no additional cost to the City of Hollywood other than those charges stipulated to maintain the warranty.

-Extended Support - As part of the response to this specification, the Proposer must guarantee to continue to provide full system maintenance and software assurance for a period of not less than five years following the expiration of the original warranty period.

UDT Response:

UDT will provide 6 month warranty on all labor and Cisco will provide warranty support under active Smartnet contracts.

Logistical Support

Requirement:

-Proposer should identify the address of the vendor's local service centers and the number of service personnel trained on the proposed system.

-Include in this section any other support levels in the local area available to the City of Hollywood for the maintenance of the proposed system.

UDT Response:

UDT Headquarters and service center is located at 8825 NW 21 Terrace, Doral, Florida 33172. Please see above Project Plan Team Chart for personnel assignment.

Repair Response

Requirement:

-The successful Proposer will provide routine system monitoring to assure the continued operation of all system components.

-Repair Commitment - The Proposer must include a description of the Proposer's repair commitment from time of trouble discovery through the time the trouble is cleared.

-Response Time — The City of Hollywood is guaranteed a response time of no more than 4 hours for all major system problems and a maximum of 8 hours response to other system problems.

-4 Hour Response — During the term of the lease, the Proposer must supply no more than a 4-hour response to major problems, 24 hours a day, 7 days a week.

UDT Response:

24x7x4 (SNTP coverage): Advanced replacement parts are delivered within 4 hours of determining that part replacement is required during a standard work week (24 hours per day, 7 days per week, including Cisco observed holidays).

UDT Response:

The Cisco Technical Assistance Center (TAC) has a formal process in place for handling and responding to customer case-escalation requests. To help ensure all service requests are reported in a standard format, TAC has established the following service request severity definitions.

Service Request Severity Definitions

Severity Level	Definition
Severity 1 (S1)	Your network is “down” or there is a critical impact to your business operations. You and Cisco will commit considerable resources around the clock to resolve the situation.
Severity 2 (S2)	Operation of an existing network is severely degraded, or significant aspects of your business operation are negatively affected. You and Cisco will commit considerable resources during normal business hours to resolve the situation.
Severity 3 (S3)	Operational performance of your network is impaired, while most business operations remain functional. You and Cisco are willing to commit resources during normal business hours to restore service to satisfactory levels.
Severity 4 (S4)	You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.

-Major/Minor Problems - Proposers must describe their definitions of major and minor problems.

-Preventative Maintenance - Explain any services the vendor offers that would assist in disaster avoidance and recovery planning for the proposed system.

-Spare Parts Availability - Describe the availability of spare parts maintained in the area for the critical hardware and software.

UDT Response:

Cisco advance hardware replacement is available worldwide. Dependable parts delivery on a global basis is provided by the Cisco Service Supply Chain, a network of over 900 spare parts depots around the world managed by a sophisticated global inventory that automates parts stocking processes worldwide. Cisco is constantly adjusting regional stock supplies so spares are available where and when you need them.

-Replacement Time - Explain the amount of time required for full replacement of the central operating hardware/software of the system, assuming a suitable site exists for locating the replacement components.

-Emergency Installation - How long does it take trained personnel to install and load operating system software and database software, if a major disaster destroys the call processing component of the system.

-Plan - Explain the available services provided by the vendor to allow for a high level of recovery from disasters [e.g., within two (2) hours, four (4) hours].

UDT Response:

Response time is determined by service level agreement. The shortest response time available is 4 hours.

-Back-up Procedures - Describe standard database back-up procedures.

-Replacement Options - Describe the options available to the City of Hollywood if a system component is destroyed (e.g., replacement with the next machine on the assembly line, replacement systems available locally, customer spares on site, etc.).

UDT Response:

With an active maintenance contract Cisco will replace equipment on the SLA purchased

COST PROPOSAL

Requirement:

-Please provide a detailed cost proposal including price caps, tiered pricing or volume discounts offered the City of Hollywood. Please be certain that your pricing breakdown includes all aspects of the required services as identified (i.e. software, hardware, maintenance and support, training, professional services, and software upgrades and new releases. This must be for the life of the lease and included in lease financing). Please identify and price separately, those items that require customization and are not standard product offerings.

UDT Response:

Please see E

Component Itemization

Requirement:

-Proposer must itemize all charges for individually identifiable components of the proposed **IP** Communication system, including all associated installation, programming, and cabling. Proposer must include charges for all components required to connect all applications, all design charges, telco interface charges, and training charges.

UDT Response:

Please see Appendix A for Bill of Material and pricing information

Requirement:

-Damage Liability - The successful vendor is liable and responsible for any damage to the premises (e.g., floor, walls, etc.) caused by vendor personnel or equipment during installation and is responsible for the removal of all project-related debris.

UDT Response:

UDT has read and acknowledged

Requirement:

-Permits - The vendor shall obtain and pay for any permits and licenses required for the performance of the work, post all notices required by law, and comply with all laws, ordinances and regulations bearing on the conduct of the work, as specified herein. On any work which requires an inspection certificate issued by local, State or any other governing body, such inspection certificate(s) shall be obtained by and paid for by the vendor. The chosen vendor shall procure all required certificates of acceptance or of completions issued by the state, municipal or other authorities and must deliver these to the City of Hollywood.

UDT Response:

UDT has read and acknowledged.

Requirement:

-Vendor Responsibility - Unless otherwise stipulated, vendor shall provide, and pay for, all materials, labor, tools, equipment, transportation, and other facilities necessary for the performance and completion of the work. Vendor shall verify conditions at the building, particularly door openings and passages. Any pieces too bulky for existing facilities shall be hoisted and otherwise handled with apparatus as required.

UDT Response:

UDT has read and acknowledged

Requirement:

-Terms and Conditions - The vendor shall include a copy of standard terms and conditions as part of the system proposal.

UDT Response:

Please find below the Terms and Conditions for Hardware Sales. Terms and Conditions for Services implementation will be provided within the Statement of Work or MSA whichever is applicable.

TERMS AND CONDITIONS: Customer agrees to make payment in full to UNITED DATA TECHNOLOGIES, INC, ("UDT"), for all amounts due according to UDT Invoices. Customer also agrees to pay UDT, as interest, an amount equal to 1%, or the maximum provided by law (whichever is less) for amounts that are past due. Should customer default in any such payment(s), UDT shall have the right, without notice to Customer to declare all invoice amounts immediately due and payable. In the event UDT should commence any action or actions, or otherwise seek to enforce agreement against Customer, Customer agrees to pay reasonable attorney(s) fees, court and other expenses incurred by UDT, whether or not suit is filed. Customer acknowledges that all payments due hereunder are required to be made to UDT at the above stated address in Miami-Dade County Florida, and customer further acknowledges, that an appropriate forum of litigation with respect to the enforcement of the terms of this invoice shall be in a court of competent jurisdiction in Miami-Dade County Florida. Customer agrees that the laws of the State of Florida, shall control the construction, interpretation and enforcement of the terms of this invoice, without application or reference to conflict of laws provisions. Customer agrees that all sales shall be governed by these Terms and Conditions of sale.

Requirement:

Responses - All materials submitted by the vendor in response to this RFP become the sole property of the City of Hollywood upon receipt of the proposal. The material contained in these responses will be appended to the final contract, further defining the contractual responsibilities of the vendor.

UDT Response:

UDT has read and acknowledged

APPENDICES

Please feel free to attach other documents that may help explain or clarify your proposal. Examples of items to include are as follows:

- Product literature
- References
- Sample Reports
- Traffic Reports — Samples
- Drawings

NOTE: Please do not include marketing material.

UDT Response:

UDT has read and acknowledged

APPENDIX A – PRICING

Line Number	Item Name	Description	Service Duration	Lead Time	Included Item	Quantity	ListPrice	Extended ListPrice	Discount %	Selling Price
1.0	C2901-CME-SRST/K9	2901 Voice Bundle w/PVDM3-16 FL-CME-SRST-25 UC Lic FL-CUBE10	N/A	24 days	No	10	3,395.00	33,950.00	49.5	17,144.75
1.0.1	CON-SNT-2901CMST	SMARTNET 8X5XNBD 2901 Voice Bundle w/ UC License PAK	12 month(s)	N/A	No	10	305.00	3,050.00	100	0.00
1.1	S29UK9-15204M	Cisco 2901-2921 IOS UNIVERSAL	N/A	14 days	No	10	0.00	0.00	0	0.00
1.2	FL-SRST	Cisco Survivable Remote Site Telephony License	N/A	21 days	No	10	0.00	0.00	0	0.00
1.3	VIC2-4FXO	Four-port Voice Interface Card - FXO (Universal)	N/A	21 days	No	10	880.00	8,800.00	49.5	4,444.00
1.4	PWR-2901-AC	Cisco 2901 AC Power Supply	N/A	14 days	Yes	10	0.00	0.00	0	0.00
1.5	CAB-AC	AC Power Cord (North America) C13 NEMA 5-15P 2.1m	N/A	14 days	No	10	0.00	0.00	0	0.00
1.6	FL-CME-SRST-25	Communication Manager Express or SRST - 25 seat license	N/A	21 days	Yes	10	0.00	0.00	0	0.00
1.7	FL-CUBEE-5	Unified Border Element Enterprise License - 5 sessions	N/A	21 days	Yes	20	0.00	0.00	0	0.00
1.8	PI-MSE-PRMO-INSRT	Insert Packout - PI-MSE	N/A	14 days	Yes	10	0.00	0.00	0	0.00
1.9	SL-29-IPB-K9	IP Base License for Cisco 2901-2951	N/A	14 days	Yes	10	0.00	0.00	0	0.00
1.10	SL-29-UC-K9	Unified Communication License for Cisco 2901-2951	N/A	14 days	Yes	10	0.00	0.00	0	0.00
1.11	HWIC-BLANK	Blank faceplate for HWIC slot on Cisco ISR	N/A	21 days	Yes	30	0.00	0.00	0	0.00
1.12	ISR-CCP-EXP	Cisco Config Pro Express on Router Flash	N/A	21 days	Yes	10	0.00	0.00	0	0.00
1.13	MEM-2900-512MB-DEF	512MB DRAM for Cisco 2901-2921 ISR (Default)	N/A	14 days	Yes	10	0.00	0.00	0	0.00
1.14	MEM-CF-256MB	256MB Compact Flash for Cisco 1900 2900 3900 ISR	N/A	21 days	Yes	10	0.00	0.00	0	0.00
1.15	PVDM3-16	16-channel high-density voice and video DSP module	N/A	21 days	Yes	10	0.00	0.00	0	0.00
SubTotal										21,588.75
2.0	C2911-CME-SRST/K9	CUBE10	N/A	14 days	No	1	4,095.00	4,095.00	49.5	2,067.98
2.0.1	CON-SNT-2911CMST	SMARTNET 8X5XNBD 2911 Voice Bundle w/ UC License PAK	12 month(s)	N/A	No	1	440.00	440.00	100	0.00
2.1	S29UK9-15204M	Cisco 2901-2921 IOS UNIVERSAL	N/A	14 days	No	1	0.00	0.00	0	0.00
2.2	FL-SRST	Cisco Survivable Remote Site Telephony License	N/A	21 days	No	1	0.00	0.00	0	0.00
2.3	FL-CME-SRST-5	Communication Manager Express or SRST - 5 seat license	N/A	21 days	No	1	170.00	170.00	49.5	85.85
2.4	VIC2-4FXO	Four-port Voice Interface Card - FXO (Universal)	N/A	21 days	No	1	880.00	880.00	49.5	444.40
2.5	PWR-2911-AC	Cisco 2911 AC Power Supply	N/A	14 days	Yes	1	0.00	0.00	0	0.00
2.6	CAB-AC	AC Power Cord (North America) C13 NEMA 5-15P 2.1m	N/A	14 days	No	1	0.00	0.00	0	0.00
2.7	FL-CME-SRST-25	Communication Manager Express or SRST - 25 seat license	N/A	21 days	Yes	1	0.00	0.00	0	0.00
2.8	FL-CUBEE-5	Unified Border Element Enterprise License - 5 sessions	N/A	21 days	Yes	2	0.00	0.00	0	0.00
2.9	PI-MSE-PRMO-INSRT	Insert Packout - PI-MSE	N/A	14 days	Yes	1	0.00	0.00	0	0.00
2.10	SL-29-IPB-K9	IP Base License for Cisco 2901-2951	N/A	14 days	Yes	1	0.00	0.00	0	0.00
2.11	SL-29-UC-K9	Unified Communication License for Cisco 2901-2951	N/A	14 days	Yes	1	0.00	0.00	0	0.00
2.12	HWIC-BLANK	Blank faceplate for HWIC slot on Cisco ISR	N/A	21 days	Yes	3	0.00	0.00	0	0.00
2.13	ISR-CCP-EXP	Cisco Config Pro Express on Router Flash	N/A	21 days	Yes	1	0.00	0.00	0	0.00
2.14	MEM-2900-512MB-DEF	512MB DRAM for Cisco 2901-2921 ISR (Default)	N/A	14 days	Yes	1	0.00	0.00	0	0.00
2.15	MEM-CF-256MB	256MB Compact Flash for Cisco 1900 2900 3900 ISR	N/A	21 days	Yes	1	0.00	0.00	0	0.00
2.16	PVDM3-16	16-channel high-density voice and video DSP module	N/A	21 days	Yes	1	0.00	0.00	0	0.00
2.17	SM-S-BLANK	Removable faceplate for SM slot on Cisco 290039004400 ISR	N/A	21 days	Yes	1	0.00	0.00	0	0.00
SubTotal										2,598.23
3.0	C2921-CME-SRST/K9	CUBE10	N/A	14 days	No	1	5,195.00	5,195.00	49.5	2,623.48
3.0.1	CON-SNT-2921CMST	SMARTNET 8X5XNBD 2921 Voice Bundle w/ UC License PAK	12 month(s)	N/A	No	1	550.00	550.00	100	0.00
3.1	S29UK9-15204M	Cisco 2901-2921 IOS UNIVERSAL	N/A	14 days	No	1	0.00	0.00	0	0.00
3.2	FL-SRST	Cisco Survivable Remote Site Telephony License	N/A	21 days	No	1	0.00	0.00	0	0.00
3.3	FL-CME-SRST-25	Communication Manager Express or SRST - 25 seat license	N/A	21 days	No	2	650.00	1,300.00	49.5	656.50
3.4	VIC2-4FXO	Four-port Voice Interface Card - FXO (Universal)	N/A	21 days	No	2	880.00	1,760.00	49.5	888.80

3.5	PWR-2921-51-AC	Cisco 2921/2951 AC Power Supply	N/A	14 days	Yes	1	0.00	0.00	0	0.00
3.6	CAB-AC	AC Power Cord (North America) C13 NEMA 5-15P 2.1m	N/A	14 days	No	1	0.00	0.00	0	0.00
3.7	FL-CME-SRST-25	Communication Manager Express or SRST - 25 seat license	N/A	21 days	Yes	1	0.00	0.00	0	0.00
3.8	FL-CUBEE-5	Unified Border Element Enterprise License - 5 sessions	N/A	21 days	Yes	2	0.00	0.00	0	0.00
3.9	PI-MSE-PRMO-INSRT	Insert Packout - PI-MSE	N/A	14 days	Yes	1	0.00	0.00	0	0.00
3.10	SL-29-IPB-K9	IP Base License for Cisco 2901-2951	N/A	14 days	Yes	1	0.00	0.00	0	0.00
3.11	SL-29-UC-K9	Unified Communication License for Cisco 2901-2951	N/A	14 days	Yes	1	0.00	0.00	0	0.00
3.12	HWIC-BLANK	Blank faceplate for HWIC slot on Cisco ISR	N/A	21 days	Yes	2	0.00	0.00	0	0.00
3.13	ISR-CCP-EXP	Cisco Config Pro Express on Router Flash	N/A	21 days	Yes	1	0.00	0.00	0	0.00
3.14	MEM-2900-512MB-DEF	512MB DRAM for Cisco 2901-2921 ISR (Default)	N/A	14 days	Yes	1	0.00	0.00	0	0.00
3.15	MEM-CF-256MB	256MB Compact Flash for Cisco 1900 2900 3900 ISR	N/A	21 days	Yes	1	0.00	0.00	0	0.00
3.16	PVDM3-32	32-channel high-density voice and video DSP module	N/A	21 days	Yes	1	0.00	0.00	0	0.00
3.17	SM-D-BLANK	Blank faceplate for DW slot on Cisco 2951 and 3925	N/A	21 days	Yes	1	0.00	0.00	0	0.00
3.18	SM-S-BLANK	Removable faceplate for SM slot on Cisco 290039004400 ISR	N/A	21 days	Yes	1	0.00	0.00	0	0.00
SubTotal										4,168.78
4.0	C2951-CME-SRST/K9	CUBE10	N/A	14 days	No	1	9,095.00	9,095.00	49.5	4,592.98
4.0.1	CON-SNT-2951CMST	SMARTNET 8X5XNBD 2951 Voice Bundle w/ UC License PAK	12 month(s)	N/A	No	1	960.00	960.00	100	0.00
4.1	S2951UK9-15204M	Cisco 2951 IOS UNIVERSAL	N/A	14 days	No	1	0.00	0.00	0	0.00
4.2	FL-SRST	Cisco Survivable Remote Site Telephony License	N/A	21 days	No	1	0.00	0.00	0	0.00
4.3	VVIC3-1MFT-T1/E1	1-Port 3rd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1	N/A	21 days	No	1	1,430.00	1,430.00	49.5	722.15
4.4	PWR-2921-51-AC	Cisco 2921/2951 AC Power Supply	N/A	14 days	Yes	1	0.00	0.00	0	0.00
4.5	CAB-AC	AC Power Cord (North America) C13 NEMA 5-15P 2.1m	N/A	14 days	No	1	0.00	0.00	0	0.00
4.6	FL-CME-SRST-25	Communication Manager Express or SRST - 25 seat license	N/A	21 days	Yes	1	0.00	0.00	0	0.00
4.7	FL-CUBEE-5	Unified Border Element Enterprise License - 5 sessions	N/A	21 days	Yes	2	0.00	0.00	0	0.00
4.8	PI-MSE-PRMO-INSRT	Insert Packout - PI-MSE	N/A	14 days	Yes	1	0.00	0.00	0	0.00
4.9	SL-29-IPB-K9	IP Base License for Cisco 2901-2951	N/A	14 days	Yes	1	0.00	0.00	0	0.00
4.10	SL-29-UC-K9	Unified Communication License for Cisco 2901-2951	N/A	14 days	Yes	1	0.00	0.00	0	0.00
4.11	HWIC-BLANK	Blank faceplate for HWIC slot on Cisco ISR	N/A	21 days	Yes	3	0.00	0.00	0	0.00
4.12	ISR-CCP-EXP	Cisco Config Pro Express on Router Flash	N/A	21 days	Yes	1	0.00	0.00	0	0.00
4.13	MEM-2951-512MB-DEF	512MB DRAM (1 512MB DIMM) for Cisco 2951 ISR (Default)	N/A	14 days	Yes	1	0.00	0.00	0	0.00
4.14	MEM-CF-256MB	256MB Compact Flash for Cisco 1900 2900 3900 ISR	N/A	21 days	Yes	1	0.00	0.00	0	0.00
4.15	PVDM3-32	32-channel high-density voice and video DSP module	N/A	21 days	Yes	1	0.00	0.00	0	0.00
4.16	SM-S-BLANK	Removable faceplate for SM slot on Cisco 290039004400 ISR	N/A	21 days	Yes	2	0.00	0.00	0	0.00
SubTotal										5,315.13
5.0	BE7K-K9	Cisco BE7000 UCS C240M3 TRC2 Srv RST	N/A	21 days	No	4	23,468.00	93,872.00	49.5	47,405.36
5.0.1	CON-SNT-BE7KK9IP	SMARTNET 8X5XNBD Cisco BE7000 UCS C240M3 TRC2 SrvRST	12 month(s)	N/A	No	4	336.00	1,344.00	100	0.00
5.1	CAB-9K12A-NA	Power Cord 125VAC 13A NEMA 5-15 Plug North America	N/A	8 days	No	8	0.00	0.00	0	0.00
5.2	BE7K-SW-9X10X	Media (no lic) for Cisco Collaboration 9.x 10.x	N/A	21 days	Yes	4	0.00	0.00	0	0.00
5.3	CIT2-A03-D300GA2	300GB 6Gb SAS 10K RPM SFF HDD/hot plug/drive sled mounted	N/A	21 days	Yes	48	0.00	0.00	0	0.00
5.4	CIT2-CPU-E5-2640	2.50 GHz E5-2640/95W 6C/15MB Cache/DDR3 1333MHz	N/A	21 days	Yes	8	0.00	0.00	0	0.00
5.5	CIT2-MR-1X082RY-A	8GB DDR3-1333-MHz RDIMM/PC3-10600/2R/1.35v	N/A	21 days	Yes	32	0.00	0.00	0	0.00
5.6	CIT2-PCIE-IRJ45	Intel i350 Quad Port 1Gb Adapter	N/A	21 days	Yes	8	0.00	0.00	0	0.00
5.7	CIT2-PSU2-1200	1200W 2u Power Supply For UCS	N/A	21 days	Yes	8	0.00	0.00	0	0.00
5.8	CIT2-RAID-9271CV	MegaRAID 9271CV Raid card with 8 internal SAS/SATA parts S	N/A	21 days	Yes	4	0.00	0.00	0	0.00
5.9	R2XX-RAID5	Enable RAID 5 Setting	N/A	10 days	Yes	4	0.00	0.00	0	0.00
5.10	VMW-VS5-HYP-K9	Cisco UC Virt. Hypervisor 5.x (2-socket)	N/A	21 days	Yes	4	0.00	0.00	0	0.00
5.11	VMW-VS5-SNS	Cisco UC Virt. Hypervisor 5.x - SnS	N/A	21 days	Yes	4	0.00	0.00	0	0.00
SubTotal										47,405.36
6.0	R-UCL-UCM-LIC-K9	Top Level SKU For 9.x/10.x User License - eDelivery	N/A	21 days	No	1	0.00	0.00	0	0.00
6.0.1	CON-ESW-RUCLUCK9	ESSENTIAL SW Top Level SKU For 9.	12 month(s)	N/A	No	1	0.00	0.00	0	0.00

6.1	LIC-UCM-10X-ENHP-A	UC Manager-10.x Enh Plus Single User-Under 1K	N/A	21 days	No	207	295.00	61,065.00	49.5	30,837.83
6.1.0.1	CON-ESW-LICUEHPA	ESSENTIAL SW UC Manager-10.x Enh	12 month(s)	N/A	No	207	18.00	3,726.00	21.5	2,924.91
6.1.0.2	UCSS-U-CMENP-A-1-1	UC Manager Enh Plus UCSS Less Than 1K Users - 1 User -1 Year	12 month(s)	N/A	No	207	30.00	6,210.00	49.5	3,136.05
6.2	LIC-CUCM-10X-BAS-B	UC Manager-10.x Basic Single User-1K to 10K	N/A	21 days	No	1053	110.00	115,830.00	49.5	58,494.15
6.2.0.1	CON-ESW-LICCUBAB	ESSENTIAL SW UC Manager-10.x Basi	12 month(s)	N/A	No	1053	5.00	5,265.00	21.5	4,133.03
6.2.0.2	UCSS-UUCMBAS-B-1-1	UC Manager UCSS - 1 Basic User One Year Sub Tier B	12 month(s)	N/A	No	1053	6.00	6,318.00	49.5	3,190.59
6.3	LIC-CUCM-10X-ESS-A	UC Manager-10.x Essential User License User-Under 1K	N/A	21 days	No	312	40.00	12,480.00	49.5	6,302.40
6.3.0.1	CON-ESW-LICCUESA	ESSENTIAL SW UC Manager-10.x Esse	12 month(s)	N/A	No	312	2.00	624.00	21.5	489.84
6.3.0.2	UCSS-UUCMESS-A-1-1	UC Manager UCSS - 1 Essential User One Year Sub Tier A	12 month(s)	N/A	No	312	3.00	936.00	49.5	472.68
6.4	JAB-ADR-CLNT-UCM	Jabber for Android UCM Only	N/A	21 days	No	50	0.00	0.00	0	0.00
6.5	JAB-IPH-CLNT-UCM	Jabber for iPhone UCM Only	N/A	21 days	No	50	0.00	0.00	0	0.00
6.6	JAB9-DSK-CLNT-UCM	Jabber for Desktop User License 9.x for UCM only	N/A	21 days	No	100	0.00	0.00	0	0.00
6.7	JABBER-IM-ADDON	Jabber for Everyone Additional IM Users	N/A	21 days	No	1500	0.00	0.00	0	0.00
6.8	CUCM-VERS-10.X	CUCM Software Version 10.X	N/A	21 days	No	1	0.00	0.00	0	0.00
6.9	EXPWY-VE-C-K9	Cisco Expressway-C Server Virtual Edition	N/A	0 days	No	1	0.00	0.00	0	0.00
6.9.0.1	CON-ESW-EXPWYVEC	ESSENTIAL SW Cisco Expressway-C S	12 month(s)	N/A	No	1	0.00	0.00	0	0.00
6.10	EXPWY-VE-E-K9	Cisco Expressway-E Server Virtual Edition	N/A	0 days	No	1	0.00	0.00	0	0.00
6.10.0.1	CON-ESW-EXPWYVEE	ESSENTIAL SW Cisco Expressway-E Server Virtual Editi	12 month(s)	N/A	No	1	0.00	0.00	0	0.00
6.11	SW-EXP-8.X-K9	Software Image for Expressway with Encryption Version X8	N/A	0 days	No	1	0.00	0.00	0	0.00
6.12	LIC-EXP-E-PAK	Expressway Series Expressway-E PAK	N/A	0 days	Yes	1	0.00	0.00	0	0.00
6.13	LIC-EXP-GW	Enable GW Feature (H323-SIP)	N/A	0 days	Yes	2	0.00	0.00	0	0.00
6.14	LIC-EXP-SERIES	Enable Expressway Series Feature Set	N/A	0 days	Yes	2	0.00	0.00	0	0.00
6.15	LIC-SW-EXP-K9	License Key Software Encrypted	N/A	0 days	Yes	2	0.00	0.00	0	0.00
6.16	LIC-EXP-AN	Enable Advanced Networking Option	N/A	0 days	Yes	1	0.00	0.00	0	0.00
6.17	LIC-EXP-E	Enable Expressway-E Feature Set	N/A	0 days	Yes	1	0.00	0.00	0	0.00
6.18	LIC-EXP-TURN	Enable TURN Relay Option	N/A	0 days	Yes	1	0.00	0.00	0	0.00
6.19	JAB-IPH-RTU	Jabber for iPhone Right to Use	N/A	21 days	Yes	1	0.00	0.00	0	0.00
6.20	JAB9-WIN-UCM-RTU	JAB9 UCM Right to Use Certificate	N/A	21 days	Yes	1	0.00	0.00	0	0.00
6.21	UCM-PAK	UCM 9X/10X PAK	N/A	21 days	Yes	1	0.00	0.00	0	0.00
6.22	PC-10X-STANDARD-K9	Prime Collaboration Standard 10.x	N/A	21 days	Yes	1	0.00	0.00	0	0.00
6.23	JABBER-IM-RTU	Jabber for Everyone Right to Use	N/A	21 days	Yes	1	0.00	0.00	0	0.00
6.24	JAB-ADR-RTU	Jabber for Android Right to Use	N/A	21 days	Yes	1	0.00	0.00	0	0.00
6.25	LIC-CUCM-10X-BAS	UC Manager Basic 10.x License	N/A	21 days	Yes	1053	0.00	0.00	0	0.00
6.26	LIC-CUCM-10X-ENHP	UC Manager Enhanced Plus 10.x License	N/A	21 days	Yes	207	0.00	0.00	0	0.00
6.27	LIC-CUCM-10X-ESS	UC Manager Essential 10.x License	N/A	21 days	Yes	312	0.00	0.00	0	0.00
SubTotal										109,981.48
7.0	R-UNITYCN10-K9	Unity Connection 10.x Software	N/A	21 days	No	1	0.00	0.00	0	0.00
7.0.1	CON-ESW-RUNITCN1	ESSENTIAL SW Unity Connection 10.x Software	12 month(s)	N/A	No	1	0.00	0.00	0	0.00
7.1	UNITYCN10-ENH-USR	One Unity Connection 10.x Enhanced Voice Messaging User	N/A	21 days	No	1500	110.00	165,000.00	49.5	83,325.00
7.1.0.1	CON-ESW-UNITYEHR	ESSENTIAL SW One Unity Connection 10.x Enhanced Voice	12 month(s)	N/A	No	1500	11.00	16,500.00	21.5	12,952.50
7.1.0.2	UCSS-U-MSG-ENH-1-1	UCSS for Enhanced Messaging - One Year - 1 user	12 month(s)	N/A	No	1500	15.00	22,500.00	49.5	11,362.50
7.2	LIC-SPCHVIEW-DEMO	SpeechView Unity Connection Demo for 50 users for 6 months	N/A	21 days	Yes	1	0.00	0.00	0	0.00
SubTotal										107,640.00
8.0	R-EMRGNCY-RSPNDR	EMRGNCY RSPNDR ESD	N/A	21 days	No	1	0.00	0.00	0	0.00
8.0.1	CON-ESW-EMRGNCY	ESSENTIAL SW EMRGNCY RSPNDR	12 month(s)	N/A	No	1	0.00	0.00	0	0.00
8.1	ER10-SW-K9	EMRGNCY RSPNDR 10 SW NEW	N/A	21 days	No	1	0.00	0.00	0	0.00
8.2	ER10-USR-1	EMRGNCY RSPNDR USR LIC 1 PHN FOR NEW 10X SYSTEM	N/A	21 days	No	1572	20.00	31,440.00	49.5	15,877.20
8.2.0.1	UCSS-U-ER-1-1	UCSS Emergency Responder - 1 year - 1 User	12 month(s)	N/A	No	1572	2.00	3,144.00	49.5	1,587.72
8.2.0.2	CON-ESW-ER10USR1	ESSENTIAL SW EMRGNCY RSPNDR USR LIC 1 PHN FOR NEW 10X	12 month(s)	N/A	No	1572	3.00	4,716.00	21.5	3,702.06
8.3	ER10-PAK	EMRGNCY RSPNDR 10.X PAK	N/A	21 days	Yes	1	0.00	0.00	0	0.00

										SubTotal	21,166.98
9.0	C2901-CME-SRST/K9	CUBE10	N/A	24 days	No	1	3,395.00	3,395.00	49.5		1,714.48
9.0.1	CON-SNT-2901CMST	SMARTNET 8X5XNBD 2901 Voice Bundle w/ UC License PAK	12 month(s)	N/A	No	1	305.00	305.00	100		0.00
9.1	S29UK9-15204M	Cisco 2901-2921 IOS UNIVERSAL	N/A	14 days	No	1	0.00	0.00	0		0.00
9.2	FL-SRST	Cisco Survivable Remote Site Telephony License	N/A	21 days	No	1	0.00	0.00	0		0.00
9.3	VVIC3-1MFT-T1/E1	1-Port 3rd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1	N/A	21 days	No	1	1,430.00	1,430.00	49.5		722.15
9.4	VVIC3-2MFT-T1/E1	2-Port 3rd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1	N/A	21 days	No	1	2,200.00	2,200.00	49.5		1,111.00
9.5	VIC3-2FXS/DID	Two-Port Voice Interface Card- FXS and DID	N/A	21 days	No	1	440.00	440.00	49.5		222.20
9.6	PVDM3-32	32-channel high-density voice and video DSP module	N/A	21 days	No	1	1,600.00	1,600.00	49.5		808.00
9.7	PVDM3-16U64	PVDM3 16-channel to 64-channel factory upgrade	N/A	21 days	No	1	2,250.00	2,250.00	49.5		1,136.25
9.8	PWR-2901-AC	Cisco 2901 AC Power Supply	N/A	14 days	Yes	1	0.00	0.00	0		0.00
9.9	CAB-AC	AC Power Cord (North America) C13 NEMA 5-15P 2.1m	N/A	14 days	No	1	0.00	0.00	0		0.00
9.10	FL-CME-SRST-25	Communication Manager Express or SRST - 25 seat license	N/A	21 days	Yes	1	0.00	0.00	0		0.00
9.11	FL-CUBEE-5	Unified Border Element Enterprise License - 5 sessions	N/A	21 days	Yes	2	0.00	0.00	0		0.00
9.12	PI-MSE-PRMO-INSRT	Insert Packout - PI-MSE	N/A	14 days	Yes	1	0.00	0.00	0		0.00
9.13	SL-29-IPB-K9	IP Base License for Cisco 2901-2951	N/A	14 days	Yes	1	0.00	0.00	0		0.00
9.14	SL-29-UC-K9	Unified Communication License for Cisco 2901-2951	N/A	14 days	Yes	1	0.00	0.00	0		0.00
9.15	HWIC-BLANK	Blank faceplate for HWIC slot on Cisco ISR	N/A	21 days	Yes	1	0.00	0.00	0		0.00
9.16	ISR-CCP-EXP	Cisco Config Pro Express on Router Flash	N/A	21 days	Yes	1	0.00	0.00	0		0.00
9.17	MEM-2900-512MB-DEF	512MB DRAM for Cisco 2901-2921 ISR (Default)	N/A	14 days	Yes	1	0.00	0.00	0		0.00
9.18	MEM-CF-256MB	256MB Compact Flash for Cisco 1900 2900 3900 ISR	N/A	21 days	Yes	1	0.00	0.00	0		0.00
										SubTotal	5,714.08
10.0	C2911-CME-SRST/K9	CUBE10	N/A	14 days	No	1	4,095.00	4,095.00	49.5		2,067.98
10.0.1	CON-SNT-2911CMST	SMARTNET 8X5XNBD 2911 Voice Bundle w/ UC License PAK	12 month(s)	N/A	No	1	440.00	440.00	100		0.00
10.1	S29UK9-15204M	Cisco 2901-2921 IOS UNIVERSAL	N/A	14 days	No	1	0.00	0.00	0		0.00
10.2	FL-CME	Cisco Communications Manager Express License	N/A	21 days	Yes	1	0.00	0.00	0		0.00
10.3	VVIC3-4MFT-T1/E1	4-Port 3rd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1	N/A	21 days	No	1	4,400.00	4,400.00	49.5		2,222.00
10.4	VVIC3-1MFT-T1/E1	1-Port 3rd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1	N/A	21 days	No	1	1,430.00	1,430.00	49.5		722.15
10.5	PVDM3-16U128	PVDM3 16-channel to 128-channel factory upgrade	N/A	21 days	No	1	5,250.00	5,250.00	49.5		2,651.25
10.6	PWR-2911-AC	Cisco 2911 AC Power Supply	N/A	14 days	Yes	1	0.00	0.00	0		0.00
10.7	CAB-AC	AC Power Cord (North America) C13 NEMA 5-15P 2.1m	N/A	14 days	No	1	0.00	0.00	0		0.00
10.8	FL-CME-SRST-25	Communication Manager Express or SRST - 25 seat license	N/A	21 days	Yes	1	0.00	0.00	0		0.00
10.9	FL-CUBEE-5	Unified Border Element Enterprise License - 5 sessions	N/A	21 days	Yes	2	0.00	0.00	0		0.00
10.10	PI-MSE-PRMO-INSRT	Insert Packout - PI-MSE	N/A	14 days	Yes	1	0.00	0.00	0		0.00
10.11	SL-29-IPB-K9	IP Base License for Cisco 2901-2951	N/A	14 days	Yes	1	0.00	0.00	0		0.00
10.12	SL-29-UC-K9	Unified Communication License for Cisco 2901-2951	N/A	14 days	Yes	1	0.00	0.00	0		0.00
10.13	HWIC-BLANK	Blank faceplate for HWIC slot on Cisco ISR	N/A	21 days	Yes	2	0.00	0.00	0		0.00
10.14	ISR-CCP-EXP	Cisco Config Pro Express on Router Flash	N/A	21 days	Yes	1	0.00	0.00	0		0.00
10.15	MEM-2900-512MB-DEF	512MB DRAM for Cisco 2901-2921 ISR (Default)	N/A	14 days	Yes	1	0.00	0.00	0		0.00
10.16	MEM-CF-256MB	256MB Compact Flash for Cisco 1900 2900 3900 ISR	N/A	21 days	Yes	1	0.00	0.00	0		0.00
10.17	SM-S-BLANK	Removable faceplate for SM slot on Cisco 290039004400 ISR	N/A	21 days	Yes	1	0.00	0.00	0		0.00
										SubTotal	7,663.38
11.0	C2901-CME-SRST/K9	CUBE10	N/A	24 days	No	3	3,395.00	10,185.00	49.5		5,143.43
11.0.1	CON-SNT-2901CMST	SMARTNET 8X5XNBD 2901 Voice Bundle w/ UC License PAK	12 month(s)	N/A	No	3	305.00	915.00	100		0.00
11.1	S29UK9-15204M	Cisco 2901-2921 IOS UNIVERSAL	N/A	14 days	No	3	0.00	0.00	0		0.00
11.2	FL-SRST	Cisco Survivable Remote Site Telephony License	N/A	21 days	No	3	0.00	0.00	0		0.00
11.3	FL-CME-SRST-5	Communication Manager Express or SRST - 5 seat license	N/A	21 days	No	3	170.00	510.00	49.5		257.55
11.4	VIC2-4FXO	Four-port Voice Interface Card - FXO (Universal)	N/A	21 days	No	3	880.00	2,640.00	49.5		1,333.20
11.5	PWR-2901-AC	Cisco 2901 AC Power Supply	N/A	14 days	Yes	3	0.00	0.00	0		0.00
11.6	CAB-AC	AC Power Cord (North America) C13 NEMA 5-15P 2.1m	N/A	14 days	No	3	0.00	0.00	0		0.00

11.7	FL-CME-SRST-25	Communication Manager Express or SRST - 25 seat license	N/A	21 days	Yes	3	0.00	0.00	0	0.00
11.8	FL-CUBEE-5	Unified Border Element Enterprise License - 5 sessions	N/A	21 days	Yes	6	0.00	0.00	0	0.00
11.9	PI-MSE-PRMO-INSRT	Insert Packout - PI-MSE	N/A	14 days	Yes	3	0.00	0.00	0	0.00
11.10	SL-29-IPB-K9	IP Base License for Cisco 2901-2951	N/A	14 days	Yes	3	0.00	0.00	0	0.00
11.11	SL-29-UC-K9	Unified Communication License for Cisco 2901-2951	N/A	14 days	Yes	3	0.00	0.00	0	0.00
11.12	HWIC-BLANK	Blank faceplate for HWIC slot on Cisco ISR	N/A	21 days	Yes	9	0.00	0.00	0	0.00
11.13	ISR-CCP-EXP	Cisco Config Pro Express on Router Flash	N/A	21 days	Yes	3	0.00	0.00	0	0.00
11.14	MEM-2900-512MB-DEF	512MB DRAM for Cisco 2901-2921 ISR (Default)	N/A	14 days	Yes	3	0.00	0.00	0	0.00
11.15	MEM-CF-256MB	256MB Compact Flash for Cisco 1900 2900 3900 ISR	N/A	21 days	Yes	3	0.00	0.00	0	0.00
11.16	PVDM3-16	16-channel high-density voice and video DSP module	N/A	21 days	Yes	3	0.00	0.00	0	0.00
SubTotal										6,734.18
12.0	C2921-CME-SRST/K9	CUBE10	N/A	14 days	No	1	5,195.00	5,195.00	49.5	2,623.48
12.0.1	CON-SNT-2921CMST	SMARTNET 8X5XNBD 2921 Voice Bundle w/ UC License PAK	12 month(s)	N/A	No	1	550.00	550.00	100	0.00
12.1	S29UK9-15204M	Cisco 2901-2921 IOS UNIVERSAL	N/A	14 days	No	1	0.00	0.00	0	0.00
12.2	FL-SRST	Cisco Survivable Remote Site Telephony License	N/A	21 days	No	1	0.00	0.00	0	0.00
12.3	VVIC3-2MFT-T1/E1	2-Port 3rd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1	N/A	21 days	No	1	2,200.00	2,200.00	49.5	1,111.00
12.4	VIC3-2FXS/DID	Two-Port Voice Interface Card- FXS and DID	N/A	21 days	No	1	440.00	440.00	49.5	222.20
12.5	PVDM3-32U64	PVDM3 32-channel to 64-channel factory upgrade	N/A	21 days	No	1	1,500.00	1,500.00	49.5	757.50
12.6	PWR-2921-51-AC	Cisco 2921/2951 AC Power Supply	N/A	14 days	Yes	1	0.00	0.00	0	0.00
12.7	CAB-AC	AC Power Cord (North America) C13 NEMA 5-15P 2.1m	N/A	14 days	No	1	0.00	0.00	0	0.00
12.8	FL-CME-SRST-25	Communication Manager Express or SRST - 25 seat license	N/A	21 days	Yes	1	0.00	0.00	0	0.00
12.9	FL-CUBEE-5	Unified Border Element Enterprise License - 5 sessions	N/A	21 days	Yes	2	0.00	0.00	0	0.00
12.10	PI-MSE-PRMO-INSRT	Insert Packout - PI-MSE	N/A	14 days	Yes	1	0.00	0.00	0	0.00
12.11	SL-29-IPB-K9	IP Base License for Cisco 2901-2951	N/A	14 days	Yes	1	0.00	0.00	0	0.00
12.12	SL-29-UC-K9	Unified Communication License for Cisco 2901-2951	N/A	14 days	Yes	1	0.00	0.00	0	0.00
12.13	HWIC-BLANK	Blank faceplate for HWIC slot on Cisco ISR	N/A	21 days	Yes	2	0.00	0.00	0	0.00
12.14	ISR-CCP-EXP	Cisco Config Pro Express on Router Flash	N/A	21 days	Yes	1	0.00	0.00	0	0.00
12.15	MEM-2900-512MB-DEF	512MB DRAM for Cisco 2901-2921 ISR (Default)	N/A	14 days	Yes	1	0.00	0.00	0	0.00
12.16	MEM-CF-256MB	256MB Compact Flash for Cisco 1900 2900 3900 ISR	N/A	21 days	Yes	1	0.00	0.00	0	0.00
12.17	SM-D-BLANK	Blank faceplate for DW slot on Cisco 2951 and 3925	N/A	21 days	Yes	1	0.00	0.00	0	0.00
12.18	SM-S-BLANK	Removable faceplate for SM slot on Cisco 290039004400 ISR	N/A	21 days	Yes	1	0.00	0.00	0	0.00
SubTotal										4,714.18
13.0	C2921-CME-SRST/K9	CUBE10	N/A	14 days	No	1	5,195.00	5,195.00	49.5	2,623.48
13.0.1	CON-SNT-2921CMST	SMARTNET 8X5XNBD 2921 Voice Bundle w/ UC License PAK	12 month(s)	N/A	No	1	550.00	550.00	100	0.00
13.1	S29UK9-15204M	Cisco 2901-2921 IOS UNIVERSAL	N/A	14 days	No	1	0.00	0.00	0	0.00
13.2	FL-SRST	Cisco Survivable Remote Site Telephony License	N/A	21 days	No	1	0.00	0.00	0	0.00
13.3	VVIC3-1MFT-T1/E1	1-Port 3rd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1	N/A	21 days	No	1	1,430.00	1,430.00	49.5	722.15
13.4	PWR-2921-51-AC	Cisco 2921/2951 AC Power Supply	N/A	14 days	Yes	1	0.00	0.00	0	0.00
13.5	CAB-AC	AC Power Cord (North America) C13 NEMA 5-15P 2.1m	N/A	14 days	No	1	0.00	0.00	0	0.00
13.6	FL-CME-SRST-25	Communication Manager Express or SRST - 25 seat license	N/A	21 days	Yes	1	0.00	0.00	0	0.00
13.7	FL-CUBEE-5	Unified Border Element Enterprise License - 5 sessions	N/A	21 days	Yes	2	0.00	0.00	0	0.00
13.8	PI-MSE-PRMO-INSRT	Insert Packout - PI-MSE	N/A	14 days	Yes	1	0.00	0.00	0	0.00
13.9	SL-29-IPB-K9	IP Base License for Cisco 2901-2951	N/A	14 days	Yes	1	0.00	0.00	0	0.00
13.10	SL-29-UC-K9	Unified Communication License for Cisco 2901-2951	N/A	14 days	Yes	1	0.00	0.00	0	0.00
13.11	HWIC-BLANK	Blank faceplate for HWIC slot on Cisco ISR	N/A	21 days	Yes	3	0.00	0.00	0	0.00
13.12	ISR-CCP-EXP	Cisco Config Pro Express on Router Flash	N/A	21 days	Yes	1	0.00	0.00	0	0.00
13.13	MEM-2900-512MB-DEF	512MB DRAM for Cisco 2901-2921 ISR (Default)	N/A	14 days	Yes	1	0.00	0.00	0	0.00
13.14	MEM-CF-256MB	256MB Compact Flash for Cisco 1900 2900 3900 ISR	N/A	21 days	Yes	1	0.00	0.00	0	0.00
13.15	PVDM3-32	32-channel high-density voice and video DSP module	N/A	21 days	Yes	1	0.00	0.00	0	0.00
13.16	SM-D-BLANK	Blank faceplate for DW slot on Cisco 2951 and 3925	N/A	21 days	Yes	1	0.00	0.00	0	0.00

13.17	SM-S-BLANK	Removable faceplate for SM slot on Cisco 290039004400 ISR	N/A	21 days	Yes	1	0.00	0.00	0	0.00
SubTotal										3,345.63
14.0	WBXMTSVR2-K9	Webex Meetings Server 2.x Software Kit	N/A	0 days	No	1	0.00	0.00	0	0.00
14.0.1	CON-ESW-WBXMT2K9	ESSENTIAL SW Webex Meeting Server 2.x Software Kit	36 month(s)	N/A	No	1	0.00	0.00	0	0.00
14.1	WBXMTSVR2-USR-K9	WBX Meetings Server 2.x - Initial Licenses	N/A	21 days	No	50	230.00	11,500.00	49.5	5,807.50
14.1.0.1	UCSS-U-MTSVR-3-1	UCSS for Wbx Meeting Server - 3 years - 1 User	36 month(s)	N/A	No	50	74.00	3,700.00	49.5	1,868.50
14.1.0.2	CON-ESW-WBXMUSR9	ESSENTIAL SW WBX Meetings Server	36 month(s)	N/A	No	50	48.00	2,400.00	21.5	1,884.00
SubTotal										9,560.00
15.0	WMS-EZ-C220-50P	PCIe	N/A	10 days	No	2	11,874.70	23,749.40	57.5	10,093.50
15.0.1	CON-SNT-C22050P	CPU9271CV RAI	12 month(s)	N/A	No	2	263.00	526.00	100	0.00
15.1	CAB-9K12A-NA	Power Cord 125VAC 13A NEMA 5-15 Plug North America	N/A	8 days	No	4	0.00	0.00	0	0.00
15.2	R2XX-RAID10	Enable RAID 10 Setting	N/A	10 days	Yes	2	0.00	0.00	0	0.00
15.3	UCS-CPU-E5-2609	2.4 GHz E5-2609/80W 4C/10MB Cache/DDR3 1066MHz	N/A	10 days	Yes	4	0.00	0.00	0	0.00
15.4	UCS-HDD1T12F212	1TB SAS 7.2K RPM 3.5 inch HDD/hot plug/drive sled mounted	N/A	10 days	Yes	8	0.00	0.00	0	0.00
15.5	UCS-MR-1X041RY-A	4GB DDR3-1600-MHz RDIMM/PC3-12800/single rank/1.35v	N/A	10 days	Yes	24	0.00	0.00	0	0.00
15.6	UCS-RAID9271CV-8I	MegaRAID 9271CV with 8 internal SAS/SATA ports with Supercap	N/A	10 days	Yes	2	0.00	0.00	0	0.00
15.7	UCS-SD-16G	16GB SD Card module for UCS Servers	N/A	10 days	Yes	2	0.00	0.00	0	0.00
15.8	UCSC-HS-C220M3	Heat Sink for UCS C220 M3 Rack Server	N/A	10 days	Yes	4	0.00	0.00	0	0.00
15.9	UCSC-PCIE-IRJ45	Intel i350 Quad Port 1Gb Adapter	N/A	10 days	Yes	2	0.00	0.00	0	0.00
15.10	UCSC-PSU-650W	650W power supply for C-series rack servers	N/A	10 days	Yes	4	0.00	0.00	0	0.00
15.11	UCSC-RAIL1	Rail Kit for C220 C22 C24 rack servers	N/A	10 days	Yes	2	0.00	0.00	0	0.00
SubTotal										10,093.50
16.0	BE6K-ST-BDL-K9=	Cisco BE6000 Medium Density Server Export Restricted SW	N/A	21 days	No	1	9,400.00	9,400.00	49.5	4,747.00
16.0.1	CON-SNT-BE6KSTBD	SMARTNET 8X5XNBD Cisco Business Edition 6000 UCS Srv 9.0	12 month(s)	N/A	No	1	239.00	239.00	100	0.00
16.1	CAB-9K12A-NA	Power Cord 125VAC 13A NEMA 5-15 Plug North America	N/A	8 days	No	1	0.00	0.00	0	0.00
16.2	BE6K-SW-9X10X	Cisco Business Edition 6000 - Software App Version 9.X 10.X	N/A	21 days	Yes	1	0.00	0.00	0	0.00
16.3	CIT-PSU-BLKP	Power Supply Blanking Panel/Filler	N/A	21 days	Yes	1	0.00	0.00	0	0.00
16.4	CIT-SD-16G-C220	16GB SD Card Module for C220 servers	N/A	21 days	Yes	1	0.00	0.00	0	0.00
16.5	CTI-VCSC-BE6K-PAK	Config Only E-Delivery VCS Control PAK PID	N/A	21 days	Yes	1	0.00	0.00	0	0.00
16.6	LIC-SW-VMVCS-K9	Software Release Key for Encrypted Virtual VCS Application	N/A	14 days	Yes	1	0.00	0.00	0	0.00
16.7	LIC-VCS-10+	Video Comm Server 10 Add Non-traversal Network Calls	N/A	14 days	Yes	1	0.00	0.00	0	0.00
16.8	LIC-VCS-GW	Enable GW Feature (H323-SIP)	N/A	14 days	Yes	1	0.00	0.00	0	0.00
16.9	LIC-VCSE-5+	Video Communication Server - 5 Traversal Calls	N/A	14 days	Yes	1	0.00	0.00	0	0.00
16.10	R2XX-RAID10	Enable RAID 10 Setting	N/A	10 days	Yes	1	0.00	0.00	0	0.00
16.11	UC-A03-D500GC3	500GB 6Gb SATA 7.2K RPM SFF Hot Plug/Drive Sled Mounted	N/A	21 days	Yes	4	0.00	0.00	0	0.00
16.12	UC-CPU-E5-2609	2.4 GHz E5-2609/80W 4C/10MB Cache/DDR3 1066MHz	N/A	21 days	Yes	2	0.00	0.00	0	0.00
16.13	UC-MR-1X082RY-A	8GB DDR3-1600-MHz RDIMM/PC3-12800/Dual Rank/1.35v	N/A	21 days	Yes	4	0.00	0.00	0	0.00
16.14	UC-PSU-650W	650W Power Supply Unit For UCSC C220 Rack Server	N/A	21 days	Yes	1	0.00	0.00	0	0.00
16.15	UC-RAID-9271	MegaRAID 9271-8i + Battery Backup for C240 and C220	N/A	21 days	Yes	1	0.00	0.00	0	0.00
16.16	VMW-VS5-HYP-K9	Cisco UC Virt. Hypervisor 5.x (2-socket)	N/A	21 days	Yes	1	0.00	0.00	0	0.00
16.17	VMW-VS5-SNS	Cisco UC Virt. Hypervisor 5.x - SnS	N/A	21 days	Yes	1	0.00	0.00	0	0.00
SubTotal										4,747.00
17.0	VMW-VS5-ST-1A=	VMware vSphere 5 Standard (1 CPU) 1yr Support Required	N/A	10 days	No	4	1,866.00	7,464.00	57.5	3,172.20
17.0.1	CON-ISV1-VS5STD1A	ISV 24X7 VMware vSphere Standard List Price is ANNUAL	12 month(s)	N/A	No	4	420.00	1,680.00	21.5	1,318.80
17.1	UCS-VMW-TERMS	Acceptance of Terms Standalone VMW License for UCS Servers	N/A	10 days	No	4	0.00	0.00	0	0.00
SubTotal										4,491.00
18.0	CP-8945-K9=	Cisco Unified Phone 8945 Phantom Grey Standard Handset	N/A	21 days	No	104	525.00	54,600.00	49.5	27,573.00
18.0.1	CON-SNT-CP8945K9	SMARTNET 8X5XNBD Cisco Unified Phone 8945 Phantom Grey	12 month(s)	N/A	No	104	12.00	1,248.00	100	0.00
SubTotal										27,573.00
19.0	CP-7841-K9=	Cisco UC Phone 7841	N/A	21 days	No	103	365.00	37,595.00	49.5	18,985.48

19.0.1	CON-SNT-CP7841K9	SMARTNET 8X5XNBD Cisco UP Phone 7841	12 month(s)	N/A	No	103	10.00	1,030.00	100	0.00
SubTotal										18,985.48
20.0	CP-7821-K9=	Cisco UC Phone 7821	N/A	21 days	No	1053	255.00	268,515.00	49.5	135,600.08
20.0.1	CON-SNT-CP7821K9	SMARTNET 8X5XNBD Cisco UP Phone 7821	12 month(s)	N/A	No	1053	10.00	10,530.00	100	0.00
SubTotal										135,600.08
21.0	VG204XM	Cisco VG204XM Analog Voice Gateway	N/A	21 days	No	15	1,295.00	19,425.00	49.5	9,809.63
21.0.1	CON-SNT-VG204XM	SMARTNET 8X5XNBD Cisco VG204 Analog V	12 month(s)	N/A	No	15	104.00	1,560.00	100	0.00
21.1	SVG2XIPV-15302T	Cisco VG20X Series IOS IP VOICE	N/A	21 days	Yes	15	0.00	0.00	0	0.00
21.2	CAB-AC	AC Power Cord (North America) C13 NEMA 5-15P 2.1m	N/A	14 days	No	15	0.00	0.00	0	0.00
21.3	CAB-ETH-S-RJ45	Yellow Cable for Ethernet Straight-through RJ-45 6 feet	N/A	14 days	Yes	15	0.00	0.00	0	0.00
21.4	PWR-30W-AC	Power Supply 30 Watt AC	N/A	21 days	Yes	15	0.00	0.00	0	0.00
SubTotal										9,809.63
22.0	VG224-4PACK	4 Pack of VG224 High Density Analog Gateway	N/A	0 days	No	1	0.00	0.00	0	0.00
22.1	VG224-MP	VG224 for MultiPack	N/A	0 days	No	4	4,125.00	16,500.00	49.5	8,332.50
22.1.0.1	CON-SNT-VG224-MP	SMARTNET 8X5XNBD VG224 for MultiPack	12 month(s)	N/A	No	4	432.00	1,728.00	100	0.00
22.1.1	CAB-AC	AC Power Cord (North America), C13, NEMA 5-15P, 2.1m	N/A	14 days	No	4	0.00	0.00	0	0.00
22.1.2	SVGVG-15104M	Cisco VG200 Series IP SUBSET/VOICE	N/A	14 days	No	4	0.00	0.00	0	0.00
22.1.3	MEM-224-1X128D-U	128MB DRAM Memory for VG224 (Factory Upgrade)	N/A	21 days	Yes	8	0.00	0.00	0	0.00
22.1.4	MEM-224-1X64F-U	64MB Flash Memory for VG224 (Factory Upgrade)	N/A	21 days	Yes	4	0.00	0.00	0	0.00
SubTotal										8,332.50
23.0	VG224	24 Port Voice over IP analog phone gateway	N/A	21 days	No	2	5,395.00	10,790.00	49.5	5,448.95
23.0.1	CON-SNT-VG224	SMARTNET 8X5XNBD 24 Port Voice over I	12 month(s)	N/A	No	2	432.00	864.00	100	0.00
23.1	CAB-AC	AC Power Cord (North America) C13 NEMA 5-15P 2.1m	N/A	14 days	No	2	0.00	0.00	0	0.00
23.2	SVGVG-15104M	Cisco VG200 Series IP SUBSET/VOICE	N/A	14 days	No	2	0.00	0.00	0	0.00
23.3	MEM-224-1X128D-U	128MB DRAM Memory for VG224 (Factory Upgrade)	N/A	21 days	Yes	4	0.00	0.00	0	0.00
23.4	MEM-224-1X64F-U	64MB Flash Memory for VG224 (Factory Upgrade)	N/A	21 days	Yes	2	0.00	0.00	0	0.00
SubTotal										5,448.95
24.0	CCX-10-SYS-K9	CCX 10 System	N/A	0 days	No	1	0.00	0.00	0	0.00
24.1	CCX-10-LIC-K9	CCX 10.0 New Licenses	N/A	21 days	No	1	0.00	0.00	0	0.00
24.1.0.1	CON-ESW-CCX10LK9	ESSENTIAL SW CCX 10.0 New Licenses	12 month(s)	N/A	No	1	0.00	0.00	0	0.00
24.1.1	CCX-10-N-P-LIC	CCX 10.0 PRE Seat Qty 1 LICENSE ONLY	N/A	21 days	No	80	1,850.00	148,000.00	49.5	74,740.00
24.1.1.0.1	UCSS-U-CCX-P-1-1	UCSS for CCX PRE for - 1 users One Year Sub	12 month(s)	N/A	No	80	148.00	11,840.00	49.5	5,979.20
24.1.1.0.2	CON-ESW-CCX10NPL	ESSENTIAL SW CCX 10.0 PRE Seat Qty 1 LICENSE ONLY	12 month(s)	N/A	No	80	205.00	16,400.00	21.5	12,874.00
24.1.2	CCX-10-AQM-LIC	CCX 10.0 Adv Quality Manager Seat Qty 1 LICENSE ONLY	N/A	21 days	No	80	695.00	55,600.00	49.5	28,078.00
24.1.2.0.1	UCSS-U-CCX-AQM-1-1	UCSS CCX Advanced Qual Mgmt - 1 agent One Year Sub	12 month(s)	N/A	No	80	42.00	3,360.00	49.5	1,696.80
24.1.2.0.2	CON-ESW-CCX10AML	ESSENTIAL SW CCX 10.0 Adv Quality Manager Seat Qty 1	12 month(s)	N/A	No	80	77.00	6,160.00	21.5	4,835.60
24.1.3	CCX-10-WFM-LIC	CCX 10.0 Workforce Manager Seat Qty 1 LICENSE ONLY	N/A	NPH	No	80	550.00	44,000.00	49.5	22,220.00
24.1.3.0.1	UCSS-U-CCX-WFM-1-1	UCSS for Workfrc Mgmnt - 1 Instance One Year Sub	12 month(s)	N/A	No	80	35.00	2,800.00	49.5	1,414.00
24.1.3.0.2	CON-ESW-CCX10WFM	ESSENTIAL SW CCX 10.0 Workforce Manager Seat Qty 1 LI	12 month(s)	N/A	No	80	64.00	5,120.00	21.5	4,019.20
24.1.4	CCX-10-PHA-LIC	CCX 10.0 PRE HA LICENSE ONLY	N/A	21 days	No	1	14,995.00	14,995.00	49.5	7,572.48
24.1.5	CCEH-CCP-SVR-LIC	CCP Server	N/A	21 days	No	1	1,000.00	1,000.00	49.5	505.00
24.1.5.0.1	CON-ESW-CCPSVRLC	ESSENTIAL SW CCP Server	12 month(s)	N/A	No	1	120.00	120.00	21.5	94.20
24.1.6	CCX-10-P-SVR-LIC	CCX 10.0 PRE Server License	N/A	21 days	Yes	1	0.00	0.00	0	0.00
24.1.7	CCX-10-PAK	CCX 10.0 autoexpanded PAK	N/A	21 days	Yes	1	0.00	0.00	0	0.00
SubTotal										164,028.48
25.0	CCEH-SM-V100-K9=	Media kit for SocialMiner 10.0	N/A	21 days	No	1	100.00	100.00	49.5	50.50
SubTotal										50.50
26.0	L-CUAC10X	Cisco Unified Attendant Consoles 10.x	N/A	21 days	No	1	0.00	0.00	0	0.00
26.0.1	CON-SCU4-CUACX10M	SC ADV SUP SAU Cisco Unified Attendant Consoles 10.x	12 month(s)	N/A	No	1	0.00	0.00	0	0.00
26.1	L-CUAC10X-STND	Cisco Unified Attendant Console Standard 10.x - 1 Lic	N/A	21 days	No	5	995.00	4,975.00	49.5	2,512.38

26.1.0.1	UCSS-U-UACSTND-1-1	UCSS for Cisco UAC Standard - 1 instance One Year Sub	12 month(s)	N/A	No	5	100.00	500.00	49.5	252.50
26.1.0.2	CON-SCU4-CUAC10XS	SC ADV SUP SAU Cisco Unified Attend	12 month(s)	N/A	No	5	398.00	1,990.00	21.5	1,562.15
									SubTotal	4,327.03
Cisco Solution (w/ 7821 phones)									Configset Total	\$751,083.31

UDT Professional Services Engagement

\$247,676.00

Variphy Insight for Enterprises

\$13,980.00

GRAND TOTAL=

\$1,012,739.31

Optional:

Additional Cost as Needed-

Cable Drops

Price per Cable Drop

\$150.00



CISCO CAPITAL FINANCING OPTION

City of Hollywood

EQUIPMENT

FINANCE OPTION: The financing will be completed by Key Government Finance, Cisco Systems Capital's financing partner for government and education customers. Payments due under the financing will be made directly to Key Government Finance, Inc.

LESSOR: Key Government Finance, Inc.

LESSEE: **City of Hollywood**

EQUIPMENT: Cisco Systems Products

Project Summary Option 7821	
Cisco Systems Equipment	\$ 751,083.31
Buyout	\$ 238,182.34
Cisco "Smartnet" Maintenance	\$ -
Labor/Installation/Etc.	\$ 247,676.00
Variphy Insight for Enterprises	\$ 13,980.00
TOTAL AMOUNT TO BE FINANCED	\$ 1,250,921.65

FINANCING STRUCTURE: This is a financing with the title to the equipment passing to lessee. This is a net financing under which Lessee pays all costs, including insurance, maintenance and taxes, for the term of the financing. At the end of the financing term the equipment can be purchased for \$1

Option 1

Amount to be Financed	Interest Rate	24 quarterly Payments	Payment Due Date	Payment Factor(*)	Pmts / Year	Term
\$1,250,921.65	0.00%	\$48,148.11	9/15/2014	Custom	4	5 Years
		\$48,148.11	12/15/2014			
		\$48,148.11	3/15/2015			
		\$48,148.11	6/15/2015			
		\$48,148.11	9/15/2015			
		\$48,148.11	12/15/2015			
		\$48,148.11	3/15/2016			
		\$48,148.11	6/15/2016			
		\$48,148.11	9/15/2016			
		\$48,148.11	12/15/2016			
		\$48,148.11	3/15/2017			
		\$48,148.11	6/15/2017			
		\$48,148.11	9/15/2017			
		\$48,148.11	12/15/2017			
		\$48,148.11	3/15/2018			
		\$48,148.11	6/15/2018			
		\$48,148.11	9/15/2018			
		\$48,148.11	12/15/2018			
		\$48,148.11	3/15/2019			
		\$48,148.11	6/15/2019			
		\$48,148.11	9/15/2019			
		\$48,148.11	12/15/2019			
		\$48,148.11	3/15/2020			
		\$48,148.11	6/15/2020			

**Assumes a lease/escrow funding on 6/15/2014*

**NTT program- \$0 payments, 0% interest for first 3 months*

() The payment factor expresses the payment as a percentage of the Equipment Cost. To calculate the periodic lease payment for any Equipment Cost, multiply the payment factor by the Equipment Cost.*

RATE INDEX:

The interest rate provided above is based on current market rates as of the date of this proposal, and will be subject to change based on market conditions as of the time of closing. After closing the interest rate will be fixed for the term of the financing.

APPROVAL:

The financing contemplated by this proposal is subject to the execution and delivery of all appropriate documents (in form satisfactory to Lessor), including without limitation, to the extent applicable, the Master Lease Agreement, any Schedule, financing statements, legal opinion or other documents or agreements reasonably required by Lessor. This proposal, until credit approved, serves as a quotation, not a commitment by Key Government Finance to provide credit. Final acceptance of this proposal is subject to credit, collateral and essential use review and approval by Lessor.

CONTACT:

Contact your financing representative with any questions:

Brandon Casement- US State & Local Government Account Manager
Cisco Systems Capital
843-822-4455

bcasemen@cisco.com

NOTES:

The rates provided above are based on a minimum funding amount of \$50,000. If total to be funded will be less than \$50,000 please contact us for a revised Proposal.

Line Number	Item Name	Description	Service Duration	Lead Time	Included Item	Quantity	ListPrice	Extended ListPrice	Discount %	Selling Price
1.0	C2901-CME-SRST/K9	2901 Voice Bundle w/PVDM3-16 FL-CME-SRST-25 UC Lic FL-CUBE10	N/A	24 days	No	10	3,395.00	33,950.00	49.5	17,144.75
1.0.1	CON-SNT-2901CMST	SMARTNET 8X5XNBD 2901 Voice Bundle w/ UC License PAK	12 month(s)	N/A	No	10	305.00	3,050.00	100	0.00
1.1	S29UK9-15204M	Cisco 2901-2921 IOS UNIVERSAL	N/A	14 days	No	10	0.00	0.00	0	0.00
1.2	FL-SRST	Cisco Survivable Remote Site Telephony License	N/A	21 days	No	10	0.00	0.00	0	0.00
1.3	VIC2-4FXO	Four-port Voice Interface Card - FXO (Universal)	N/A	21 days	No	10	880.00	8,800.00	49.5	4,444.00
1.4	PWR-2901-AC	Cisco 2901 AC Power Supply	N/A	14 days	Yes	10	0.00	0.00	0	0.00
1.5	CAB-AC	AC Power Cord (North America) C13 NEMA 5-15P 2.1m	N/A	14 days	No	10	0.00	0.00	0	0.00
1.6	FL-CME-SRST-25	Communication Manager Express or SRST - 25 seat license	N/A	21 days	Yes	10	0.00	0.00	0	0.00
1.7	MEM-CF-256MB	256MB Compact Flash for Cisco 1900 2900 3900 ISR	N/A	21 days	Yes	10	0.00	0.00	0	0.00
1.8	PVDM3-16	16-channel high-density voice and video DSP module	N/A	21 days	Yes	10	0.00	0.00	0	0.00
1.9	FL-CUBEE-5	Unified Border Element Enterprise License - 5 sessions	N/A	21 days	Yes	20	0.00	0.00	0	0.00
1.10	PI-MSE-PRMO-INSRT	Insert Packout - PI-MSE	N/A	14 days	Yes	10	0.00	0.00	0	0.00
1.11	SL-29-IPB-K9	IP Base License for Cisco 2901-2951	N/A	14 days	Yes	10	0.00	0.00	0	0.00
1.12	SL-29-UC-K9	Unified Communication License for Cisco 2901-2951	N/A	14 days	Yes	10	0.00	0.00	0	0.00
1.13	HWIC-BLANK	Blank faceplate for HWIC slot on Cisco ISR	N/A	21 days	Yes	30	0.00	0.00	0	0.00
1.14	ISR-CCP-EXP	Cisco Config Pro Express on Router Flash	N/A	21 days	Yes	10	0.00	0.00	0	0.00
1.15	MEM-2900-512MB-DEF	512MB DRAM for Cisco 2901-2921 ISR (Default)	N/A	14 days	Yes	10	0.00	0.00	0	0.00
SubTotal										21,588.75
2.0	C2911-CME-SRST/K9	2911 Voice Bundle w/PVDM3-16 FL-CME-SRST-25 UC Lic FL-CUBE10	N/A	14 days	No	1	4,095.00	4,095.00	49.5	2,067.98
2.0.1	CON-SNT-2911CMST	SMARTNET 8X5XNBD 2911 Voice Bundle w/ UC License PAK	12 month(s)	N/A	No	1	440.00	440.00	100	0.00
2.1	S29UK9-15204M	Cisco 2901-2921 IOS UNIVERSAL	N/A	14 days	No	1	0.00	0.00	0	0.00
2.2	FL-SRST	Cisco Survivable Remote Site Telephony License	N/A	21 days	No	1	0.00	0.00	0	0.00
2.3	FL-CME-SRST-5	Communication Manager Express or SRST - 5 seat license	N/A	21 days	No	1	170.00	170.00	49.5	85.85
2.4	VIC2-4FXO	Four-port Voice Interface Card - FXO (Universal)	N/A	21 days	No	1	880.00	880.00	49.5	444.40
2.5	PWR-2911-AC	Cisco 2911 AC Power Supply	N/A	14 days	Yes	1	0.00	0.00	0	0.00
2.6	CAB-AC	AC Power Cord (North America) C13 NEMA 5-15P 2.1m	N/A	14 days	No	1	0.00	0.00	0	0.00
2.7	FL-CME-SRST-25	Communication Manager Express or SRST - 25 seat license	N/A	21 days	Yes	1	0.00	0.00	0	0.00
2.8	FL-CUBEE-5	Unified Border Element Enterprise License - 5 sessions	N/A	21 days	Yes	2	0.00	0.00	0	0.00
2.9	PI-MSE-PRMO-INSRT	Insert Packout - PI-MSE	N/A	14 days	Yes	1	0.00	0.00	0	0.00
2.10	SL-29-IPB-K9	IP Base License for Cisco 2901-2951	N/A	14 days	Yes	1	0.00	0.00	0	0.00
2.11	SL-29-UC-K9	Unified Communication License for Cisco 2901-2951	N/A	14 days	Yes	1	0.00	0.00	0	0.00
2.12	HWIC-BLANK	Blank faceplate for HWIC slot on Cisco ISR	N/A	21 days	Yes	3	0.00	0.00	0	0.00
2.13	ISR-CCP-EXP	Cisco Config Pro Express on Router Flash	N/A	21 days	Yes	1	0.00	0.00	0	0.00
2.14	MEM-2900-512MB-DEF	512MB DRAM for Cisco 2901-2921 ISR (Default)	N/A	14 days	Yes	1	0.00	0.00	0	0.00
2.15	MEM-CF-256MB	256MB Compact Flash for Cisco 1900 2900 3900 ISR	N/A	21 days	Yes	1	0.00	0.00	0	0.00
2.16	PVDM3-16	16-channel high-density voice and video DSP module	N/A	21 days	Yes	1	0.00	0.00	0	0.00
2.17	SM-S-BLANK	Removable faceplate for SM slot on Cisco 290039004400 ISR	N/A	21 days	Yes	1	0.00	0.00	0	0.00
SubTotal										2,598.23
3.0	C2921-CME-SRST/K9	2921 Voice Bundle w/PVDM3-32 FL-CME-SRST-25 UC Lic FL-CUBE10	N/A	14 days	No	1	5,195.00	5,195.00	49.5	2,623.48
3.0.1	CON-SNT-2921CMST	SMARTNET 8X5XNBD 2921 Voice Bundle w/ UC License PAK	12 month(s)	N/A	No	1	550.00	550.00	100	0.00
3.1	S29UK9-15204M	Cisco 2901-2921 IOS UNIVERSAL	N/A	14 days	No	1	0.00	0.00	0	0.00
3.2	FL-SRST	Cisco Survivable Remote Site Telephony License	N/A	21 days	No	1	0.00	0.00	0	0.00
3.3	FL-CME-SRST-25	Communication Manager Express or SRST - 25 seat license	N/A	21 days	No	2	650.00	1,300.00	49.5	656.50
3.4	VIC2-4FXO	Four-port Voice Interface Card - FXO (Universal)	N/A	21 days	No	2	880.00	1,760.00	49.5	888.80
3.5	PWR-2921-51-AC	Cisco 2921/2951 AC Power Supply	N/A	14 days	Yes	1	0.00	0.00	0	0.00
3.6	CAB-AC	AC Power Cord (North America) C13 NEMA 5-15P 2.1m	N/A	14 days	No	1	0.00	0.00	0	0.00
3.7	FL-CME-SRST-25	Communication Manager Express or SRST - 25 seat license	N/A	21 days	Yes	1	0.00	0.00	0	0.00

3.8	FL-CUBEE-5	Unified Border Element Enterprise License - 5 sessions	N/A	21 days	Yes	2	0.00	0.00	0	0.00
3.9	PI-MSE-PRMO-INSRT	Insert Packout - PI-MSE	N/A	14 days	Yes	1	0.00	0.00	0	0.00
3.10	SL-29-IPB-K9	IP Base License for Cisco 2901-2951	N/A	14 days	Yes	1	0.00	0.00	0	0.00
3.11	SL-29-UC-K9	Unified Communication License for Cisco 2901-2951	N/A	14 days	Yes	1	0.00	0.00	0	0.00
3.12	HWIC-BLANK	Blank faceplate for HWIC slot on Cisco ISR	N/A	21 days	Yes	2	0.00	0.00	0	0.00
3.13	ISR-CCP-EXP	Cisco Config Pro Express on Router Flash	N/A	21 days	Yes	1	0.00	0.00	0	0.00
3.14	MEM-2900-512MB-DEF	512MB DRAM for Cisco 2901-2921 ISR (Default)	N/A	14 days	Yes	1	0.00	0.00	0	0.00
3.15	MEM-CF-256MB	256MB Compact Flash for Cisco 1900 2900 3900 ISR	N/A	21 days	Yes	1	0.00	0.00	0	0.00
3.16	PVDM3-32	32-channel high-density voice and video DSP module	N/A	21 days	Yes	1	0.00	0.00	0	0.00
3.17	SM-D-BLANK	Blank faceplate for DW slot on Cisco 2951 and 3925	N/A	21 days	Yes	1	0.00	0.00	0	0.00
3.18	SM-S-BLANK	Removable faceplate for SM slot on Cisco 290039004400 ISR	N/A	21 days	Yes	1	0.00	0.00	0	0.00
										SubTotal
										4,168.78
4.0	C2951-CME-SRST/K9	2951 Voice Bundle w/PVDM3-32 FL-CME-SRST-25 UC Lic FL-CUBE10	N/A	14 days	No	1	9,095.00	9,095.00	49.5	4,592.98
4.0.1	CON-SNT-2951CMST	SMARTNET 8X5XNBD 2951 Voice Bundle w/ UC License PAK	12 month(s)	N/A	No	1	960.00	960.00	100	0.00
4.1	ISR-CCP-EXP	Cisco Config Pro Express on Router Flash	N/A	21 days	Yes	1	0.00	0.00	0	0.00
4.2	MEM-2951-512MB-DEF	512MB DRAM (1 512MB DIMM) for Cisco 2951 ISR (Default)	N/A	14 days	Yes	1	0.00	0.00	0	0.00
4.3	MEM-CF-256MB	256MB Compact Flash for Cisco 1900 2900 3900 ISR	N/A	21 days	Yes	1	0.00	0.00	0	0.00
4.4	PVDM3-32	32-channel high-density voice and video DSP module	N/A	21 days	Yes	1	0.00	0.00	0	0.00
4.5	SM-S-BLANK	Removable faceplate for SM slot on Cisco 290039004400 ISR	N/A	21 days	Yes	2	0.00	0.00	0	0.00
4.6	S2951UK9-15204M	Cisco 2951 IOS UNIVERSAL	N/A	14 days	No	1	0.00	0.00	0	0.00
4.7	VVIC3-1MFT-T1/E1	1-Port 3rd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1	N/A	21 days	No	1	1,430.00	1,430.00	49.5	722.15
4.8	PWR-2921-51-AC	Cisco 2921/2951 AC Power Supply	N/A	14 days	Yes	1	0.00	0.00	0	0.00
4.9	CAB-AC	AC Power Cord (North America) C13 NEMA 5-15P 2.1m	N/A	14 days	No	1	0.00	0.00	0	0.00
4.10	FL-CME-SRST-25	Communication Manager Express or SRST - 25 seat license	N/A	21 days	Yes	1	0.00	0.00	0	0.00
4.11	FL-CUBEE-5	Unified Border Element Enterprise License - 5 sessions	N/A	21 days	Yes	2	0.00	0.00	0	0.00
4.12	PI-MSE-PRMO-INSRT	Insert Packout - PI-MSE	N/A	14 days	Yes	1	0.00	0.00	0	0.00
4.13	SL-29-IPB-K9	IP Base License for Cisco 2901-2951	N/A	14 days	Yes	1	0.00	0.00	0	0.00
4.14	SL-29-UC-K9	Unified Communication License for Cisco 2901-2951	N/A	14 days	Yes	1	0.00	0.00	0	0.00
4.15	HWIC-BLANK	Blank faceplate for HWIC slot on Cisco ISR	N/A	21 days	Yes	3	0.00	0.00	0	0.00
4.16	FL-SRST	Cisco Survivable Remote Site Telephony License	N/A	21 days	No	1	0.00	0.00	0	0.00
										SubTotal
										5,315.13
5.0	BE7K-K9	Cisco BE7000 UCS C240M3 TRC2 Srv RST	N/A	21 days	No	4	23,468.00	93,872.00	49.5	47,405.36
5.0.1	CON-SNT-BE7KK9IP	SMARTNET 8X5XNBD Cisco BE7000 UCS C240M3 TRC2 SrvRST	12 month(s)	N/A	No	4	336.00	1,344.00	100	0.00
5.1	CAB-9K12A-NA	Power Cord 125VAC 13A NEMA 5-15 Plug North America	N/A	8 days	No	8	0.00	0.00	0	0.00
5.2	BE7K-SW-9X10X	Media (no lic) for Cisco Collaboration 9.x 10.x	N/A	21 days	Yes	4	0.00	0.00	0	0.00
5.3	CIT2-A03-D300GA2	300GB 6Gb SAS 10K RPM SFF HDD/hot plug/drive sled mounted	N/A	21 days	Yes	48	0.00	0.00	0	0.00
5.4	CIT2-CPU-E5-2640	2.50 GHz E5-2640/95W 6C/15MB Cache/DDR3 1333MHz	N/A	21 days	Yes	8	0.00	0.00	0	0.00
5.5	CIT2-MR-1X082RY-A	8GB DDR3-1333-MHz RDIMM/PC3-10600/2R/1.35v	N/A	21 days	Yes	32	0.00	0.00	0	0.00
5.6	CIT2-PCIE-IRJ45	Intel i350 Quad Port 1Gb Adapter	N/A	21 days	Yes	8	0.00	0.00	0	0.00
5.7	CIT2-PSU2-1200	1200W 2u Power Supply For UCS	N/A	21 days	Yes	8	0.00	0.00	0	0.00
5.8	CIT2-RAID-9271CV	MegaRAID 9271CV Raid card with 8 internal SAS/SATA parts S	N/A	21 days	Yes	4	0.00	0.00	0	0.00
5.9	R2XX-RAID5	Enable RAID 5 Setting	N/A	10 days	Yes	4	0.00	0.00	0	0.00
5.10	VMW-VS5-HYP-K9	Cisco UC Virt. Hypervisor 5.x (2-socket)	N/A	21 days	Yes	4	0.00	0.00	0	0.00
5.11	VMW-VS5-SNS	Cisco UC Virt. Hypervisor 5.x - SnS	N/A	21 days	Yes	4	0.00	0.00	0	0.00
										SubTotal
										47,405.36
6.0	R-UCL-UCM-LIC-K9	Top Level SKU For 9.x/10.x User License - eDelivery	N/A	21 days	No	1	0.00	0.00	0	0.00
6.0.1	CON-ESW-RUCLUCK9	ESSENTIAL SW Top Level SKU For 9.	12 month(s)	N/A	No	1	0.00	0.00	0	0.00
6.1	LIC-UCM-10X-ENHP-A	UC Manager-10.x Enh Plus Single User-Under 1K	N/A	21 days	No	207	295.00	61,065.00	49.5	30,837.83
6.1.0.1	CON-ESW-LICUEHPA	ESSENTIAL SW UC Manager-10.x Enh	12 month(s)	N/A	No	207	18.00	3,726.00	21.5	2,924.91
6.1.0.2	UCSS-U-CMENP-A-1-1	UC Manager Enh Plus UCSS Less Than 1K Users - 1 User -1 Year	12 month(s)	N/A	No	207	30.00	6,210.00	49.5	3,136.05
6.2	LIC-CUCM-10X-ENH-B	UC Manager-10.x Enhanced Single User-1K to 10K	N/A	21 days	No	1053	195.00	205,335.00	49.5	103,694.18
6.2.0.1	CON-ESW-LICCUNHB	ESSENTIAL SW UC Manager-10.x Enha	12 month(s)	N/A	No	1053	6.00	6,318.00	21.5	4,959.63

6.2.0.2	UCSS-U-UCM-B-1-1	UC Manager UCSS - 1 ENH User One Year Sub Tier B	12 month(s)	N/A	No	1053	14.00	14,742.00	49.5	7,444.71
6.3	LIC-CUCM-10X-ESS-A	UC Manager-10.x Essential User License User-Under 1K	N/A	21 days	No	312	40.00	12,480.00	49.5	6,302.40
6.3.0.1	CON-ESW-LICCUESA	ESSENTIAL SW UC Manager-10.x Esse	12 month(s)	N/A	No	312	2.00	624.00	21.5	489.84
6.3.0.2	UCSS-UUCMESS-A-1-1	UC Manager UCSS - 1 Essential User One Year Sub Tier A	12 month(s)	N/A	No	312	3.00	936.00	49.5	472.68
6.4	JAB-ADR-CLNT-UCM	Jabber for Android UCM Only	N/A	21 days	No	50	0.00	0.00	0	0.00
6.5	JAB-IPH-CLNT-UCM	Jabber for iPhone UCM Only	N/A	21 days	No	50	0.00	0.00	0	0.00
6.6	JAB9-DSK-CLNT-UCM	Jabber for Desktop User License 9.x for UCM only	N/A	21 days	No	100	0.00	0.00	0	0.00
6.7	JABBER-IM-ADDON	Jabber for Everyone Additional IM Users	N/A	21 days	No	1500	0.00	0.00	0	0.00
6.8	CUCM-VERS-10.X	CUCM Software Version 10.X	N/A	21 days	No	1	0.00	0.00	0	0.00
6.9	EXPWY-VE-C-K9	Cisco Expressway-C Server Virtual Edition	N/A	0 days	No	1	0.00	0.00	0	0.00
6.9.0.1	CON-ESW-EXPWYVEC	ESSENTIAL SW Cisco Expressway-C S	12 month(s)	N/A	No	1	0.00	0.00	0	0.00
6.10	EXPWY-VE-E-K9	Cisco Expressway-E Server Virtual Edition	N/A	0 days	No	1	0.00	0.00	0	0.00
6.10.0.1	CON-ESW-EXPWYVEE	ESSENTIAL SW Cisco Expressway-E Server Virtual Editi	12 month(s)	N/A	No	1	0.00	0.00	0	0.00
6.11	SW-EXP-8.X-K9	Software Image for Expressway with Encryption Version X8	N/A	0 days	No	1	0.00	0.00	0	0.00
6.12	JAB-IPH-RTU	Jabber for iPhone Right to Use	N/A	21 days	Yes	1	0.00	0.00	0	0.00
6.13	JAB9-WIN-UCM-RTU	JAB9 UCM Right to Use Certificate	N/A	21 days	Yes	1	0.00	0.00	0	0.00
6.14	JABBER-IM-RTU	Jabber for Everyone Right to Use	N/A	21 days	Yes	1	0.00	0.00	0	0.00
6.15	LIC-EXP-AN	Enable Advanced Networking Option	N/A	0 days	Yes	1	0.00	0.00	0	0.00
6.16	LIC-EXP-E	Enable Expressway-E Feature Set	N/A	0 days	Yes	1	0.00	0.00	0	0.00
6.17	LIC-EXP-E-PAK	Expressway Series Expressway-E PAK	N/A	0 days	Yes	1	0.00	0.00	0	0.00
6.18	LIC-EXP-GW	Enable GW Feature (H323-SIP)	N/A	0 days	Yes	2	0.00	0.00	0	0.00
6.19	LIC-EXP-SERIES	Enable Expressway Series Feature Set	N/A	0 days	Yes	2	0.00	0.00	0	0.00
6.20	LIC-EXP-TURN	Enable TURN Relay Option	N/A	0 days	Yes	1	0.00	0.00	0	0.00
6.21	LIC-SW-EXP-K9	License Key Software Encrypted	N/A	0 days	Yes	2	0.00	0.00	0	0.00
6.22	PC-10X-STANDARD-K9	Prime Collaboration Standard 10.x	N/A	21 days	Yes	1	0.00	0.00	0	0.00
6.23	UCM-PAK	UCM 9X/10X PAK	N/A	21 days	Yes	1	0.00	0.00	0	0.00
6.24	JAB-ADR-RTU	Jabber for Android Right to Use	N/A	21 days	Yes	1	0.00	0.00	0	0.00
6.25	LIC-CUCM-10X-ENH	UC Manager Enhanced 10.x License	N/A	21 days	Yes	1053	0.00	0.00	0	0.00
6.26	LIC-CUCM-10X-ENHP	UC Manager Enhanced Plus 10.x License	N/A	21 days	Yes	207	0.00	0.00	0	0.00
6.27	LIC-CUCM-10X-ESS	UC Manager Essential 10.x License	N/A	21 days	Yes	312	0.00	0.00	0	0.00
SubTotal										160,262.23
7.0	R-UNITYCN10-K9	Unity Connection 10.x Software	N/A	21 days	No	1	0.00	0.00	0	0.00
7.0.1	CON-ESW-RUNITCN1	ESSENTIAL SW Unity Connection 10.x Software	12 month(s)	N/A	No	1	0.00	0.00	0	0.00
7.1	UNITYCN10-ENH-USR	One Unity Connection 10.x Enhanced Voice Messaging User	N/A	21 days	No	1500	110.00	165,000.00	49.5	83,325.00
7.1.0.1	CON-ESW-UNITYEHR	ESSENTIAL SW One Unity Connection 10.x Enhanced Voice	12 month(s)	N/A	No	1500	11.00	16,500.00	21.5	12,952.50
7.1.0.2	UCSS-U-MSG-ENH-1-1	UCSS for Enhanced Messaging - One Year - 1 user	12 month(s)	N/A	No	1500	15.00	22,500.00	49.5	11,362.50
7.2	LIC-SPCHVIEW-DEMO	SpeechView Unity Connection Demo for 50 users for 6 months	N/A	21 days	Yes	1	0.00	0.00	0	0.00
SubTotal										107,640.00
8.0	R-EMRGNCY-RSPNDR	EMRGNCY RSPNDR ESD	N/A	21 days	No	1	0.00	0.00	0	0.00
8.0.1	CON-ESW-EMRGNCY	ESSENTIAL SW EMRGNCY RSPNDR	12 month(s)	N/A	No	1	0.00	0.00	0	0.00
8.1	ER10-SW-K9	EMRGNCY RSPNDR 10 SW NEW	N/A	21 days	No	1	0.00	0.00	0	0.00
8.2	ER10-USR-1	EMRGNCY RSPNDR USR LIC 1 PHN FOR NEW 10X SYSTEM	N/A	21 days	No	1572	20.00	31,440.00	49.5	15,877.20
8.2.0.1	UCSS-U-ER-1-1	UCSS Emergency Responder - 1 year - 1 User	12 month(s)	N/A	No	1572	2.00	3,144.00	49.5	1,587.72
8.2.0.2	CON-ESW-ER10USR1	ESSENTIAL SW EMRGNCY RSPNDR USR LIC 1 PHN FOR NEW 10X	12 month(s)	N/A	No	1572	3.00	4,716.00	21.5	3,702.06
8.3	ER10-PAK	EMRGNCY RSPNDR 10.X PAK	N/A	21 days	Yes	1	0.00	0.00	0	0.00
SubTotal										21,166.98
9.0	C2901-CME-SRST/K9	2901 Voice Bundle w/PVDM3-16 FL-CME-SRST-25 UC Lic FL-CUBE10	N/A	24 days	No	1	3,395.00	3,395.00	49.5	1,714.48
9.0.1	CON-SNT-2901CMST	SMARTNET 8X5XNBD 2901 Voice Bundle w/ UC License PAK	12 month(s)	N/A	No	1	305.00	305.00	100	0.00
9.1	S29UK9-15204M	Cisco 2901-2921 IOS UNIVERSAL	N/A	14 days	No	1	0.00	0.00	0	0.00
9.2	FL-SRST	Cisco Survivable Remote Site Telephony License	N/A	21 days	No	1	0.00	0.00	0	0.00
9.3	VVIC3-1MFT-T1/E1	1-Port 3rd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1	N/A	21 days	No	1	1,430.00	1,430.00	49.5	722.15
9.4	VVIC3-2MFT-T1/E1	2-Port 3rd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1	N/A	21 days	No	1	2,200.00	2,200.00	49.5	1,111.00

										SubTotal	6,734.18
12.0	C2921-CME-SRST/K9	2921 Voice Bundle w/PVDM3-32 FL-CME-SRST-25 UC Lic FL-CUBE10	N/A	14 days	No	1	5,195.00	5,195.00	49.5	2,623.48	
12.0.1	CON-SNT-2921CMST	SMARTNET 8X5XNBD 2921 Voice Bundle w/ UC License PAK	12 month(s)	N/A	No	1	550.00	550.00	100	0.00	
12.1	S29UK9-15204M	Cisco 2901-2921 IOS UNIVERSAL	N/A	14 days	No	1	0.00	0.00	0	0.00	
12.2	FL-SRST	Cisco Survivable Remote Site Telephony License	N/A	21 days	No	1	0.00	0.00	0	0.00	
12.3	VVIC3-2MFT-T1/E1	2-Port 3rd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1	N/A	21 days	No	1	2,200.00	2,200.00	49.5	1,111.00	
12.4	VIC3-2FXS/DID	Two-Port Voice Interface Card- FXS and DID	N/A	21 days	No	1	440.00	440.00	49.5	222.20	
12.5	PVDM3-32U64	PVDM3 32-channel to 64-channel factory upgrade	N/A	21 days	No	1	1,500.00	1,500.00	49.5	757.50	
12.6	PWR-2921-51-AC	Cisco 2921/2951 AC Power Supply	N/A	14 days	Yes	1	0.00	0.00	0	0.00	
12.7	CAB-AC	AC Power Cord (North America) C13 NEMA 5-15P 2.1m	N/A	14 days	No	1	0.00	0.00	0	0.00	
12.8	FL-CME-SRST-25	Communication Manager Express or SRST - 25 seat license	N/A	21 days	Yes	1	0.00	0.00	0	0.00	
12.9	FL-CUBEE-5	Unified Border Element Enterprise License - 5 sessions	N/A	21 days	Yes	2	0.00	0.00	0	0.00	
12.10	PI-MSE-PRMO-INSRT	Insert Packout - PI-MSE	N/A	14 days	Yes	1	0.00	0.00	0	0.00	
12.11	SL-29-IPB-K9	IP Base License for Cisco 2901-2951	N/A	14 days	Yes	1	0.00	0.00	0	0.00	
12.12	SL-29-UC-K9	Unified Communication License for Cisco 2901-2951	N/A	14 days	Yes	1	0.00	0.00	0	0.00	
12.13	HWIC-BLANK	Blank faceplate for HWIC slot on Cisco ISR	N/A	21 days	Yes	2	0.00	0.00	0	0.00	
12.14	ISR-CCP-EXP	Cisco Config Pro Express on Router Flash	N/A	21 days	Yes	1	0.00	0.00	0	0.00	
12.15	MEM-2900-512MB-DEF	512MB DRAM for Cisco 2901-2921 ISR (Default)	N/A	14 days	Yes	1	0.00	0.00	0	0.00	
12.16	MEM-CF-256MB	256MB Compact Flash for Cisco 1900 2900 3900 ISR	N/A	21 days	Yes	1	0.00	0.00	0	0.00	
12.17	SM-D-BLANK	Blank faceplate for DW slot on Cisco 2951 and 3925	N/A	21 days	Yes	1	0.00	0.00	0	0.00	
12.18	SM-S-BLANK	Removable faceplate for SM slot on Cisco 290039004400 ISR	N/A	21 days	Yes	1	0.00	0.00	0	0.00	
										SubTotal	4,714.18
13.0	C2921-CME-SRST/K9	2921 Voice Bundle w/PVDM3-32 FL-CME-SRST-25 UC Lic FL-CUBE10	N/A	14 days	No	1	5,195.00	5,195.00	49.5	2,623.48	
13.0.1	CON-SNT-2921CMST	SMARTNET 8X5XNBD 2921 Voice Bundle w/ UC License PAK	12 month(s)	N/A	No	1	550.00	550.00	100	0.00	
13.1	S29UK9-15204M	Cisco 2901-2921 IOS UNIVERSAL	N/A	14 days	No	1	0.00	0.00	0	0.00	
13.2	FL-SRST	Cisco Survivable Remote Site Telephony License	N/A	21 days	No	1	0.00	0.00	0	0.00	
13.3	VVIC3-1MFT-T1/E1	1-Port 3rd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1	N/A	21 days	No	1	1,430.00	1,430.00	49.5	722.15	
13.4	PWR-2921-51-AC	Cisco 2921/2951 AC Power Supply	N/A	14 days	Yes	1	0.00	0.00	0	0.00	
13.5	CAB-AC	AC Power Cord (North America) C13 NEMA 5-15P 2.1m	N/A	14 days	No	1	0.00	0.00	0	0.00	
13.6	FL-CME-SRST-25	Communication Manager Express or SRST - 25 seat license	N/A	21 days	Yes	1	0.00	0.00	0	0.00	
13.7	FL-CUBEE-5	Unified Border Element Enterprise License - 5 sessions	N/A	21 days	Yes	2	0.00	0.00	0	0.00	
13.8	PI-MSE-PRMO-INSRT	Insert Packout - PI-MSE	N/A	14 days	Yes	1	0.00	0.00	0	0.00	
13.9	SL-29-IPB-K9	IP Base License for Cisco 2901-2951	N/A	14 days	Yes	1	0.00	0.00	0	0.00	
13.10	SL-29-UC-K9	Unified Communication License for Cisco 2901-2951	N/A	14 days	Yes	1	0.00	0.00	0	0.00	
13.11	HWIC-BLANK	Blank faceplate for HWIC slot on Cisco ISR	N/A	21 days	Yes	3	0.00	0.00	0	0.00	
13.12	ISR-CCP-EXP	Cisco Config Pro Express on Router Flash	N/A	21 days	Yes	1	0.00	0.00	0	0.00	
13.13	MEM-2900-512MB-DEF	512MB DRAM for Cisco 2901-2921 ISR (Default)	N/A	14 days	Yes	1	0.00	0.00	0	0.00	
13.14	MEM-CF-256MB	256MB Compact Flash for Cisco 1900 2900 3900 ISR	N/A	21 days	Yes	1	0.00	0.00	0	0.00	
13.15	PVDM3-32	32-channel high-density voice and video DSP module	N/A	21 days	Yes	1	0.00	0.00	0	0.00	
13.16	SM-D-BLANK	Blank faceplate for DW slot on Cisco 2951 and 3925	N/A	21 days	Yes	1	0.00	0.00	0	0.00	
13.17	SM-S-BLANK	Removable faceplate for SM slot on Cisco 290039004400 ISR	N/A	21 days	Yes	1	0.00	0.00	0	0.00	
										SubTotal	3,345.63
14.0	WBXMTSVR2-K9	Webex Meetings Server 2.x Software Kit	N/A	0 days	No	1	0.00	0.00	0	0.00	
14.0.1	CON-ESW-WBXMT2K9	ESSENTIAL SW Webex Meeting Server 2.x Software Kit	36 month(s)	N/A	No	1	0.00	0.00	0	0.00	
14.1	WBXMTSVR2-USR-K9	WBX Meetings Server 2.x - Initial Licenses	N/A	21 days	No	50	230.00	11,500.00	49.5	5,807.50	
14.1.0.1	UCSS-U-MTSVR-3-1	UCSS for Wbx Meeting Server - 3 years - 1 User	36 month(s)	N/A	No	50	74.00	3,700.00	49.5	1,868.50	
14.1.0.2	CON-ESW-WBXMUSR9	ESSENTIAL SW WBX Meetings Server	36 month(s)	N/A	No	50	48.00	2,400.00	21.5	1,884.00	
										SubTotal	9,560.00
15.0	WMS-EZ-C220-50P	PCIe	N/A	10 days	No	2	11,874.70	23,749.40	57.5	10,093.50	
15.0.1	CON-SNT-C22050P	CPU9271CV RAI	12 month(s)	N/A	No	2	263.00	526.00	100	0.00	
15.1	UCSC-PSU-650W	650W power supply for C-series rack servers	N/A	10 days	Yes	4	0.00	0.00	0	0.00	
15.2	UCSC-RAIL1	Rail Kit for C220 C22 C24 rack servers	N/A	10 days	Yes	2	0.00	0.00	0	0.00	

15.3	CAB-9K12A-NA	Power Cord 125VAC 13A NEMA 5-15 Plug North America	N/A	8 days	No	4	0.00	0.00	0	0.00
15.4	R2XX-RAID10	Enable RAID 10 Setting	N/A	10 days	Yes	2	0.00	0.00	0	0.00
15.5	UCS-CPU-E5-2609	2.4 GHz E5-2609/80W 4C/10MB Cache/DDR3 1066MHz	N/A	10 days	Yes	4	0.00	0.00	0	0.00
15.6	UCS-HDD1T12F212	1TB SAS 7.2K RPM 3.5 inch HDD/hot plug/drive sled mounted	N/A	10 days	Yes	8	0.00	0.00	0	0.00
15.7	UCS-MR-1X041RY-A	4GB DDR3-1600-MHz RDIMM/PC3-12800/single rank/1.35v	N/A	10 days	Yes	24	0.00	0.00	0	0.00
15.8	UCS-RAID9271CV-8I	MegaRAID 9271CV with 8 internal SAS/SATA ports with Supercap	N/A	10 days	Yes	2	0.00	0.00	0	0.00
15.9	UCS-SD-16G	16GB SD Card module for UCS Servers	N/A	10 days	Yes	2	0.00	0.00	0	0.00
15.10	UCSC-HS-C220M3	Heat Sink for UCS C220 M3 Rack Server	N/A	10 days	Yes	4	0.00	0.00	0	0.00
15.11	UCSC-PCIE-IRJ45	Intel i350 Quad Port 1Gb Adapter	N/A	10 days	Yes	2	0.00	0.00	0	0.00
SubTotal										10,093.50
16.0	BE6K-ST-BDL-K9=	Cisco BE6000 Medium Density Server Export Restricted SW	N/A	21 days	No	1	9,400.00	9,400.00	49.5	4,747.00
16.0.1	CON-SNT-BE6KSTBD	SMARTNET 8X5XNBD Cisco Business Edition 6000 UCS Srv 9.0	12 month(s)	N/A	No	1	239.00	239.00	100	0.00
16.1	CAB-9K12A-NA	Power Cord 125VAC 13A NEMA 5-15 Plug North America	N/A	8 days	No	1	0.00	0.00	0	0.00
16.2	BE6K-SW-9X10X	Cisco Business Edition 6000 - Software App Version 9.X 10.X	N/A	21 days	Yes	1	0.00	0.00	0	0.00
16.3	CIT-PSU-BLKP	Power Supply Blanking Panel/Filler	N/A	21 days	Yes	1	0.00	0.00	0	0.00
16.4	CIT-SD-16G-C220	16GB SD Card Module for C220 servers	N/A	21 days	Yes	1	0.00	0.00	0	0.00
16.5	CTI-VCSC-BE6K-PAK	Config Only E-Delivery VCS Control PAK PID	N/A	21 days	Yes	1	0.00	0.00	0	0.00
16.6	LIC-SW-VMVCS-K9	Software Release Key for Encrypted Virtual VCS Application	N/A	14 days	Yes	1	0.00	0.00	0	0.00
16.7	LIC-VCS-10+	Video Comm Server 10 Add Non-traversal Network Calls	N/A	14 days	Yes	1	0.00	0.00	0	0.00
16.8	LIC-VCS-GW	Enable GW Feature (H323-SIP)	N/A	14 days	Yes	1	0.00	0.00	0	0.00
16.9	LIC-VCSE-5+	Video Communication Server - 5 Traversal Calls	N/A	14 days	Yes	1	0.00	0.00	0	0.00
16.10	R2XX-RAID10	Enable RAID 10 Setting	N/A	10 days	Yes	1	0.00	0.00	0	0.00
16.11	UC-A03-D500GC3	500GB 6Gb SATA 7.2K RPM SFF Hot Plug/Drive Sled Mounted	N/A	21 days	Yes	4	0.00	0.00	0	0.00
16.12	UC-CPU-E5-2609	2.4 GHz E5-2609/80W 4C/10MB Cache/DDR3 1066MHz	N/A	21 days	Yes	2	0.00	0.00	0	0.00
16.13	UC-MR-1X082RY-A	8GB DDR3-1600-MHz RDIMM/PC3-12800/Dual Rank/1.35v	N/A	21 days	Yes	4	0.00	0.00	0	0.00
16.14	UC-PSU-650W	650W Power Supply Unit For UCSC C220 Rack Server	N/A	21 days	Yes	1	0.00	0.00	0	0.00
16.15	UC-RAID-9271	MegaRAID 9271-8i + Battery Backup for C240 and C220	N/A	21 days	Yes	1	0.00	0.00	0	0.00
16.16	VMW-VS5-HYP-K9	Cisco UC Virt. Hypervisor 5.x (2-socket)	N/A	21 days	Yes	1	0.00	0.00	0	0.00
16.17	VMW-VS5-SNS	Cisco UC Virt. Hypervisor 5.x - SnS	N/A	21 days	Yes	1	0.00	0.00	0	0.00
SubTotal										4,747.00
17.0	VMW-VS5-ST-1A=	VMware vSphere 5 Standard (1 CPU) 1yr Support Required	N/A	10 days	No	4	1,866.00	7,464.00	57.5	3,172.20
17.0.1	CON-ISV1-VS5STD1A	ISV 24X7 VMware vSphere Standard List Price is ANNUAL	12 month(s)	N/A	No	4	420.00	1,680.00	21.5	1,318.80
17.1	UCS-VMW-TERMS	Acceptance of Terms Standalone VMW License for UCS Servers	N/A	10 days	No	4	0.00	0.00	0	0.00
SubTotal										4,491.00
18.0	CP-8945-K9=	Cisco Unified Phone 8945 Phantom Grey Standard Handset	N/A	21 days	No	104	525.00	54,600.00	49.5	27,573.00
18.0.1	CON-SNT-CP8945K9	SMARTNET 8X5XNBD Cisco Unified Phone 8945 Phantom Grey	12 month(s)	N/A	No	104	12.00	1,248.00	100	0.00
SubTotal										27,573.00
19.0	CP-7841-K9=	Cisco UC Phone 7841	N/A	21 days	No	1156	365.00	421,940.00	49.5	213,079.70
19.0.1	CON-SNT-CP7841K9	SMARTNET 8X5XNBD Cisco UP Phone 7841	12 month(s)	N/A	No	1156	10.00	11,560.00	100	0.00
SubTotal										213,079.70
20.0	VG204XM	Cisco VG204XM Analog Voice Gateway	N/A	21 days	No	15	1,295.00	19,425.00	49.5	9,809.63
20.0.1	CON-SNT-VG204XM	SMARTNET 8X5XNBD Cisco VG204 Analog V	12 month(s)	N/A	No	15	104.00	1,560.00	100	0.00
20.1	SVG2XIPV-15302T	Cisco VG20X Series IOS IP VOICE	N/A	21 days	Yes	15	0.00	0.00	0	0.00
20.2	CAB-AC	AC Power Cord (North America) C13 NEMA 5-15P 2.1m	N/A	14 days	No	15	0.00	0.00	0	0.00
20.3	CAB-ETH-S-RJ45	Yellow Cable for Ethernet Straight-through RJ-45 6 feet	N/A	14 days	Yes	15	0.00	0.00	0	0.00
20.4	PWR-30W-AC	Power Supply 30 Watt AC	N/A	21 days	Yes	15	0.00	0.00	0	0.00
SubTotal										9,809.63
21.0	VG224-4PACK	4 Pack of VG224 High Density Analog Gateway	N/A	0 days	No	1	0.00	0.00	0	0.00

21.1	VG224-MP	VG224 for MultiPack	N/A	0 days	No	4	4,125.00	16,500.00	49.5	8,332.50
21.1.0.1	CON-SNT-VG224-MP	SMARTNET 8X5XNBD VG224 for MultiPack	12 month(s)	N/A	No	4	432.00	1,728.00	100	0.00
21.1.1	CAB-AC	AC Power Cord (North America), C13, NEMA 5-15P, 2.1m	N/A	14 days	No	4	0.00	0.00	0	0.00
21.1.2	SVGVG-15104M	Cisco VG200 Series IP SUBSET/VOICE	N/A	14 days	No	4	0.00	0.00	0	0.00
21.1.3	MEM-224-1X128D-U	128MB DRAM Memory for VG224 (Factory Upgrade)	N/A	21 days	Yes	8	0.00	0.00	0	0.00
21.1.4	MEM-224-1X64F-U	64MB Flash Memory for VG224 (Factory Upgrade)	N/A	21 days	Yes	4	0.00	0.00	0	0.00
										SubTotal
										8,332.50
22.0	VG224	24 Port Voice over IP analog phone gateway	N/A	21 days	No	2	5,395.00	10,790.00	49.5	5,448.95
22.0.1	CON-SNT-VG224	SMARTNET 8X5XNBD 24 Port Voice over I	12 month(s)	N/A	No	2	432.00	864.00	100	0.00
22.1	CAB-AC	AC Power Cord (North America) C13 NEMA 5-15P 2.1m	N/A	14 days	No	2	0.00	0.00	0	0.00
22.2	SVGVG-15104M	Cisco VG200 Series IP SUBSET/VOICE	N/A	14 days	No	2	0.00	0.00	0	0.00
22.3	MEM-224-1X128D-U	128MB DRAM Memory for VG224 (Factory Upgrade)	N/A	21 days	Yes	4	0.00	0.00	0	0.00
22.4	MEM-224-1X64F-U	64MB Flash Memory for VG224 (Factory Upgrade)	N/A	21 days	Yes	2	0.00	0.00	0	0.00
										SubTotal
										5,448.95
23.0	CCX-10-SYS-K9	CCX 10 System	N/A	0 days	No	1	0.00	0.00	0	0.00
23.1	CCX-10-LIC-K9	CCX 10.0 New Licenses	N/A	21 days	No	1	0.00	0.00	0	0.00
23.1.0.1	CON-ESW-CCX10LK9	ESSENTIAL SW CCX 10.0 New Licenses	12 month(s)	N/A	No	1	0.00	0.00	0	0.00
23.1.1	CCX-10-N-P-LIC	CCX 10.0 PRE Seat Qty 1 LICENSE ONLY	N/A	21 days	No	80	1,850.00	148,000.00	49.5	74,740.00
23.1.1.0.1	UCSS-U-CCX-P-1-1	UCSS for CCX PRE for - 1 users One Year Sub	12 month(s)	N/A	No	80	148.00	11,840.00	49.5	5,979.20
23.1.1.0.2	CON-ESW-CCX10NPL	ESSENTIAL SW CCX 10.0 PRE Seat Qty 1 LICENSE ONLY	12 month(s)	N/A	No	80	205.00	16,400.00	21.5	12,874.00
23.1.2	CCX-10-AQM-LIC	CCX 10.0 Adv Quality Manager Seat Qty 1 LICENSE ONLY	N/A	21 days	No	80	695.00	55,600.00	49.5	28,078.00
23.1.2.0.1	UCSS-U-CCX-AQM-1-1	UCSS CCX Advanced Qual Mgmt - 1 agent One Year Sub	12 month(s)	N/A	No	80	42.00	3,360.00	49.5	1,696.80
23.1.2.0.2	CON-ESW-CCX10AML	ESSENTIAL SW CCX 10.0 Adv Quality Manager Seat Qty 1	12 month(s)	N/A	No	80	77.00	6,160.00	21.5	4,835.60
23.1.3	CCX-10-WFM-LIC	CCX 10.0 Workforce Manager Seat Qty 1 LICENSE ONLY	N/A	NPH	No	80	550.00	44,000.00	49.5	22,220.00
23.1.3.0.1	UCSS-U-CCX-WFM-1-1	UCSS for Workfrc Mgmnt - 1 Instance One Year Sub	12 month(s)	N/A	No	80	35.00	2,800.00	49.5	1,414.00
23.1.3.0.2	CON-ESW-CCX10WFM	ESSENTIAL SW CCX 10.0 Workforce Manager Seat Qty 1 LI	12 month(s)	N/A	No	80	64.00	5,120.00	21.5	4,019.20
23.1.4	CCX-10-PHA-LIC	CCX 10.0 PRE HA LICENSE ONLY	N/A	21 days	No	1	14,995.00	14,995.00	49.5	7,572.48
23.1.5	CCEH-CCP-SVR-LIC	CCP Server	N/A	21 days	No	1	1,000.00	1,000.00	49.5	505.00
23.1.5.0.1	CON-ESW-CCPSVRLC	ESSENTIAL SW CCP Server	12 month(s)	N/A	No	1	120.00	120.00	21.5	94.20
23.1.6	CCX-10-P-SVR-LIC	CCX 10.0 PRE Server License	N/A	21 days	Yes	1	0.00	0.00	0	0.00
23.1.7	CCX-10-PAK	CCX 10.0 autoexpanded PAK	N/A	21 days	Yes	1	0.00	0.00	0	0.00
										SubTotal
										164,028.48
24.0	CCEH-SM-V100-K9=	Media kit for SocialMiner 10.0	N/A	21 days	No	1	100.00	100.00	49.5	50.50
										SubTotal
										50.50
25.0	L-CUAC10X	Cisco Unified Attendant Consoles 10.x	N/A	21 days	No	1	0.00	0.00	0	0.00
25.0.1	CON-SCU4-CUACX10M	SC ADV SUP SAU Cisco Unified Attendant Consoles 10.x	12 month(s)	N/A	No	1	0.00	0.00	0	0.00
25.1	L-CUAC10X-STND	Cisco Unified Attendant Console Standard 10.x - 1 Lic	N/A	21 days	No	5	995.00	4,975.00	49.5	2,512.38
25.1.0.1	CON-SCU4-CUAC10XS	SC ADV SUP SAU Cisco Unified Attend	12 month(s)	N/A	No	5	398.00	1,990.00	21.5	1,562.15
25.1.0.2	UCSS-U-UACSTND-1-1	UCSS for Cisco UAC Standard - 1 instance One Year Sub	12 month(s)	N/A	No	5	100.00	500.00	49.5	252.50
										SubTotal
										4,327.03

Cisco Solution (w/ 7841 phones)

Configset Total

\$859,858.20

UDT Professional Services Engagement

\$247,676.00

Variphy Insight for Enterprises

\$13,980.00

GRAND TOTAL=

\$1,121,514.20

Optional:

Additional Cost as Needed-
Cable Drops

Price per Cable Drop

\$150.00



CISCO CAPITAL FINANCING OPTION

May 29, 2014

City of Hollywood

EQUIPMENT

FINANCE OPTION: The financing will be completed by Key Government Finance, Cisco Systems Capital's financing partner for government and education customers. Payments due under the financing will be made directly to Key Government Finance, Inc.

LESSOR: Key Government Finance, Inc.

LESSEE: City of Hollywood

EQUIPMENT: Cisco Systems Products

Project Summary Option 7841	
Cisco Systems Equipment	\$ 859,858.20
Buyout	\$ 238,182.34
Cisco "Smartnet" Maintenance	\$ -
Labor/Installation/Etc.	\$ 247,676.00
Variphy Insight for Enterprises	\$ 13,980.00
TOTAL AMOUNT TO BE FINANCED	\$ 1,359,696.54

FINANCING STRUCTURE: This is a financing with the title to the equipment passing to lessee. This is a net financing under which Lessee pays all costs, including insurance, maintenance and taxes, for the term of the financing. At the end of the financing term the equipment can be purchased for \$1

Option 1

Amount to be Financed	Interest Rate	24 quarterly Payments	Payment Due Date	Payment Factor(*)	Pmts / Year	Term
#REF!	0.00%	\$48,148.11	9/15/2014	Custom	4	5 Years
		\$48,148.11	12/15/2014			
		\$48,148.11	3/15/2015			
		\$48,148.11	6/15/2015			
		\$48,148.11	9/15/2015			
		\$48,148.11	12/15/2015			
		\$48,148.11	3/15/2016			
		\$48,148.11	6/15/2016			
		\$48,148.11	9/15/2016			
		\$48,148.11	12/15/2016			
		\$48,148.11	3/15/2017			
		\$48,148.11	6/15/2017			
		\$48,148.11	9/15/2017			
		\$48,148.11	12/15/2017			
		\$48,148.11	3/15/2018			
		\$48,148.11	6/15/2018			
		\$48,148.11	9/15/2018			
		\$48,148.11	12/15/2018			
		\$48,148.11	3/15/2019			
		\$48,148.11	6/15/2019			
		\$48,148.11	9/15/2019			
		\$48,148.11	12/15/2019			
		\$48,148.11	3/15/2020			
		\$48,148.11	6/15/2020			

Option 1

Amount to be Financed	Interest Rate	24 quarterly Payments	Payment Due Date	Payment Factor(*)	Pmts / Year	Term
\$1,359,696.54	0.00%	\$53,016.93	9/15/2014	Custom	4	5 Years
		\$53,016.93	12/15/2014			
		\$53,016.93	3/15/2015			
		\$53,016.93	6/15/2015			

In Association with Key Government Finance, Inc.
1000 South McCaslin Blvd
Superior, CO 80027

\$53,016.93	9/15/2015
\$53,016.93	12/15/2015
\$53,016.93	3/15/2016
\$53,016.93	6/15/2016
\$53,016.93	9/15/2016
\$53,016.93	12/15/2016
\$53,016.93	3/15/2017
\$53,016.93	6/15/2017
\$53,016.93	9/15/2017
\$53,016.93	12/15/2017
\$53,016.93	3/15/2018
\$53,016.93	6/15/2018
\$53,016.93	9/15/2018
\$53,016.93	12/15/2018
\$53,016.93	3/15/2019
\$53,016.93	6/15/2019
\$53,016.93	9/15/2019
\$53,016.93	12/15/2019
\$53,016.93	3/15/2020
\$53,016.93	6/15/2020

***Assumes a lease/escrow funding on 6/15/2014**

***NTT program- \$0 payments, 0% interest for first 3 months**

(*) The payment factor expresses the payment as a percentage of the Equipment Cost. To calculate the periodic lease payment for any Equipment Cost, multiply the payment factor by the Equipment Cost.

RATE INDEX: The interest rate provided above is based on current market rates as of the date of this proposal, and will be subject to change based on market conditions as of the time of closing. After closing the interest rate will be fixed for the term of the financing.

APPROVAL: The financing contemplated by this proposal is subject to the execution and delivery of all appropriate documents (in form satisfactory to Lessor), including without limitation, to the extent applicable, the Master Lease Agreement, any Schedule, financing statements, legal opinion or other documents or agreements reasonably required by Lessor. This proposal, until credit approved, serves as a quotation, not a commitment by Key Government Finance to provide credit. Final acceptance of this proposal is subject to credit, collateral and essential use review and approval by Lessor.

CONTACT: Contact your financing representative with any questions:

Brandon Casement- US State & Local Government Account Manager
Cisco Systems Capital
843-822-4455

bcasemen@cisco.com

NOTES:

The rates provided above are based on a minimum funding amount of \$50,000. If total to be funded will be less than \$50,000 please contact us for a revised Proposal.

APPENDIX B – SAMPLE PROJECT PLAN



Consulting Services Statement of Work

Prepared for
City of Hollywood

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Project Definition

Project Summary

City of Hollywood has requested United Data Technologies (UDT), to provide a quote for services and hardware in response to a Request for Proposal to implement a corporate wide Unified Communications environment.

Project Contacts

Customer Contact Information	
Name:	
Title:	
Email:	
Address:	
Phone:	

UDT Contact Information	
Name:	Justin Clary
Title:	Account Manager
Email:	justin.clary@udtonline.com
Address:	8801 NW 21st Terrace, Doral, FL 33172
Phone:	305-411-5061

Key Project Dates

Customer requests the following timeline for project deliverables. UDT will make every attempt to meet the dates requested. Please note that critical factors (such as those listed above) impact UDT's ability to meet certain dates.

Project Kick-Off Date: Kick-Off Meeting on TBD

- Start Date: TBD in kick-off meeting
- Expected Completion Date: TBD

Key Project Contingencies

- Customer has valid Cisco SMARTnet and if appropriate, SAU, ESW and UCSS contracts in place.
- Customer will implement (configure & deploy) PoE Switching infrastructure necessary to support the Communications project.
- Customer will provide the facilities necessary to maintain the data network devices. This area will be consistent with Cisco recommendations.
- Customer must be accessible and available for our work to begin.
- Current switch and router configuration will be supplied to UDT Engineer at time of engagement.
- Customer will provide Internet connectivity to the UDT Engineer for patches/upgrades/support during staging/implementation periods.
- Customer will provide passwords granting access to all relevant Unified Communications devices

General Assumptions

UDT made the assumptions that follow in the preparation of the cost, resource estimates and schedule reflected in this SOW. Any changes to the assumptions may result in changes to UDT' pricing and/or Project schedule.

- All work is to be done during normal business hours Monday through Friday, excluding holidays. The following dates are considered UDT Holidays: New Years Day, Easter Sunday, Memorial Day, Independence Day, Labor Day, Thanksgiving, the day following Thanksgiving and Christmas.
- Customer will notify UDT in writing of any potential safety or health hazards that may exist at the site, as well as provide and/or recommend safety procedures to be followed while at the site.
- To avoid any access limitations due to facility security, Customer will provide UDT access to areas relevant to the Project.
- UDT will have full access to equipment as required.
- UDT will have relevant access to all systems with appropriate account access as required.
- Customer will provide a workspace as required by Project criteria.
- Customer shall provide a contact person to serve as overall project liaison with UDT and shall be available to coordinate scheduling of activities, relay technical questions and answers and escalate issues as needed.
- Customer will provide original software distribution media for all software installed, if required.
- All data relevant to the project will have two separate and distinct forms of backup and restoration.

Scope of Work

This Statement of Work defines the intended solution for City of Hollywood Request for Proposal for a Unified Voice Solution.

Deployment Model Definition

- A Centralized deployment model will be implemented.
- In a Centralized deployment model enterprise branch sites are geographically dispersed and interconnected over a Wide Area Network can be deployed at a central location while serving endpoints over the WAN connections. For example, the call processing service will be deployed requiring only IP connectivity with the remote sites to deliver telephony services. Likewise, voice messaging services, such as those provided by the Cisco Unity Connection platform will also be provisioned centrally to deliver services to endpoints remotely connected across an IP WAN.
- Centrally provisioned Unified Communications services can be impacted by WAN connectivity interruptions; for each service, the available local survivability options will be planned. As an example, the call processing service as offered by Cisco Unified CM can be configured with local survivability functionality known as SRST (Survivable Remote Site Telephony). Likewise, a centralized voice messaging service such as that of Cisco Unity Connection can be provisioned to allow remote sites operating under SRST to access voice messaging services at the central site, through the PSTN.
- When a given service is deployed centrally to serve endpoints at multiple sites, there are advantages of feature transparency afforded by the use of the same processing resources for users at multiple sites. For example, when two sites are served by the same centralized Cisco Unified Communications Manager cluster, the users can share line appearances between the two sites. This benefit would not be available if each site were served by different (distributed) call processing systems.
- Redundant elements will be employed so that no single point of failure is present in the design. The redundancy between the two (or more) elements is automated. For example, the clustering technology employed in Cisco Unified Communications Manager (Unified CM) allows for multiple servers to provide backup for each other. Example, a phone may have as its first three preferred call control agents three separate Unified CM servers belonging to the same call processing cluster. As a fourth choice, the phone can also be configured to rely on a Cisco IOS router for call processing services.

PROJECT MANAGEMENT:

City of Hollywood shall provide a single point of contact that shall have authority to act on behalf of City of Hollywood to resolve any & all issues that arise during the execution of this SOW.

PLANNING WORKSHOP:

UDT will chair and take part in a Planning Workshop that will review City of Hollywood's requirements, and start the process of preparing a high-level design that meets those requirements. The Planning Workshops will be conducted as half-a-day meeting at City of Hollywood's Orlando location and will require contribution from the project's Executive Sponsor, City of Hollywood's engineering technical lead, UDT's engineering lead, and any additional stakeholders. The goal of the Planning Workshop is to identify all City of Hollywood requirements and to ensure that the proposed solution meets all of them. The deliverable of this workshop will be a report which documents all identified City of Hollywood

requirements, a high-level design and describes how the proposed solution meets all the requirements. It will also document any gaps between the solution and requirements and propose alternative or 'spot' solutions for those issues.

- **Planning and Design workshops**
 - Gather existing environment information
 - user Information
 - sites information
 - Voice circuits information
 - DID ranges
 - Current features in use
 - Hunt Groups
 - Call Center
 - Automated Attendants
 - Operator Consoles
 - Voicemail
 - DR Procedures
 - Gather requirements for new phone system implementation
 - New Features
 - AD integration parameters
 - Discuss design alternatives and features available
- **Develop Design Document**
 - Per Site Power & Util. requirements
 - Per Site Physical environment requirements
 - Per Site IP v4 scheme for voice network
 - Naming convention for servers gateways and voice objects
 - Core Telephony Applications Architecture
 - Call Control (HA)
 - Voice Mail (HA)
 - Presence
 - Call Center Express
 - Attendant Console
 - Voice Gateways and SRST Architecture
 - Features not to be implemented
 - Inbound and outbound Dial Plan
 - Call Accounting integration
 - Telephony best-practices LAN/WAN
- **Develop test and acceptance Plan**
- **Design acceptance meeting**

STAGING:

- **Staging – Based on Accepted Design Plan**
 - UCS Servers
 - Configure CIMC
 - Install and Configure VMWARE EXSi hypervisor

- Core Virtualized Application
 - Call Control
 - Configure Communications Manager System Settings:
 - Install Licenses
 - Configure Regions
 - Configure Date Time Groups
 - Configure Locations
 - Configure SRST
 - Configure Enterprise Parameters
 - Configure Service Parameters
 - Configure Callmanager Groups
 - Configure Device Pool
 - Configure AD Integration
 - Configure Media resources
 - Configure Annunciators
 - Configure Media Termination Points
 - Configure Conference Bridge
 - Configure Transcode Resources
 - Configure Music on Hold Server
 - Configure Media resource groups
 - Configure Media resource group List
 - Configure Gateways
 - Configure Gateway (s)
 - Add route group for Gateway (s)
 - Add Route List for local Route group call routing
 - Configure Dial-plan
 - Configure partitions
 - Configure Calling Search Spaces
 - Configure route-patterns
 - Configure outbound route patterns for making calls to the PSTN
 - Configure inbound call routing for calls from the PSTN
 - Configure translation patterns as needed for inbound and outbound dialing
 - Configure Voicemail Integration
 - Configure MWI on DN
 - Configure MWI off DN
 - Configure Voicemail Ports
 - Configure Voicemail Hunt group
 - Configure Voicemail Hunt List
 - Configure Voicemail pilot number
 - Configure Voicemail Profile
 - Configure Phones and DN's
 - Associate Phones with Users and Users to Phones
 - Configure Hunt groups if any are required
 - Configure Pickup groups if any are required
 - Configure custom configurations for VIPs if any are required
 - Voice Mail
 - Install Licenses
 - Configure Communications manager integration
 - Configure Class of Service Configurations
 - Configure systems settings
 - Message aging settings

- PIN complexity settings
 - Unity Connection calling permissions
- Configure Unified Messaging settings
- Configure Call Handler if required
- Configure User Template
- Import Users from either Communications Manager and/or AD
- Add additional users if required
- Call Center Express
 - Configure Contact Center Express
 - Integrate Contact Center Express with Communications Manager
 - Add ports for Integration
 - Create Teams
 - Create Skills for Skills based routing
 - Associate Users as Call Center Agents
 - Assign skills to users
 - Assign Supervisors to teams
 - Configure Phones to use the IP Phone Agent Service
- Attendant Console
- Voice Gateway (20 Sites)
 - Configure Gateway protocols
 - Configure SRST
 - Features
 - Dial Plan
- Configure Dial Plan and features (20 Sites)
- Test Redundancy
- Develop Training material

IMPLEMENTATION:

- Implementation – Based on Approved Design Plan
 - Implementation/Deployment (20 Sites)
 - City call out
 - Deploy voice gateway
 - Assist in deployment IP Phones
 - Deploy Attendant Console client
 - IP Phone usage Train-a-Trainer Training session
 - Attendant Console Training
 - Integrate with Call Accounting system
 - Deploy Jabber client on IT desktops
 - Deploy Help Desk Call Center
 - Cutover PRI
 - Post Cut-over support (up to 3 Days)
 - Administrator knowledge Transfer
 - To be Determined in planning phase (any office located in the State of Florida)
 - Deploy voice gateway
 - Assist in deployment IP Phones
 - Deploy Attendant Console client
 - IP Phone usage Train-a-Trainer Training session

- Attendant Console Training
- Cutover PRI
- Post Cut-over support (up to 3 Days)

▪ Documentation (Phase I)

- Unified Communication as-built document
- Design Documents
- Per Site Power & UPS requirements
- Per Site Physical environment requirements
- Per Site IPv4 scheme for voice network
- Naming convention for servers gateways and voice objects
- Core Telephony Applications Architecture
- Voice Gateways and SRST Architecture
- Features list to be implemented
- Inbound and outbound Dial Plan
- Call Accounting integration
- Telephony best-practices LAN/WAN
- Voice Gateways configurations
- DVD with backups
 - Communications manager backup
 - Call Center Backup
 - Unified Communications backup
- Training Presentation

▪ Post Implementation Review & Phase Sign-off (Phase I)

- Implementation Remote Support (for Additional Sites) - Based on Accepted Design Plan and defined in Location Site included in Addendum 1

City Locations	Executive Endpoints	Admin Endpoints	General Endpoints	Expansion Modules	Analog Requirements
City Hall	33	69	220	0	60
Public Works	6	10	50	0	16
Waste Water	10	14	110	0	16
Fire Administration	8	6	40	0	50
FS 5	0	0	10	0	8
FS 2	0	0	15	0	8
FS 3	0	0	23	0	8
FS 105	0	0	25	0	8
Fire Training	1	0	20	0	8
Underground Utilities	0	0	22	0	8
Network West	0	0	10	0	8
Liberia	0	0	10	0	8
Kay Gaither	0	0	4	0	8
David Park	0	0	4	0	8
McNicol	4	0	20	0	8
HBCCC	0	0	8	0	8
Driftwood	0	0	8	0	8
Washington Park	0	0	4	0	8
Police	40		400	0	50
Fresh Water	2	4	50		8
	104	103	1053	0	312

- Post Implementation Review & Phase sign-off (Phase II)

FINAL TESTING/VALIDATION:

UDT will test the solution implementation and validate against the City of Hollywood requirements identified during the Planning Workshops. To the extent possible, testing will include verification of the following:

- UC Call Manager installation
- IP Phone functionality
- Verify voice quality and QoS
- Security validation
- Dial plan configuration
- Disaster recovery scenarios (TBD)

FINAL DOCUMENTATION TURNOVER:

Upon completion of the project, UDT will update the design document with any changes made during implementation and will provide this to the City of Hollywood in softcopy format via email as final “as built” documentation.

Out of Scope Work

Work requested by Customer and performed by UDT, which is outside of the scope of this project (work not specifically included within this SOW), will be billed in addition to and separate from the above stated charges. If during the duration of this project it is determined that additional effort will be required to complete the deliverables specified herein, UDT will inform Customer of the additional effort required to complete the project, furnish a new estimate, and only after receiving written authorization will continue work subject to availability of personnel. UDT may utilize one or more consultants to complete various stages of the Project, within the scope of work effort.

Project Delays

Any delays caused by a non-UDT business that could require return visits and additional time are subject to billing. Examples are:

- Power Issues
- Cabling Delays
- Personnel Availability
- Delays In Receiving Required Customer Provided Documentation
- Physical or Virtual Site and / or Equipment Access

Manufacturer Product Defects

UDT is neither a manufacturer of hardware nor a publisher of computer software. Because of this, UDT cannot be held responsible for functionality or performance defects of any products associated with this engagement. Manufacturer warranties, where extended by the manufacturer, for products sold by or licensed through UDT (or UDT Product Partners) are set forth in end user license agreements and manufacturer warranty statements, and such warranties, if any, are solely those of the manufacturer. UDT will take reasonable measures to work, on behalf of the engagement, with vendors to

escalate problems and take corrective action, based on the vendor's recommendations. Any delays caused by support calls due to manufacturer defects that will require additional time are subject to billing.

Employee Non-Solicitation

During the term of this SOW, and for one year after, neither party will solicit for nor offer employment to any individual who is employed by the other, nor contractor of the other if such party was introduced to the employee directly or indirectly as a result of this SOW. Both parties agree to pay, as liquidated damages, an amount equal to the aggregate salary and wages (to include bonuses) paid to such employee in the previous six months. A general advertisement or a request for employment, which is initiated exclusively by an employee or contractor of the other, shall not be considered a solicitation pursuant to this section.

Time and Cost Estimates

UDT pricing for this engagement is provided on a fixed-fee, single project basis regardless of the actual number of engineers or hours reasonably required to complete the work. Price for this Professional Services Engagement is: **\$ 247,676.00.**

Billing Schedule

Description	%	Amount
Start of project (SOW Sign-off)	25%	\$ 61,919.00
Implementation Corporate and Main Voice Equipment		\$ 86,686.60
Implementation of 1 Remote sites	15%	\$ 37,151.40
Implementation of 5 Remote sites	15%	\$ 37,151.40
Documentation	10%	\$24,767.60

UDT will invoice Customer for the actual cost of all travel expenses (e.g. hotel, meals, rental car, flight, incidentals, etc.) incurred by its engineers and staff while completing this project outside the three main sites in Miami and Orlando. UDT will provide copies of original receipts and/or invoices for all expenses.

Work Hours

UDT consulting services will be performed between 8:00am and 5:00pm (local time), unless after-hours or weekend work is requested or required.

After-hours required?	Yes
Weekend hours required?	Yes

UDT has made every attempt to accurately estimate the total project cost and number of engineers required to successfully complete the project. If impediments or complications arise that are out of the control of UDT, the length of the project could be impacted.

Valid impediments and/or complications consist of (but are not limited to):

- Malfunctioning customer-owned hardware essential to conduct the engagement.
- Inability to access equipment or personnel that are required to complete the project.
- Inability to begin or continue work related to the project because of a lack of customer-provided information, such as valid IP addresses, login information, network diagrams, change management, etc.
- Changes to either the project scope, timeline, deliverables or project schedule that occur after the date this agreement is executed.

Should a condition of this nature arise, UDT will notify customer as soon as possible and provide specific details. If the size, scope or number of documented impediments or complications results in an unreasonable increase in either the number of engineers or hours required to complete the engagement, UDT may seek additional compensation from customer.

Scheduling

UDT requires a signed Purchase Order and Consulting Service Statement of Work before it can schedule any consultant to begin a project.

Warranty

All Services shall be performed by UDT in a professional and workmanlike manner and will be in accordance with the industry standard for providing similar services. UDT shall comply with Customer's (i) safety and security rules and other rules applicable to those working in Customer's facilities, and (ii) Customer's policies concerning access to and security of any Customer-owned information technology system to which Company may have access. UDT warrants that it will agree to enter into this Agreement and perform the consulting services of this Agreement. Except for those warranties provided here, UDT disclaims all other representations or warranties. In no event shall UDT or Customer be liable for indirect, special, incidental or consequential damages of any kind, including without limitation, lost profits.

Limitation of Liability

UDT's or Customer's maximum liability for any action, regardless of the form of action, whether in tort or contract, arising under this agreement shall be limited to the amount of services fees paid by UDT and Customer hereunder. The services provided by UDT under this agreement are point in time advisory and security controls implemented as a result of this statement of work do not imply or in any way guarantee the integrity, confidentiality, and availability of Customer's information technology resources, systems or data. UDT follows current industry best practices, compliancy or otherwise, pertaining to and for information technology security and the mitigation of risks or vulnerabilities. Vulnerabilities and attacks evolve over time as do control measures for detection and prevention. Information technology security requires a holistic approach and an ongoing process of risk

assessment and policy review to be fully effective. Both parties agree to indemnify and hold each other harmless for any injuries to persons or property caused by the intentional and willful acts or gross negligence of each party in the performance of services under this Agreement

DRAFT

Confidentiality

Customer and UDT shall agree that all information which is disclosed by either party to the other which is identified or reasonably understood to be confidential or proprietary, shall be treated by both Parties as strictly confidential. Both Parties agree that at no time or in any manner, either directly or indirectly, shall the information be divulged, disclosed or communicated in any manner to any third party, except on a need to know basis only in connection with services rendered under this Agreement. Proprietary information shall not be deemed to include information that (a) is in or becomes in the public domain without violation of this Agreement, or (b) is already in the possession of, or was rightfully known without an obligation to maintain its confidentiality prior to receipt, or (c) is rightfully received from a third entity having no obligation on confidentiality. The confidentiality provisions of this Agreement shall remain in full force and effect after the termination of this Agreement. Within thirty (30) days after termination of this Agreement, each party shall certify in writing that all copies of confidential information have been returned or destroyed.

UDT shall be an independent contractor with respect to Customer and is not an employee of Customer. UDT shall not have the right to bind Customer to any party or contract. Except as provided herein, Customer shall not have the right to direct or control the means by which UDT achieves the results to accomplish pursuant to this Agreement. UDT, its employees and agents shall not be entitled to receive any compensation, benefits or other incidents of employment from Customer as a result of this Agreement. UDT shall be responsible for all taxes and other expenses arising from providing services hereunder. UDT shall maintain workers compensation insurance in the amount required by the laws of the state in which the services are being performed, if required. UDT shall also maintain Commercial General Liability Insurance with a minimum combined single limit of \$1,000,000 per occurrence covering personal injury and property damage, Employer's Liability Insurance with a minimum combined single limit of \$1,000,000 and Commercial Automobile Liability Insurance for any motor vehicle, covering bodily injury and property damage with a minimum combined single limit of \$1,000,000.

This Agreement is not assignable by either party hereto, except with the written permission of the non-assigning party. This Agreement contains and accurately recites the complete and entire agreement among the parties, and it expressly terminates, cancels, and supersedes any and all prior agreements or understandings, whether oral or in writing, if any, among the parties. The waiver by either party of a breach or violation of any provision of this Agreement shall not constitute a waiver of any subsequent or other breach or violation. This Agreement shall be governed by Tennessee law, without regard to the choice or conflict of law provisions thereof. This Agreement may not be modified except in a writing signed by the parties.

Approval

CUSTOMER

Name:

Address:

Signature:

UNITED DATA TECHNOLOGIES, INC.

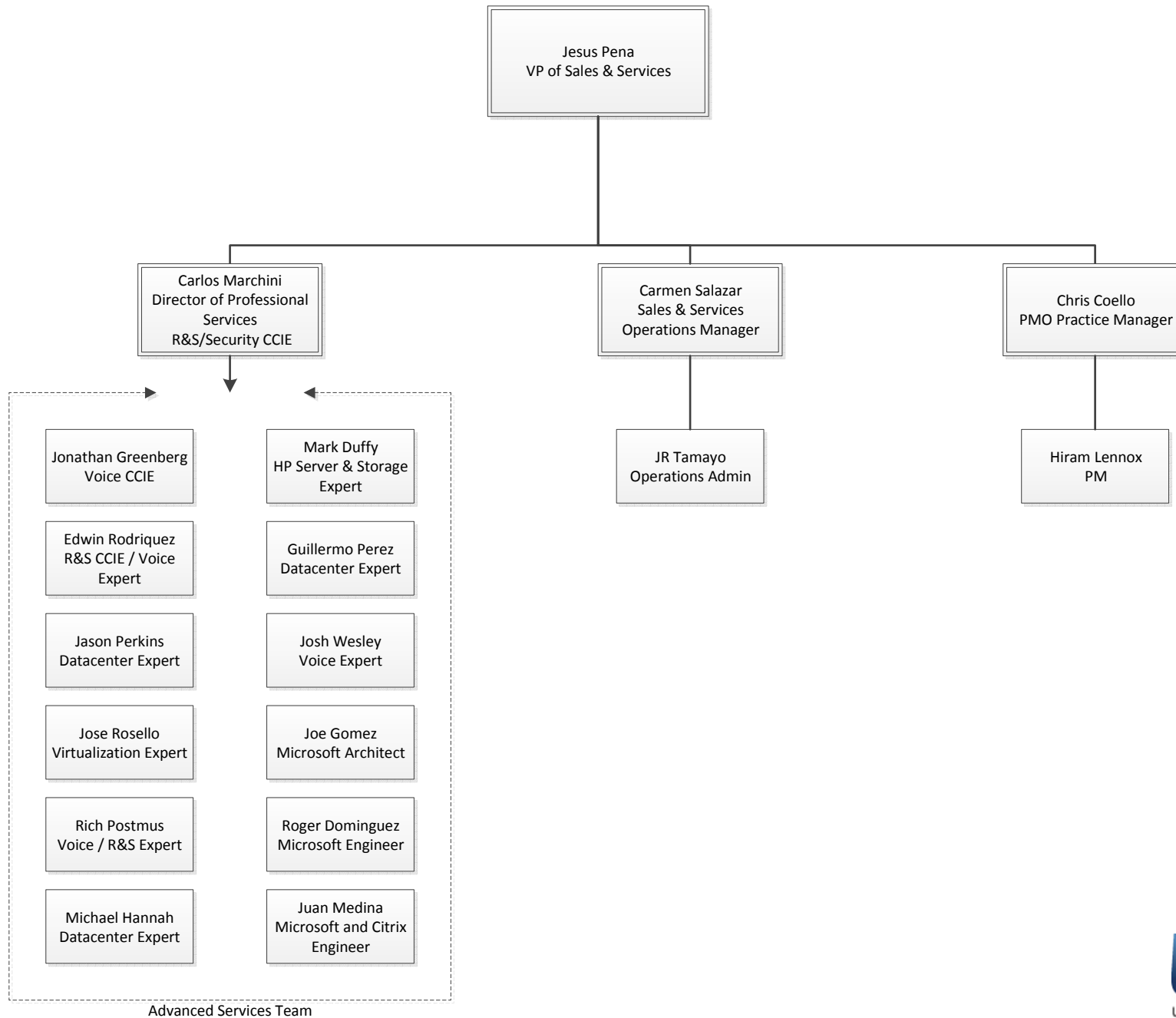
Name:

Address:

Signature:

APPENDIX C – INFO SHEETS

United Data Technologies Professional Services Organization



Carlos Marchini

Technology Consultant, CCIE#13229



Summary

An Information Technology veteran with 20+ years' experience in the industry. Areas of expertise include Cisco routing/switching, security, unified communication, wireless, and data center technologies.

Systems and Services Competencies

- Unified Communication: Call Manager Express 4.x/6.x/7.x/8.x/9.x, Call Manager 3.x/4.x/6.x/7.x/8.x/9.x, Unity Connection 7.x/8.x/9.x, Unity 4.x/5.x/7.x, Call Center Express 7.x/8.x/9.x, Presence 7.x/8.x/9.x.
- Routing/Switching: Cisco Routing 2800/2900/3800/3900/ASR1000, Catalyst 29xx/35xx/37xx/45xx/65xx.
- Routing Protocols: EIGRP, OSPF, BGP, and RIP.
- Data Center Products: Cisco UCS B-Series/C-Series Server, Nexus 1000v/2K/5K/7K, VMware ESXi, VMware vCenter.
- Security Products: Cisco PIX/ASA, Cisco IPS, Cisco ACS
- Wireless Products: Cisco Wireless LAN Controllers, Cisco Wireless Control System, Cisco Aironet access points.

Education

- Bachelor of Science in Information Technology
- Associate in Science in Electronic Engineering Technology

Other items of interest

- Thorough knowledge of Cisco's product lines.
- Memberships: INFRAGUARD and ISSA

Certifications

CCIE R/S
CCIE Security
CCVP
CCSP
CCNA
CCDA
Cisco Data Center Specialist
VMware VCP4
MCSE 2003

Summary

Juan started his career in Network Engineering in a competitive market, the tri-state area of NY, NJ and CT where he resided for 17 years. He has been providing solutions for his customers in the MIA/FLL area for the past 2 years. Juan is a Cisco Certified Engineer with over 10 years of experience, he has been involved in the pre-sales, design, IT development, implementation and support of advanced global network environments in the areas of Network Engineering, Unified Communications and Mobility. He holds proven technical skill-set, management and program development, team management and field enablement. He was worked with all market segments, Pubic Sector, Government, Enterprise and Healthcare.

Systems and Services Competencies

- Services: TCP/IP, HTTP, SMTP, SNMP, DNS, DHCP, GRE, IPSEC, DMVPN
- LAN Topologies: Ethernet, FDDI, Gigabit Ethernet, 10-Gigabit Ethernet
- WAN Topologies: Frame Relay, Leased Line, MPLS, Internet-based VPNs, GET-VPNs
- Routing Protocols/Other: RIP, OSPF, EIGRP, BGP4, static/default, access filters to reduce/secure traffic; internal and external DNS; QoS for voice, or for high priority traffic or for multiple internal/Internet gateways, etc.
- Network Equipment / Operating Systems: Cisco Routers for data and/or voice gateways and/or firewalling; Cisco Layer 2 and Layer 3 Switches (CatOS, IOS, NexusOS) in various forms: standalone workgroup, stacked workgroup, or chassis; Cisco Content/Load-balancing Switches; Cisco PIX/ASA, including Phone Proxy, SSL-HTTP Proxy, SSL-VPN, Cisco AnyConnect
- VoIP Software: Cisco Communications Manager (CCM/CUCM) and Call Manager Express (CME) or Survivable Remote Site Telephony (SRST); Cisco Voice-mail and Unified Messaging (Unity, Unity Express, Unity Connection); Cisco Unified Presence; Cisco Call Center Express; Cisco MeetingPlace Express; Sagem XMedius Fax Server; Singlewire Paging/Notification
- Other Network Applications: Microsoft DHCP Services, DNS Services, Active Directory

Other items of interest

- Employed since 2007 as a Reseller/Partner consultant; prior to that, employed in large private enterprise companies
- Avid NY Giants and NY Yankees fan

Courses & Certifications

Cisco Network Associate (CCNA)

- Successfully completed ICND (Interconnecting Cisco Network Devices) part 1 and 2 of CCNA certification.
- Successfully completed Cisco Secure PIX Firewall and ASA Advanced course for CCSP Certification
- Successfully completed Administering Cisco Call Manager and Unity course-ACCMU
- Successfully completed Troubleshooting Unified Communications course-TUC

Rich Postmus

Senior Network Engineer III



Summary

Over thirty years of experience in IT Technologies. Senior Network Engineer with excellent technical and communication skills, whether working with novice system administrators to expert engineers to top level management. Well versed in networking protocols and routing, including the design, configuration, and administration of LAN's and WAN's using private or public connectivity and including firewall design and configuration. His expertise also expands to Cisco's VoIP solutions, including voice messaging and call center (CCX). Rich has strong project management skills in network implementations, conversions or expansions, including VoIP implementations or upgrades. Able to quickly diagnose issues, recommend complete solutions and then follow through to ensure completeness.

Systems and Services Competencies

- Services: TCP/IP, HTTP, SMTP, SNMP, DNS, DHCP, GRE, IPSEC, SSL-VPN, DMVPN
- LAN Topologies: Ethernet, FDDI, Gigabit Ethernet, 10-Gigabit Ethernet
- WAN Topologies: Frame Relay, Leased Line, MPLS, Internet-based VPNs, GET-VPNs
- Routing Protocols/Other: RIP, OSPF, EIGRP, BGP4, static/default, access filters to reduce/secure traffic; internal and external DNS; policy based routing to provide QoS for voice, or for high priority traffic or for multiple internal/Internet gateways, etc.
- Network Equipment / Operating Systems: Cisco Routers for data and/or voice gateways and/or firewalling; Cisco Layer 2 and Layer 3 Switches (CatOS, IOS, NexusOS) in various forms: standalone workgroup, stacked workgroup, or chassis; Cisco Content/Load-balancing Switches; Cisco PIX/ASA, including Phone Proxy, SSL-HTTP Proxy, SSL-VPN, Cisco AnyConnect
- VoIP Software: Cisco Communications Manager (CCM/CUCM) and Call Manager Express (CME) or Survivable Remote Site Telephony (SRST); Cisco Voice-mail and Unified Messaging (Unity, Unity Express, Unity Connection); Cisco Unified Presence; Cisco Call Center Express; Cisco MeetingPlace Express; Sagem XMedius Fax Server; Singlewire Paging/Notification
- Other Network Applications: Microsoft DHCP Services, DNS Services, Active Directory

Other items of interest

- Employed since 2008 as a Reseller/Partner consultant; prior to that, employed in large private enterprise companies
- Miami Dolphin Football season ticket holder

Certifications

Cisco Design Associate (CCDA)
Cisco Network Associate (CCNA)
Cisco IP Telephony Design Specialist
Cisco Unity Support Specialist
Cisco Advanced Unified Communications Sales Engineer
Cisco Data Center Network Infrastructure Support-2 (DCNIS-2)
Cisco CCIE Written Exam (Route/Switch)
VMware Certified Professional on Virtual Infrastructure/vSphere (VCP3, VCP4, VCP5)
VMware Technical Sales Professional (VTSP 4)

Edwin Rodriquez

Senior Network Architect



Summary

Mr. Rodriguez is a Senior Network Architect with over 30 years experience successfully directing a broad range of corporate IT initiatives while participating in planning and implementation of Network and information-security solutions in direct support of business objectives. He has a track record of increasing responsibility in secure network design, systems analysis and development and full lifecycle project management, and a demonstrated capacity to implement innovative security programs that drive awareness, decrease exposure, and strengthen organizations.

Mr. Rodriguez has hands-on experience leading all stages of Network, Voice, Wireless, Data Center, and security implementation efforts, including requirements definition, design, architecture, migrations, testing and support, and he is adept at developing effective operational and security policies and procedures, project documentation and milestones, and technical/business specifications.

Systems and Services Competencies

- Routing & Switching Platforms: Cisco Nexus, MDS 9000, Catalyst & IOS switches, Cisco routers, HP ProCurve Switches,
- Wireless Platforms: Cisco 4200 and 5500 Wireless LAN Controllers, Cisco 1100, 1200, 1500, 3500, and 3600 series access points, AeroHive access points, Cisco Mobility Solution Engine (MSE)
- Security Platforms: Cisco ASA, Checkpoint, and Juniper firewalls, Cisco, Juniper and HP IPS/IDS, Cisco ISE, Cisco ACS 3.x-5.x, RSA SecureID, Cisco CSA
- Systems Platforms: , Cisco Unified Computing System,
- Unified Communication Platforms: Cisco Unified Communication Manager 7.X – 8.X, CallManager v3.X-4.X, Unity, Unity Connection, SRST, Auto Attendant, Presence, IP Communicator
- Management Solutions: Cisco Data Center Manager, Cisco NCS/WCS, Cisco Prime Network Management (CiscoWorks LMS/VMS), Cisco Security Manager, SolarWinds Orion, SolarWinds Configuration Manager, NetIQ VivaNet, OpNet, NetDoctor, IT GURU,
- Other Hardware: Cisco ACE, Cisco GSA, Cisco WAE,
- Protocols: BGP, OSPF, EIGRP, RIP, SNA, DLSW+, Fiber Channel, FCoE, iSCSI, CIFS, NFS, NAS, SAN
- Server Hardware: Dell, HP, IBM, Cisco
- Other Software: VMWare vSphere

Other items of interest

- White Water Rafting

Certifications

CCIE RS #5048 (Cisco Certified Internet Expert)
CCNP Voice
CCNP Security
CCNP Wireless
CCDP (Cisco Certified Design Professional)
Cisco Data Center Storage Networking Support Specialist
Cisco Data Center Unified Fabric Support Specialist
Cisco Data Center Support UC Specialist
Cisco Unified Computing Technology Support Specialist
Cisco IPS Specialist
Cisco IOS Security Specialist
CISSP #78583 (Certified Information Systems Security Professional)
CISA (Certified Information Security Auditor)
CISM (Certified Information Security Manager)
PCI-QDSP (PCI Qualified Data Security Professional)

APPENDIX D – SAMPLE TRAINING DOCUMENT

UNITED DATA TECHNOLOGIES PRESENTATION



Cisco IP Telephony Training

TOTAL TECHNOLOGY SOLUTIONS

▼ Agenda

- Overview
- IP Phone layout and buttons
- IP Phone features
- Voicemail
- User Page
- Q&A

SAMPLE



▼ Key Notes

- **Ocean Bank will be migrating from a 4 digit dial plan to a 5 digit dial plan.**
 - Extensions at the corporate office will be 5XXXX
 - Extensions at branch offices will be 5XXXX
 - Branch offices extensions will be BBXX (BB – Branch number)
- **You will be able to dial between the branches and corporate offices using the 5 digit extension.**
- **DID will remain the same. There will be no need to replace business cards.**
- **No need for ‘virtual numbers or roll over’ lines.**
- **Second Call will appear on LCD screen.**
- **Users be continue to dial ‘9’ for external calls**
- **Emergency number is 9911 (911 will also work).**



Cisco 7965G & 7962G IP Phone



1	Programmable buttons 	Depending on configuration, programmable buttons provide access to: • Phone lines (line buttons) • Speed-dial numbers (speed-dial buttons, including the BLF speed-dial feature) • Web-based services (for example, a Personal Address Book button) • Phone features (for example, a Privacy button) Buttons illuminate to indicate status:  Green, steady—Active call  Green, flashing—Held call  Amber, steady—Privacy in use  Amber, flashing—Incoming call  Red, steady—Remote line in use (shared line or BLF status)
2	Footstand adjustment button	Allows you to adjust the angle of the phone base.
3	Display button 	Awakens the touchscreen or phone screen from sleep mode or disables it for cleaning. - No color—Ready for input - Green flashing—Disabled - Green steady—Sleep mode
4	Messages button 	Auto-dials your voice message service (varies by service).
5	Directories button 	Opens/closes the Directories menu. Use it to access call logs and directories.
6	Help button 	Activates the Help menu.
7	Settings button 	Opens/closes the Settings menu. Use it to change touchscreen (or phone screen) and ring settings.



Cisco 7965G & 7962G IP Phone



8	Services button 	Opens/closes the Services menu.
9	Volume button 	Controls the handset, headset, and speakerphone volume (off-hook) and the ringer volume (on-hook).
10	Speaker button 	Toggles the speakerphone on or off.
11	Mute button 	Toggles the Mute feature on or off.
12	Headset button 	Toggles the headset on or off.
13	4-way navigation pad and Select button (center) 	Allows you to scroll through menus and highlight items. Use the Select button to select an item that is highlighted on the screen. Navigation button • Scroll up and down to see menus and highlight items. • Scroll right and left to scroll horizontally in multi-column displays. Select button—scroll to highlight a line using the Navigation button, and then: • Press  to open a menu. • Press  to play a ringer item. • Press  to access other features as described on the screen. Note: The Select button does not take action on all menu items. For Cisco Unified Phones 7971G-GE and 7970G: Allows you to scroll through menus and highlight items. When the phone is on-hook, displays phone numbers from your Placed Calls log.



Cisco 7965G & 7962G IP Phone



14	Keypad	Allows you to dial phone numbers, enter letters, and choose menu items.
15	Softkey buttons	Each activates a softkey option (displayed on your touchscreen or phone screen).
16	Handset light strip	Indicates an incoming call or new voice message.
17	Touchscreen or phone screen	Shows phone features.



Know Your Phone



▼ Hardkeys

- ▼ **Messages** – Press this button to dial to Voicemail
- ▼ **Directories** – Press this button to view call history and to access Personal Directory and Corporate Directory
- ▼ **Services** – Press this button to get to Phone Services (Currently configured only for IP Phone Agents)
- ▼ **Settings** – Press this button to view and change phone settings
- ▼ **?** – Press this button for more information on the keys surrounding it
- ▼ **Volume** – Press this button to adjust the volume of the ringer, speaker, handset or headset
- ▼ **Speaker** – Press this button to use the Speaker Phone
- ▼ **Mute** – Press this button to Mute and un-Mute the microphone
- ▼ **Headset** – Press this button to use the Headset

▼ Volume Adjustment

- ▼ With phone on hook, the **VOLUME** button increases or decreases the ringer volume
- ▼ With receiver off hook, the **VOLUME** button adjusts audio volume
 - Press the up or down **VOLUME** button
 - Press the **SAVE** soft key
- ▼ With the Speaker off hook, the **VOLUME** button adjusts the speaker audio volume
- ▼ With the Headset button active (green), the **VOLUME** button adjusts the headset audio volume
- ▼ The **VOLUME** button adjusts the volume only for the currently active voice receiver unless the adjustment is saved.

▼ Placing or Answering a Call

▼ You can place or answer a call many different ways!



Lift the handset, or Press the **HEADSET** button, OR

You have the option of dialing before or after going off hook
Begin dialing, when finished press the **Dial** softkey

▼ Answering a Call

- ▼ **Answer** – Press this button to answer the call (only presented while you are on another call. This is call waiting)
- ▼ **iDivert** – Press this button to send a call directly to voicemail or forwarded to coverage path. Button is only presented during an incoming call



▼ Softkeys

With your phone 'on hook'

- ▼ **Redial** – Press this button redial the last successfully dialed number
- ▼ **NewCall** – Press this button to make a new call
- ▼ **CfwdAll** – Press this button to Call Forward your phone to another extension
- ▼ **CallBack** – During an outgoing call to an internal number, you may press this button to activate **CallBack**. When the called phone's line state changes, it will notify your phone via chime and text. You can then dial the phone again by pressing the 'Dial' Softkey



▼ Softkeys

With your phone 'on hook' after digits pressed

- ▼ **Dial** – Press this button to Dial the number
- ▼ **<<** – Press this button to delete entered digits
- ▼ **AbbrDial** – Press this button to dial the speed dial number associated with that button (Speed Dial List will be created by the IT team by request)
- ▼ **Cancel** – Cancels the call



▼ Softkeys

With your phone 'off hook'

- ▼ **Redial** – Press this button redial the last successfully dialed number
- ▼ **End Call** – Hangs up the call
- ▼ **CfwdAll** – Press this button to Call Forward your phone to another extension



▼ Softkeys

With your phone 'off hook' after digits pressed

- ▼ << – Press this button to delete entered digits
- ▼ **End Call** – Hangs up the call



▼ Softkeys – During a Call

- ▼ **Hold** – Press this button to place the call on hold. If the call is put on hold, this softkey will change to “**Resume**”
- ▼ **Resume** – Press this button to resume the call from hold
- ▼ **End Call** – Hangs up the call
- ▼ **Transfer** – Transfers the call
- ▼ **Confrn** – Press this to create a Conference call
- ▼ **More** – Press this to page over to see more softkeys



▼ Softkeys – During a Call

- ▼ **ConfList** – Displays callers in the conference
- ▼ **Select** – Selects the call to join to conference or direct transfer
- ▼ **Join** – Joins two separate calls on two different lines into a conference call
- ▼ **DirTrfr** – Directly transfers two selected calls
- ▼ **More** – Press this to page over to see more softkeys



▼ Softkeys – During a Call

- ▼ **MCID** – (Malicious Caller ID) will collect information about the calls, which can be provided to the authorities for possible investigation.
- ▼ **More** – Return to first page



▼ Placing a Call on Hold

To place a call on Hold:

- ▼ During a call, press the “**Hold**” soft key. This will put the active call on hold and the softkey will change to “**Resume**”. You can then make another call, transfer the call or resume the call.



▼ Transferring a Call

To transfer a call:

1. During a call, press the **“Transfer”** soft key. This will put an active call on hold and present you with dial tone
2. Dial the other person’s extension
3. Then either wait for them to answer and tell them that you transferring a call and then press **“Transfer”** soft key again to complete the transfer.

Or

- ▼ When the phone starts ringing, just press the **Transfer** soft key again to complete the transfer

NOTE: You cannot press the **EndCall** softkey to complete the transfer. If you press **EndCall**, you will hang up on the called party and keep the original call on hold.



▼ Transferring to VoiceMail

Transferring a call directly to a person's Voice mailbox:

- ▼ During a call, press the **Transfer** soft key. This will put an active call on hold and present you with dial tone
- ▼ Then enter * + the person's extension (*55650)

NOTE: You cannot press the End Call key to complete the transfer. If you press End Call, you will hang up on the called party and keep the original call on hold.



▼ Activating CallBack Feature

Activating CallBack when someone's line is busy:

- ▼ When making an internal call to another person, if they are on the phone, use will see the CallBack softkey



▼ Activating CallBack Feature

Activating CallBack:

- ▼ Press the **CallBack** softkey to activate

Or

- ▼ Press the **Cancel** softkey to cancel the Callback
- ▼ Press the **Exit** to return to the main screen



▼ Using CallBack Feature

When Extension is Available Again:

1. Once the person has become available, you will hear a chime on your phone and the **CallBack** screen will appear again, informing you that the extension is has become available
2. You can then press the **Dial** softkey to call them back

Or

- ▼ Press **Cancel** to deactivate CallBack feature for that extension.

Or

- ▼ Press the **Exit** to return to the main screen



▼ Cancelling CallBack

Cancelling CallBack:

- ▼ If not on the CallBack Press the **CallBack** softkey
- ▼ Then Press the **Cancel** button



▼ Conference Calls

There are 2 types of conference calls

- **Ad-Hoc Conference** – While on an existing call, you conference in another caller.
- **Conference Bridge** – Participants are given a number to dial into, usually external. Security access code can be used. Need to be scheduled. Can support a very large number of participants. Can also include web access, like WebEx. May require additional resources (hardware).

SAMPLE

▼ Softkeys – Ad-Hoc Conference

To place a conference call:

1. During a call, press the more soft key and then press the **Confrn** softkey. This will put an active call on hold
2. Place a call to another person
3. When the call connects, press the **Confrn** soft key again
4. You can repeat above steps to add up to 5 additional callers for a total of 6 participants
5. Use “**ConfList**” (Conference List) to view participants on conference call



▼ Softkeys – Ad-Hoc Conference

The conference leader can remove participants

1. Press the **More** softkey
2. Press the **ConfList** button
3. Use the scroll button to highlight a user
4. Press the **Remove** button to remove that participant



▼ Phone Features

You can personalize your phone using the Settings button

▼ Settings → User Preferences

▼ Adjust Rings

1. Settings → User Preferences → Rings → Default Ring
2. Choose your favorite ring by pressing Select.
3. Press Save to save the setting

▼ Adjusting Background image

1. Settings → User Preferences → Background Images
2. Press Save to save the setting

▼ Adjusting Brightness

1. Settings → User Preferences → Brightness
2. Use Up or Down, then Save

▼ Directories

▼ You can view and dial received, placed, and missed calls:

1. Press the **DIRECTORIES** button
2. Select a directory
3. Highlight a number
4. Press the **Dial** softkey to dial the number

▼ Personal Directory

1. Select the **Personal Directory** option from the **Directories** menu
2. Enter your UserID. This is your AD username
3. Enter your PIN. Default is your extension number
4. You may search or enter information

▼ Corporate Directory

1. Select the **Corporate Directory** option from the **Directories** menu
2. Enter a couple letters of First name or Last name and select **Search**
3. Highlight the user
4. Select the **Dial** soft key





Voicemail

Before you can listen to voicemails, you must first configure your mailbox:

- ▼ Press **messages** button from your IP phone
- ▼ Default password is **1234** plus the **#** key.
- ▼ Then follow the prompts
- ▼ You must record a recorded name and personal greeting.
- ▼ Change your PIN (must be at least 4 digits. Cannot be sequential, repetitive or your extension number)
- ▼ Press **#** to complete initial mailbox set-up.
- ▼ **NOTE:** You must have a recorded name to be searchable in the dial by name directory

SAMPLE

▼ Voicemail - Greeting

▼ You can have up six different greetings

- **Standard** – This greeting will be played when alternate is not select
- **Alternate** – This greeting can be used when on vacation or out on leave.
- **Busy** – This greeting will play when your line is busy
- **Holiday** – This greeting will play when there is a holiday. You will need set-up the calendar of company holidays
- **Closed** – This greeting will play during non-working hours. You will need to set start and end time.
- **Internal** – This greeting will play when the call comes from an internal number.

Checking Voicemail On-site

- Press **messages** button and follow the voice instructions.

Or

1. You can also access your voicemail from any other phone by pressing the “messages” button, and then pressing the * key
2. Then enter your user ID (extension) and Voice Mail PIN, then follow the prompts

Or

1. Dialing 40000
2. Then pressing * when you hear the Voice Mail system answer
3. Enter your userID. This is your 5 digit extension number followed by #
4. Enter your 4 digit PIN followed by #

▼ Checking Voicemail Off-site

1. You can access your voicemail offsite by dialing your number
2. When it rolls to voicemail, press the * key to sign in
3. Enter your user ID. This is your 5 digit extension number followed by #
4. Enter your 4 digit PIN followed by #

SAMPLE

▼ Voicemail Indication

▼ Multiple types of voicemail notification on the phone:

1. Message waiting indicator on handset
2. Flashing envelope next to the line appearance
3. 'You have Voicemail' will appear at the bottom of your screen





Unity Key Map

While listening to a message

- 1 – Restart message
- 2 – Save message
- 3 – Delete message
- 4 – Slow playback
- 5 – Change volume
- 6 – Fast playback
- 7 – Rewind message
- 8 – Pause/Resume
- 9 – Fast-forward
- # – Fast-forward to end

After listening to a message

- 1 – Repeat message
- 2 – Save message
- 3 – Delete message
- 4 – Reply to subscriber
- 5 – Forward message
- 6 – Save Message as New
- 7 – Replay message
- 9 – Message summary
- # - Skip message

SAMPLE

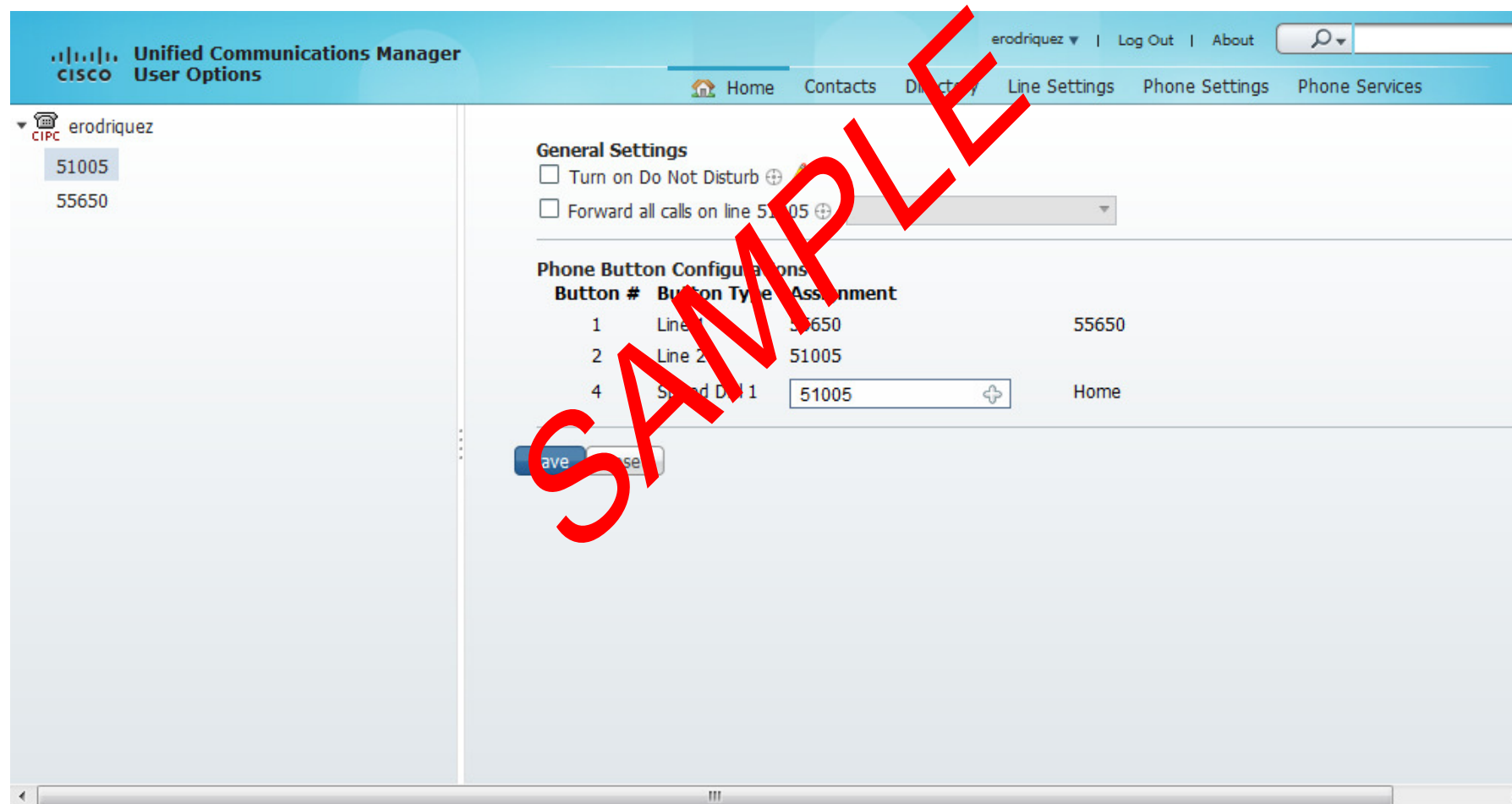
▼ CCM User Page

- ▼ Browse to <https://myphone/ccmuser>
- ▼ Log in with your System (AD) username and password



▼ CCM User Page - Device

▼ If you have more than one directory number on your phone, select the Directory Number you wish to change.



erodriquez | Log Out | About

Home | Contacts | Directory | Line Settings | Phone Settings | Phone Services

erodriquez

51005

55650

General Settings

☐ Turn on Do Not Disturb

☐ Forward all calls on line 51005

Phone Button Configurations

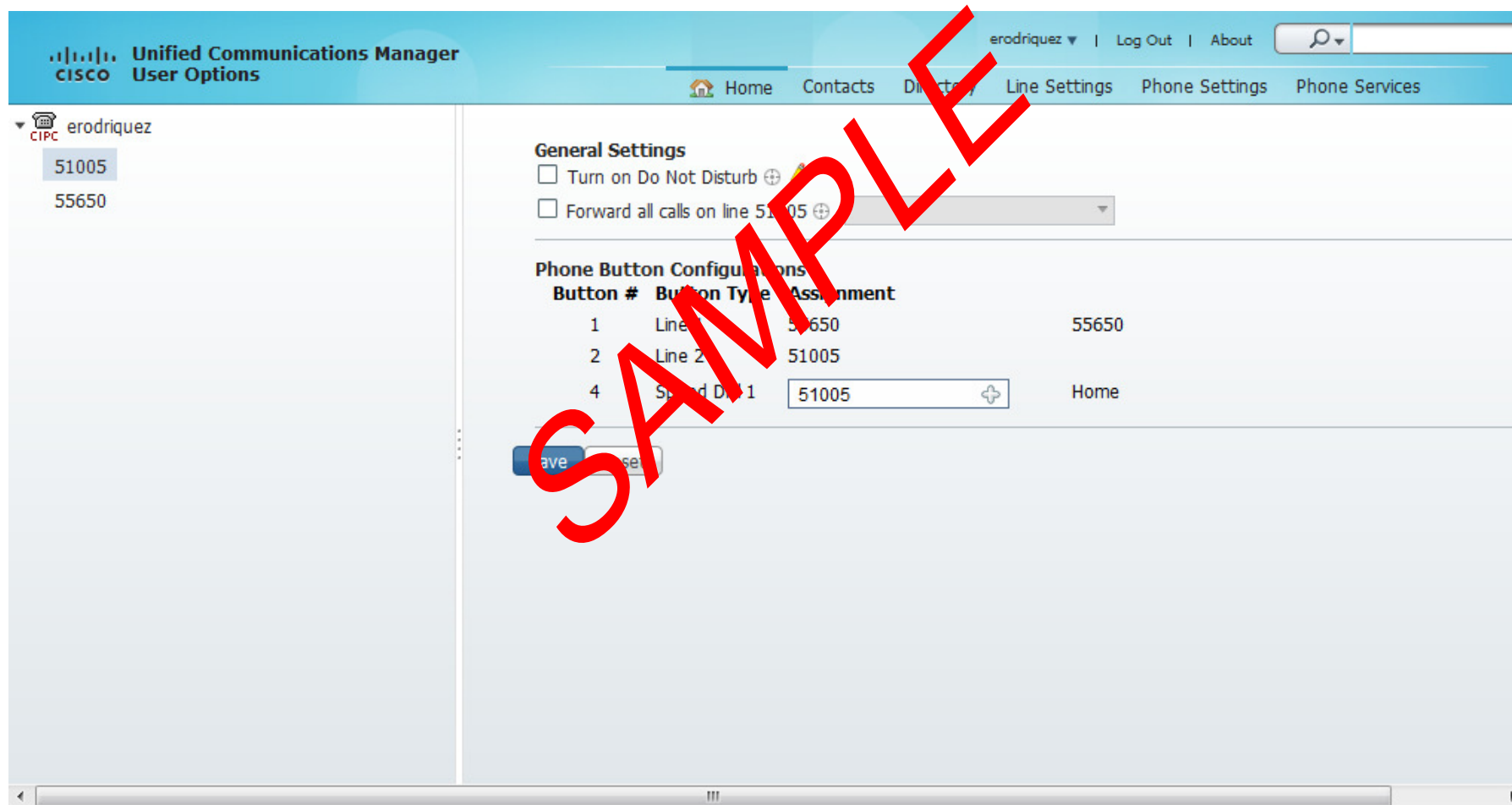
Button #	Button Type	Assignment
1	Line 1	55650
2	Line 2	51005
4	Speed Dial 1	51005

Home

Save

▼ CCM User Page – Home

- ▼ Choose Line Settings
- ▼ You can adjust Call Forwarding properties



erodriquez | Log Out | About

Home Contacts Directory Line Settings Phone Settings Phone Services

erodriquez
CIPC

51005
55650

General Settings

☐ Turn on Do Not Disturb

☐ Forward all calls on line 51005

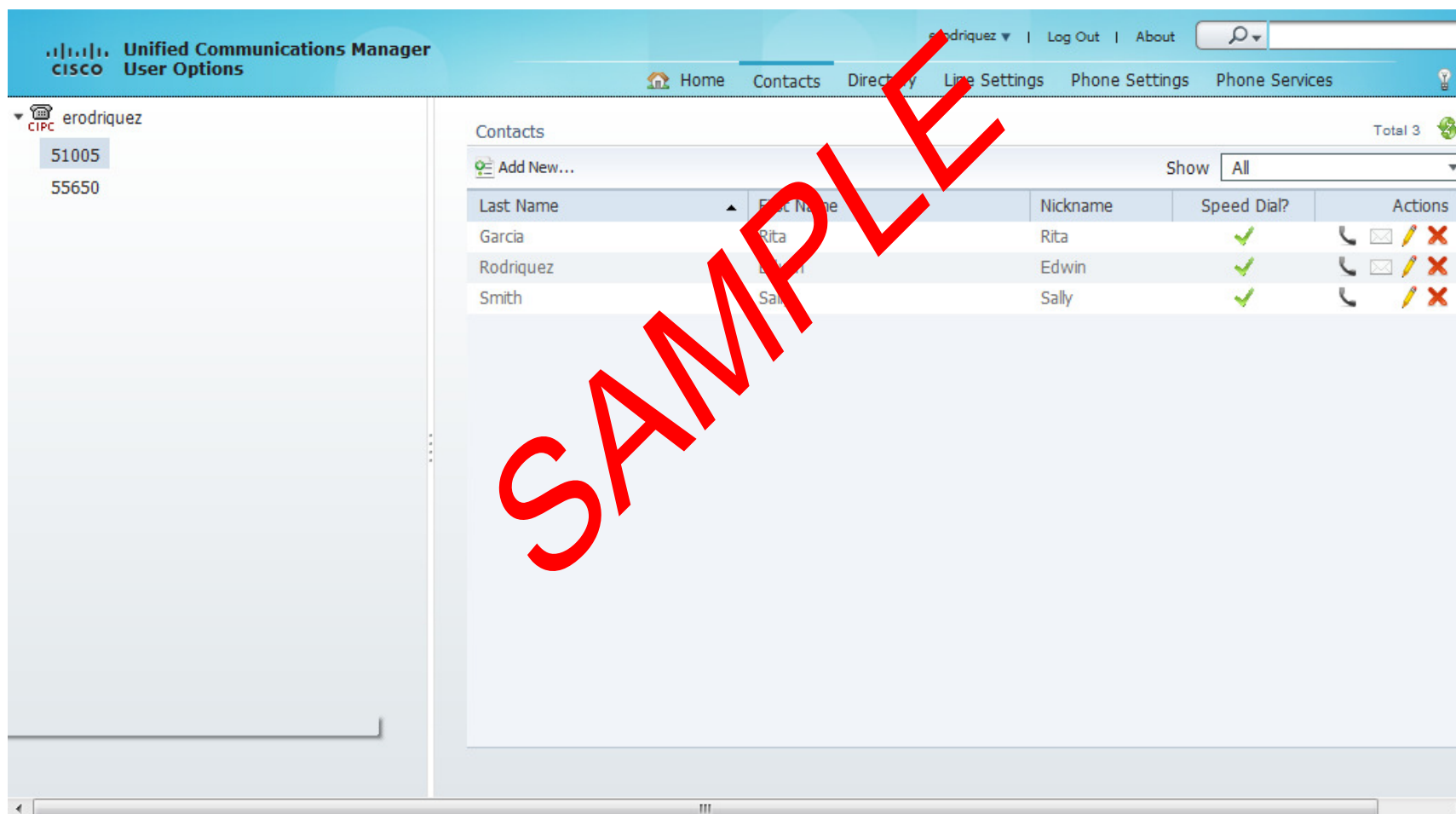
Phone Button Configurations

Button #	Button Type	Assignment
1	Line 1	55650
2	Line 2	51005
4	Speed Dial 1	51005

Save Cancel

▼ CCM User Page – Contacts

- ▼ Select the **Contacts** tabs
- ▼ Click on **Add New** to add contracts to your speed dial list or personal directory.



Unified Communications Manager
Cisco User Options

erodriquez ▼ | Log Out | About

Home Contacts Directory Line Settings Phone Settings Phone Services

erodriquez
51005
55650

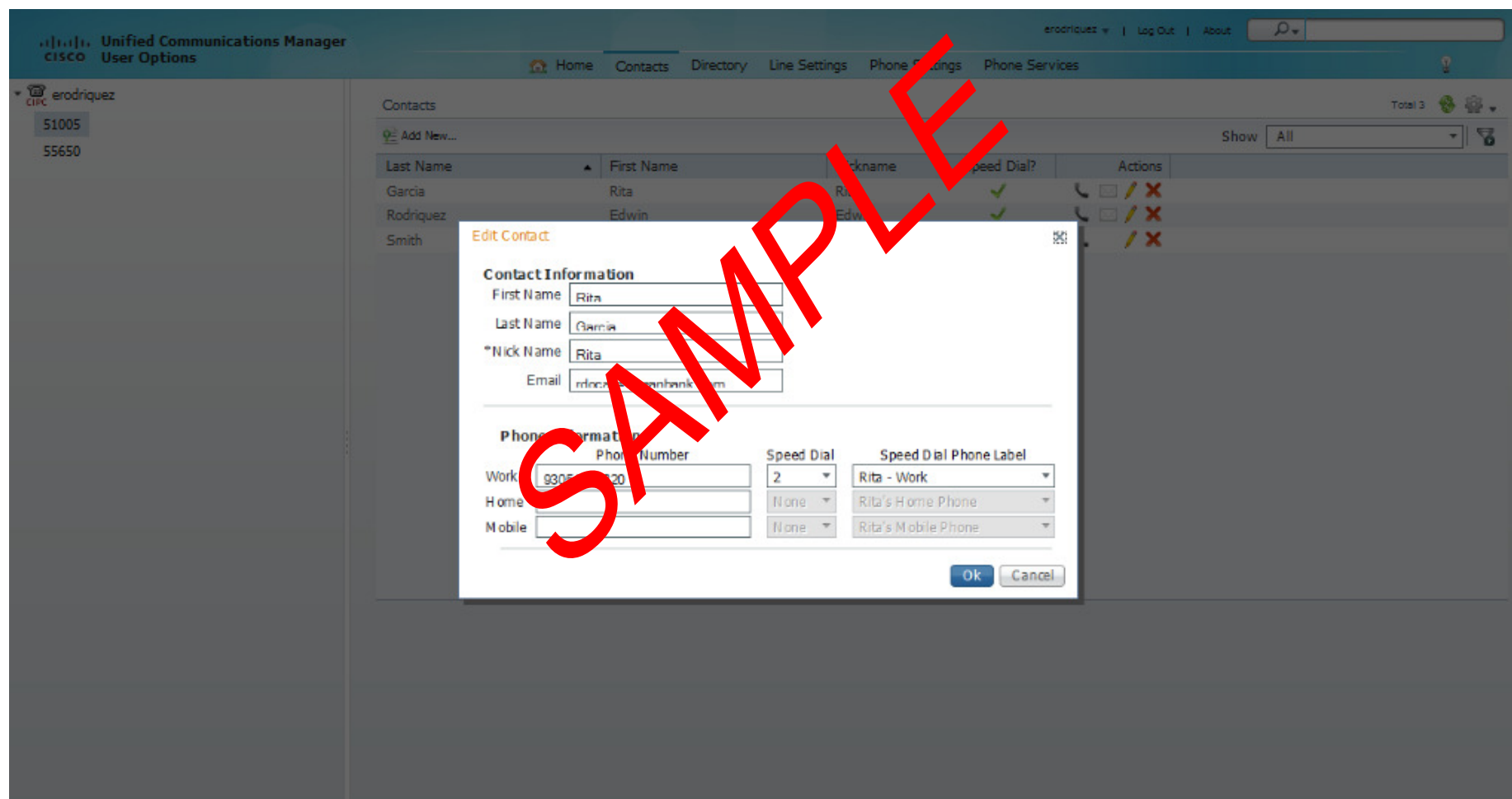
Contacts Total 3

Add New... Show All

Last Name	First Name	Nickname	Speed Dial?	Actions
Garcia	Rita	Rita	✓	☎ ✉ ✎ ✕
Rodriguez	Edwin	Edwin	✓	☎ ✉ ✎ ✕
Smith	Sally	Sally	✓	☎ ✉ ✎ ✕

▼ CCM User Page – Contacts

- ▼ Enter contact information, telephone numbers and speed dial numbers.
- ▼ Remember to add 9 and area code for number going out of the phone system



The screenshot shows the Cisco Unified Communications Manager (CCM) User Options page. The 'Contacts' tab is selected, and the 'Edit Contact' dialog box is open. The dialog box contains the following fields:

- Contact Information:**
 - First Name: Rita
 - Last Name: Garcia
 - Nick Name: Rita
 - Email: rlgarcia@sanbank.com
- Phone Information:**
 - Work Phone Number: 9305551200
 - Home Phone Number: None
 - Mobile Phone Number: None
 - Speed Dial: 2
 - Speed Dial Phone Label: Rita - Work

The background shows a list of contacts with columns for Last Name, First Name, Nickname, Speed Dial?, and Actions. The contacts listed are Garcia, Rita; Rodriguez, Edwin; and Smith.



CCM User Page – Directory

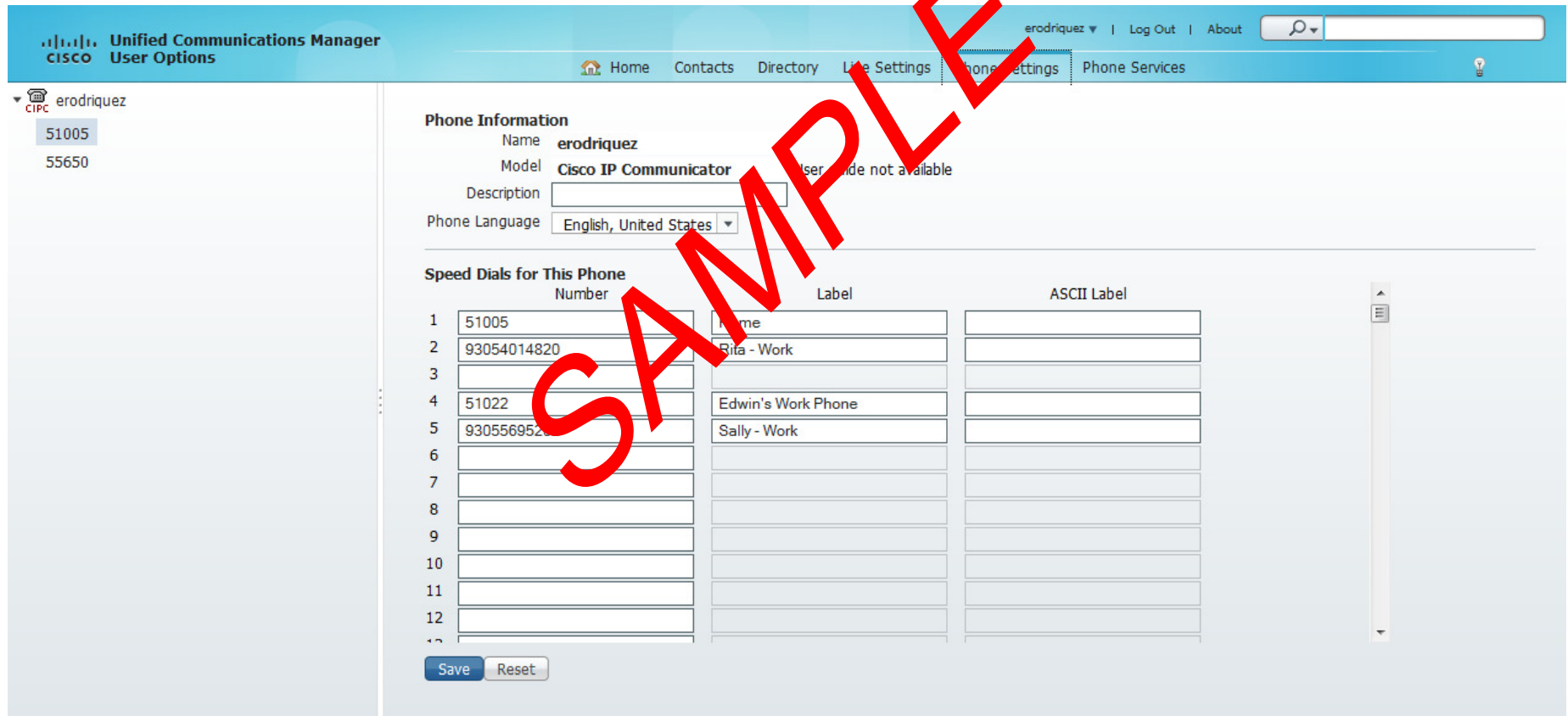
▼ Select **Directory Page** to see users in the corporate directory.

The screenshot displays the Cisco Unified Communications Manager (CCM) User Options page. The top navigation bar includes links for Home, Contacts, Directory, Line Settings, Phone Settings, and Phone Services. The Directory tab is selected. On the left, the user 'erodriquez' is listed with extensions 51005 and 55650. The main area shows a table of users in the corporate directory. The table has columns for Name, User ID, Extension, LDAP Extension, Department, Manager, Contact?, and Actions. The table is sorted by Name. A 'Show' dropdown menu is set to 'All'. The total number of users is 829.

Name	User ID	Extension	LDAP Extension	Department	Manager	Contact?	Actions
Luz Hernandez	luhe						
Luz Hernandez	Lhernandez			Special Assets			
Luz Torres	ltorres			Wealth Manag...			
Lymarie Cervoni Sepul...	lsepul...			Miami Lakes Br...			
Mabel Amaya	mamaya			Human Resou...			
Madeline Corrales	mcorrales			Palm Springs...			
Magaly Alvarez	maalvarez			CIF			
Magaly Cruz	mcruz			Loan Operatio...			
Magaly Garcia	magarcia			Airport West...			
Maggie Ruano	mrugno			Intl Banking...			
Maideline Peguero	mpeguero			Doral Branch			
Maily Untoria	muntoria			Bank Operatio...			
Manuel Lavallo	mlavallo			Bank Secrecy...			
Manuel Murtua-Helden	mhelden			Wealth Manag...			
Manuel Nunez	mnunez			West Flagler B...			
Marc Thompson	mthompson			Credit Adminis...			
Marcela Quesada	mquesada			Loan Operatio...			

▼ CCM User Page – Phone Settings

▼ Select **Phone Setting** tab to change the labels on line buttons.



Phone Information

Name: erodriquez
 Model: Cisco IP Communicator
 Description:
 Phone Language: English, United States

Speed Dials for This Phone

	Number	Label	ASCII Label
1	51005	Home	
2	93054014820	Rita - Work	
3			
4	51022	Edwin's Work Phone	
5	930556952	Sally - Work	
6			
7			
8			
9			
10			
11			
12			

Save Reset



Questions?

SAMPLE

APPENDIX E – UDT FINANCIALS

UNITED DATA TECHNOLOGIES, INC.
BALANCE SHEET
DECEMBER 31, 2013 AND 2012



 James Cline, CFO
 May 28, 2014

	<u>2013</u>	<u>2012</u>
<u>ASSETS</u>		
Current assets:		
Cash and cash equivalents	\$ 1,015,511	\$ 1,059,836
Accounts receivable, net	18,383,564	14,000,436
Inventories	8,449,236	1,966,084
Prepaid expenses	263,989	369,789
Other receivable	<u>2,723,177</u>	<u>998,830</u>
Total current assets	<u>30,835,477</u>	<u>18,394,975</u>
 Property and equipment, net	 <u>4,093,595</u>	 <u>4,126,650</u>
 Total assets	 <u><u>\$ 34,929,072</u></u>	 <u><u>\$ 22,521,625</u></u>
<u>LIABILITIES AND STOCKHOLDER'S EQUITY</u>		
Current liabilities:		
Accounts payable	\$ 15,151,910	\$ 14,994,686
Accrued expenses	11,275,588	1,779,423
Current portion of long-term debt	<u>4,637,411</u>	<u>1,921,651</u>
Total Current Liabilities	<u>31,064,909</u>	<u>18,695,760</u>
 Long-term debt, less current portion	 <u>3,281,647</u>	 <u>3,471,248</u>
 Total liabilities	 <u>34,346,556</u>	 <u>22,167,008</u>
 Commitments and contingencies:		
 Stockholders' equity:		
Common stock, \$1 par value, 600 shares, authorized issued and outstanding	 600	 600
Additional paid-in capital	326,900	326,900
Accumulated earnings	<u>255,016</u>	<u>27,117</u>
Total stockholders' equity	<u>582,516</u>	<u>354,617</u>
 Total liabilities and stockholders' equity	 <u><u>\$ 34,929,072</u></u>	 <u><u>\$ 22,521,625</u></u>

UNITED DATA TECHNOLOGIES, INC.
STATEMENT OF OPERATIONS
FOR THE YEARS ENDED DECEMBER 31, 2013 AND 2012

	2013	2012
Net Revenue	\$ 106,681,491	\$ 84,123,913
Cost of products and services	<u>91,900,917</u>	<u>70,900,534</u>
Gross profit	14,780,574	13,223,379
Selling, general and administrative expenses	<u>13,833,632</u>	<u>12,291,083</u>
Operating income	946,942	932,296
Other income	<u>13,100</u>	<u>3,573</u>
Net Income	<u><u>\$ 960,042</u></u>	<u><u>\$ 935,869</u></u>

UNITED DATA TECHNOLOGIES, INC.
STATEMENT OF STOCKHOLDERS' EQUITY
FOR THE YEARS ENDED DECEMBER 31, 2013 AND 2012

	Common Stock 600 Shares \$1 Par Value	Additional Paid-in Capital	Accumulated Earnings (Deficit)	Total Stockholders' Equity
December 31, 2011	\$ 600	\$ 326,900	\$ (293,543)	\$ 33,957
Net income	-	-	935,869	935,869
Stockholders' draws	<u>-</u>	<u>-</u>	<u>(615,209)</u>	<u>(615,209)</u>
December 31, 2012	600	326,900	27,117	354,617
Net income	-	-	960,042	960,042
Stockholders' draws	<u>-</u>	<u>-</u>	<u>(732,143)</u>	<u>(732,143)</u>
December 31, 2013	<u>\$ 600</u>	<u>\$ 326,900</u>	<u>255,016</u>	<u>582,516</u>

UNITED DATA TECHNOLOGIES, INC.
STATEMENT OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2013 AND 2012

	2013	2012
Cash flows from operating activities		
Net income	\$ 960,042	\$ 935,869
Adjustments to reconcile net loss to net cash provided by operating activities:		
Depreciation expense	222,844	265,327
Changes in operating assets and liabilities:		
Accounts receivable	(4,383,128)	(4,932,549)
Inventories	(6,483,152)	(595,371)
Prepaid expenses	105,800	8,932
Other receivable	(1,724,347)	(62,110)
Accounts payable	157,224	6,035,450
Accrued expenses	<u>9,496,165</u>	<u>882,430</u>
 Net cash provided by, (used in) operating activities	 <u>(1,648,552)</u>	 <u>2,537,978</u>
 Cash flows from investing activities:		
Acquisition of property and equipment	(189,788)	(127,456)
Sales of securities	<u>-</u>	<u>5,605</u>
 Net cash used in investing activities	 <u>(189,788)</u>	 <u>(121,851)</u>
 Cash flows from financing activities		
Net (repayments), proceeds from debt	2,526,159	(2,594,897)
Stockholders' draws	<u>(732,144)</u>	<u>(615,209)</u>
 Net cash (used for), provided by financing activities	 <u>1,794,015</u>	 <u>(3,210,106)</u>
 Net (decrease), increase in cash and cash equivalents	 (44,325)	 (793,979)
 Cash and cash equivalents, beginning of year	 <u>1,059,836</u>	 <u>1,853,815</u>
 Cash and cash equivalents, end of year	 <u><u>\$ 1,015,511</u></u>	 <u><u>\$ 1,059,836</u></u>

UNITED DATA TECHNOLOGIES, INC.

FINANCIAL STATEMENTS

DECEMBER 31, 2012 AND 2011

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Statement of Stockholders' Equity	4
Statement of Cash Flows	5
Notes to Financial Statements	6 - 11
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ALBERTO R. GARCES, CPA

CERTIFIED PUBLIC ACCOUNTANT

MEMBER
AMERICAN AND FLORIDA
INSTITUTE OF
CERTIFIED PUBLIC ACCOUNTANTS

419 WEST 49th STREET
SUITE 208
HIALEAH, FLORIDA 33012
(305) 828-9123

ACCOUNTANT'S REVIEW REPORT

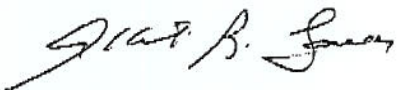
Board of Directors and Stockholders
United Data Technologies, Inc.
Miami, Florida

I have reviewed the accompanying balance sheet of United Data Technologies, Inc. as of December 31, 2012 and 2011, and the related statement of operations, stockholders' equity and cash flows, notes and supplementary schedules for the years then ended in accordance with Statements on Standards for Accounting and Review Services issued by the American Institute of Certified Public Accountants. All information included in these financial statements is the representation of the management of United Data Technologies, Inc.

A review consists principally of inquiries of Company personnel and analytical procedures applied to financial data. It is substantially less in scope than an audit in accordance with generally accepted auditing standards, the objective of which is the expression of an opinion regarding the financial statements taken as a whole. Accordingly, I do not express such an opinion.

Based on my reviews, I am not aware of any material modifications that should be made to the accompanying financial statements in order for them to be in conformity with generally accepted accounting principles.

Respectfully submitted,



Alberto R. Garces, CPA

May 8, 2013

UNITED DATA TECHNOLOGIES, INC.

BALANCE SHEET

DECEMBER 31, 2012 AND 2011

	<u>2012</u>	<u>2011</u>
<u>ASSETS</u>		
Current assets:		
Cash and cash equivalents	\$ 1,059,836	\$ 1,853,815
Accounts receivable, net	13,877,296	9,067,887
Inventories	1,966,084	1,370,713
Prepaid expenses	369,790	378,721
Other receivable	<u>1,225,623</u>	<u>936,720</u>
Total current assets	<u>18,498,629</u>	<u>13,607,856</u>
Property and equipment, net	<u>4,132,466</u>	<u>4,264,521</u>
Other assets:		
Marketable securities	<u>-0-</u>	<u>5,605</u>
Total assets	<u>\$ 22,631,095</u>	<u>\$ 17,877,982</u>

LIABILITIES AND STOCKHOLDER'S EQUITY

Current liabilities:		
Accounts payable	\$ 14,994,686	\$ 8,959,236
Accrued expenses	1,740,120	896,993
Current portion of long-term debt	<u>1,921,651</u>	<u>4,206,429</u>
Total Current Liabilities	<u>18,656,457</u>	<u>14,062,658</u>
Long-term debt, less current portion	<u>3,614,204</u>	<u>3,781,367</u>
Total liabilities	<u>22,270,661</u>	<u>17,844,025</u>
Commitments and contingencies:		
Stockholders' equity:		
Common stock, \$1 par value, 600 shares, authorized issued and outstanding	600	600
Additional paid-in capital	326,900	326,900
Accumulated earnings, (deficit)	<u>32,934</u>	<u>(293,543)</u>
Total stockholders' equity	<u>360,434</u>	<u>33,957</u>
Total liabilities and stockholders' equity	<u>\$ 22,631,095</u>	<u>\$ 17,877,982</u>

The accompanying notes are an integral part of these financial statements.

(2)

UNITED DATA TECHNOLOGIES, INC.

STATEMENT OF OPERATIONS

FOR THE YEARS ENDED DECEMBER 31, 2012 AND 2011

	<u>2012</u>	<u>2011</u>
Net sales and services	\$ 84,123,913	\$ 58,392,595
Cost of products and services	<u>70,900,534</u>	<u>48,970,533</u>
Gross profit	13,223,379	9,422,062
Selling, general and administrative expenses	<u>12,285,267</u>	<u>10,400,921</u>
Operating income, (loss)	938,112	(978,859)
Other income	<u>3,573</u>	<u>2,153</u>
Net income, (loss)	\$ <u>941,685</u>	\$ (<u>976,706</u>)

The accompanying notes are an integral part of these financial statements.

(3)

UNITED DATA TECHNOLOGIES, INC.
STATEMENT OF STOCKHOLDERS' EQUITY
FOR THE YEARS ENDED DECEMBER 31, 2012 AND 2011

	Common Stock 600 Shares \$1 Par Value	Additional Paid-in Capital	Accumulated Earnings (Deficit)	Total Stockholders' Equity
December 31, 2010	\$ 600	\$ 326,900	\$ 1,303,675	\$ 1,631,175
Net loss	-0-	-0-	(976,706)	(976,706)
Stockholders' draws	<u>-0-</u>	<u>-0-</u>	(<u>620,512</u>)	(<u>620,512</u>)
December 31, 2011	600	326,900	(293,543)	33,957
Net income	-0-	-0-	941,685	941,685
Stockholders' draws	<u>-0-</u>	<u>-0-</u>	(<u>615,208</u>)	(<u>615,208</u>)
December 31, 2012	\$ <u>600</u>	\$ <u>326,900</u>	\$ <u>32,934</u>	\$ <u>360,434</u>

The accompanying notes are an integral part of these financial statements.

UNITED DATA TECHNOLOGIES, INC.

STATEMENT OF CASH FLOWS

FOR THE YEARS ENDED DECEMBER 31, 2012 AND 2011

	<u>2012</u>	<u>2011</u>
Cash flows from operating activities:		
Net income, (loss)	\$ 941,685	\$(976,706)
Adjustments to reconcile net loss to net cash provided by operating activities:		
Depreciation expense	259,510	288,097
Changes in operating assets and liabilities:		
Accounts receivable	(4,809,409)	2,070,386
Inventories	(595,371)	(453,800)
Prepaid expenses	8,931	(168,126)
Other receivable	(288,903)	(449,910)
Accounts payable	6,035,450	391,435
Accrued expenses	<u>843,127</u>	<u>86,394</u>
Net cash provided by, (used in) operating activities	<u>2,395,020</u>	<u>787,770</u>
Cash flows from investing activities:		
Acquisition of property and equipment	(127,455)	(230,906)
Sale of securities	<u>5,605</u>	<u>-0-</u>
Net cash used in investing activities	(<u>121,850</u>)	(<u>230,906</u>)
Cash flows from financing activities:		
Net (repayments), proceeds from debt	(2,451,941)	1,894,593
Stockholders' draws	<u>(615,208)</u>	<u>(620,512)</u>
Net cash (used for), provided by financing activities	<u>(3,067,149)</u>	<u>1,274,081</u>
Net (decrease), increase in cash and cash equivalents	(793,979)	1,830,945
Cash and cash equivalents, beginning of year	<u>1,853,815</u>	<u>22,870</u>
Cash and cash equivalents, end of year	\$ <u>1,059,836</u>	\$ <u>1,853,815</u>

The accompanying notes are an integral part of these financial statements.

UNITED DATA TECHNOLOGIES, INC

NOTES TO FINANCIAL STATEMENTS

FOR THE YEARS ENDED DECEMBER 31, 2012 AND 2011

NOTE A SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Organization and Description of Business

United Data Technologies, Inc. is a corporation which was organized on March 23, 1995 under the Laws of the State of Florida. The principal business activity is providing information technology solutions in addition to the authorized sale of information technology equipment and services in the United States and the Caribbean.

Method of Accounting

The Company prepares its financial statements in conformity with U.S. generally accepted accounting principles in the United States. These principles require management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Revenue Recognition

Revenue is derived primarily from the sale of products and services. The Company recognizes revenue when persuasive evidence of a sales arrangement exists, delivery has occurred or services are rendered, the sales price or fee is fixed or determinable and collectability is reasonably assured. The Company allows its customers to return product for exchange or credit subject to certain limitations. A provision for such returns is recorded at the time of sale based upon historical experience. The Company also sells software maintenance contracts where services are performed by a third party. When we determine that such sales are made by us as agent, we recognize revenue on a net basis, with the cost paid to the third party service provider recorded as a reduction to sales.

The accompanying notes are an integral part of these financial statements.

UNITED DATA TECHNOLOGIES, INC

NOTES TO FINANCIAL STATEMENTS

FOR THE YEARS ENDED DECEMBER 31, 2012 AND 2011

NOTE A SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Cash and Cash Equivalents

The Company considers all highly liquid investments with original maturities of three months or less to be cash equivalents. As of December 31, 2012 and 2011 there were no cash equivalents.

Accounts Receivable

Accounts receivable as of December 31, 2012 and 2011 are stated net of an allowance for doubtful accounts of \$ 91,663 and \$ 12,757, respectively. The Company obtains trade credit insurance for qualifying commercial receivables but does not insure receivables from public sector entities (government and public education) (see Note D).

Inventories

Inventories are valued at lower of cost or market. Cost being determined on the First-in, First-out (FIFO) method. Management has written off obsolete inventories. At December 31, 2012 and 2011, the reserve for obsolete inventory is stated at \$ 45,000 and \$ 15,000, respectively.

Income Taxes

The Company, with the consent of its shareholders, has elected under the Internal Revenue Code to be an "S" Corporation. Whereas, under these provisions, the shareholders of the Company will be taxed on their proportionate share of the Company's taxable income, no provision or liability for federal or state income taxes has been included in these financial statements.

Advertising

Advertising costs are expensed as incurred. Advertising and promotion expenses for the years ended December 31, 2012 and 2011 was \$ 715,620 and \$ 564,173, respectively.

Financial Statement Presentation

Prior year statement has been revised in order to conform with current year presentation.

The accompanying notes are an integral part of these financial statements.

UNITED DATA TECHNOLOGIES, INC.

NOTES TO FINANCIAL STATEMENTS

FOR THE YEARS ENDED DECEMBER 31, 2012 AND 2011

NOTE B PROPERTY AND EQUIPMENT

Property and Equipment are stated at cost net of accumulated depreciation. Depreciation was computed using the straight line, half-year convention method over the estimated useful life of each asset ranging from 5 to 39 years. For the years prior to 2009 for federal income tax reporting purposes management elected the Internal Revenue Service Code Section 179 depreciation method. Whereas, the applicable assets are fully depreciated in the year of acquisition and placed in service.

Expenditures for maintenance and repairs are charged to operations when incurred.

Depreciation expense for the years ended December 31, 2012 and 2011 was \$ 259,510 and \$ 288,097, respectively.

Property and Equipment are summarized by major classifications as follows:

<u>Description</u>	<u>Cost</u>		<u>Useful Life Years</u>
	<u>2012</u>	<u>2011</u>	
Land	\$ 919,159	\$ 919,159	
Building & Improvements	2,125,842	2,125,842	39
Equipment & Fixtures	<u>2,688,750</u>	<u>2,561,295</u>	5
Total	5,733,751	5,606,296	
Accumulated Depreciation	(<u>1,601,285</u>)	(<u>1,341,775</u>)	
Property and Equipment	\$ <u>4,132,466</u>	\$ <u>4,264,521</u>	

The accompanying notes are an integral part of these financial statements.

UNITED DATA TECHNOLOGIES, INC.

NOTES TO FINANCIAL STATEMENTS

FOR THE YEARS ENDED DECEMBER 31, 2012 AND 2011

NOTE C DEBT

Mortgage Payable

Mortgage payable to Mercantile Commercebank secured by land, building and improvements of Company occupied premises. The \$ 3,154,000 total promissory note is payable in monthly payments of \$ 20,489 beginning November 5, 2008 to October 5, 2013 including interest at 6.0% amortized over 25 years. From November 5, 2013 to October 5, 2018 new monthly payments are payable including interest based on a 2.50% above Five-Year Treasury Yield Rate based on a remaining assumed amortization of 20 years. All remaining unpaid principal and interest due shall be due and payable in full on the tenth anniversary of the date of this note.

GE Commercial Credit

The Company entered into a credit line agreement with GE Commercial Credit in 2006 which consist of an inventory floorplan facility and an accounts receivable facility. At December 31, 2012 the total credit line was \$ 6 million. The credit line was increased to \$ 12 million on March 8, 2013.

The credit facility is due on demand with interest rate variable at Prime Minimum of 5.0% plus 0.50% charged on average daily balance of outstandings, approximately 5.50% as of December 31, 2012 and 2011, respectively.

Subordinated Debt 1

Fixed Rate at 8.00%, Interest only, Note Payable of \$ 501,400 to a private investor, principal amount of loan to be repaid in full March 2013. The investor has agreed to extend the maturity date to March 2014.

Subordinated Debt 2

Fixed Rate \$ 500,000 Note Payable to Capital Bank at 6.00%, sixty (60) monthly payments of \$ 9,680 including principal and interest to be repaid in full August 2016.

Bank of America

Variable Rate, Interest only, \$ 50,000 Line of Credit payable to Bank of America, due on demand. As of December 31, 2011 annual interest rate was 5.75%. As of December 31, 2012 the line was paid and closed.

The accompanying notes are an integral part of these financial statements.

UNITED DATA TECHNOLOGIES, INC.

NOTES TO FINANCIAL STATEMENTS

FOR THE YEARS ENDED DECEMBER 31, 2012 AND 2011

NOTE C DEBT (Continued)

Interest Expense

Interest expense for the years ended December 31, 2012 and 2011 was \$ 490,994 and \$ 405,556, respectively.

Debt Summary

Current portion of long-term debt consist of the following:

	<u>2012</u>		<u>2011</u>	
	<u>Total</u>	<u>Current</u>	<u>Total</u>	<u>Current</u>
Mortgage Note	\$ 2,899,237	\$ 71,478	\$ 2,966,021	\$ 66,784
GE Commercial	1,754,548	1,754,548	4,000,000	4,000,000
Subordinated1	501,400	-0-	501,400	-0-
Subordinated2	380,670	95,625	470,650	89,920
Bk of America	-0-	-0-	49,725	49,725
Total	\$ <u>5,535,855</u>	\$ <u>1,921,651</u>	\$ <u>7,987,796</u>	\$ <u>4,206,429</u>

The following is a summary of principal maturities of long-term debt during the next five (5) years ending December 31,:

2013	\$ 1,921,651
2014	678,956
2015	188,664
2016	160,761
2017	91,084
Thereafter	<u>2,494,739</u>
Total debt obligations	5,535,855
Less current portion	<u>1,921,651</u>
Total long-term debt	\$ <u>3,614,204</u>

The accompanying notes are an integral part of these financial statements.

UNITED DATA TECHNOLOGIES, INC.

NOTES TO FINANCIAL STATEMENTS

FOR THE YEARS ENDED DECEMBER 31, 2012 AND 2011

NOTE D COMMITMENTS AND CONTINGENCIES

Operating Leases

The Company leases some of its equipment and office space under noncancelable operating lease agreements.

Litigation

Based on management assessments, any pending or threatened litigation filed against United Data Technologies, Inc. would not materially affect the Company's financial position.

Employee Benefit Plan

The Company maintains a 401(k) retirement plan for its employees. Full-time employees are eligible to participate immediately upon employment. The Company began to match employee contributions as of January 1, 2013 at a rate of 20% of such contribution up to 5% of compensation.

Concentration of Credit Risk

Financial instruments, which potentially expose the Company to concentrations of credit risk, consist primarily of contract receivables. The Company has attempted to minimize this risk by monitoring customers for whom they perform services and also by obtaining insurance for qualifying commercial receivables. Due to these factors, no additional credit risk beyond amounts provided for collection losses is believed by management to be inherent in the Company's accounts receivable.

The two largest customers represented approximately 18.4% and 41.4% of the total accounts receivable balance (uninsured balances) and approximately 18.5% and 24.6% of total revenues for the years ended December 31, 2012 and 2011, respectively. No other customers are considered a concentration risk.

The Company maintains its operating cash accounts at three financial institutions. Balances in the accounts may, on occasion, exceed the federally insured limit of \$ 250,000 per institution. At December 31, 2012 and 2011, the Company's cash balance exceeded the insured limit by approximately \$ 1,732,617 and \$ 2,328,050, respectively.

The accompanying notes are an integral part of these financial statements.

UNITED DATA TECHNOLOGIES, INC.

SUPPLEMENTARY SCHEDULES

FOR THE YEARS ENDED DECEMBER 31, 2012 AND 2011

	<u>2012</u>	<u>2011</u>
Cost of products and services:		
Beginning inventories	\$ 1,370,713	\$ 916,913
Add: Purchases and direct costs	71,495,905	51,274,343
Less: Ending inventories	(1,966,084)	(1,370,713)
Total cost of products and services	<u>70,900,534</u>	<u>50,820,543</u>
Selling, general and administrative expenses:		
Advertising and promotions	\$ 715,620	\$ 564,173
Alarm and security service	6,619	6,437
Auto and truck expenses	109,240	183,292
Bad Debts	78,921	-0-
Bank and credit charges	22,173	21,871
Consulting fees	185,085	297,631
Depreciation	259,510	288,097
Dues and education	85,275	107,884
Entertainment	104,569	86,977
Equipment leasing	65,644	61,407
Insurance expense	309,496	437,718
Interest Expense	490,994	405,556
IT consultants and support	290,031	167,797
Licenses and taxes	38,396	41,606
Maintenance and repairs	33,413	29,766
Office and miscellaneous	92,562	82,418
Payroll and related	8,440,275	6,573,634
Postage and delivery	21,490	31,920
Professional fees	156,750	344,015
Rent expense	202,571	160,094
Telephone	204,507	249,050
Travel	301,788	192,099
Utilities	<u>70,338</u>	<u>67,479</u>
Total selling, general and administrative expenses	<u>12,285,267</u>	<u>10,400,921</u>

The accompanying notes are an integral part of these financial statements.

Attachment A - Datasheets

Double click on objects to view datasheet and IP Phone portfolio and click on link to view data on the Cisco IP 8945.



Data Sheet

Cisco IP Phone 7800 Series

The Cisco® IP Phone 7800 Series is a cost-effective, high-fidelity voice communications portfolio designed to improve your organization's people-centric communications, while reducing your operating costs.

It combines an attractive new ergonomic design with "always-on" reliability and secure encrypted communications. The Cisco® IP Phone 7800 Series delivers advanced IP Telephony features and crystal-clear wideband audio performance to deliver an easy-to-use, full-featured voice communications experience.

The Cisco® IP Phone 7800 Series introduces three models to the Cisco IP Phone portfolio. From left to right (Figure 1), they are:

- The IP Phone 7821 supporting two lines
- The IP Phone 7841 supporting four lines
- The IP Phone 7861 supporting sixteen lines

Figure 1. Cisco IP Phone 7800 Series



The line keys on each model are fully programmable. You can set up keys to support either lines, such as directory numbers, or call features like speed dialing. You can also boost productivity by handling multiple calls for each directory number, using the multi-call per-line appearance feature. Tri-color LEDs on the line keys support this feature and make the phone simpler and easy to use.

Fixed function keys on all models give you one-touch access to service, messaging, directory, hold/transfer, transfer, and conference features. A full-duplex speakerphone lets you set up clear multi-party conferences for flexible, productive collaboration.

The Cisco® IP Phone 7800 Series sets a new standard in usability and delivers a context-sensitive user experience. It features a high resolution 3.5" (306x162) grayscale display, with white backlighting for easy reading. Localized language support, including right-to-left onscreen text, meets the needs of global users.

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<http://www.cisco.com/c/en/us/products/collaboration-endpoints/unified-ip-phone-8945/index.html>



Introduction

Cisco Unified IP Phones 6900 Series

Cisco Unified IP Phones 7800 Series

Cisco Unified IP Phones 8800 Series

Cisco Unified IP Phones 8900 Series

Smart Desk, Cisco IM500 Series

Analog Telephone Adapters & Accessories

Additional Information

Cisco Unified SIP Phones 2900 Series

Cisco IP Phone 7800 Series

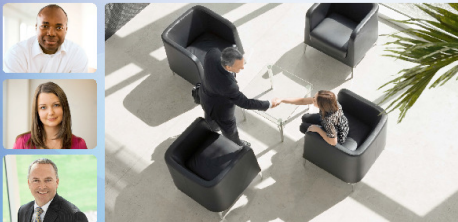
Cisco Unified IP Phones 8800 Series

Cisco Unified IP Phones 8900 Series

IP Endpoint Multimedia Applications

Contents

Cisco Unified IP Phone Portfolio



Environmental Information

Proposers must furnish all space, power, and environmental requirements for the proposed telephone system and optional voice messaging equipment.

UDT Response:

UDT read and acknowledged.

Requirement:

Space — Provide the physical dimensions of the proposed equipment.

UDT Response:

Cisco IP Phone 7821: 207 x 206 x 28mm (exclude foot stand) – Weight: 867g – Display: 3.5” 396×162 pixels

Cisco IP Phone 7841: 207 x 206 x 28mm (exclude foot stand) – Weight: 868g – Display: 3.5” 396×162 pixels

Cisco Unified IP Phone 8945: 9.25 x 4.49 x 10.24 in. (235 x 114 x 260 mm). – Weight: 2.80 lb (1.27 kg)

Cisco VG204XM: 223.8 x 206.5 x 45.2mm – Weight: 1.351kg – Mounting: Desktop and wall-mountable

Cisco UCS C220 Server: 4.32 x 43.0 x 75.5cm – Weight: 16.8kg

Requirement:

Power - All power requirements, including any special conditioning or grounding requirements.

UDT Response:

Cisco IP Phone 7821 -

The phone is an interoperable IEEE 802.3af PoE (Class 1 device); 48 VDC is required; it can be supplied locally at the desktop using an optional AC-to-DC power supply (CP-PWR-CUBE-3=). Use of the power supply also requires the use of one of the corresponding AC country cords

Cisco IP Phone 7841 -

The phone is an interoperable IEEE 802.3af PoE (Class 1 device); 48 VDC is required; it can be supplied locally at the desktop using an optional AC-to-DC power supply (CP-PWR-CUBE-3=). Use of the power supply also requires the use of one of the corresponding AC country cords

Cisco Unified IP Phone 8945: The phones can receive power from IEEE 802.3af-compliant blades. The phone is Power over Ethernet (PoE) Class 2. The phones can also be powered locally with a power adapter (CP-PWR-CUBE-3=) along with one of the power cords listed in Table 4.

**Cisco VG204XM: AC Input Voltage: 100 to 240 VAC – AC Input Current(Maximum): 0.5 amp – DC Input Voltage: 12V – Frequency: 50 to 60 Hz
Power Dissipation: 30W**

Cisco UCS C220 Server: AC Input Voltage: 90 to 264 VAC self-ranging, 100 to 120 VAC nominal, 200 to 240 VAC nominal

AC Input Frequency: Range- 47 to 63 Hz (single phase, 50 to 60 Hz nominal)

Maximum AC input current: 6 A Maximum @ 100 VAC, 3 A maximum @ 208 VAC

Maximum AC inrush current: 9 A peak @ 35° C, 208 VAC

Maximum output power for the power supply: 450 W

Power supply output voltage: Main power 12 VDC, Standby power 12 VDC

Power supply efficiency: CSCI Platinum

Requirement:

Heat - Vendor must provide heat dissipation for proposed switchroom and the recommended safe temperature operating range for the proposed system.

UDT Response:

Cisco IP Phone 7821:

Operational Temperature: 32 to 104°F (0 to 40°C)

Nonoperational Temperature: 14 to 140°F (-10 to 60°C)

Humidity – Operating 10% to 90%, non-condensing – Non-operating 10% to 95%, non-condensing

Cisco IP Phone 7841:

Operational Temperature: 32 to 104°F (0 to 40°C)

Nonoperational Temperature: 14 to 140°F (-10 to 60°C)

Humidity – Operating 10% to 90%, non-condensing – Non-operating 10% to 95%, non-condensing

Cisco Unified IP Phone8945:

Operating-:32 to 104°F (0 to 40°C)

Relative humidity: 10 to 95% (noncondensing)

Storage Temperature: 14 to 140°F (-10 to 60°C)

Cisco VG204XM:

Operating temperature: 32 to 104°F (0 to 40°C)

Nonoperating temperature: -22 to 149°F (-30 to 65°C)

Operating humidity: 10 to 85% noncondensing

Noise level (maximum): No fan, 0 db

On- or off-premises: On-premises only, permanent ground required, to be installed and serviced only by trained professionals

Cisco UCS C220 Server:

Temperature operating: 41 to 104° F (5 to 40° C)

Derate the maximum temperature by 1°C per every 305m of altitude above sea level

Temperature nonoperating: -40 to 149°F (-40 to 65°C)

Humidity (RH) nonoperating, non-condensing: 10 to 90 %

Altitude operating: 0 to 3,000 m (0 to 10,000 ft.)

Altitude nonoperating: 0 to 12,192 m (0 to 40,000 ft.)

Sound Power level, Measure A-weighted per ISO7779 LWAd (Bels) Operation at 73°F (23°C): 5.4

Sound Pressure level, Measure A-weighted per ISO7779 LpAm (dBA) Operation at 73°F (23°C) :

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Cisco VG350, VG224, VG204XM, and VG202XM Stand-Alone Analog Voice Gateways

The Cisco® VG350, VG224, VG204XM, and VG202XM Analog Voice Gateways allow you to use your IP telephony solution with traditional analog devices while taking advantage of the productivity afforded by IP infrastructure.

Cisco Unified Communications enables organizations to collaborate more effectively - helping them streamline business processes, reach the right resource the first time, and improve productivity and profitability (Figures 1 through 4). Cisco offers an end-to-end unified communications and collaboration solution that includes network infrastructure, security, unified call control, endpoints, network management, and a lifecycle services approach. In addition, it offers flexible deployment models, outsourced management options, end-user and partner financing packages, and integration with third-party communications applications.

Figure 1. Cisco VG350 Analog Voice Gateway



Figure 2. Cisco VG224 Analog Voice Gateway



Figure 3. Cisco VG204XM Analog Voice Gateway



Figure 4. Cisco VG202XM Analog Voice Gateway



The Cisco VG350, VG224, VG204XM, and VG202XM are part Cisco IOS® software-based VG series stand-alone analog voice gateways. The Cisco VG350 is a high-density 160-port gateway, the Cisco VG224 is a 24-port gateway, and the Cisco VG204XM and VG202XM are low-density 4- and 2-port gateways, respectively. These gateways connect analog phones, fax machines, modems, and speakerphones to an enterprise voice system based on Cisco Unified Communications Manager (Unified CM). Having these devices tightly integrated with the IP-based phone system is advantageous for increased manageability, scalability, and cost-effectiveness (refer to Figure 5 later in this document). Commercial businesses can also use these gateways with Cisco Unified Communications Manager Express to effectively augment an integrated-services-router (ISR) environment. Both topology environments support business needs ranging from high to low concentrations of analog voice ports for modem calls, fax calls, and analog supplementary services.

The Cisco VG350, VG224, VG204XM, and VG202XM offer Cisco IOS Software manageability on analog phone lines so that you can use them as extensions to your Cisco or 3rd party IP call control solution. The Cisco VG350 and VG224 offer 19-inch rack-mount chassis, and the Cisco VG204XM and VG202XM offer desktop form-factor chassis with a fanless design.

Features and Benefits

- Cisco IOS Software-based hardware: The hardware includes uniform Cisco command-line interface (CLI) and Simple Network Management Protocol Version 3 (SNMPv3) support for ease of gateway configuration and operation.
- Robust voice quality: Cisco experience in providing toll-quality packet-voice service helps ensure that the Cisco VG350, VG224, VG204XM, and VG202XM provide the clear, robust voice quality end users have come to expect from telephony services.
- Investment protection: You can continue to use your existing analog phones, fax machines, and modems while taking advantage of IP telephony. Basic analog phone connectivity is needed when the infrastructure (wiring) or application does not support or require IP phones. The Cisco VG350 and VG224 offer ideal platforms to support centralized analog phone-line deployments, and the Cisco VG204XM and VG202XM are ideal platforms to support sparsely concentrated, distributed analog phone deployments. Thus you can deploy IP telephony without having to purchase IP phones for all users and you can continue using existing devices. You can also use the Cisco VG350 and VG224 in a Cisco Unified Communications Manager Express environment and migrate to a Cisco Unified Communications Manager deployment with 100-percent investment protection.
- High availability: With these gateways you will experience less voice downtime due to WAN link failure. The Cisco VG350, VG224, VG204XM, and VG202XM have built-in Media Gateway Control Protocol (MGCP) failover to an H.323 connection to a Survivable Remote Site Telephony (SRST) router. This failover maintains voice service for analog endpoints if the WAN link fails or you lose connectivity to the Cisco Unified Communications Manager, Cisco Business Edition or Cisco Hosted Collaboration Solution. The Cisco VG350 is built on the Cisco Integrated Services Routers Generation 2 (ISR G2) platform powered by high-performance multicore processors. In this platform, you can achieve power redundancy by installing an optional integrated redundant power supply (RPS), which helps decrease network downtime and protects the network from power-supply failures. The Cisco VG224 offers high availability during power failure using an external 12-VDC UPS for battery backup.
- Reduced barrier to entry: These analog phone gateways provide a low-cost alternative for low-end analog phones and allow you to take advantage of IP telephony with a lower overall IP telephony investment.

Figure 5. Cisco Voice Gateway Integration with Cisco Unified Communications Manager

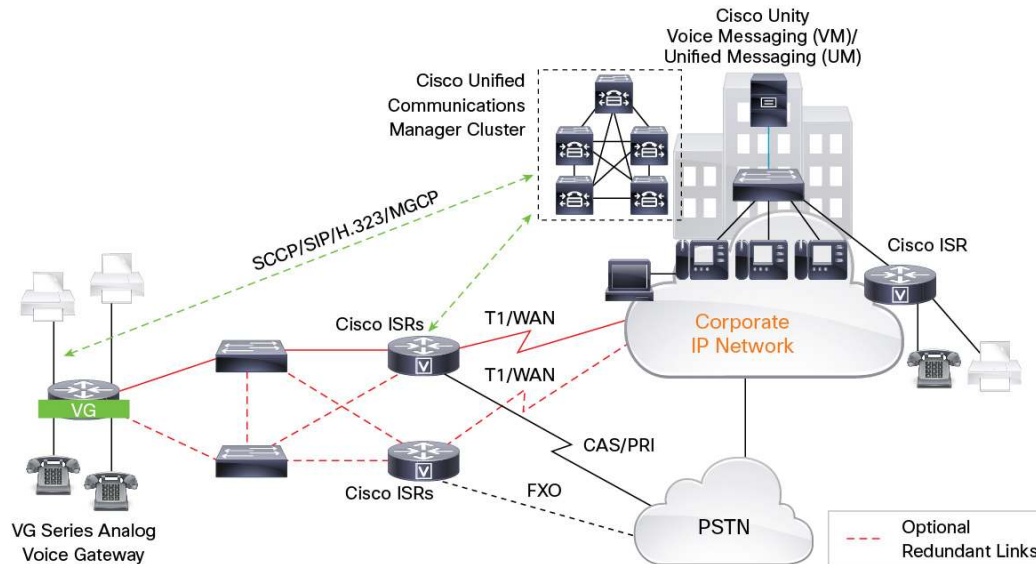
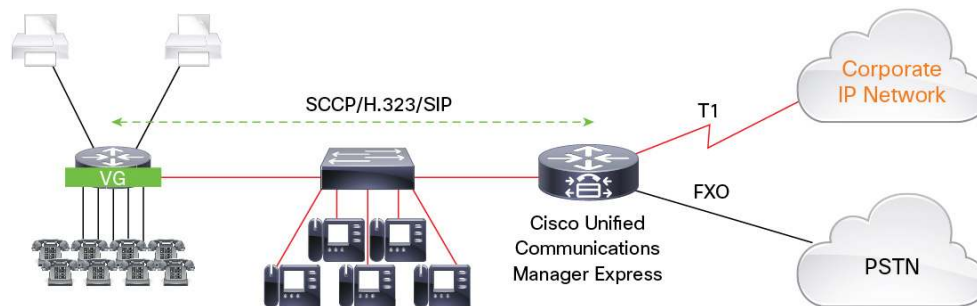


Figure 6. Cisco Voice Gateway Integration with Cisco Unified Communications Manager Express



Analog Phone Connectivity

The Cisco VG350, VG224, VG204XM, and VG202XM are ideal for analog phone deployments ranging from centralized to sparsely concentrated or distributed topologies. These analog voice gateways provide a high level of availability at locations with MGCP fallback, with ease of manageability using Cisco IOS Software monitoring features. They offer many supplementary analog calling features depending on the call control and signaling type used. Refer to Table 1 for the supplementary analog calling features available.

Table 1. Analog Supplementary Features Available on Analog Voice Gateways

Feature	Skinny Client Control Protocol (SCCP) Features with Cisco Unified Communications Manager	SCCP Features with Cisco Unified Communications Manager Express	Session Initiation Protocol (SIP) Features with Cisco Unified Communications Manager
Basic call	X	X	X
Call forward all	X	X	
Call forward busy	X	X	
Call forward cancel	X	X	
Call forward no answer	X	X	
Call hold or resume	X	X	X

Feature	Skinny Client Control Protocol (SCCP) Features with Cisco Unified Communications Manager	SCCP Features with Cisco Unified Communications Manager Express	Session Initiation Protocol (SIP) Features with Cisco Unified Communications Manager
Call pickup group	X	X	
Call pickup local	X	X	
Call transfer blind	X	X	
Call transfer consultative	X	X	X
Call waiting	X	X	X
Caller ID	X	X	X
Caller ID on call waiting	X	X	X
Malicious caller ID	X		
Conference call	Up to 3 parties	Up to 3 parties	Up to 3 parties
Ad hoc conference call	Up to 3 parties	Up to 3 parties	
Meet-Me conference call	X	X	
Directed call park		X	
Directed call pickup		X	
Directed call pickup of ringing extension		X	
Redial	X	X	
Speed dial	X	X	
Call toggle	X	X	X
Music on hold	X		
Shared-line support*	X		
Shared line privacy	X		
Precedence and preemption	X		
Call back on busy	X		
DC voltage Visual Message Waiting Indicator) VMWI	X (only for foreign exchange station [FXS] on VG224)		

*Simultaneous ringing, hold, and resume across analog and IP phone

The Cisco VG350, VG224, VG204XM, and VG202XM support feature access codes (FACs) in conjunction with Cisco Unified Communications Manager and Cisco Unified Communications Manager Express. Refer to documentation for these applications for details.

Fax and Modem Connectivity

The Cisco VG350, VG224, VG204XM, and VG202XM support fax machines and modems. When using fax machines, they support Cisco Fax Relay, T.38 fax relay, and fax pass-through. Cisco and T.38 fax relay technologies allow transfer of faxes across the network with high reliability using less bandwidth than a voice call. All modems can be connected to the Cisco VG350, VG224, VG204XM, and VG202XM and are transferred over the network using modem pass-through.

Protocols Supported

The voice gateways support the following protocols:

- SCCP
- H.323v4
- MGCP
- SIP
- Real-Time Transport Protocol (RTP)
- Secure Real-Time Transport Protocol (SRTP)
- Trivial File Transfer Protocol (TFTP)
- HTTP server
- Simple Network Management Protocol (SNMP)
- Telnet
- Dynamic Host Configuration Protocol (DHCP)
- Domain Name System (DNS)
- Cisco Unified Communications Manager or Cisco Unified Communications Manager Express redundancy support using Hot Standby Router Protocol (HSRP)
- Call survivability - MGCP failover to an H.323 connection to the SRST router
- Cisco Fax Relay, T.38 fax relay, and modem pass-through
- Coder/decoder (codec) support, G.711, and G.729a
- RADIUS and TACACS+ for Telnet and authorization

Technical Specifications

Table 2 lists technical specifications of the gateways.

Table 2. Technical Specifications

Category	Cisco VG350	Cisco VG224	Cisco VG204XM and VG202XM
System			
Processor	High-performance multicore processors	RISC processor	Power QUICC (power PC-based) processor
Memory (default)	1-GB synchronous dynamic RAM (SDRAM)	256-MB SDRAM	256-MB double data rate 2 (DDR2) RAM
Compact Flash	256 MB	128 MB, one slot Type II	128-MB NAND Flash
Ethernet	Up to three 10/100/1000 Ethernet WAN ports are supported Two of the 10/100/1000 Ethernet WAN ports can support Small Form-Factor Pluggable (SFP)-based connectivity instead of RJ-45 ports, enabling fiber connectivity	Two 10/100BASE-T Ethernet ports	Two 10/100BASE-T Ethernet ports
Console and auxiliary (maximum)	A new, innovative, mini-B USB console port supports management connectivity when traditional serial ports are not available Traditional console and auxiliary ports are also available	Up to 119.2 kbps per port	Up to 115.2 kbps per port

Category	Cisco VG350	Cisco VG224	Cisco VG204XM and VG202XM
Power			
AC input voltage	100- to 240-VAC autoranging	100 to 240 VAC	100 to 240 VAC
AC input current (maximum)	7.1 to 3.0 amps	1 amp	0.5 amp
DC input voltage	-	12V	12V
Frequency	47 to 63 Hz	50 to 60 Hz	50 to 60 Hz
Power dissipation	230 watts (maximum consumption) (power supply rated for 540W capacity)	60W	30W
Redundant power supply	Optional integrated RPS	External 12-VDC UPS	-
Physical			
Width	17.25 in. (438.15 mm)	17.5 in. (444.5 mm)	8.81 in. (223.8 mm)
Height	5.25 in. (133.35 mm)	1.75 in. (44.4 mm) (add 0.17 in. for optional rubber feet)	1.78 in. (45.2 mm) with rubber feet
Depth	18.75 in. (476.25 mm)	13.5 in. (342.9 mm)	8.13 in. (206.5 mm)
Weight (maximum)	48.08 lb	11 lb (4.106 kg)	2.98 lb (1.351 kg)
Mounting	3 rack units (3RU), 19 in.; EIA 23 in.	Rack- and wall-mountable	Desktop- and wall-mountable
Environment			
Operating temperature	32 to 104°F (0 to 40°C)	32 to 122°F (0 to 50°C)	32 to 104°F (0 to 40°C)
Nonoperating temperature	-40 to 158°F (-40 to 70°C)	-40 to 185°F (-40 to 85°C)	-22 to 149°F (-30 to 65°C)
Operating humidity	5 to 95%	5 to 95% noncondensing	10 to 85% noncondensing
Noise level (maximum)	Sound pressure: 57.6 dB typical, 77.6 dB maximum Sound power: 67.8 dB typical, 84.7 dB maximum	38-dBA @ 3 ft (0.914m)	No fan, 0 db
On- or off-premises	On-premises only, restricted access area, permanent ground required, to be installed and serviced only by trained professionals	On-premises only, restricted access area, permanent ground required, to be installed and serviced only by trained professionals	On-premises only, permanent ground required, to be installed and serviced only by trained professionals
Compatibility			
Cisco IOS Software Release	15.2(4)M or later	12.3(4)T or later	15.3(2)T or later
Cisco Unified Communications Manager version	8.6.2(SU2), 9.0.1, or later	3.3.3 SR2 or later	6.1.3, 7.0.1 or later
Cisco Unified Communications Manager Express version	7.1, 8.0, or later	4.3.2 or later	7.0.1 or later
Tip and Ring Interfaces for Each FXS Port (SLIC)			
Interface type	FXS (on-premises connection only) (RJ-21) (Optional high-speed WAN interface card [HWIC] FXS modules on motherboard have RJ-11 connectors.)	FXS (on-premises connection only)	FXS (on-premises connection only)
Address signaling formats	In-band dual tone multifrequency (DTMF) Out-of-band pulse (8-12 pulses per second [pps])	In-band DTMF Out-of-band pulse (8-12 pps)	In-band DTMF Out-of-band pulse (8-12 pps)
FXS signaling formats	Part numbers SM-D-72FXS and SM-D-48FXS-E support loop-start and ground-start signaling. HWIC slots on motherboard support FXS loop-start, ground-start, and DID signaling.	Loop-start and ground-start signaling	Loop-start and ground-start signaling

Category	Cisco VG350	Cisco VG224	Cisco VG204XM and VG202XM
FXS loop resistance	Up to 600 ohms (including phone or terminal equipment) for short-loop-length port Up to 1400 ohms (including phone and terminal equipment) for long-loop-length port	Up to 600 ohms (including the phone or terminal equipment)	Up to 600 ohms (including the phone or terminal equipment)
Direct inward dialing (DID) loop resistance	Up to 1800 ohms (including terminal equipment)	-	-
On-hook voltage	-44V	-43 V	-43 V
Off-hook loop current	25 mA (maximum) for short-loop-length port 35 mA (maximum) for long-loop-length port	25 mA (maximum)	25 mA (maximum)
Ring tone	Configurable for different country requirements	Configurable for different country requirements	Configurable for different country requirements
Ring voltage	54 Vrms into 5 ringer equivalence numbers (RENS) at zero-loop-length port (balanced) (short-loop-length port) 62 Vrms into 2 RENS at zero-loop-length port (balanced) (long-loop-length port)	50 Vrms into 5 RENS at zero-loop-length port (balanced) if no DC offset	54 Vrms into 5 RENS at zero-loop-length port (balanced) if no DC offset
Ring frequency	20, 25, 30, and 50 Hz	20, 25, 30, and 50 Hz	20, 25, 30, and 50 Hz
Ring waveform	Sine wave if no DC offset	Sine wave if no DC offset 20 and 24 VDC offset trapezoidal	Sine wave up to 35-VDC offset
Ring load	-	5REN with no DC offset 2REN with DC offset	5 RENS with no DC offset 2 RENS with DC offset
REN loading	5 REN per port (short-loop-length port) 2 RENS per port (long-loop-length port) (maximum 40 total RENS loads per each SM-D-72FXS module; maximum 30 total RENS loads per each SM-D-48FXS-E module)	5 RENS per port, 12 RENS per system (maximum)	5 RENS per port, 12 RENS per system (maximum)
RJ-11 FXS port terminating impedance option	600c, 600r, 900c, 900r, complex1, complex2, complex3, complex4, complex5, and complex6	600-ohm complex, 600-ohm real, 900-ohm complex, 900-ohm real, complex1, and complex2	600-ohm complex, 600-ohm real, 900-ohm complex, 900-ohm real, complex1, and complex2
Disconnect supervision	Power denial (calling party control and far-end disconnect)	Power denial (calling party control and far-end disconnect)	Power denial (calling party control and far-end disconnect)
Caller ID	On-hook transmission of frequency-shift-keying (FSK) data	On-hook transmission of FSK data	On-hook transmission of FSK data
FXS loop Length	Short-loop-length port 3000 ft, 26 AWG 5500 ft, and 24 AWG Long-loop-length port 11,000 ft, 26AWG 18,000 ft, and 24 AWG	3000 ft, 26 AWG	3000 ft, 26 AWG
Category cable	Category 3 and Category 5	Category 3 and Category 5	Category 3 and Category 5
Physical connector	RJ-21 and RJ-11	RJ-21	RJ-11
Number of connectors or ports	160 (144 using two SM-D-72FXS modules with RJ-21 connectors and 16 using FXS voice interface card (VIC) modules with RJ-11 connectors)	24 FXS ports	2 FXS ports on VG202XM 4 FXS ports on VG204XM
Mean time between failures (MTBF)	1,390,019 hours	195,671 hours	200,000 hours

Category	Cisco VG350	Cisco VG224	Cisco VG204XM and VG202XM
Certifications			
Safety	• UL 60950-1 • CAN/CSA C22.2 No. 60950-1 • EN 60950-1 • AS/NZS 60950-1 • IEC 60950-1	• UL 60950 3rd edition • IEC 60950 3rd edition • AS/NZS 3260: 1993 with Amendments 1, 2, 3, and 4 • TS001:1996 with Amendment 1	• UL 60950 • CAN/CSA C22.2 No. 60950 • IEC 60950 • EN 60950-1 • AS/NZS 60950
Immunity	• EN 55024, CISPR 24 • EN50082-1 • EN 61000	• EN55024 and EN50082-1 (including • EN 61000 4-2 electrostatic discharge • EN 61000 4-3 radiated susceptibility • EN 61000 4-4 electrical fast transients • EN 61000 4-5 power and signal line surges • EN 61000 4-6 injected RF swept immunity) post, telephone, and telegraph administration (PTT)	• EN300386 • EN55024/CISPR24 • EN50082-1 • EN61000-6-1
EMC	• 47 CFR, Part 15 • ICES-003 Class A • EN55022 Class A • CISPR22 Class A • AS/NZS 3548 Class A • VCCI V-3 • CNS 13438 • EN 300-386	• 47CFR15 Class A (FCC) • CISPR22 Class A • EN55022 Class A • AS/NZS 3548 Class A (ACA) • ICES003 Class A (Industry Canada) • V-3 Class A (VCCI) • CNS13438 Class A (BSMI)	• FCC Part 15 Class B • ICES-003 Class B • EN55022 Class B • CISPR22 Class B • VCCI Class B • EN 300386 Class B • EN61000-3-3 • EN61000-3-2
TELCOM	• TIA/EIA/IS-968 • CS-03 • ANSI T1.101 • ITU-T G.823, G.824 • IEEE 802.3 • RTTE Directive • Homologation requirements vary by country and interface type. For specific country information, refer to the online approvals data base at: http://www.ciscofax.com.	• The Cisco VG224 platform complies with FCC Part 68, CS-03, European Directive 99/5/EC, and other standards. • Homologation requirements vary by country and interface type. For specific country information, refer to the online approvals data base at: http://www.ciscofax.com.	• The Cisco VG202XM and VG204XM platforms comply with FCC Part 68, CS-03, European Directive 99/5/EC, and other standards. • Homologation requirements vary by country and interface type. For specific country information, refer to the online approvals data base at: http://www.ciscofax.com.

This equipment complies with all the regulatory requirements for connection to the communications networks of each country in which it is sold.

Ordering Information

To order this product, use the information provided in Table 3.

Table 3. Ordering Information

Product Number	Product Description
VG350-144FXS/K9	Cisco VG350 144 FXS Bundle
VG350-98FXSE/K9	Cisco VG350 96 FXS OPX-Lite Bundle
VG350-72F48E/K9	Cisco VG350 72 FXS & 48 FXS OPX-Lite Bundle
VG350/K9	Cisco VG350 High Density Voice over IP Analog Gateway (A la carte option)
VG224	Cisco VG224 Analog Phone Gateway
VG224-4PACK	4 Pack of VG224 Analog Phone Gateway

Product Number	Product Description
VG204XM	Cisco VG204XM Analog Phone Gateway
VG202XM	Cisco VG202XM Analog Phone Gateway

While this data sheet focuses on Cisco stand-alone analog gateways, the Cisco VG Series of Analog Gateways also provides high-density analog service modules (SM-D-72FXS, SM-D-48FXS-E) that are deployed on Cisco Integrated Services Routers (ISRs). More information can be found on these voice gateways at <http://www.cisco.com/go/vg> and information on the Cisco ISRs can be found at <http://www.cisco.com/go/isr>.

Services and Support

Using the Cisco Lifecycle Services approach, Cisco and our partners offer a broad portfolio of end-to-end services. These services are based on proven methodologies for deploying, operating, and optimizing IP communications solutions. Initial planning and design services, for example, can help you meet aggressive deployment schedules and minimize network disruption during implementation. Operate services reduce the risk of communications downtime with expert technical support. Optimize services enhance solution performance for operational excellence. Cisco and our partners offer a system-level service and support approach that can help you create and maintain a resilient, converged network that meets your business needs.



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Cisco IP Phone 7800 Series

The Cisco® IP Phone 7800 Series is a cost-effective, high-fidelity voice communications portfolio designed to improve your organization's people-centric communications, while reducing your operating costs.

It combines an attractive new ergonomic design with “always-on” reliability and secure encrypted communications. The Cisco® IP Phone 7800 Series delivers advanced IP Telephony features and crystal clear wideband audio performance to deliver an easy-to-use, full-featured voice communications experience.

The Cisco® IP Phone 7800 Series introduces three models to the Cisco IP Phone portfolio. From left-to-right (Figure 1), they are:

- The IP Phone 7821 supporting two lines
- The IP Phone 7841 supporting four lines
- The IP Phone 7861 supporting sixteen lines

Figure 1. Cisco IP Phone 7800 Series



The line keys on each model are fully programmable. You can set up keys to support either lines, such as directory numbers, or call features like speed dialing. You can also boost productivity by handling multiple calls for each directory number, using the multi-call per-line appearance feature. Tri-color LEDs on the line keys support this feature and make the phone simpler and easy to use.

Fixed function keys on all models give you one-touch access to service, messaging, directory, hold/resume, transfer, and conference features. A full-duplex speakerphone lets you set up clear multi-party conferences for flexible, productive collaboration.

The Cisco® IP Phone 7800 Series sets a new standard in usability and delivers a context-sensitive user experience. It features a high resolution 3.5" (396x162) greyscale display, with white backlighting for easy reading. Localized language support, including right-to-left onscreen text, meets the needs of global users.

The Cisco® IP Phone 7800 Series is also more energy-efficient and eco-friendly, to support your green initiatives. Each phone supports Power-over-Ethernet (PoE) Class 1 and Cisco's EnergyWise™, and is Energy Star certified. A standard power-save option reduces power consumption during off-hours, to save money and maximize energy efficiency.

The IP Phone 7800 Series portfolio is ideal for any mid-sized to large enterprise company that wants to update its phone system from a traditional analog or digital-based system to an IP Communications system. It's also an excellent choice if you're seeking to expand your voice communications support with your current Cisco Unified Communications solution.

Features and Benefits

Table 1 lists features and benefits of the Cisco® IP Phone 7800 Series

Table 1. Features and Benefits

Features	Benefits
Hardware Features	
Ergonomic design	The phone offers an easy-to-use interface and provides a traditional telephony-like user experience.
Graphical display	White backlit, greyscale, 396×162 pixel-based display (3.5") provides scrollable access to calling features and text-based XML applications.
Backlit Indicator	The phone supports backlit indicators for the audio path keys (handset, headset and speakerphone), select key, line keys, and message waiting.
Volume control	A volume-control toggle provides easy decibel-level adjustments of the handset, monitor speaker, and ringer.
Full duplex speakerphone	Full-duplex speakerphone allows gives you flexibility in placing and receiving calls.
Replaceable bezel	Phone includes a black bezel. Optional silver bezel is also available separately.
Dual-position foot stand	The display is easy to view and the buttons and keys are easy to use. The two-position foot stand supports viewing angles of 30 degrees and 45 degrees; you can remove the foot stand for wall mounting, with mounting holes located on the base of the phone.
Wall-mountable	The phone can be installed on a wall using optional wall-mount kit (available separately).
Electronic hook switch	The hookswitch can be controlled electronically with a third party headset connected to the auxiliary port.
Keys	- The phone has the following keys - Line keys - Soft-keys - Two-way navigation and select keys - Hold/Resume, Transfer and Conference keys - Messaging, Service and Directory keys - Standard key pads - Volume control toggle key - Speakerphone, headset and mute keys
Power Features	
IEEE PoE class 1	The phone supports IEEE 802.3af PoE (Class 1); power consumption does not exceed 3.84 watts.
Cisco power cube 3	This power cube is used as a standard Cisco IP Phone Power Supply for non-PoE deployments.
Call-Control Support	
Cisco Unified Communications Manager	8.5.1 8.6.2 9.1.2 10.x and later
Cisco Business Edition 6000	8.6.2 9.1.2 10.x and later

Features	Benefits
Cisco Hosted Collaboration Solution	• 8.6.2 • 9.1.2 • 10.x and later

Licensing

The Cisco® IP Phone 7821 requires a Basic User Connect License (UCL) in order to connect to Cisco Unified Communications Manager. The Cisco® IP Phone 7841 and 7861 require an Enhanced User Connect License (UCL) in order to connect to Cisco Unified Communications Manager.

Product Specifications

Table 2 lists the features and specifications of The Cisco® IP Phone 7800 Series.

Table 2. Features and Specifications

Features	Specifications
Signaling protocol support	• Session Initiation Protocol (SIP)
Codec support	• G.711a/μ, G.722, G.729a, iLBC
Key call features support	• + Dialing (E.164) • Adjustable ringing and volume levels • Adjustable display contrast • Auto-answer • Auto-detection of headset • Call forward • Call history • Call timer • Call waiting • Caller ID • cBarge • Corporate directory • Conference • Dial from the list • Direct transfer • Do not disturb • Hold/resume • Immediate divert • Join • Message-waiting indicator • Music on hold • Mute • Network profiles (automatic) • On- and off-network distinctive ringing • Personal directory • Privacy • Ring tone per line appearance • Shared line • Silent monitoring and recording • Speed dial • Time and date display • Transfer • Voicemail
Language support	• Arabic (Arabic Area) • Bulgarian (Bulgaria) • Catalan (Spain)

Features	Specifications
	• Chinese (China) • Chinese (Hong Kong) • Chinese (Taiwan) • Croatian (Croatia) • Czech (Czech Republic) • Danish (Denmark) • Dutch (Netherlands) • English (United Kingdom) • Estonian (Estonia) • French (France) • Finnish (Finland) • German (Germany) • Greek (Greece) • Hebrew (Israel) • Hungarian (Hungary) • Italian (Italy) • Japanese (Japan) • Latvian (Latvia) • Lithuanian (Lithuania) • Korean (Korea Republic) • Norwegian (Norway) • Polish (Poland) • Portuguese (Portugal) • Portuguese (Brazil) • Romanian (Romania) • Russian (Russian Federation) • Spanish (Columbia) • Spanish (Spain) • Slovak (Slovakia) • Swedish (Sweden) • Serbian (Republic of Serbia) • Serbian (Republic of Montenegro) • Slovenian (Slovenia) • Thai (Thailand) • Turkish (Turkey)
Multiple ring tones	• The phone supports user-adjustable ring tones
Directories	• The phone identifies incoming messages and categorizes them for users on the screen. This makes it fast and easy to return calls using direct dial-back capability. The corporate directory integrates with the Lightweight Directory Access Protocol (LDAP) standard directory
Quality-of-service (QoS) options	• The phone supports CDP and 802.1Q/p standards, and can be configured with an 801.1Q VLAN header containing the VLAN ID overrides configured by the Admin VLAN ID
Security	• Certificates • Image authentication • Device authentication • File authentication • Signaling authentication • Media encryption using Secure Real-Time Transfer Protocol (SRTP) using AES-128 • Signaling encryption using Transport Layer Security (TLS) Protocol using AES-128 or AES-256 • Encrypted configuration files • 802.1X authentication • Cryptography
Configuration options	• The user can configure IP address assignment statically or through the DHCP client

Features	Specifications
Physical dimensions (H×W×D)	• CP-7821: 207 x 206 x 28mm (exclude foot stand) • CP-7841: 207 x 206 x 28mm (exclude foot stand) • CP-7861: 207 x 265 x 28mm (exclude foot stand)
Weight	• CP-7821: 867g • CP-7841: 868g • CP-7861: 1053g
Display	• 3.5" 396×162 pixels
Ethernet switch	• The phone has a 10/100BASE-T (The Cisco® IP Phone 7821 & 7861) or a10/100/1000BASE-T (The Cisco® IP Phone 7841) Ethernet connection through two RJ-45 ports, one for the LAN connection and the other for a downstream Ethernet device connection like a PC
Phone casing composition	• Polycarbonate acrylonitrile butadiene styrene (ABS) textured plastic
Power requirements	• The phone is an interoperable IEEE 802.3af PoE (Class 1 device); 48 VDC is required; it can be supplied locally at the desktop using an optional AC-to-DC power supply (CP-PWR-CUBE-3=). Use of the power supply also requires the use of one of the corresponding AC country cords
Operational temperature	• 32 to 104°F (0 to 40°C)
Nonoperational temperature shock	• 14 to 140°F (-10 to 60°C)
Humidity	• Operating 10% to 90%, non-condensing • Non-operating 10% to 95%, non-condensing
Cosmetic	• Cisco cosmetic class A
Certification and compliance	• Regulatory Compliance ◦ CE Markings per directives 2004/108/EC and 2006/95/EC • Safety ◦ UL 60950 Second Edition ◦ CAN/CSA-C22.2 No. 60950 Second Edition ◦ EN 60950 Second Edition (including A11 & A12) ◦ IEC 60950 Second Edition (including A11 & A12) ◦ AS/NZS 60950 ◦ GB4943 • EMC - Emissions ◦ 47CFR Part 15 (CFR 47) Class B ◦ AS/NZS CISPR22 Class B ◦ CISPR22: 2005 w/Amendment 1: 2005 Class B ◦ EN55022: 2006 w/Amendment 1: 2007 Class B ◦ ICES003 Class B ◦ VCCI Class B ◦ EN61000-3-2 ◦ EN61000-3-3 ◦ KN22 Class B • EMC - Immunity ◦ EN55024 ◦ CISPR24 ◦ EN60601-1-2 ◦ KN24 ◦ Armadillo Light • Telecom ◦ FCC Part 68 HAC ◦ CS-03-HAC ◦ AS/ACIF S004 ◦ AS/ACIF S040 ◦ NZ PTC 220 ◦ Industry Standards: TIA 810 and TIA 920 ◦ Industry Standards: IEEE 802.3 Ethernet, IEEE 802.3af and 802.3at

Product Specifications

Table 3 gives ordering information for the phone and its accessories.

Table 3. Ordering Information

Product Number	Description
CP-7821-K9=	• Cisco IP Phone 7821
CP-7841-K9=	• Cisco IP Phone 7841
CP-7861-K9=	• Cisco IP Phone 7861
CP-DX-HS=	• Spare Handset for Cisco IP Phone 7800 Series
CP-7800-HS-CORD=	• Spare Handset Cord for Cisco IP Phone 7800 Series
CP-7800-HS-HOOK=	• Spare Handset Hook for Cisco IP Phone 7800 Series, 20 Pieces
CP-7800-WMK=	• Spare Wallmount Kit for Cisco IP Phone 7800 Series
CP-7861-WMK=	• Spare Wallmount Kit for Cisco IP Phone 7861
CP-7800-FS=	• Spare Foot stand for Cisco IP Phone 7800 Series
CP-7861-FS=	• Spare Foot stand for Cisco IP Phone 7861
CP-7821-B-BEZEL=	• Spare Black Bezel for Cisco IP Phone 7821
CP-7821-S-BEZEL=	• Spare Silver Bezel for Cisco IP Phone 7821
CP-7841-B-BEZEL=	• Spare Black Bezel for Cisco IP Phone 7841
CP-7841-S-BEZEL=	• Spare Silver Bezel for Cisco IP Phone 7841
CP-7861-B-BEZEL=	• Spare Black Bezel for Cisco IP Phone 7861
CP-7861-S-BEZEL=	• Spare Silver Bezel for Cisco IP Phone 7861
CP-PWR-CUBE-3	• Cisco Power Cube 3
CP-PWR-CORD-AP=	• Power Cord Asia Pacific
CP-PWR-CORD-AR=	• Power Cord Argentina
CP-PWR-CORD-AU=	• Power Cord Australia
CP-PWR-CORD-BZ=	• Power cord for Brazil
CP-PWR-CORD-CE=	• Power Cord European
CP-PWR-CORD-CN=	• Power Cord China
CP-PWR-CORD-JP=	• Power Cord Japan
CP-PWR-CORD-NA=	• Power Cord North America
CP-PWR-CORD-SW=	• Power Cord Switzerland
CP-PWR-CORD-UK=	• Power Cord United Kingdom

Warranty

The Cisco® IP Phone 7800 Series are covered by a Cisco standard 1-year replacement warranty.

Cisco Unified Communications Services

Cisco and our certified partners can help you set up a secure, dependable Cisco Unified Communications solution, meeting aggressive deployment schedules and accelerating business advantage. Cisco's portfolio of services is based on proven methodologies for unifying voice, video, data, and mobile applications on fixed and mobile networks.

Our unique lifecycle approach to services defines what's needed at each phase of the solution lifecycle. Customized planning and design services help you create a solution that meets your business needs. Award-winning technical support helps you boost your operational efficiency. Remote management services simplify day-to-day operations. And optimization services let you modify and improve your network solution when business needs change.

More Information

For additional details on the Cisco® IP Phone 7800 Series, go to <http://www.cisco.com/go/ipphones/7800>.



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Cisco Unified IP Phone 8945



Cisco® Unified Communications Solutions enable collaboration so that organizations can quickly adapt to market changes while increasing productivity, improving competitive advantage through speed and innovation, and delivering a rich-media experience across any workspace, securely and with optimal quality.

Product Overview

The Cisco Unified IP Phone 8945 is a new and innovative IP endpoint that delivers affordable, business-grade voice and video communication services to customers worldwide.

The Cisco Unified IP Phone 8945 integrates video communications into the Cisco Unified IP Phones 8900 Series with a built-in, high-quality video (VGA or 640 x 480 pixel) camera up to 30 frames per second, for both encoding and decoding. The Cisco Unified IP Phone 8945 renders video on its high-resolution, 5-inch diagonal, fully backlit, VGA-quality display.

The phone supports four lines and four context-sensitive soft keys along with a high-definition voice, full-duplex speakerphone for a more productive and more flexible endpoint experience. Fixed keys for hold, transfer, redial, and conference; a tri-color LED line; and feature keys also make the endpoint simpler and easier to use.

The Cisco Unified IP Phone 8945 offers greater personalization with two handset style options. In addition, Bluetooth 2.1 support is delivered for additional freedom using headsets, such as the Jawbone ICON for Cisco Bluetooth Headset. The Cisco Unified IP Phone 8945 supports right-to-left language presentation on its display, addressing the language localization needs of global customers.

The endpoint also comes with an IEEE 10/100/1000 network and PC ports, reducing costs with the ability to consolidate wiring infrastructure at the desktop. With these integrated ports, the multimedia traffic from a co-located PC can be routed through the integrated switch of the phone and then sent back to the closet switch over a single cable-drop.

The Cisco Unified IP Phone 8945 supports a deep-sleep option, offering energy savings with reduced power draw during nonbusiness hours. In addition, the phone employs use of both recyclable and reground plastics for a more earth-responsible solution.

Features and Benefits

Tables 1 through 6 give features and other information about the phones, and Table 7 gives ordering information.

Table 1. Features and Benefits

Feature	Benefit
Lighted Menu key	The key lights when pressed to access voicemail messages, call logs, network settings, user preferences, corporate directories, and XML services; it stays lit while menu items are active.
Deep-sleep option	Power savings can be recognized by cycling power by time of day and day of week.
Co-branding	Co-branding allows you to include your logo on the Cisco Unified IP Phone 8945.
Multiple-language support	The following languages are supported with CUCM 8.6: • Arabic (Arabic area) • Bulgarian (Bulgaria) • Catalan (Spain) • Chinese (China) • Chinese (Hong Kong) • Chinese (Taiwan) • Croatian (Croatia) • Czech (Czech Republic) • Danish (Denmark) • Dutch (Netherlands) • English (United Kingdom) - Prompts only • Estonian (Estonia) • French (France) • Finnish (Finland) • German (Germany) • Greek (Greece) • Hebrew (Israel) • Hungarian (Hungary) • Italian (Italy) • Japanese (Japan) • Latvian (Latvia) • Lithuanian (Lithuania) • Korean (Korea Republic) • Norwegian (Norway) • Polish (Poland) • Portuguese (Portugal) • Portuguese (Brazil) • Romanian (Romania) • Russian (Russian Federation) • Spanish (Spain) • Slovak (Slovakia) • Swedish (Sweden) • Serbian (Republic of Serbia) • Serbian (Republic of Montenegro) • Slovenian (Slovenia) • Thai (Thailand) • Turkish (Turkey)
Speakerphone	Full-duplex speakerphone with high-definition voice support for handset, headset and speaker allows for flexibility in placing and receiving calls.
Headset support	A Bluetooth and RJ-9 interface to the optional headset allows you to enjoy additional options for placing and receiving calls.
Lighted message waiting indicator	The handset lights when there is new voicemail, it stays lit until you process your new voicemail.

Feature	Benefit
Graphical display	The phone delivers VGA presentation for calling, video calling, and applications, in addition to a 5-inch (10-cm) graphical TFT color display, 16-bit color depth, 640 x 480 effective pixel resolution, and backlighting. The display also supports localization requiring double-byte Unicode encoding for fonts.
Four soft key buttons and a scroll toggle bar	Your calling options are dynamically present; the scroll toggle bar allows easy movement through the displayed information.
Network features	Network features include LLDP-MED, Cisco Discovery Protocol and IEEE 802.1 p/q tagging and switching.
Ethernet switch	The phone has a 10/100/1000BASE-T Ethernet connection through two RJ-45 ports, one for the LAN connection and the other for connecting a downstream Ethernet device such as a PC.
Volume control	A volume-control toggle provides easy decibel-level adjustments of the handset, headset, monitor speaker, and ringer.
Dual-position foot stand	The display is easy to view and the buttons and keys are easy to use.
Multiple ring tones	The phone offers user-adjustable ring tones.
American Disabilities Act (ADA) features	The hearing-aid-compatible (HAC) handset meets the requirements set by the ADA; it also meets ADA HAC requirements for a magnetic coupling to approved hearing aids. The phone dialing pad also complies with ADA standards.
Signaling protocol support	The phones are supported in Cisco Unified Communications Manager and Unified Communications Manager Business Edition Versions 7.1.5 and later using Skinny Client Control Protocol (SCCP). Session Initiation Protocol (SIP). SIP support is targeted for July 2011.
Codec support	G.711a, G.711u, G.729a, G.729ab, G.722, and Internet Low Bitrate (iLBC) audio compression codecs are supported.
Voice quality	Comfort-noise generation and voice-activity-detection (VAD) programming is provided on a system basis.

Table 2. Software and Physical Specifications

Specification	Description
Firmware upgrades	You can download firmware changes from Cisco.com.
Software upgrades	Software upgrades are supported with a Trivial File Transfer Protocol (TFTP) server.
Dimensions (H x W x D)	Cisco Unified IP Phone 8945: 9.25 x 4.49 x 10.24 in. (235 x 114 x 260 mm).
Weight	Cisco Unified IP Phone 8945: 2.80 lb (1.27 kg) Slimline: 2.72 lb (1.235 kg).
Phone casing composition	Polycarbonate acrylonitrile butadiene styrene (ABS) plastic.

Table 3. Power Requirements

Power Requirement	Description
IEEE 802.3af PoE	The phones can receive power from IEEE 802.3af-compliant blades. The phone is Power over Ethernet (PoE) Class 2.
Local power	The phones can also be powered locally with a power adapter (CP-PWR-CUBE-3=) along with one of the power cords listed in Table 4.

Table 4. AC Region and Country-Specific Power Cords

Part Number	Country
CP-PWR-CORD-AP=	Asia Pacific
CP-PWR-CORD-AR=	Argentina
CP-PWR-CORD-AU=	Australia
CP-PWR-CORD-CE=	European Community
CP-PWR-CORD-CN=	China
CP-PWR-CORD-JP=	Japan
CP-PWR-CORD-NA=	North America
CP-PWR-CORD-SW=	Switzerland
CP-PWR-CORD-UK=	United Kingdom

Table 5. Temperature Ratings

Temperature Variable	Description
Operating temperature	32 to 104°F (0 to 40°C)
Relative humidity	10 to 95% (noncondensing)
Storage temperature	14 to 140°F (-10 to 60°C)

Table 6. Certifications

Regulatory Compliance	CE Marking
Safety	- Underwriters Laboratories (UL) 60950 - Canadian Standards Association (CSA) C22.2 No. 60950 - EN 60950 - IEC 60950 - AS/NZS60950 - TS 001
Electromagnetic compatibility	- Federal Communications Commission (FCC) Part 15 (CFR 47) Class B - ICES-003 Class B - EN55022 Class B - CISPR22 Class B - AS/NZS CISPR 22 Class B - CISPR 24 - VCCI Class B - EN55024 - EN 50082-1 - EN 61000-3-2 - EN 61000-3-3 - EN 61000-6-1
Telecom	- FCC Part 68 (CFR47) HAC - TIA 810A
Regulatory compliance	CE Marking

Table 7. Ordering Information

Product Name	Part Number
Cisco Unified IP Phone 8945, Standard Handset	CP-8945-K9=
Cisco Unified IP Phone 8945, Slimline Handset	CP-8945-L-K9=
Note: All Cisco Unified IP Phones require the purchase of a phone technology license, regardless of call protocol being used.	
Optional Accessories	
Description	SKU
Standard Handset	CP-HANDSET-STD-C=
Slimline Handset	CP-HANDSET-SLIM-C=
Replacement Footstand for 8941/8945	CP-894X-FS=

Warranty

Cisco Unified IP Phones are covered by a Cisco standard 1-year hardware warranty.

Cisco Unified Communications Services and Support

Using the Cisco Lifecycle Services approach, Cisco and our partners offer a broad portfolio of end-to-end services to support the Cisco Unified Communications System. These services are based on proven methodologies for deploying, operating, and optimizing IP communications solutions. Initial planning and design services, for example, can help you meet aggressive deployment schedules and minimize network disruption during implementation. Operate services reduce the risk of communications downtime with expert technical support. Optimize services enhance solution performance for operational excellence. Cisco and our partners offer a system-level service and support approach that can help you create and maintain a resilient, converged network that meets your business needs.

For More Information

For more information about the Cisco Unified IP Phone 8945, visit <http://www.cisco.com/go/ipphones/8900> or contact your local Cisco account representative.



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Cisco Unified Communications Manager 10.0

Cisco® Unified Communications Manager is the heart of Cisco Collaboration services, enabling session and call control for video, voice, messaging, mobility, instant messaging (IM), and presence.

Product Overview

In this post-PC era where users bring their own devices (BYOD) to the work place, today's organization is challenged in unprecedented ways. These changes in work styles and the ever-increasing need for collaboration require organizations to have an integrated productivity solution that enables users to communicate from anywhere, using any device, on any network in a cost-effective, reliable, and secure manner. With more than 200,000 customers worldwide and more than 60 million Cisco IP Phones and tens of millions of soft clients deployed, Cisco Unified Communications Manager (UCM) is the industry leader in enterprise call and session management platforms. It delivers people-centric user and administrative experiences while supporting the full range of collaboration services including video, voice, IM and presence, messaging, and mobility on Cisco as well as third-party devices.

New with Cisco Unified Communications Manager Version 10.0

Cisco Unified Communications Manager Version 10.0 builds on the many capabilities of previous versions by:

- Providing smooth experiences for end users and system administrators: It enables network-based call recording for any device, including Jabber® clients; allows remote devices to connect without creating a VPN; provides integrated administration, serviceability, and user options and preferences for Instant Messaging and Presence (IM&P); and supports standards-based Single Sign-On (SSO) for administrative users.
- Offering new capabilities such as agent-selected video on hold and caller-specific audio on hold for contact centers, and a powerful new user-oriented application programming interface (API) as well as enhancements to existing APIs for developers.
- Assuring the most efficient use of valuable human and network resources by simplifying the installation, upgrade, and platform migration process; automating dial-plan replication; end-user self-provisioning and self-care; and more efficient use of videoconferencing resources and enhancements to network bandwidth management.
- Removing management complexity with automated, accelerated provisioning and simplified, real-time monitoring and troubleshooting: Comprehensive management is now included with every Cisco Unified Communications Manager installation. Cisco Prime™ Collaboration Standard, a fully web-enabled management application, is included with all Cisco Unified Workspace Licensing and Cisco User Connect Licensing for Cisco Unified Communications. Cisco Prime Collaboration Advanced offers additional automation, deeper diagnostic capabilities, and long-term reporting.

Table 1 lists major features in Cisco Unified Communications Manager Version 10.0.

Table 1. High-Level Features in Cisco Unified Communications Manager 10.0

Feature	Benefits
SSO	- SSO enables system administrators to work on different clusters and different applications without repeatedly responding to challenges for their username and password. - Security Access Markup Language (SAML) enables integration with various commercial identity providers.
Network-based call recording	- This feature enables call recording without regard to device capabilities or location, including mobility calls using Single Number Reach or Extend and Connect. - This feature automatically selects the best point at which to replicate audio media: Cisco Unified Border Element (UBE), Cisco Session Initiation Protocol (SIP) voice gateway, or Cisco device. - It integrates with Cisco MediaSense and other commercial call recording servers, in centralized or distributed deployments.
Remote access	- Session-based firewall traversal limits exposure of enterprise and personal data by enabling remote devices to connect without establishing a VPN. - It works with Cisco Collaboration Edge Architecture and selects Cisco devices to optimize audio and video media paths for economical, large-scale deployment.
IM&P	- Unified administration of IM&P and voice and video call-control users reduces time and effort to add, change, and verify user configuration. - Common administration of IM&P and other nodes within a cluster simplifies installation, node configuration, and backup and restore. - Integrated serviceability allows easy navigation and supports a single client for the Real-Time Monitoring Tool (RTMT). - A common portal makes it easy for end users to manage their options and preferences for IM&P together with voice and video. - Increased flexibility in Active Directory (AD) integration makes it easier to migrate from other IM&P services.
IPv6	- IPv6 offers an expanded portfolio of IPv6-capable endpoints that will be compatible with future versions. - It enables video- and presentation-sharing capability for IPv6 endpoints. - It reduces the need for Media Termination Points (MTPs) to provide IPv4-to-IPv6 interworking for announcements and music on hold. - Server-based MTP can provide IPv4-to-IPv6 interworking for audio.
Contact center	- Agent-selected video on hold supports a rich, interactive experience for users of premium contact center services. - Video awareness for Computer Telephony Integration (CTI) enables a broader opportunity to match video-capable callers and agents. - Caller-specific music on hold makes it possible to preserve the source selection most appropriate for the caller as a call is transferred from Interactive Voice Response (IVR) to an agent or subsequently from agent to agent.
Mobility and Extend and Connect	- These features restore and maintain connections with remote clients and controlled devices for improved end-user experience. - Additional enterprise features for mobile clients and support for concurrent use of mobility and Extend and Connect amplify end-user control. - Self-provisioning and self-care make it easy for administrators to offer these capabilities to all users.
Developer APIs	- A powerful, standards-based, new API makes it easy to develop new applications to manage user-based settings consistently for multiple devices. - Comprehensive change notification keeps Administrative XML (AXL) applications synchronized with Cisco UCM.
Global dial-plan replication	- Numeric patterns configured in one cluster are automatically distributed among all communicating clusters, reducing administrative effort. - Common service with intercluster Uniform Resource Identifier (URI) distribution eases setup.
Self-provisioning and self-care	- Provisioning templates enable administrators to define user configuration once and apply it automatically to new users discovered through directory integration. - End users can complete the provisioning process without administrative assistance, configuring their personal devices through an application or Intel Virtualization Technology (IVT) interaction. - A new self-care interface makes it easy for end users to manage their options and preferences for all devices.
Videoconferencing	- Integration with Cisco TelePresence Conductor enables shared use of common videoconferencing resources for ad hoc and rendezvous conferencing across multiple clusters, increasing usage and lowering unit costs. - A new data channel for videoconferences enables enhanced information exchange and control capabilities for conference participants. - Endpoint-based three-way videoconferencing expands the resource pool while protecting the user experience from music on hold.

Feature	Benefits
Network bandwidth accounting	- Improved Call Admission Control for Extension Mobility across clusters protects call quality for visiting users. - Video promotion reduces inefficient use of network bandwidth and dynamically enables Cisco Telepresence video quality for Cisco Desktop Collaboration Experience (DX600) Series desktop video endpoints participating in Cisco Telepresence video calls.
Cisco Prime Collaboration deployment	- This feature automates multiversion software upgrades and physical-to-virtual platform migrations with ease and simplicity for administrators. - Cisco Prime Collaboration automates and simplifies installations, IP address and hostname changes, file distribution, and notification. - It enables you to realize the benefits of upgrading without the challenges.
Cisco Prime Collaboration Provisioning Standard	- This solution provides a single interface for a single cluster for call control, messaging, presence, and video. - Administrator audit log and order tracking promote accountability, network security, and operational control, and they facilitate troubleshooting. - Lightweight Directory Access Protocol (LDAP) integration for user changes helps ensure consistency among systems. - Batch provisioning (single cluster only) increases operating efficiencies and reduces costs with scheduled scripts and templates that let an operator rapidly and consistently add or modify a large number of users or a large number of endpoints or device profiles (and the corresponding configuration settings).
Cisco Prime Collaboration Assurance Standard	- This solution provides a web-enabled single interface for fault monitoring for core Cisco Unified Communications and video components. - Email notification of alarms alerts operators even if they are not viewing the management system, reducing downtime and helping ensure that critical alarms are not missed. - Pre-canned and customizable performance metrics dashboards display short-term trends for core unified communications components and provide visibility into critical performance metrics for reduced troubleshooting time and effort. - The ability to search components within a unified communications cluster and view them in real time allows you to customize searches and find the status of components quickly. - Custom performance alerts based on user-configurable thresholds facilitate proactive notification of problems.

For More Information

For more information about Cisco Unified Communications Manager, please visit <http://www.cisco.com/go/unifiedcm> or contact your local Cisco account representative.



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Cisco Emergency Responder 10.0

Cisco® Emergency Responder helps Cisco Unified Communications Manager customers comply more effectively with their legal or regulatory obligations and reduce their risk of liability related to emergency calls.

Product Overview

Cisco Emergency Responder is a software appliance that enhances emergency calling from Cisco Unified Communications Manager. It helps assure that Cisco Unified Communications Manager sends emergency calls to the appropriate Public Safety Answering Point (PSAP) for the caller's location, and that the PSAP can identify the caller's location and, if necessary, return the call. Cisco Emergency Responder can also notify customer security personnel of an emergency call in progress and the caller's location.

New with Cisco Emergency Responder Version 10.0

Cisco Emergency Responder Version 10.0 builds on the many capabilities of previous versions with:

- Simplified licensing: Cisco Prime™ License Manager centralizes all of the licensing for Emergency Responder 10.0 and later.
- Flexibility: Flexible licensing allows the Cisco Emergency Responder Administrator to configure Emergency Responder to not track phones in an IP subnet, so you do not need Emergency Responder User Licenses for these phones.
- Capability to use E.164 dial plan: Cisco Emergency Responder can track E.164 dial-plan numbers and provide configured Emergency Response Location (ERL) treatment.
- Security: Cisco Emergency Responder provides secure Simple Network Management Protocol Version 3 (SNMPv3) communication to LAN switches and Cisco Unified Communications Manager.

Table 1 lists major features in Cisco Emergency Responder Version 10.0.

Table 1. High-Level Features in Cisco Emergency Responder 10.0

Feature	Benefits
Automatic location of IP phones by MAC or IP address	• Eliminates the need for administrators to update location when an IP phone is relocated • Keeps track of IP phones powered down by Cisco EnergyWise™ technology • Uses secure SNMPv3 communication with LAN access switches and Cisco Unified Communications Manager • Tracks devices that are configured with E.164 numbers
Emergency calls routed by location	• Routes calls to a public-switched-telephone-network (PSTN) gateway capable of reaching the responsible PSAP for the caller's location
Identification of caller location to PSAPs by Emergency Location Identification Numbers (ELINs)	• Eliminates the need to update the Automatic Location Information (ALI) database when an IP phone is relocated
Integration with Intrado V9-1-1 service	• Centralizes and automates the initial administration of ELINs and ERLs for on-premises users, especially for customers with many sites in regions served by different local exchange carriers (LECs)
Remote worker emergency calling	• Facilitates emergency call completion with user-entered and confirmed location information for off-premises users such as teleworkers, irrespective of their proximity to the customer premises

Feature	Benefits
Emergency call-back to ELINs	Facilitates PSAP callback to reach the most recent callers from each location, including callers from stations without direct-inward-dialing (DID) numbers
Emergency call alerting by voice, web, and email	Helps onsite security to identify and assist emergency callers immediately, and to direct fire, police, or ambulance services when they arrive
Remote user authentication	Enables shared user passwords with Cisco Unified Communications Manager
Software appliance	- Simplifies software installation and upgrade - Enhances system security and stability
Unified license management	- Uses Cisco Prime License Manager for all Emergency Responder servers - Offers flexibility to exclude untracked IP phones from licensing requirement

For More Information

For more information about Cisco Emergency Responder, please visit

<http://www.cisco.com/en/US/partner/products/sw/voicesw/ps842/index.html> or contact your local Cisco account representative.

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Cisco Business Edition 7000 Version 10.5

Product Overview

Cisco® Business Edition 7000 (BE7000) is a stackable, packaged collaboration solution optimized for organizations with 1000 or more users and thousands of devices. The solution offers premium voice, video, mobility, messaging, conferencing, instant messaging and presence, and contact center features on a single, integrated platform. It provides core communication capabilities that fast-growing companies need for improved collaboration for employees, customers, and business partners. Enabled by virtualization technology, BE7000 consolidates multiple collaboration applications in a highly available solution that enables organizations to quickly reduce their total cost of ownership (TCO) and increase their return on investment (ROI) through its flexible architecture that scales out with business needs in a modular, building-block design.

Features and Benefits

Cisco BE7000 delivers full-featured, enterprise-class communications and collaboration services that successful businesses rely on today. Built on the world-leading Cisco Unified Communications Architecture, the solution boasts a variety of highly available applications that allow you to build a solution to meet your specific collaboration needs.

Platform Support and Compatibility

The BE7000 is built on virtualized Cisco Unified Computing System™ (Cisco UCS®) products, which are designed for performance and density over a wide range of business workloads. The enterprise-class Cisco UCS C240 M3 Rack Server packages advanced performance with energy efficiency of the Intel Xeon processor E5-2600 product family in a 2-rack-unit (2RU) form factor. Deployments vary, but typically four to six collaboration or management applications are supported per server. BE7000 ships with a preinstalled virtualization hypervisor and preloaded software applications that are ready to deploy.

Foundation Applications

The following applications are typically used together to deliver the core unified communications features of the BE7000:

- [Cisco Unified Communications Manager](#) is the call-processing engine of BE7000, extending voice and video features to network devices such as IP phones, telepresence endpoints, media-processing devices, gateways, and multimedia applications. Fully integrated instant messaging and presence services are also included. Additional services such as multimedia conferencing, collaborative contact centers, and interactive multimedia response systems are made possible through Cisco Unified Communications Manager open telephony application programming interfaces (APIs).

- [Cisco Unified Communications Manager IM and Presence Service](#) provides native standards-based enterprise instant messaging (IM) and network-based presence as part of Cisco Unified Communications. This secure, scalable, and easy-to-manage service within Cisco Unified Communications Manager offers users feature-rich communications capabilities. IM and Presence Service is tightly integrated with the Cisco desktop and mobile instant messaging and presence clients - [the Cisco Jabber®](#) and Cisco Jabber Software Development Kit (SDK). It enables these clients to perform numerous functions such as instant messaging, presence, click-to-call, phone control, voice, video, visual voicemail, and web collaboration.
- [Cisco Unity® Connection](#) integrates voice-messaging and voice-recognition functions to provide continuous global access to calls and messages. Its advanced convergence-based communication services allow you to use natural-language voice commands to place calls or listen to messages in hands-free mode and to check voice messages from your desktop, either through integration with your email inbox or by using a web browser. It also provides robust Automated-Attendant functions, including intelligent routing for incoming calls and easily customizable call-screening and message-notification options.
- [Cisco Prime™ Collaboration](#) provides automated processes for initial deployments and for moves, adds, changes, and deletions (MACDs). An intuitive user interface provides a single view of a subscriber and the subscriber's services. With these capabilities, Cisco Prime Collaboration significantly accelerates site rollouts and dramatically reduces the time required for ongoing changes, resulting in exceptional productivity gains and lower operating expenses (OpEx). In addition, Cisco Prime Collaboration Provisioning simplifies the tasks, and includes zero-touch provisioning and a setup wizard that accelerates the setup of Cisco Unified Communications applications and Cisco Prime Collaboration Provisioning. This acceleration of the setup process allows organizations to optimize IT resources and further reduce TCO.
- [Cisco Licensing](#) (including Cisco Prime Licensing Manager) makes usage and reporting simple. Cisco Prime Licensing Manager provides a centralized, at-a-glance view of compliance and allows for redistribution of licensing among supported products. User licensing - based on user profiles - aligns with Cisco User Connect Licenses (UCL) and Cisco Unified Workspace Licensing (UWL) purchasing models.

Additional Collaboration Options

To complement the core unified communications applications detailed previously, the following collaboration applications and services can also be deployed with the BE7000:

- [Cisco TelePresence® Server](#) helps make video pervasive for all users from the browser to the boardroom, with multiparty high-definition (HD) videoconferencing capabilities supported as a co-resident application. Flexible licensing options enable you to deploy conferencing in the way that best suits your needs. Cisco TelePresence Server can be licensed in conjunction with Cisco TelePresence Conductor on a per-user basis for high-quality small-group ad-hoc and MeetMe conferencing, with Cisco Unified Workspace Professional Licensing or on a concurrent call (screen) basis.
- [Cisco TelePresence Conductor](#) simplifies and enhances conference resource management, making conferences easy to join and administer. It uses knowledge of all available conferencing resources and their capabilities to help ensure dynamic, intelligent conference placement and optimum resource usage.
- [Cisco TelePresence Management Suite](#) offers flexible scheduling capabilities for video meetings, including the ability to integrate with Microsoft Exchange and Microsoft Office 365. It also works alongside Cisco TelePresence Conductor to enable user self-service personalization of individual conferencing environments (Collaboration Meeting Rooms).

- [Cisco Expressway](#) is an advanced collaboration gateway that helps make collaboration as simple, secure, and effective outside the organization as it is inside. It gives video-enabled teleworkers and mobile Cisco Jabber users access to their full collaboration workloads without requiring a VPN. Cisco Expressway simplifies business-to-business video and supports Jabber® Guest for business-to-consumer collaboration. Cisco Expressway also eases migration by enabling video interoperability with third-party standards-based systems - including Microsoft Lync 2013.
- [Cisco TelePresence Video Communication Server](#) is available for existing Cisco VCS customers and for organizations that need third-party standards-based video endpoint interoperability (H.323 and Session Initiation Protocol [SIP]). Organizations can move their current virtualized VCS software and licensing onto the server or ease their migration to Cisco by integrating their current third-party video endpoints. There is also a migration program in place that converts an existing VCS appliance to virtual machine VCS.

Note: Refer to the [Cisco TelePresence Cisco VCS on Virtual Machine Installation Guide](#) and virtual specifications for more information.

- [Cisco Unified Contact Center Express](#) provides high-quality call center capabilities, including agent-based services as well as fully integrated self-service applications, sophisticated and distributed automatic call distributor (ACD), interactive voice response (IVR), customer voice portal (CVP), and computer telephony integration (CTI).
- [Cisco Unified Attendant Consoles](#) provide the human attendant console operator with the tools to quickly accept and effectively dispatch incoming calls to individuals across the organization.
- [Cisco WebEx® Web Conferencing](#) accelerates business results by making your web meetings more productive. This people-centric cloud-based collaboration solution can enable team members to easily share information through any computer or mobile device. WebEx® Meetings allows people to attend meetings any time, from anywhere, inside and outside corporate firewalls.
- [Cisco Emergency Responder](#) helps assure that Cisco Unified Communications Manager sends emergency calls to the appropriate Public Safety Answering Point (PSAP) for the caller's location, and that the PSAP can identify the caller's location and return the call if necessary. The system automatically tracks and updates equipment moves and changes, helping ensure more effective compliance with legal or regulatory obligations, reducing the risk of liability related to emergency calls as a result.
- [Cisco Paging Server](#) provides basic and advanced paging features for all users. Basic paging features require no license and allow point-to-point or group audio paging between groups of up to 50 Cisco IP Phones. An advanced paging license allows larger (unlimited) paging groups and enables other advanced functions, including paging to overhead analog and IP speakers, bell scheduling, prioritizing emergency notifications with the call-barge option, prerecorded and text-only pages, integration with social media sites for notification, email and Short Message Service (SMS) mass notification, and call-number monitoring: 911 alerting and integration with Jabber® clients.

Cisco BE7000 supports limited co-residency of approved third-party applications as described in the [Co-residency Policy](#).

Warning: Installation of an unapproved applications server would be in violation of the Virtualization Hypervisor license terms and would invalidate product warranty and support.

Solution Specifications: System Capacity

Table 1 lists typical system capacities that BE7000 supports (actual capacities will vary by deployment specifics). For detailed design guidance and deployment models, please refer to the [Solutions Reference Network Design \(SRND\) Guide](#), the [wiki pages](#), and the [Collaboration Virtual Machine Placement Tool](#).

Table 1. System Capacity

Attribute	Capacity
Maximum capacity	No enforced limit; optimized for 1000 to 5000 users with a modular, building-block design approach for larger deployments
Number of devices supported	No enforced limit; optimized for 3000+ devices
Maximum number of co-resident applications	Typically four to six applications per server (will vary by deployment specifics) Typical deployment: Two to four physical servers

Ordering Information

To order the BE7000, simply purchase the required number of servers (using the part number(s) in Table 2), and add application licensing to enable the required mix of features and number of users (for example, User Connect Licensing [UCL] or Unified Workspace Licensing [UWL], sold separately from the BE7000 server part number). Cisco channel partners and resellers can refer to the [Cisco Business Edition 7000 Ordering Guide](#) for further information.

To place an order, contact your local Cisco representative or visit Cisco.com to [Order Direct From Cisco](#) or [Locate a Partner](#); search on “Advanced Collaboration Architecture Specialization (ACAS)”, “Advanced Unified Communications (AUC)”, or “Advanced Technology Partner (ATP)” to find a certified unified communications partner in your local area.

Table 2. Ordering Cisco Business Edition 7000

Part Number	Description
BE7K-K9	Cisco Business Edition 7000 UCS C240 M3 TRC2 Srv, RST
BE7K-K9-XU	Cisco Business Edition 7000 UCS C240 M3 TRC2 Srv, UNRST

Cisco Services

[Cisco Unified Communications Services](#) allows you to accelerate cost savings and productivity gains associated with deploying a secure, resilient Cisco Unified Communications solution on your network. Delivered by Cisco and our certified partners, our portfolio of deployment and technical support services is based on proven methodologies for unifying voice, video, data, and mobile applications on fixed and mobile networks. Our unique lifecycle approach to these services can enhance your technology experience to enable powerful new ways to collaborate with co-workers, partners, and customers across any workspace to accelerate business advantage.

For More Information

To learn more about Cisco Business Edition 7000, visit <http://www.cisco.com/go/be7000>.

To learn more about designing virtualized solutions, visit <http://www.cisco.com/go/uconucs>, <http://www.cisco.com/go/uc-virtualized>, and <http://www.cisco.com/go/vmpt>.



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Cisco Unity Connection 10.0(1)

Cisco® Collaboration Solutions improve team and customer experiences to help organizations encourage innovation and improve decision making while building trust and enhancing team performance.

Product Overview

Cisco Unity® Connection is a voicemail and unified messaging platform with a comprehensive feature set and is based on the same Linux Unified Communications Operating System as Cisco Unified Communications Manager. With Cisco Unity Connection, you can access and manage voice messages in a variety of ways, using your email inbox, web browser, the Cisco Jabber® messaging integration platform, Cisco Unified IP Phone, smartphone, tablet, and more. Cisco Unity Connection also provides robust speech-recognition features for when you are mobile, so you can manage your voice messages hands- and eyes-free.

Features and Benefits

Accelerate Collaboration

Cisco Unity Connection is a powerful unified messaging system with many advanced capabilities that you can customize to increase your individual and team productivity. Respond quickly to colleagues and partners by using speech-activated tools. Easily prioritize and manage messages, access meetings on your calendar, and connect to colleagues simply by saying their names.

Access Voicemail Anytime and Anywhere

Access your Cisco Unity Connection voice messages the way you prefer, whether from an IP phone, mobile phone, tablet, web browser, email client, or desktop client such as the Cisco Jabber platform. You can also use Cisco SpeechView to have your voice messages transcribed and delivered to your email inbox.

Reduce Total Cost of Ownership

Simplify your deployment efforts with the Cisco Unity Connection solution on a Linux appliance. Enjoy the flexibility to deliver unified messaging, integrated messaging, or simply voicemail. The flexible user interface makes messaging more efficient for power users and occasional voicemail users alike. Cisco Unity Connection works in a variety of messaging environments using standard protocols.

Deploy a Reliable Solution

With years of successful deployments, Cisco Unity Connection is a tested, reliable solution. Take advantage of redundancy to make sure you never miss a voicemail. Cisco Unity Connection uses a common set of management and serviceability tools designed to provide a consistent experience and to streamline the ongoing management and operation of a Cisco Unified Communications System.

Assure Branch-Office Survivability

Centralization of your voice infrastructure reduces maintenance costs and simplifies management, but if the WAN is disrupted, your branch offices risk losing their voice messaging and Automated-Attendant services. The Cisco Unity Connection Survivable Remote Site Voicemail (SRSV) solution eliminates these concerns by assuring that branch-office voicemail and Automated-Attendant functions are always available, even when connectivity to your central data center is lost.

Survivable Remote Site Voicemail complements the Cisco Unified Survivable Remote Site Telephony (SRST) solution by offering an easy-to-deploy, centrally provisioned, voicemail and Automated-Attendant survivable branch-office solution that runs on existing branch-office hardware. SRSV is a feature of Cisco Unity Connection, meaning no other software products or third-party solutions are required to make it work.

Secure Your Messages

Security is a concern for most organizations, and mandatory for others. Cisco Unity Connection keeps your messages highly secure so someone outside your organization cannot play them.

Speech-Enabled Messaging

To increase the productivity of mobile workers, Cisco Unity Connection offers a natural and robust speech-activated user interface that allows you to browse and manage your voice messages using simple, natural speech commands.

The Speech Connect for Cisco Unity Connection feature is a built-in speech-enabled Automated Attendant that enables you to call other Cisco Unity Connection users or personal contacts by simply using your voice. To learn more, please refer to the data sheet at:

http://www.cisco.com/en/US/prod/collateral/voicesw/ps6789/ps5745/ps6509/data_sheet_c78-575232.html.

The Cisco SpeechView feature converts voice messages to text and delivers the text version of the voice message to your email inbox, allowing you to read your voice messages and take immediate action. To learn more, please refer to the data sheet at:

http://www.cisco.com/en/US/prod/collateral/voicesw/ps6789/ps5745/ps6509/ps10671/data_sheet_c78-609206.html.

Virtualize Your Environment

You can install Cisco Unity Connection 10.0 as a virtual machine on Cisco Unified Computing System™ (Cisco UCS®), IBM, and HP platforms. Cisco Unity Connection 10.0 supports virtualization on Fibre Channel, Fibre Channel over Ethernet (FCoE), Small Computer System Interface over IP (iSCSI), and Network File Storage (NFS) storage area networks (SANs). For more information, please refer to http://docwiki.cisco.com/wiki/Unified_Communications_Virtualization.

Table 1 lists more features and benefits of Cisco Unity Connection 10.0.

Table 1. Features and Benefits

New Features for Cisco Unity Connection Version 10.0(1)
• Video greetings: ◦ You can record video for your greetings in place of audio only. ◦ You are shown a subscriber's video greeting when calling from any Cisco Unified Communications Manager integrated video-enabled endpoint and land on a video greeting-enabled subscribers mailbox. ◦ You can listen to the audio-only portion of video-enabled greetings when calling from a non-video-enabled endpoint.

- **HTTPS networking:**
 - You can support up to 250,000 objects in your directory. Secure HTTP (HTTPS) networking supports 100,000 users and an additional 150,000 Voice Profile for Internet Mail (VPIM) and system contacts in a single directory.
 - You can network up to 25 Cisco Unity Connection nodes. A node can be a single server or a cluster.
- **Security Application Markup Language (SAML) Single Sign-On:** You can access the administrative and subscriber web interfaces, taking advantage of the industry standard SAML for Single Sign-On interoperability.
- **Session Initiation Protocol (SIP) Early Offer:** This feature enables better integration with SIP service providers.
- **Voicemail quota notifications:** You can receive notifications by email when your voicemail quota threshold has been reached.
- **State Reply-To recipients and urgency:** You can listen to the recipients and urgency status of a message when replying to a message.

Message Access from the Telephony User Interface (TUI)

- You can play and process messages (repeat, reply, forward, delete, save, mark as new, hear day or time stamp, or skip to the next message).
- You can reverse, pause, or fast forward messages during playback.
- You can control volume and speed during message playback.
- You can pause or resume during message recording.
- You can address messages to multiple recipients.
- You can hear before playing a message that it has been sent to multiple recipients.
- You can be allowed to listen to all the recipients of the message.
- With the message locator, you can search for messages by caller ID, name, or extension in saved messages.
- You can record messages and mark them as regular, urgent, private, or secure.
- You can record messages and request a return receipt.
- You can record a live conversation with a caller and have the recording sent to your mailbox.
- You can switch between spelling name and extension when addressing a message.
- With live reply, you can immediately reply to messages from other users.
- You can access email messages over the phone using the Text-to-Speech (TTS) feature (for Microsoft Exchange 2003, 2007, 2010, and 2013 and Office 365).
- When TTS is enabled, a conversation tells you if the message has attachments; when an attachment is in a playable or readable format, the attachment is played or read.
- You can view, listen, respond to, and play back messages using the Cisco Unified Communications Widget for Visual Voicemail on Cisco Unified IP Phones.
- You can access the Microsoft Exchange calendar through speech or the TUI.
- You can browse the calendar and accept, decline, or cancel an Outlook appointment.
- If you inadvertently disconnect while sending a new message, replying to, or forwarding a message, and if the message has at least one recipient or a recording, Cisco Unity Connection can save the message as a draft and allow you to return to finish the message on a subsequent call.
- You can review and recall messages sent over a period of time.
- When you hang up or your call is disconnected, bookmarks allow you to call back into Cisco Unity Connection and resume listening to messages without losing your place.
- You can have a single voice (customized prompts) for all externally facing TUIs.

Speech-Enabled Messaging*

- Speech Connect for Cisco Unity Connection, a speech-enabled Automated Attendant for the enterprise, allows you to connect quickly with your colleagues using only your voice (available with Cisco Unity Connection 7.1.3 and later).
- You can speak your voicemail password.
- You can speak dates and times.
- You can use speech commands to play and process messages (play, record, reply, forward, delete, save, etc.).
- You can use speech commands to edit and manage your personal greetings.
- You can use speech commands to address messages to private distribution lists.
- You can use speech commands such as pause, resume, speed up, slow down, skip ahead, and skip back to provide rich and granular control of messages and prompts.
- Speech-enabled directory handlers allow outside callers to use voice commands to reach Cisco Unity Connection users.
- You can temporarily use touch tones to change setup options, and then return to speech-recognition mode.
- A speech command tutorial is available.

- You can customize speech-enabled directory handler greetings.

* Speech-enabled messaging is available for U.S. English only.

Call-Transfer Rules

- You can define rules to route incoming calls by caller.
- You can define rules to route incoming calls by time of day.
- You can define rules to route incoming calls by your calendar free or busy status (Microsoft Exchange only).

End-User Features

- Single Sign-On for the Cisco Unity Connection browser applications is supported with OpenAM or SAML.
- If a call is dropped while you are recording a message, Cisco Unity Connection saves a draft message and you can continue recording where you left off during your next session.
- You can customize message-notification options, manage personal greetings, or change passwords with Cisco Unity Connection Assistant (the Cisco web browser-based personal administrator).
- You can select the conversation type: Full or brief prompts.
- You can record and then address a message, or address and then record a message.
- You can record a message for future delivery.
- You can record up to five personal greetings (alternative, busy, internal, off hours, or standard).
- You can manage an alternative greeting, set the expiration date or time, notify users when an alternative greeting is set, or require callers to listen to the full alternative greeting.
- You can forward calls directly to an alternative greeting (or other personal greeting) without ringing the phone.
- You can specify an after-greeting action; after a user greeting, callers can leave a message, sign in, or hang up, or they can be sent to call handlers, directory handlers, interview handlers, or other users.
- You can use Cisco FlexStack technology to specify the order in which messages are presented over the phone: by urgency and then by last in, first out (LIFO) or first in, first out (FIFO).
- You can create private distribution lists and address messages to them through the TUI or GUI.
- You can provide message notification for new messages through devices such as Simple Mail Transfer Protocol (SMTP), Short Message Service (SMS), text pagers, and phone destinations.
- With a cascade message-notification feature, you can send additional notification types if a message is not retrieved.
- You can send notifications for messages from a particular user or phone number.
- You can select whether message counts are announced; totals, saved, and new counts are available.
- You can specify whether Cisco Unity Connection announces a transferred call.
- You can perform a supervised transfer for individual alternate contact numbers.
- You can view and play back messages using Visual Voicemail on Cisco Unified IP Phones. You can use soft keys on Cisco Unified IP Phones to access all messages, new messages, or messages from a specific subscriber or outside caller.
- You can use a RSS reader to retrieve voice messages.
- You can perform a "live reply" to someone who left a message from an external telephone.
- You can have your voice messages synchronized with your Exchange Inbox (Single Inbox).
- With the ViewMail for Microsoft Outlook (VMO) plug-in, you can compose, reply to, forward, play, rewind, or pause messages directly from within the Outlook email client.
- You can compose, reply to, and forward messages by using Internet Message Access Protocol (IMAP) clients.
- Through calendar integration with Cisco Unified MeetingPlace® 8.0, you can join a meeting that is in progress, hear a list of participants for a meeting, send a message to the meeting organizer or participants, and set up an immediate meeting.
- You can dispatch a message to a group, with the message being assigned to the first member of the group to listen to the message. When the message is assigned, it is deleted from all other users' inboxes and becomes a normal message in the assignee's mailbox.
- You have flexibility with support for partitions, search spaces, and search scopes.
- You can receive and forward fax messages through integration with supported fax servers.
- You can customize subject lines for messages received in any visual client that displays the subject message, such as Outlook or an IMAP or RSS client.
- You can use a single phone number for both voice calls and fax transmissions.
- You can receive message-aging alerts before messages are deleted from the system.

- Over the phone, you can toggle between touch-tone and speech-recognition conversations.
- With the Voice Message Store and Forward feature, administrators, on a per-user basis, can forward voice messages to an external mailbox, making it easier for you to access voice messages on a mobile device.
- Intelligent notifications:
 - You can create customized HTML notifications with actionable links and deliver them using SMTP.
 - You can use the new browser-based Mini-Inbox for more efficient playback and management of your voicemail on desktops, tablets, and mobile devices.

System Administration Overview

- Cisco Unity Connection supports HTTPS networking for up to 250,000 objects within an enterprise and up to 25 servers or active-active cluster server pairs, including cross-server login, cross-server transfer, and cross-server live replay.
- Cisco Unity Connection is scalable to 250 ports and 20,000 users per server. Refer to the Cisco Unity Connection Supported Platforms List for details at: http://www.cisco.com/en/US/products/ps6509/products_data_sheets_list.html.
- High-availability support is achieved through an active-active redundancy configuration, which also supports up to 500 ports in the server pair.
- You can use advanced Cisco Unity Connection to Cisco Unity networking to allow both solutions to be networked together transparently.
- Cisco Unity Connection supports the synchronization of user information using Lightweight Directory Access Protocol (LDAP) with Microsoft Active Directory 2000, 2003, 2008, and 2012; Sun One; Sun iPlanet; Netscape Directory Server; OpenLDAP; and Microsoft Active Directory Application Mode/Lightweight Directory Service (ADAM/LDS), enhancing your deployment and administrative options.
- Cisco Unity Connection allows for separation of an active-active pair across data centers (geospatial separation), providing greater deployment options for the enhanced reliability of high availability across the WAN.
- Survivable Remote Site Voicemail helps ensure that voice messaging and Automated-Attendant functions are available to branch offices in a centralized voice deployment, even when the WAN is disrupted.
- Cisco Unity Connection supports VPIM Version 2 (VPIMv2), which allows networking of up to 100 Cisco Unity, Cisco Unity Express, or third-party voicemail systems, allowing users on each of these systems to transparently reply to, forward, and exchange voice messages.
- Cisco Unity Connection 10.0 supports unified messaging (Single Inbox) with Microsoft Exchange 2003, 2007, 2010, and 2013, Microsoft Business Productivity Online Suite - Dedicated (BPOS-D), and Office 365.
- Support for virtual machine deployments on Cisco UCS, IBM, and HP servers and blades is specifications-based. Virtualization support is extended to include Fibre Channel, FCoE, iSCSI, and NFS SANs.
- Phone-system integrations include any phone system that provides a serial data link (Simplified Message Desk Interface [SMDI], Message Center Interface [MCI], or Message Digest Algorithm 110 [MD110] protocol) to the master PBX IP media gateway (PIMG) unit (serial integration through analog PIMG or T1 IP media gateway [TIMG] units).
- Cisco Unity Connection integrates with QSIG-enabled private branch exchanges (PBXs) through either Cisco Unified Communications Manager or a Cisco Integrated Services Router.
- Cisco Unity Connection integrates with Cisco Unified Communications Manager and leading traditional telephone systems, even simultaneously (using the PIMG or TIMG).
- Cisco Unified Communications Manager 4.1(3) and later, Cisco Unified Mobility Advantage, and Cisco Unified Mobile Communicator are supported.
- Cisco Unity Connection supports the Cisco Unified Communications Manager Session Management Edition 8.5 and later.
- Cisco Unity Connection supports the Cisco Unified SIP Proxy integration.
- Cisco Unity Connection provides a browser-based system administration console and tools for easy installation and maintenance.
- Cisco Unity Connection provides fax integrations with the Cisco Fax Server (Version 9.0 and later), OpenText Fax Server (RightFax Edition Version 9.0 and later), and Sagemcom Xmedius Fax SP (Version 6.5.5).
- City and Department fields are available for administratively defined contacts.
- Enterprise License Manager (ELM):
 - You can manage all Cisco Unity Connection and Cisco Unified Communications Manager licenses from a single management portal.
 - You can pool all Cisco Unity Connection licenses in your network on a single ELM.
- IPv6 is supported for all web-based interfaces.
- Full E.164 formatted extension is supported.

System Administration Features

- The solution supports E.164 formatted phone numbers.
- Alternate extensions are configurable by the system administrator or user.
- Alternate key mappings for message retrieval can help you transition from traditional voicemail systems.
- Custom keypad mapping allows administrators to create TUIs for specific user needs. Call-routing rules can be configured to route calls to different conversation styles.

- Automatic gain control provides consistent message volume playback levels.
- Handlers provide building blocks for Automated-Attendant and intelligent call-routing functions.
- Call handlers accept calls, play recorded prompts, route calls, and accept messages.
- Directory handlers manage the way that callers search the directory.
- Interview handlers collect and record input from callers.
- You can customize directory handlers with a voice greeting.
- You can configure per-user message-handling actions to determine how messages of specific types are handled in the system, such as "accept the message", "reject the message", or "relay the message".
- Caller ID is supported.
- Call screening is configurable.
- Class of service (CoS) controls user access to features.
- Administrators can create users individually or in bulk.
- Administrators can update users and distributions lists and their various settings in bulk.
- Administrators can create and update multiple alternate first and last names for contacts and users.
- Administrators can import users from Cisco Unified Communications Manager.
- Messages are day- and time-stamped.
- You can perform a directory search by spelling a username; you can enter up to 24 letters.
- You can log in to the TUI without entering your ID.
- Representational State Transfer-based application programming interfaces (APIs) for provisioning, messaging, telephony, and notifications allow integrations with existing corporate provisioning tools or messaging clients.
- Cisco Unity Connection supports IPv6 addressing with Cisco Unified Communications Manager (7.1(2) or later) phone system integrations using Skinny Client Control Protocol (SCCP) and SIP. The addressing mode is configurable by port group.
- Encrypted SCCP, Secure Real-Time Transport Protocol (SRTP), and Transport Layer Security/SRTP (TLS/SRTP) for SIP facilitates Cisco Unified Communications Manager integration.
- SIP support includes the following:
 - TLS/SRTP: Cisco Unified Communications Manager SIP trunk integrations support authentication and encryption of the Cisco Unity Connection voice messaging ports.
 - Keypad Stimulus Protocol (KPML): For Cisco Unified Communications Manager SIP trunk integrations, administrators can configure the integration to send dual-tone multifrequency (DTMF) keystrokes in the Real-Time Transport Protocol (RTP) media stream (in-band) or in a SIP message (out-of-band).
 - Port multiplexing: SIP integrations (such as for PIMG, TIMG, or Cisco SIP Proxy Server) can share the same SIP port on the Cisco Unity Connection server.
- Simple Network Management Protocol (SNMP) Versions 1, 2, and 3 are supported.
- Event logging is supported.
- Cisco Unity Connection supports application and database audit logging that tracks changes to the system in separate audit log files.
- Full mailbox warning is supported.
- You can create folders within a mailbox for inbox, deleted items, sent items, and draft items.
- Users can be set up for unified (single Inbox) or integrated (IMAP) messaging. These features can be enabled for individual users.
- Installation is simple and quick.
- A list of observed holidays is configurable.
- You can configure how Cisco Unity Connection handles messages that are interrupted by disconnected calls.
- Message-waiting indicator (MWI) is supported, including enhanced MWI that displays a constant message count on certain Cisco Unified IP Phones.
- Multiple administrative levels allow you to control access to pages in the system administration GUI by CoS (read, modify, or delete rights).
- Music on hold (MOH) is supported.
- Nondelivery or delivery receipt reason details are presented in the GUI inbox.
- You can specify the public distribution lists to which new users will be added.
- Restriction tables are configurable.
- You can exclude return receipts.

- The system schedule is configurable.
- Self-enrollment allows you to set your password, record your voice name, and specify your directory listing.
- A status monitor allows for real-time administrator status of telephone ports, reports in progress, and system configuration.
- System broadcast messages for officewide announcements are supported.
- System greetings are configurable.
- The system offers 12- and 24-hour clock support for time stamps.
- The system time clock adjusts automatically for Daylight Savings Time.
- A TUI greetings administrator (Cisco Unity Connection Greetings Administrator) is supported.
- LDAP directory integration allows users to be quickly imported, synchronized, and authenticated within the directory.
- You can create up to nine mailbox stores in addition to the default mailbox store that is created when Cisco Unity Connection is installed.
- The system can be set up to shred voice messages for secure deletion.
- Message recording expiration guarantees voice messages cannot be listened to after they reach a set expiration date.
- Message aging alerts are supported.
- You can simulate abbreviated extensions by using prepended digits for call handlers and user mailboxes.
- You can create customized HTML notifications with actionable links and deliver them using SMTP.
- You can use the new browser-based Mini-Inbox for more efficient playback and management of your voicemail on desktops, tablets, and mobile devices.
- You can manage all Cisco Unity Connection and Cisco Unified Communications Manager licenses from a single management portal.
- You can pool all Cisco Unity Connection licenses in your network on a single ELM.
- You can manage and provision Survivable Remote Site Voicemail branch-office users and greetings from a central Cisco Unity Connection system.

Security

- Cisco Unity Connection uses Security-Enhanced Linux (SELinux) access-control policies to provide a secure system.
- Password and PIN security policy options to enforce expiration, complexity, reuse, and lockout are supported.
- Call-restriction tables to prevent toll fraud are supported.
- Security event logging and reports of failed login and account lockouts to help prevent unauthorized PIN use are supported.
- Secure, private messaging prevents the playing of private messages accidentally forwarded outside the enterprise.
- A message-aging policy for secure messages automatically deletes all secure messages that are older than the specified number of days.
- The system can be set up to shred voice messages for secure deletion.
- Message recording expiration guarantees voice messages cannot be listened to after they reach a set expiration date.
- Message-aging policies can be set on a per-user basis.
- Secure RTP and signaling encryption provides for secure communication between Cisco Unity Connection and Cisco Unified Communications Manager.
- A user telephone PIN reset feature in Cisco Unity Connection Assistant reduces help-desk calls and operating expenses.
- Support for HTTPS provides for secure web access to Cisco Unity Connection and allows for playback of secure messages within Microsoft Outlook.

Voice Quality

- G.722 and Internet Low Bitrate Codec (iLBC) voice codecs are supported (advertised or “on the line”). G.711 mu-law, G.711 a-law, and G.729 are also supported.
- System-level recording is available for linear pulse code modulation (PCM), Global System for Mobile Communications (GSM) 6.10, G.711 mu-law, G.711 a-law, G.729a, and G.726 through system-based transcoding resources.

Reports

- Call Handler Traffic Report
- Distribution Lists Report
- Events Report
- Outcall Billing Report
- Port Usage Report

- Users Report
- User Message Activity Report
- System Configuration Report
- Transfer Call Billing Report
- User Access Activity Report
- User Lockout Report
- Message Traffic Report
- Port Activity Report
- Mailbox Store Report
- Dial Plan Report
- Dial Search Scope Report
- For a full list and description of reports, refer to the Cisco Unity Connection System Administration Guide at: http://www.cisco.com/en/US/products/ps6509/prod_maintenance_guides_list.html.

Localization

The Cisco Unity Connection TUI, end-user GUI, and TTS engine are available in the following languages:

- Arabic (no TTS)
- Catalan
- Chinese (Hong Kong, Mandarin TUI with simplified and traditional Chinese GUI, simplified Mandarin TTS, but no traditional Mandarin TTS)
- Czech
- Danish
- Dutch
- English (U.S., U.K., and Australian)
- English TTY
- Finnish
- French (European and Canadian)
- German
- Greek
- Hebrew (no TTS)
- Hungarian
- Italian
- Japanese
- Korean
- Norwegian
- Polish
- Portuguese (Brazilian and European)
- Russian
- Spanish (European and Latin American)
- Swedish
- Turkish (no TTS)

Licensing

Cisco Unity Connection user and interoperability functions are offered under a single, low-cost Basic user license that you can use for voicemail, unified messaging, or integrated messaging. An Enhanced user license provides all the user and interoperability functions available with the Basic license plus the Survivable Remote Site Voicemail capability for branch-office users. Enhanced licensing provides a second standby mailbox at the branch office for remote users. Both Basic and Enhanced capabilities are provided with Cisco Unified Workspace Licensing (Cisco UWL).

The ELM hosts Cisco Unity Connection licenses. The ELM can be running on the same server as Cisco Unity Connection or on a remote server.

System Requirements

The Cisco Unity Connection system runs as a virtual machine on the Cisco UCS or natively on the Cisco media convergence servers. You can mix Cisco Unity Connection Inbox, IMAP, and Cisco Unified Personal Communicator message access in a single deployment. Refer to the Cisco Unity Connection Supported Platform List for hardware configuration and scalability requirements:

http://www.cisco.com/en/US/products/ps6509/products_data_sheets_list.html.

For a full, updated list of supported email clients, web browsers, and desktop operating systems for use with Cisco Unity Connection, please visit

http://www.cisco.com/en/US/products/ps6509/products_device_support_tables_list.html.

Ordering Information

To place an order, visit the Cisco Ordering homepage at <http://www.cisco.com/en/US/ordering/index.shtml> and refer to Table 2. To download software, visit the Cisco Software Center at <http://www.cisco.com/public/sw-center/index.shtml>.

Table 2. Ordering Information

Product Name	Part Number
Cisco Unity Connection Release 10.0(1)	UNITYCN10-K9

Please refer to the Cisco Unity Connection Ordering Guide for detailed information about part numbers, descriptions, and packaging options (Cisco Partner access required):

http://www.cisco.com/web/partners/sell/technology/ipc/uc_tech_readiness.html#~7.

This product is a part of Cisco Unified Workspace Licensing. Please visit

http://www.cisco.com/go/workspace_licensing for more information and to determine whether Cisco Unified Workspace Licensing is appropriate for your customer.

Cisco Services

Cisco Unified Communications Services allows you to accelerate cost savings and productivity gains associated with deploying a secure, resilient Cisco Unified Communications Solution. Delivered by Cisco and our certified partners, our portfolio of services is based on proven methodologies for unifying voice, video, data, and mobile applications on fixed and mobile networks. Our unique lifestyle approach to services can enhance your technology experience to accelerate true business advantage.



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Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV Amsterdam,
The Netherlands

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Local Business Tax Receipt

Miami-Dade County, State of Florida

-THIS IS NOT A BILL - DO NOT PAY

LBT

3405289

BUSINESS NAME/LOCATION

UNITED DATA TECHNOLOGIES INC
8825 NW 21 TERR
DORAL FL 33172

RECEIPT NO.

RENEWAL
3549665

EXPIRES

SEPTEMBER 30, 2014

Must be displayed at place of business

Pursuant to County Code

Chapter 8A - Art. 9 & 10

OWNER

UNITED DATA TECHNOLOGIES INC

SEC. TYPE OF BUSINESS

212 CONSULTANT

PAYMENT RECEIVED

BY TAX COLLECTOR

\$60.00 08/22/2013

TXHS1-13-048860

This Local Business Tax Receipt only confirms payment of the Local Business Tax. The Receipt is not a license, permit, or a certification of the holder's qualifications, to do business. Holder must comply with any governmental or nongovernmental regulatory laws and requirements which apply to the business.

The RECEIPT NO. above must be displayed on all commercial vehicles - Miami-Dade Code Sec 8a-276.

For more information, visit www.miamidade.gov/taxcollector

Local Business Tax Receipt

Miami-Dade County, State of Florida

-THIS IS NOT A BILL - DO NOT PAY

LBT

6322689

BUSINESS NAME/LOCATION

UNITED DATA TECHNOLOGIES INC
8825 NW 21 TERR
DORAL FL 33172

RECEIPT NO.

RENEWAL
6482178

EXPIRES
SEPTEMBER 30, 2014

Must be displayed at place of business
Pursuant to County Code
Chapter 8A - Art. 9 & 10

OWNER

UNITED DATA TECHNOLOGIES INC
Worker(s) 1

SEC. TYPE OF BUSINESS

196 SPEC ELECTRICAL CONTRACTOR
ES12000295

**PAYMENT RECEIVED
BY TAX COLLECTOR**

\$45.00 08/22/2013
TXHS1-13-048863

This Local Business Tax Receipt only confirms payment of the Local Business Tax. The Receipt is not a license, permit, or a certification of the holder's qualifications, to do business. Holder must comply with any governmental or nongovernmental regulatory laws and requirements which apply to the business.

The RECEIPT NO. above must be displayed on all commercial vehicles - Miami-Dade Code Sec 8a-276.

For more information, visit www.miamidade.gov/taxcollector

State of Florida

Minority, Women & Florida Veteran Business Certification

United Data Technologies, Inc.

Is certified under the provisions of
287 and 295.187, Florida Statutes for a period from:

12/10/2013 ^{to} 12/10/2015



Craig J. Nichols
Craig J. Nichols, Secretary
Florida Department of Management Services



All other specifications, terms & conditions remain the same.

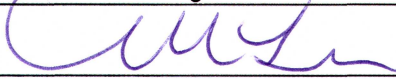
MAILED RFP'S:

If you have already submitted your printed proposals, it will be retained in the City Clerk's Office until the Proposals Opening time and date. If you wish to pick up your Proposal that has already been submitted, you can do so by showing proper identification, in the Office of the City Clerk, 2600 Hollywood Blvd, Room 221, Hollywood, Florida 33020.

Please sign and return with your Proposal.

COMPANY NAME: United Data Technologies

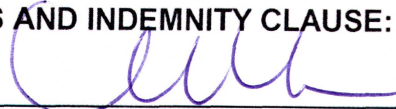
BIDDER'S SIGNATURE



Dated this 16th day of May, 2014

HOLD HARMLESS AND INDEMNITY CLAUSE:

United Data Technologies

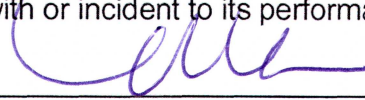


Mariana Lugaro Director of Sales Operations

(Company Name and Authorized Signature, Print Name),

the contractor shall indemnify, defend and hold harmless the City of Hollywood, its elected and appointed officials, employees and agents for any and all suits, actions, legal or administrative proceedings, claims, damage, liabilities, interest, attorney's fees, costs of any kind whether arising prior to the start of activities or following the completion or acceptance and in any manner directly or indirectly caused, occasioned or contributed to in whole or in part by reason of any act, error or omission, fault or negligence whether active or passive by the contractor, or anyone acting under its direction, control, or on its behalf in connection with or incident to its performance of the contract.

United Data Technologies



Mariana Lugaro Director of Sales Operations

(Company Name and Authorized Signature, Print Name),

further certifies that it will meet all insurance requirements of the City of Hollywood and agrees to produce valid, timely certificates of coverage.

C. GENERAL INFORMATION AND SCHEDULE

For information concerning procedure for responding to this Request for Proposal (RFP), contact the Procurement Services Division, Janice English, Sr. Procurement Specialist at (954) 921-3345, or Joel Wasserman, Director, Procurement Services at (954) 921-3290, or his designee. Such contact is to be for clarification purposes only. Material changes, if any, to the scope of services, or Proposal procedures will only be transmitted by written addendum.

It is preferred that all questions be submitted in writing. Questions should be directed to the City of Hollywood, P.O. Box 229045, Hollywood, Florida 33022-9045, Attention: Janice English, Sr. Procurement Specialist, Procurement Services Division, or to facilitate prompt receipt of questions, they may be sent via fax at (954) 921-3086, or via e-mail to jenglish@hollywoodfl.org or jwasserman@hollywoodfl.org or contact the Director of Procurement Services or his designee. **Questions must be received no later than Monday, May 12, 2014.**

RFP Schedule

REQUEST FOR PROPOSALS ISSUED : THURSDAY, MAY 1, 2014

PRE-PROPOSAL CONFERENCE: THURSDAY, MAY 15, 2014

PROPOSAL DUE DATE-PRIOR TO 3:00P.M., THURSDAY, MAY 29, 2014