Cisco Unified Workforce Optimization for Cisco Unified Contact Center Express 10.5

Product Overview

For many businesses, the contact center is a strategic connection point with customers. Each positive customer experience supports corporate business objectives, such as increased sales and customer loyalty. But with the daily pressure to satisfy customer demands, it can be a challenge to keep contact center people and processes aligned with corporate business objectives - whether it is in sales performance or profitability. To manage these expectations, it is the contact center supervisor who must deliver. It is the supervisor's job to balance the goals of the business with the customer experience and agent behavior.

To help companies provide efficient, effective, customer-focused service in the contact center, supervisors must have the tools they need to manage team performance. Cisco® Unified Workforce Optimization transforms the supervisor experience, giving supervisors access to more data and more powerful tools in simplified and flexible views so they are better equipped to lead their teams in delivering exceptional customer experiences (Figure 1).

Figure 1. Cisco Unified Workforce Optimization Personalized Performance Dashboard

Cisco Unified Workforce Optimization empowers supervisors with information in real time and gives them the tools they need to evaluate and continually improve team performance and customer satisfaction. The suite design is based on a powerful Web 2.0 framework, drawing on navigation and workflow techniques proven by the social web to deliver a set of personalized applications that are intuitive, flexible, and simple to support.

Features and Benefits

Cisco Unified Workforce Optimization applications include Call Recording and Quality Management and Workforce Management software.

Cisco Unified Workforce Optimization Call Recording and Quality Management is a recording, compliance, and evaluation solution for agent performance optimization and dispute resolution - architected to meet the unique requirements of virtual contact centers. It is a simple and cost-effective call recording solution for contact centers that value speed, scale, flexibility, and/or reliability in their solutions.

Call Recording enables recording of contact center agents and other IP telephony users to meet compliance requirements or verification of business processes. At the same time, Quality Management helps monitor and measure the contact center's contribution to overall business objectives. In addition, Call Recording and Quality Management:

- Improves agent knowledge through evaluations and feedback
- Helps ensure customer satisfaction and loyalty
- Improves business process and performance
- Increases revenue and profitability
- Helps resolve disputes quickly and accurately

Cisco Unified Workforce Optimization Workforce Management allows contact centers to manage their human capital resources. Managers can develop schedules for multiple sites, manage critical data and key performance indicators (KPIs), and manage real-time adherence of agents to their schedules. Cisco Unified Workforce Optimization Workforce Management software empowers contact center personnel to more easily and accurately forecast for the unexpected, proactively analyze and adjust for daily realities, and make smarter decisions to manage critical business resources to optimize service levels. In addition, Workforce Management:

- Provides consistent customer service levels and manages employee adherence
- Improves customer loyalty and increases revenue
- Delivers more efficient staff usage though effective scheduling
- Empowers agents to view their own performance metrics and self-serve for schedule requests
- Improves contact quality by pinpointing the need for training and maintaining or reducing labor costs

Call Recording and Quality Management

The Call Recording and Quality Management component of Cisco Unified Workforce Optimization is a highly scalable voice and screen call recording and quality evaluation solution that supports agents, knowledge workers, and supervisors at any location (Figure 2). Call Recording and Quality Management is available with any mix of the three user license types:

- Call Recording: Enables 100-percent call recording of agents or knowledge workers for compliance and transaction verification and includes on-demand recording and archiving; it also includes the search and play application to find and play back recordings
- Quality Management: Provides audio call recording, quality evaluations, performance dashboard, and reports
- Advanced Quality Management: Includes all of the Quality Management functions plus screen recording during and after calls

Figure 2. Cisco Unified Workforce Optimization Quality Management Contact Player
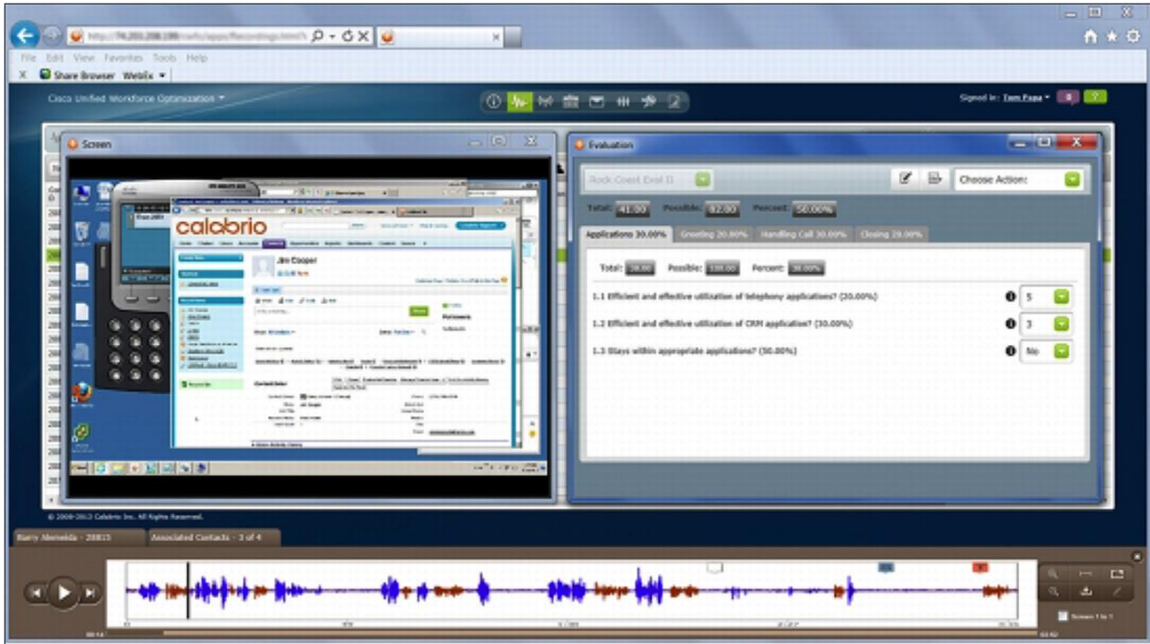
Key features include:

- Voice and screen recording
- Live voice and screen monitoring
- Workflow-based contact recording
- Configurable quality evaluation forms including points and percentage based scoring, section- and question-level weighting, and unlimited number of sections and questions
- Up to 30 custom metadata fields, providing the ability to append important enterprise and customer data to recordings for easy search and retrieval
- The ability to control recording for manual start, pause, resume and add metadata through Cisco Agent Desktop, Cisco Finesse gadget or Calabrio recording control browser or IP phone applications
- The ability to export calls in bulk for compliance and transaction verification through the Calabrio Recording Export application
- 100-percent voice recording for compliance and transaction verification
- Non-Agent or Knowledge worker recording
- The ability to evaluate, score, and report on the quality of customer interactions through any channel (chat, email, social media, etc.)
- Evaluation calibration capabilities, enabling contact center managers to benchmark evaluators
- Configurable and graphical reporting
- Role-based alerts to streamline evaluation workflows
- Advanced search capabilities that let you locate recorded calls quickly and easily

- The ability to export recorded files in .wav or Windows media formats
- Web 2.0-based framework and user interface
- Ease of implementation and use
- Payment Card Industry (PCI) data security compliance
- System monitoring and notification utility that can alert through email or existing Simple Network Management Protocol (SNMP)-based network monitoring solutions; also can match recording events to Call Detail Records (CDRs)
- A real-time recording status application that provides peace of mind that lines are recording
- Multiple recording storage locations that help ensure reliability if a server failover occurs
- Recording service redundancy and load balancing to support fault tolerance
- Cisco Finesse® gadgets for recording control including Cisco MediaSense recording application programming interface (API) to record, PCI pause, resume, delete, and metadata
- Hyperlink access to recordings, which allows access to the recordings right from the customer relationship management (CRM) data base for playback and review

The Call Recording and Quality Management software supports five recording methods:

- Desktop recording: Software recording service executed on the recorded user's PC
- Server recording: Uses monitoring and recording services running on a server connected to a Switched Port Analyzer (SPAN) port on the switch interconnecting the phones; the switch SPAN port replicates the IP packets of the phone ports and forwards them to the monitoring service for possible recording based upon computer-telephony-integration (CTI) events and the configured workflow
- Network-based recording: Uses a recording server that receives telephony packets directed to it from the built-in bridge on the recorded user's IP phone under the direction of Cisco Unified Communications Manager and controlled by the recording workflow on the recording server processing the user's CTI events
- Cisco MediaSense recording: Records through the Cisco MediaSense product and then transcodes, encrypts, and uploads into the Call Recording and Quality Management system per the user's workflow configuration
- Cisco CUBE Gateway Recording: MediaForking from CUBE to a Record Server then encrypts and uploads into the Call Recording and Quality Management System per the user's workflow configuration.

Cisco Unified Workforce Optimization Call Recording and Quality Management includes:

- Enhanced user experience for agent, supervisor, and evaluator roles
- A speech energy bar, including a timeline, visual comments, and metadata tagging, which speeds the quality analysis process and provides additional context to evaluations
- Speech energy data for talk-over and silence, which allows evaluators to quickly flag potential customer service concerns
- Agent hot desking or hoteling and extension mobility for nonagents, which frees a user from having to work at a particular location or on a particular device

For all recording types, transactions of interest are selected and processed if they meet established business criteria:

- Supervisors review and score the transactions against critical performance metrics, creating initiatives for quality improvements and training.
- Individual and team performance reports show trends that promote initiatives for quality improvement and training at the team and agent levels.
- Real calls can be used to create best-practice training modules for an existing agent coaching system.

Together with Cisco Unified Workforce Optimization Workforce Management, the Call Recording and Quality Management software streamlines the quality management process to help ensure that standards are being met and training and improvements are implemented when required.

Workforce Management

Part of the complete Cisco suite of customer interaction and workforce optimization software, Workforce Management provides the information supervisors need to schedule or forecast staffing to provide the highest level of customer service and make short- or long-term adjustments as required to maintain service levels. Supervisors can monitor intraday performance alongside schedules with the ability to easily adjust schedules by dragging and dropping and viewing the impact to help manage staff to the day's challenges, allowing workforce management specialists to concentrate on long-term, high-value analysis.

When the average contact center spends 65 percent of its budget on human capital resources, balanced staffing can significantly influence customer service, customer satisfaction, efficiency, and costs. Yet workforce management can be complex for many contact centers - particularly smaller centers that cannot afford high-end packaged solutions.

Workforce Management offers simple integration; it is easy to learn and simple for managers and supervisors to use.

Key features include:

- Forecasting and scheduling
- Real-time adherence management
- Agent access to schedules and shift trades
- Multiskill agent queuing
- An Agent Schedule view for supervisors, which provides agent and team schedules, adherence, and a coverage view on a single, unified screen
- Drag-and-drop schedule editing, which allows supervisors to make quick and easy scheduling changes, preview the effect on performance, and put the changes into production
- Project scheduling
- Shrinkage planning and intraday adjustment capabilities to match agent schedules to service-level goals
- User interface that is 100-percent web browser-based
- Role-based user dashboards, including widgets for supervisors to view the schedule, and adherence tracking for a named agent or group of agents or the goal and actual service level for selected service queues

- Ability to hyperlink to third-party applications (to support integration for training and e-learning, for example)
- Ability to delineate between noninteractive and interactive contact options for multichannel forecasting
- iCalendar feed, which allows agents to subscribe and publish the workforce management schedule to a calendar of choice
- Updated user interface for Shrinkage, Adherence State Mapping, and Service Queue Group pages
- Browser support for Internet Explorer Versions 10 and 11
- Support for Windows 8.1

The Workforce Management component (Figure 3) of Cisco Unified Workforce Optimization is an excellent solution for next-generation contact centers to:

- Accurately forecast contact volume and distribution based upon historical trends
- Schedule contact center personnel to meet target service levels based upon customized work-shift policies
- Manage contact service levels through intraday dashboards and real-time adherence views
- Apply unique business rules by channel type for multichannel contact center support

Figure 3. Workforce Management Agent Schedule View
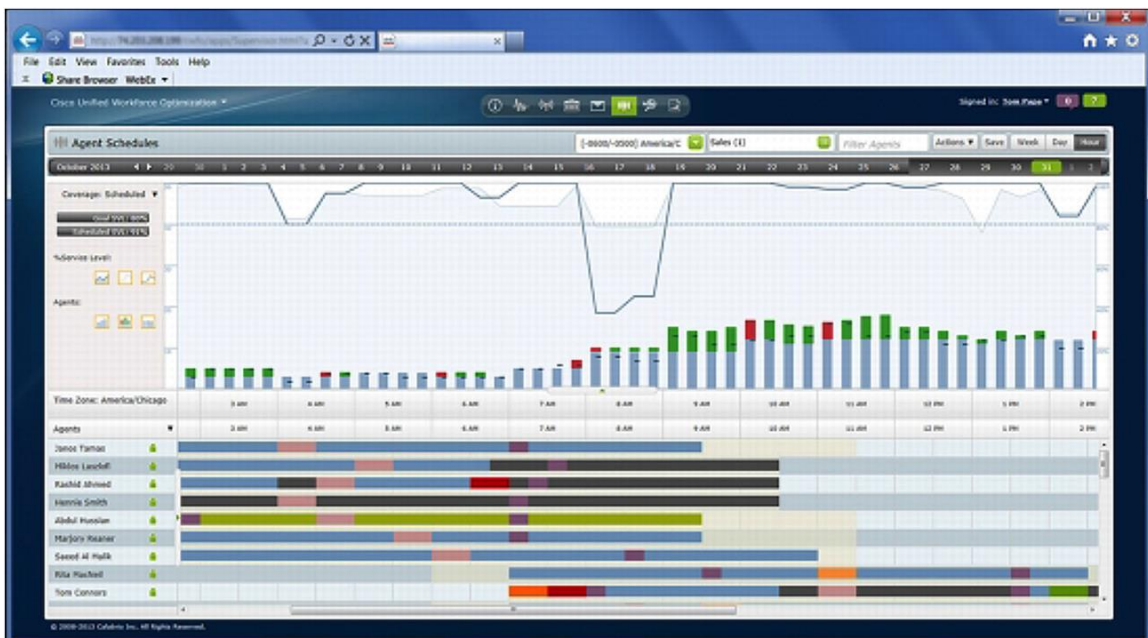
System Requirements

Server Requirements

Tables 1 and 2 give the server requirements and specifications, respectively, for monitoring and recording services based on the number of users, Table 3 lists the requirements of Cisco Unified Computing System (Cisco UCS), and Table 4 lists the application server requirements for Cisco Unified Workforce Optimization Workforce Management Server.

Table 1. Server Requirements for Monitoring and Recording Services for Cisco Unified Workforce Optimization Quality Management

Operating System	Specifications	Large Server	Medium Server	Small Server
Windows 2008 Server R2, Server 2012 or later[a] 64-bit	Processor cores (Intel)	4	2	1
	Processor cores (AMD)	8	4	2
	Processor cores (VMware)	8	4	2
	Minimum processor speed[b,c]	2 GHz	2 GHz	2 GHz
	Memory (GB)	8	4	4
	Minimum input/output operations per second (IOPS)	143	143	143
	Minimum System storage (GB) for operating system and quality management	40	40	40

[a]. Apply Microsoft Windows Server updates as recommended by Microsoft. Quality Management does not have Microsoft dependencies.

[b]. The minimum processor recommendations for Intel are Xeon Processor E3 family or later running above 2 GHz or Xeon Processor 5502 and later. You must enable hyper threading for Intel processors.

[c]. The minimum processor recommendation for AMD is Opteron Processor 3000 or later.

Table 2. Server Specifications for Monitoring and Recording Services for Cisco Unified Workforce Optimization Quality Management Record Servers

Specifications	Large Server	Medium Server	Small Server
Audio media file storage (GB)[a]	125[b]	100[b]	100[b]
Concurrent users	300	125	50
Minimum IOPS	143	143	143

[a]. The temporary recording location on a voice recording server (that is, the recordings folder) must be located on disk other than the operating system disk where Quality Management is installed. Write caching on the disk where recordings are stored must be enabled.

[b]. Recording storage varies by use.

Table 3. Cisco UCS Servers OVA - Cisco Quality Management

Component	Maximum Concurrent Recording Users (All Recording Types)	Maximum Concurrent Record Server users (Network, Server, Mediasense, Gateway Recording)	vCPU	vRAM	Minimum IOPS	Minimum Processor Speed	vDisk	vNIC
2 vCPU QM Base Server (single server) (CR/QM/AQM)	125	25	2	4	143	2 GHz	1x40 GB 1x146 GB	1
4 vCPU QM Base Server (single server) (CR/QM/AQM)	250	100	4	4	143	2 GHz	1x40 GB 1x146 GB	1

Component	Maximum Concurrent Recording Users (All Recording Types)	Maximum Concurrent Record Server users (Network, Server, Mediasense, Gateway Recording)	vCPU	vRAM	Minimum IOPS	Minimum Processor Speed	vDisk	vNIC
6 vCPU QM Base Server (single server) (CR/QM/AQM)	500	300	6	6	143	2 GHz	1x40 GB 1x146 GB	1
Off board Record Servers								
4 vCPU QM Recording Server (CR/QM/AQM)	n/a	125	4	4	143	2 GHz	1x40 GB 1x146 GB	1
6 vCPU QM Recording Server (CR/QM/AQM)	n/a	300	6	6	143	2 GHz	1x40 GB 1x146 GB	1

[1] Concurrent user counts greater than 500 require a separate, external server to host Microsoft SQL; for concurrent user counts greater than 1000, the Microsoft SQL server must have 8 GB and be 64-bit.

[2] Recording servers require 0.5 GB for voice or 1.0 GB for voice and screen storage capacity per recorded user for caching daily recordings.

OVA Template Details:

- **2 vCPU QM Base Server VM Configuration:**
  - Capacities for 10.0(1) & 10.5
  - 500 named Users for voice and screen recording
  - 125 maximum concurrent agent recordings (up to 25 can be using record server)
  - 25 maximum number of concurrent agents (voice only) using Mediasense, Server Recording, Network Recording or Gateway Recording)
  - Multiple vDisks are used as follows:
  - vDisk 1 = 40 GB Minimum Operating system, Cisco Unified Contact Center Express WFO QM binaries, SQL Server SQL Server Data files
  - vDisk 2 = 146 GB Cisco Unified Contact Center Express WFO QM recordings (Size may vary depending upon usage), SQL Server, SQL Server Data Files (Recommended)

- **4 vCPU QM Base Server VM Configuration:**
  - Capacities for 10.0(1) & 10.5
  - 1000 named Users for voice and screen recording
  - 250 maximum concurrent agent recordings (up to 100 can be using record server)
  - 100 maximum number of concurrent agents (voice only) using Mediasense, Server Recording, Network Recording or Gateway Recording)
  - Multiple vDisks are used as follows:
  - vDisk 1 = 40 GB Minimum Operating system, Cisco Unified Contact Center Express WFO QM binaries, SQL Server SQL Server Data files
  - vDisk 2 = 146 GB Cisco Unified Contact Center Express WFO QM recordings (Size may vary depending upon usage), SQL Server, SQL Server Data Files (Recommended)

- **6 vCPU QM Base Server VM Configuration:**
  - Available for 10.0(1) & 10.5
  - 2000 named Users for voice and screen recording
  - 500 maximum concurrent agent recordings (up to 300 can be using record server)
  - 300 maximum number of concurrent agents (voice only) using Mediasense, Server Recording, Network Recording or Gateway Recording)
  - Multiple vDisks are used as follows:
  - vDisk 1 = 40 GB Minimum Operating system, Cisco Unified Contact Center Express WFO QM binaries, SQL Server SQL Server Data files
  - vDisk 2 = 146 GB Cisco Unified Contact Center Express WFO QM recordings (Size may vary depending upon usage), SQL Server, SQL Server Data Files (Recommended)

- **4 vCPU Recording Server VM Configuration:**
  - Available for 10.0(1) & 10.5
  - 125 concurrent voice recordings for Server (SPAN), Network, Mediasense and Gateway Recording
  - Multiple vDisks are used as follows:
  - vDisk 1 = 40 GB Minimum Operating system, Cisco Unified Contact Center Express WFO QM recording service binaries
  - vDisk 2 = 146 GB Cisco Unified Contact Center Express WFO QM recordings storage

- **6 vCPU Recording Server VM Configuration:**
  - Available for 10.0(1) & 10.5
  - 300 concurrent voice recordings for Server (SPAN), Network, Mediasense and Gateway Recording
  - Multiple vDisks are used as follows:
  - vDisk 1 = 40 GB Minimum Operating system, Cisco Unified Contact Center Express WFO QM recording service binaries
  - vDisk 2 = 146 GB Cisco Unified Contact Center Express WFO QM recordings storage

Table 4.   Application Server Requirements for Cisco Unified Workforce Optimization Workforce Management Server

Workforce Management Server Capacities	Cisco UCS OVA		
Processor cores	2	4	2 vCPU
Memory	8 GB	8 GB	8 GB
System storage	250 GB	250 GB	250 GB
Workforce Management: Single-Server Configuration			
Maximum number of named users	450	900	450
Maximum number of concurrent agents users	150	300	150

The application server software requirements for Cisco Unified Workforce Optimization Workforce Management, Call Recording, and Quality Management follow:

- Operating system options:
  - Windows Sever 2008, 64-bit
- Database options:
  - Microsoft SQL Server 2008 Express, Standard, or Enterprise Edition based on number of recordings
  - Microsoft SQL Server 2005
- Hosting options:
  - Physical server
  - Virtual server Cisco UCS with VMware ESX or ESXi Server

Quality Management PC Requirements

Table 5 outlines client PC requirements for the Quality Management component of Cisco Unified Workforce Optimization.

Table 5.   Call Recording and Quality Management Minimum Client Requirements

Component	Processor	Memory
Applications plus voice and/or screen recording	2.0 GHz	2.0 GB

Ordering Information

Cisco field and partners can consult the ordering guide for a full list of part numbers and detailed ordering instructions at:
http://www.cisco.com/web/partners/downloads/partner/WWChannels/technology/ipc/downloads/CCBU_ordering_guide.pdf.

Cisco Services

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For more information about Cisco Unified Contact Center Services, please visit
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For More Information

For more information about Cisco Unified Workforce Optimization, please visit
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