etalk™
an Autonomy company

Qfiniti Enterprise and VoIP for Cisco

An etalk Technical White Paper

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etalk Product Briefing

In today's increasingly competitive environment, customer satisfaction is more important than ever. Customers now demand faster and more effective responses to their service needs. Organizations that can capture and analyze business communications - and use that intelligence to boost customer loyalty and improve contact center productivity - have a clear advantage in their marketplace.

Now you can give your business that keen competitive edge with etalk Qfiniti Observe.
Qfiniti Observe puts today's most powerful call recording capabilities at your fingertips. This solution gives you the option to record all your customer interactions, or lets you determine which calls to automatically monitor. It supports on-demand recording of conversations and computer desktop activities. In addition, it delivers full logging for financial and other critical compliance applications. Featuring synchronized screen and voice recording and playback, Qfiniti Observe captures and stores every aspect of your agents' interaction with a customer for easy evaluation. etalk's Qfiniti Observe provides simple installation, a lower cost of ownership, and the ability to scale to meet your growing service requirements.

Solid, long-lasting customer relationships are a key strategic investment. Now you can protect that investment and keep your customers satisfied with etalk Qfiniti Observe. This paper discusses the integration of Qfiniti Observe in IP contact center environments.

Integration Overview

For quality monitoring recording, Qfiniti Observe integrates with legacy ACD/PBXs by emulating a standard supervisor phone. Through this emulation, Qfiniti Observe utilizes the "service observation" functionality of the ACD to record the agent's voice interactions with a customer. Screen capture is achieved using our agent client application. Agent Monitor Engine captures the screen changes and sends them to the server to be saved with the voice recording.

Voice over IP (VoIP) based ACDs, or "soft switches," present a new challenge to this integration method. Because it does not contain a centralized switch like legacy ACDs, the service observation model is difficult, and in some cases impossible, to implement. etalk overcomes this challenge by tapping the network and recording the RPT traffic for targeted VoIP phones using etalk's innovative recording platform, Qfiniti Enterprise.

VoIP Connection

etalk's VoIP recording solution uses a packet recording technology that "sniffs" the network and records RTP packets for user-defined target phones.

Using etalk's innovative solution set, Qfiniti Observe translates extension numbers into the (DHCP) assigned IP addresses. This solution keeps the user from managing or configuring complicated translation tables and forcing customers to use static IP addressing schemes for their IP phones.

Use of the IP-based sniffing allows the customer to position the recording platform in one of three possible solutions. The first is at the Gateway (or between two layer 2 devices) using standard network tapping devices; the second is in Core Routing (between layer 2 and layer 3) using standard network tapping devices; and third is at the Edge Routing (via "Span" or "Mirror" ports).

Cisco IPCC Connectivity with ICM

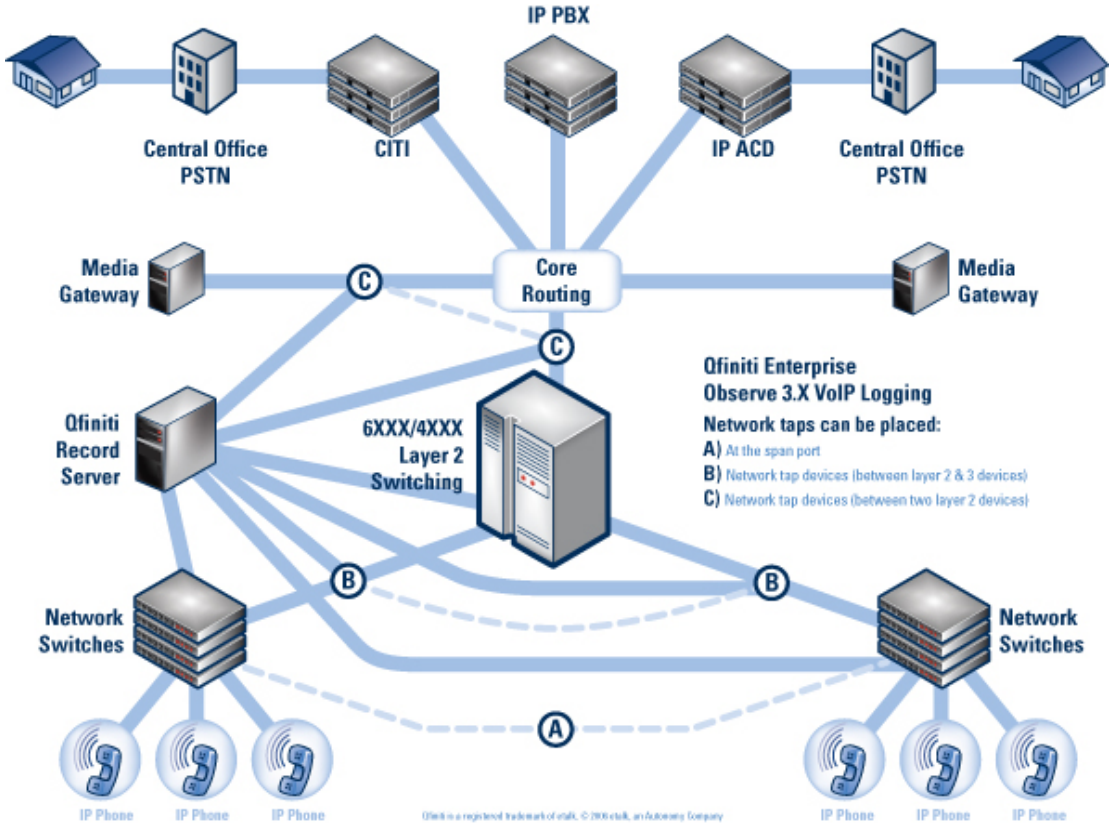

Figure 2: Cisco LAN Tapping Positions

Layer 2 Connectivity

Positioning the Qfiniti Recording Servers at the Media Gateway or inside Core Routing allows the customer to centralize the recording interfaces and to manage these interfaces in the data center. This implementation is performed using standard network tap devices from companies like DataCom Systems or NetOptics. These devices provide a passive monitor point from which Qfiniti Observe can sniff the network. Multiple network tap devices can be installed and connected to a single Qfiniti Record Server, allowing it to see traffic for primary and secondary network routes.

SPAN/RSPAN Connectivity

Network switches have a feature called a SPAN port. SPAN ports monitor network traffic and/or sniff the network, then send the data to a destination port. Span (or Local SPAN) is used when both the source ports (or source LVANs) and destination ports are on the same switch or switch stack.

RSPAN ports can also be configured and utilized if necessary. RSPAN supports source ports (or source LVANs) and destination ports on different switches or different switch stacks.

Signaling Protocol

As with all switch integrations, understanding when to start and stop recording is vital for the solution to create recordings that contain the agent conversation from beginning to end. For Cisco IPCC integrations, Qfiniti Observe decodes the Skinny Client Control Protocol (SCCP) and extracts the phone's off-hook and on-hook phone events. These phone events translate into start and stop recording messages that provides a highly reliable interface for this switch integration.

CTI Integration

Qfiniti can also connect to the Cisco ICM or Peripheral Gateway. The CTI link is used to identify the agent who is sitting at the phone and to attach CTI based metadata to the recording. These metadata fields can be used as search criteria to find, retrieve, and play back calls using the Qfiniti Enterprise 3.0 intuitive user interface.

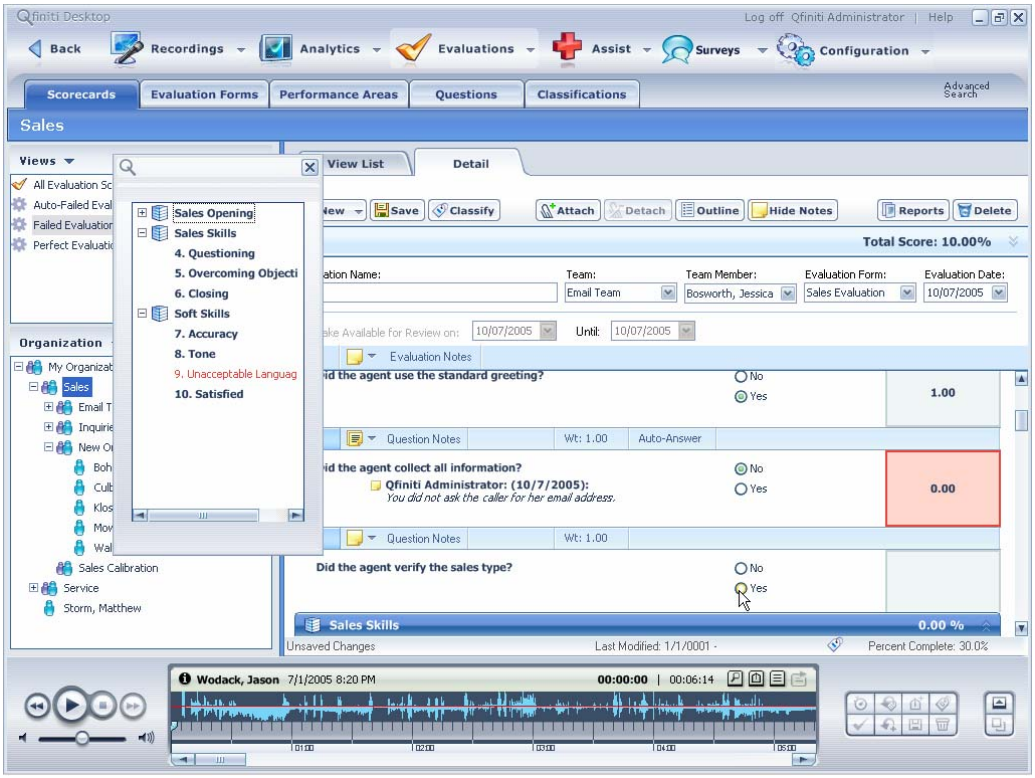

Figure 1: Qfiniti 3.0 User Interface

Recording Modes

Qfiniti Observe can trigger records in four different ways. They are: Quality Plans, Record-on-Demand, Global Plans and Continuous Record. All four of these recording methods can work independently or together, providing unmatched recording capabilities. These modes can be implemented using legacy ACD or VoIP connectivity.

Quality Plans

This recording mode randomly tags recordings based on the agents who receive the calls. Plans can be setup to record voice, voice and PC screens, or PC screens only. The plan can be set up to automatically schedule and record; for example, you may want to record three calls per agent per week. The plan can also be configured to delete recordings that age past a predetermined time frame, which frees up disk space for new recordings. This recording mode is generally used to perform quality assurance functions.

Global Plans

This recording mode, also known as Business Rules, tags recordings based on the *type* of calls that arrive in your contact center. In this mode, the system tags calls when predefined CTI data is received from the IPCC. For instance, you may want to tag five calls per hour when the system identifies that a Gold Card customer is calling. The system can be set up to record a certain number calls per hour, per day, or per rule, as well as an unlimited number of calls (tag all calls for the rule). This recording mode is normally used for agenda management (i.e., evaluation of a campaign or a sales promotion).

Record-on-Demand

This recording mode records calls when requested by an agent or supervisor or when triggered by an application such as EasyLink. In this mode, the system simply tags recordings when told. A fully supported API or our API-less application, EasyLink, can be used when integrating into a customer's application environment.

Our Agent Monitor Engine (agent client) and Qfiniti Desktop (supervisor client) software package features user interfaces that provide Record-on-Demand functionality. This recording mode is normally used for sales and/or process verification.

Continuous Record

This recording mode, also known as Logging or 100% recording, records all of the calls that connect to a station (phone) or a trunk. This recording mode is normally used for liability or compliancy recording.

Playback

Regardless of where, how, or why a call is recorded, Qfiniti Observe reassembles the Receive (RX) and Transmit (TX) portions of the RTP packets into a single voice-recording file. This file is then ready to be played back using Qfiniti Observe's GUI based voice/video file player or through a touchtone user interface.

Conclusion

etalk Qfiniti Observe's flexible recording drivers and connectivity options provide customers with a multitude of call monitoring capabilities. By utilizing Qfiniti Observe's reliable call logging and quality assurance functionality, corporations can focus on the customer and not the process. Qfiniti Observe allows organizations to maximize their investment in the etalk solution and solidify their investment in their customer relationships.

Glossary of Terms

Qfiniti Observe – a Qfiniti Enterprise product that records voice and desktop activities for compliance, risk management, and quality assurance. Recording options include trunk side logging, station side logging, and selective recording.

ACD (Automatic Call Distributor) – Automatically distributes calls to agent terminals.

Legacy ACD – TDM -based monolithic telephony switch; connects and controls connections between terminal devices (phones) and the Public Switch Telephone Network (PSTN).

PBX (Private Branch eXchange) –a TDM based Telephone switch (see Legacy ACD) with limited call routing capabilities.

Agent Monitor Engine – etalk's agent client software component responsible for screen recording.

VoIP (Voice over Internet Protocol) – the routing of voice conversations through the Internet or other IP-based network.

RTP (Real-time Transport Protocol) – a standardized packet format for delivering audio (voice) over the data network.

Sniffing – the intercepting of log traffic passing over a digital network by computer software. Sniffing can be used to analyze network problems, detect intrusion, and monitor network usage.

DHCP (Dynamic Host Configuration Protocol) – a set of rules used by a communications device (i.e., computer, router) that allow the device to request and obtain an IP address from a server.

SPAN (Switch Port ANalyzer) **port** –Span or mirror port. SPAN copies or mirrors traffic received or sent (or both) on source ports or source VLANs to a destination port for analysis or recording.

RSPAN port –SPAN that supports source ports, source VLANs, and destination ports on different switches or different switch stacks, enabling remote monitoring of multiple switches across a network.

Call control protocol – a set of commands protocol used to control the phones' call capabilities.

SIP (Session Integrated Protocol) – integrated messaging system; provides agents with instant access to experts within or outside of the contact center

CTI (Computer Telephony Integration) – a technology that allows interactions on a telephone and a computer to be integrated

Signaling Protocol – the protocol used to establish and terminate a phone call over an IP network.

CTI Integration – combining customer contact channels (voice, email, fax, etc.) with computer systems, usually through computer software known as middleware.

EasyLink – an aspect of Qfiniti Observe that establishes a direct connection between desktop applications and the call recording program; contains a web-based user interface.

API (Application Programming Interface) – the interface that computer applications use to access a set of (usually third party) functions without requiring the source code of the functions.

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