

Asterisk Call Center ACD

A Cost Effective Next-Generation Contact Center Technology Platform

It has been an exciting time for the call center industry with the non-stop innovation and evolution in technology and telecommunications. The economic shift from 'bricks and mortars' to 'clicks and online' over the last decade has tremendously increased the technological needs of modern day contact centers.

“The rapid changes in telecommunications technology have brought critical opportunities to call centers – opportunities to make significant improvements in productivity while greatly reducing operating costs.”

For most call centers, the rapid changes in telecommunications technology have brought critical opportunities – opportunities to make significant improvements in productivity while greatly reducing operating costs. Cutting-edge Internet Protocol (IP) based contact center technology platforms have evolved to the point that highly reliable and full-featured systems are available to businesses of all sizes.

The widespread use of VoIP can be seen daily (we are all familiar with the likes of Skype). However, the availability of such high-grade, quality software is not limited to simply placing and receiving calls. Next-generation call center ACD software, capable of supporting both TDM and VoIP, is available and is delivering groundbreaking advancements to call centers around the world. Many of these advances are due to the superiority of the telephony platform supporting the next-generation software.

For example, the use of Asterisk, the leading powerhouse of IP PBX systems and VoIP gateways, is so pervasive that it can be considered omnipresent. Asterisk has experienced universal acceptance and is a market leader in delivering an enterprise-grade telephony platform at a fraction of the cost compared to the available proprietary telephony systems.

Technology managers now have access to this sophisticated and leading telephony platform for their call centers. It is a great time to evaluate the available contact center technology solutions and to build out a cost effective, sophisticated, next-generation call center technology platform. The right telephony platform with the right call center ACD software will deliver the competitive edge you require. This white paper will reduce the complexities, clarify common misunderstandings and provide industry-leading insight into the key components of a successful VoIP call center platform. Along the way, we will examine the pressing need call centers have for cost-effective technology that is capable of delivering differentiated value. We

will discuss the benefits inherent to a good VoIP technology platform, and we will identify a step-by-step guide to planning and architecting a successful, next-generation call center technology platform. Finally, we will introduce a leading and unique Asterisk based call center ACD software, Q-Suite 5.0, that will allow you to compete head-to-head with other leading industry leading contact center technology solutions at a fraction of the cost.

The Right Hardware

Many of the unprecedented advances associated with telecommunications technology can be directly attributed to the progress in server hardware, with manufacturers like Dell and HP delivering powerful servers at tremendously reduced costs. The availability and affordability of powerful multi-core processors, relatively inexpensive memory and hardware RAID Controllers have made it affordable for Small to Medium Sized Businesses (SMBs) to obtain enterprise-grade hardware capable of supporting the most complex contact center technology platform requirements.

“A direct benefit of utilizing an Asterisk based contact center technology platform is the ability to avoid proprietary equipment lock-in.”

Asterisk is designed to work on such hardware, and as such, has a number of inherent benefits. A direct benefit is the ability to avoid proprietary equipment lock-in by utilizing an Asterisk based contact center technology platform. Another benefit is ease of scale. A good call center ACD will allow scaling to multiple Asterisk servers with the growth of your contact center. This creates a high available architecture that is redundant and fail-safe, an important feature that is discussed later in this white paper.

Hardware has a direct impact on any contact center technology platform and the software running on it. Therefore, when considering any contact center technology platform, the need to consider hardware requirements remains of the utmost importance.

Co-location vs. Premise-Based

An important decision to make, when selecting a new contact center platform, is the choice of a premise-based solution versus utilizing a co-location. With today's technology, both have specific advantages, as well as important implications to your plans for business continuity.

Premise-based solutions are great choices for centralized contact centers. With all your agents in one spot, you have the opportunity to run all your voice traffic on IP and utilize VoIP internally since there are no bandwidth restrictions on your internal network. This will take away the need to have legacy telephone equipment and wiring. There are cost savings to be had by using soft-phones, as long as the Agent

machines are not archaic. Furthermore, all core system functions and applications are centralized within your network.

If, however, your call center operations are decentralized, whether you utilize at-home agents or you operate multiple call centers in different locations, or if you are considering VoIP for incoming or outgoing traffic, then you may be better served by utilizing a high-quality co-location service. However, you will need to ensure that your bandwidth has the capacity to carry voice and data from your premise to the Co-location.

Bandwidth Requirements

Bandwidth planning is a part of the infrastructure requirement. There are a number of key points to consider for Voice traffic using VoIP. Codex G711 consumes up to 85 kbps of bandwidth. If you're using compression like G729, you'll require around 45kbps, but it will consume more processing power on your server, thereby reducing its capacity. When you have co-located servers, provide adequate bandwidth for data. This will depend on the sophistication of the call center software, scripts and external applications associated with the scripts. It is also important to keep in mind that voice traffic is sensitive to delays.

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VoIP or TDM?

An important option for any call center is having the degree of freedom to utilize your call center platform completely in VoIP, in TDM (Time Division Multiplexing) mode, or in a hybrid implementation with a mixture of VoIP and TDM. You may have existing traditional phone sets that you would like to continue using, or you may want to integrate with in-place TDM systems to maintain an existing business application. Asterisk call centers have the distinct advantage of being able to offer all these options, as they are native to Asterisk.

Important considerations to make, regarding whether to utilize VoIP or TDM, involve questions of cost and availability. TDM gives you good quality voice without having to worry about infrastructure requirements. VoIP will deliver the same quality of voice, when close attention is paid to infrastructure requirements.

Premise-Based Agents and At-Home Agents

VoIP can be an extremely valuable tool for your contact center, due to its adaptability. It can be tightly incorporated with other solutions to provide an increased level of flexibility, efficiency, and cost savings. With VoIP, for example, you can more easily, and cost-effectively, employ at-home agents, giving you access to a diverse labor pool, allowing your contact center to quickly add appropriate resources

during unexpected spikes in traffic, and helping your organization to reduce facilities related costs.

Voice Recording: QA's Bag

Voice Recording has proven itself as an extremely valuable tool for quality assurance teams, agent training and other on-the-spot managerial tasks. In the past, achieving voice recording capabilities has required additional expenditure and time consuming CTI developments. However, voice recording is intrinsic to Asterisk, meaning there are huge savings to be had, as there are no additional costs in acquiring a separate voice recording system. However, there will be costs associated with acquiring storage and archiving it. In an uncompressed form, one agent man hour recording is 28 MB. Compression, retrieval and other activities will consume processing power and you need to plan accordingly. The good news is that it need not be done from day one and you can evolve into it.

Asterisk: The Next-Generation Telephony Platform

“Asterisk delivers a proven, next-generation telephony switch that has been tested and implemented by millions of users.”

There has been a lot of excitement in the telecommunications world regarding Asterisk, the leading hybrid telephony switching platform. But what makes Asterisk so uniquely beneficial as a contact center telephony platform? For starters, the underlying telephony switch is usually a large portion of the initial cost when buying a packaged proprietary contact center technology solution. Asterisk, on the other hand, delivers a proven, open source, next-generation switch that has been tested and implemented by millions of users. Therefore, a call center technology platform that utilizes Asterisk is capable of achieving an immediate cost savings.

All that remains to run a full-featured, next-generation contact center with Asterisk is to find a feature-rich ACD to go with it.

Many proprietary contact center switch providers quite often have their internal teams playing “catch up” to keep their legacy CTI up to date, whether it be adding features for the switch or enabling cutting edge VoIP migration. Asterisk, on the other hand, provides all the PBX functionality independent of the underlying telecommunications connectivity, be it TDM (PRI E1/T1) or VoIP (SIP/IAX/H323). It also provides seamless integration of the underlying VoIP and TDM connectivity. This important feature provides two distinct benefits. First, Asterisk allows working with existing TDM, and second, companies significantly reduce risk as they gradually migrate to VoIP based on company timetables rather than having to “flip a switch” when go-time is at hand.

There are other benefits inherent to Asterisk. In the past, achieving voice recording capabilities has required expensive additional systems. However, voice recording is

intrinsic to Asterisk. It is also important to note that Asterisk is designed to work in commodity server grade hardware from Dell, HP and others.

With so many clear benefits to be had by utilizing Asterisk, you will rightly ask “why hasn’t everyone switched?” The answer is simple: the call center industry is mature, and it requires a suite of sophisticated features in order to cope with the demands of customer interaction today. As such, there is a need for a feature rich ACD that is capable of functioning with Asterisk’s advanced switching capabilities.

Q-Suite 5.0: Advanced Call Center Software for Asterisk

“With Q-Suite 5.0, you can switch to Asterisk and the right contact center technology solution and migrate seamlessly to IP telephony.”

Any Asterisk Call center software must meet the existing demands placed upon modern call centers. Q-Suite 5.0, a very high-end call center ACD software solution for Asterisk, delivers the Full-Functionality requirement to call centers. It is feature-rich, scalable, out-of-the-box software that comes with a powerful ACD and predictive dialer. It has detailed reporting capabilities and is bound to satisfy the functional requirements of most advanced call centers. With Q-Suite 5.0, you can switch to Asterisk with the right contact center technology solution and migrate seamlessly to IP telephony. Q-Suite 5.0 offers reliability, required for your daily operations. It offers High Availability, with ability to ensure that you do not loose existing calls due a single failure, and Full-Functionality, the availability of industry standard features comparable to the any of the high-end proprietary peers in the contact center technology domain.

Q-Suite 5.0 provides more than just a full-featured solution. The ease of system management and administration of the product throughout its lifecycle reduces the cost of running the system and substantially reduces ongoing overhead.

Interoperability is another benefit inherent to Q-Suite 5.0. Its class of standards-based API allows you to easily support the functioning of existing business applications that utilize tried and true CTI.

Call Center Software, Q-Suite 5.0 provides the following features:

Q-Suite 5.0 Product Features Matrix	
Inbound Features	Q-Suite 5.0
ACD with Skills Based Routing & Queue Prioritization	✓
GUI IVR Setup	✓
GUI Dialplan Builder	✓
GUI Script Builder	✓
Hot-Desking, On/Off Hook Agents	✓
Outbound Features	Q-Suite 5.0
Predictive Dialing	✓
GUI Script Builder	✓
Campaign & List Management	✓
Do-Not-Call Compliance	✓
General Features	Q-Suite 5.0
TDM & VoIP Connectivity	✓
Multi-tenant	✓
Real-time Reporting	✓
Historical Reporting	✓
Voice Recording	✓
Quality Monitoring	✓
Web Agent Interface and Native Client	✓
API for CTI Interface (.NET and Socket)	✓
Asterisk PBX with Voicemail	✓
Hosted & Premise Based Installs	✓
High Availability for Redundancy	✓
Mid-call Recovery for Fail-over	✓
Open Access and Full Knowledge Transfer	✓
Unique Support	✓

A Final Word

The paradigm shift in technology has opened an unprecedented opportunity to enhance your call center platform, lower your cost and provide much more functionality. There has been never such an opportunity to compete and grow with industry leaders. In order to take full advantage of what cutting edge technology can deliver, a close analysis of Asterisk and Q-Suite 5.0 should remain central to your search for a next-generation contact center technology platform.

There are a number of resources to help you learn about the benefits of Asterisk. In addition to the reference materials available at www.indosoft.com, you can find valuable information here:

*Asterisk Website
www.asterisk.org*

*Commercial Asterisk Support
www.diqium.com*

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About Indosoft

Indosoft is a global provider of call center software for Asterisk. It has been providing call center solutions to medium and large contact centers around the world for over nine years. It also licenses its ACD for Asterisk with .NET and socket library to enterprises utilizing Asterisk in their product line. Indosoft has been making available Q-Suite ACD for private label contact center technology solutions.

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