Paradigm Shift in Enterprise Communications

Why a Hosted, Deeply Integrated Application Architecture Matters
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Problem Overview

Today’s CIOs are tasked with containing and reducing costs on the one hand, while at the same time using information technology to improve productivity and enhance overall competitiveness within their industry. Staffing constraints mean that many businesses have their hands full just keeping up with technology upgrades and support of their existing systems. Research into emerging technologies and thinking about how to best take advantage of new technology developments often take a back seat to day-to-day maintenance of existing legacy systems. What’s more, IT departments are often being asked to cover existing and future projects with constant or decreased IT staff and budget. In short, CIOs are being asked to do more with less.

And still, CIOs know this tactical, “fix what’s broke” decision-making model will not put them on a path to long-term cost reductions, increased worker productivity, and the competitive technology advantages critical to success in today’s business environment. Increasingly, mid- and large-size enterprises seeking more strategic communications solutions are exploring the financial and productivity benefits of hosted unified communications platforms with tightly-integrated, enterprise-class IP voice and data applications and business analytics tools.

To date, most vendors advertising supposedly “full-fledged unified communications” capability have in reality focused mostly on voice service only. Their aim has been to pitch bare-boned feature/functionality offerings primarily to smaller businesses of 50 users and under.

To their credit, some of these current offerings may work well for small businesses with simple communications needs in a single office or storefront. But within larger
enterprises, those with multiple locations and home or field-based employees, the complexity of the network configurations rise dramatically. Further, higher-end features such as call center management are either limited or not present at all in systems geared for small businesses.

Vendors of such systems typically operate from a low touch, self-service, Web site-driven deployment model. Again, something many small businesses have found attractive but which do not fit the needs of larger corporate enterprises. To truly serve larger enterprises well, vendors need to adopt a more consultative approach, where the provider engages a prospective customer from an educational standpoint to develop a needs analysis and, ultimately, a network design and deployment strategy that will meet all of the enterprise stakeholders’ requirements.

The path of least resistance for many businesses has often been to continue upgrading existing communications technology such as premise-based PBX equipment. This tactical and often piecemeal approach has the effect of creating artificial islands of technology within an organization. That is, communications technology components – such as voice and enterprise messaging – are deployed and managed separately from customer management applications – including CRM, support, and call center management. This often creates an artificial boundary between these two sets of systems and only the most determined businesses are ever able to achieve integration of these systems. For most of these companies, lack of suitable application programming interfaces (APIs), resource and skill constraints, and related outside consulting costs often make integration projects expensive, challenging, and time consuming.

This lack of true business application integration translates into significant missed opportunities for technology-based productivity gains, and impacts the quality of the data that is captured for analysis and action. The quality of data available to business managers and executives alike directly impacts a company’s ability to make pro-active
and timely business decisions. Reporting tools within each individual system fulfill tactical needs, but these tools cannot provide the kind of overarching and summarized analytics which business managers in today’s competitive environment need.

For example, call center managers often don’t care what systems were used to communicate with a particular customer. Instead, they are more interested in seeing a holistic picture of customer health, and a record of the communication activity associated with specific customers. Alternatively, a sales manager may want to understand sales representative performance from both a communications activity as well as a financial results perspective. Visibility is impacted if management needs to look at separate sets of tactical reports and mentally correlate the different data sets. Only centralized data driven analytics can provide data aggregation and high level summary Key Performance Indicators (KPIs), but both have historically been challenging to set-up and costly to maintain. Until now.

Summary: Yesterday’s legacy on-premise enterprise communications systems fail to support today’s business realities and needs – as well as those in the future.
Solution Overview

A new generation of enterprise-grade, hosted communications platforms has emerged to move forward-looking companies off expensive and proprietary on-premise PBX systems.

Unified Communications (UC) – defined as the integration of voice, messaging, and presence on a common platform – is driving consolidation of formerly disparate business communications systems onto common integrated platforms. These platforms are connected via a converged, QoS-enabled data network using Voice-over-IP (VoIP) technology to combine formerly separate legacy TDM networks with today’s IP-based data networks.

The reduced cost and labor requirements of the Software-as-a-Service (SaaS) business model, coupled with cloud computing as an enabling technology, are shifting traditional on-premise communications and software systems to the Internet. In addition, software-based management of customers and business processes has resulted in an enormous growth of business data. Today’s enterprise CIOs want to be able to collect, structure, and analyze this data to secure competitive advantage in their marketplace.

To do all of this, a profound technological shift is taking hold with these CIOs. It can be best summarized as a movement from on-premise systems to hosted platforms that combine a full unified communications service including voice, messaging, and presence, with an integrated suite of customer management applications such as call center management, CRM, and customer support. And importantly, platforms that also have the ability to transform large volumes of unintelligible enterprise-wide communications data into immediately accessible, usable and actionable information.
Information that can drive better decision-making.

Enterprise businesses achieve productivity gains by integrating communications platform modules and automating manual tasks. Automated capture of customer communications ensures a complete record of customer interactions without excess manual overhead. The enterprise business intelligence environment provides tools and dashboards that summarize communications and operational data into KPIs, which provide executive level visibility into customer interactions, operational efficiency, and overall business health.

Summary: Bottom line cost savings will continue to be the driver for adoption of hosted unified communications in the near term. But longer term, the value of hosted unified communications will come from the types of application integration a hosted platform supports and the depth of accessibility and usability of the enterprise-wide data collected and analyzed.
VoIP Matures

“As the technology continues to mature, VoIP is now viewed more strategically because of its ability to improve business operations and worker productivity by enabling mobility, presence, unified messaging, and video conferencing.”

Ashton, Metzler & Associates Information Technology Consultants

VoIP has matured greatly since its first enterprise deployments in the mid-1990s. And because of this maturity, IP-based voice communications are enjoying an accelerated market adoption. Within most medium and large enterprise IT organizations CIOs are either deploying VoIP or making plans to do so in the very near future. By 2008, 28

The PBX (and VoIP) Matures...

...from a Tactical to a Strategic Business Decision
percent of corporate users had utilized VoIP (up from 20% of users in 2007), with the adoption rate slated to exceed 50 percent in 2010.

Economics continues to be the primary driver for VoIP adoption, including overall cost savings realized from deploying an IP-based solution as well as ongoing administrative cost reductions related to such things moves, adds, and changes. In addition, VoIP roll-outs are also being driven by a desire to connect branch offices, remote workers and on-the-road professionals.

More recently, the introduction and adoption of hosted unified communications offerings are now a primary catalyst for IP communications deployments. Increasingly, enterprise CIOs are seeing the strategic value of tightly-integrated mission-critical business applications and cost-effective cloud-based delivery systems.
Enter Unified Communications

“The PBX is no longer a standalone system, but rather just one component of a larger unified corporate communications system that includes e-mail, IM/presence, dual-mode phones, video conferencing.”

In-Stat

As with all technology investments, ROI remains the primary driver behind any change in the status quo. But increasingly, an additional accelerant – the potential to use VoIP as the jumping-off point for integration of voice and strategic IP-based data applications – is taking hold. Enterprise CIOs and CFOs alike say that communications is being viewed as a key *strategic* rather than *tactical* business decision because of the opportunity to meet a range of objectives:

1. Enhancing corporate productivity at corporate headquarters, in branch offices, for telecommuters, and for in-field sales and support professionals;

2. Gaining cross-enterprise visibility into, and actionable intelligence about, critical business applications and processes; and

3. Gaining competitive advantage by enhancing management decision-making that directly impacts customer satisfaction, retention, and growth.

The idea of bringing together formerly disparate systems and applications under a single IP-based umbrella has been evolving, and in the last few years has moved beyond the proverbial tipping point, according to industry analysts.

In its purest sense, unified communications (UC) integrates a platform suite of communications and collaboration applications onto a single set of user interfaces to
enable both internal and external communications. It is comprised of:

- **Presence** – The ability to learn end user status and availability via a set of useful characteristics:
  - Who they are.
  - What they are currently doing.
  - Whether they can be reached at the present time.
  - The best method to reach them (phone, instant messaging, email, video conference, etc.).

- **Unified messaging** – Allows users to access voice, e-mail, fax and other mixed media from a single mailbox independent of the access device.

- **Real-time and near real-time communications** – Via such applications as voice, conferencing (voice, video, Web), instant messaging, IP-PBX, paging.

- **Multimedia** – Includes mixed media types such as video, sound clips, and pictures.

- **Collaboration and interaction** – Applications that allow individuals and workgroups to communicate efficiently such as calendaring, scheduling, and workflow.
Software as a Service & Cloud Computing

“Cloud computing is one of the most transformative developments in how information technology services are created, delivered, and accessed in the last 20 years.”

_IDC_

Software as a Service

The advent of SaaS and cloud computing are trends driving enterprises off traditional on-premise hardware and software installations and onto hosted, off-premise application services. SaaS and cloud computing are sometimes spoken about separately, but are best understood as complimentary concepts.

SaaS defines an on-demand service model in which applications are delivered over the Internet on a subscription basis, replacing the need to install, manage, and maintain expensive and complex on-premise hardware and software. SaaS-based applications run on a service provider’s servers. The service provider gives subscribers application access, security, availability and performance. All that is needed by end users is an Internet connection.

For CIOs and their IT staffs, a SaaS model is an easier, faster, and more cost-effective way to consume software. With SaaS, enterprises can eliminate the high, capital intensive upfront costs and the often lengthy deployment cycles necessary before recognizing value from on-premise infrastructure. Instead, customers purchase applications on a "pay as you go" basis, with immediate access to features and functionality, and low upfront costs and near-immediate return on investment (ROI).

With a "pay-as-you-go" SaaS model, subscribers have immediate access to software features and functionality, have minimal upfront costs, and can begin realizing value immediately. And because responsibility for deployment, management and upgrades
moves from the end user to the service provider, SaaS companies must be exceptionally responsive to customers and to the overall customer experience or risk subscription cancellations.

Finally, the inherent flexibility of SaaS allows enterprise networks to evolve as their business and technology evolves without being “locked down” with enterprise applications that no longer meet requirements and needs. With SaaS, companies select the applications they need, eliminate the ones they don’t, and add new ones down the line.

**Cloud Computing**

Cloud computing offers virtually unlimited, on-demand computing resources to an enterprise. It provides the framework and economies of scale for service providers to quickly ramp their capacity upwards and downwards to meet enterprise application service requirements.

So, what exactly is cloud computing?

One way to look at it comes from a recent *BusinessWeek* article that compared cloud computing to supercomputers, the kind historically used by the military, the intelligence community, universities, and research labs to crunch highly-complex calculations. By moving network infrastructure to the “cloud supercomputer” via high-speed Internet pipes, enterprise CIOs now have access to nearly limitless processor horsepower, memory storage, and network bandwidth – all housed in secure, geographically-dispersed data centers.
Bringing it All Together: Delivering Integrated Enterprise Applications from the Cloud

Moving from legacy, premise-based communications systems to open-architected, hosted platforms is an evolutionary endeavor, say most CIOs.

The first step in this evolution allowed enterprises to utilize VoIP to eliminate the physical limitations businesses and IT departments typically endured with their previous telephony systems. Specifically, such shortcomings revolved around the capital intensive nature of on-premise communications systems and their maintenance, and the seemingly never-ending need to invest additional capital to simply expand headquarter capability on such systems or to add branch offices.

Adoption of VoIP’s economic and productivity benefits led to development and enterprise acceptance of hosted communications platforms and applications via a Software-as-a-Service (SaaS) delivery model which offered even higher ROI rates, and as mentioned previously, elimination of large upfront capital investments for on-premise hardware and software. With SaaS, applications are delivered over the Internet as a service, replacing the need to install, manage, and maintain expensive and complex on-premise systems.

Today’s hosted unified communications platforms deliver on the major trends in today’s competitive marketplace which are shaping the future of enterprise communications:

1. The move to deeply-integrated communications services previously delivered as independent and standalone systems. More and more, enterprise CIOs are expecting mission-critical business applications to be integrated into a single, feature-rich solution supported by a robust underlying and supporting network.
2. The ability to take full advantage of the SaaS and cloud computing platform frameworks and economies to quickly and cost-effectively secure integrated enterprise communications applications today, while also putting in place an open-architected development engine for independent software entrepreneurs to rapidly deliver additional creative enterprise applications.

3. Utilization of sophisticated business analytics to transform large volumes of unintelligible enterprise-wide communications data into accessible, usable, and actionable information. The liberation and integration of communications and customer management data that historically has been difficult to reach in isolated, proprietary systems. Long-term, extracting and structuring data from communications and customer management applications will allow forward-looking companies to gain competitive advantage in their respective marketplaces through increased visibility into customer interactions as well as employee productivity.
Conclusions

New technology trends are changing the economics and capabilities of customer communications and management systems. Existing enterprises with legacy systems are resource constrained and struggle to keep up with patches and updates. Most typically, individual communications and customer management applications are deployed to meet specific needs. This has the effect of creating technology islands where individual communications systems and customer management applications have no integration between them. This also puts in place manual steps for the business processes that span these systems. Finally, such systems limit management visibility to these pre-defined areas.

Next generation hosted communications platforms are designed to take advantage of enterprise technology trends toward unification of communications systems, SaaS, cloud-based computing, and the collection and structuring of communications and customer data for analytical business insight. According to an increasing number of CIOs, a truly integrated enterprise platform must include a unified communications core including voice, messaging, and presence. Building on the unified communications core should be a suite of customer management applications including Call Center Management, CRM, and Customer Support modules. Finally, an integrated analytics environment extracts and transforms data from all these component modules into a data warehouse.

Businesses using such a platform for their communications and customer management enjoy the elimination of steep upfront capital costs and productivity gains through task automation. In addition, integrated customer management applications ensure that customer interactions are automatically tracked, minimizing the need for manual data
entry. Management gains valuable insight into their employee productivity, customer interactions, and operational efficiency based on analytical reports and dashboards. Analytics facilitate visibility into the health of their business, and the nature of their customer interactions.