IBM Business Consulting Services

Realizing the business value of converged applications

White Paper

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ON DEMAND BUSINESS

Table of Contents

Converged networks: more than cost reduction

There are many compelling reasons to put voice, video and data traffic on a single Internet protocol (IP) network. According to IDC, an enterprise with a headquarters office and 7 to 10 branch offices typically saves 20 percent on its annual information technology (IT) costs by choosing convergence over a traditional network design.[1] A consolidated communications platform is also easier and more economical to sustain than multiple networks built on diverse, separate infrastructures. Security and redundancy are simplified, support and maintenance are streamlined, and IT administration costs are reduced when multiple networks are converged onto a single pipe.

One of the most well-known benefits of IP convergence is the bypassing of international toll charges through Voice over IP (VoIP). However, the real value of migrating to a converged IP network is that it opens the door to creating next-generation customer relationship management (CRM) and contact center applications capable of integrating unified messaging, streaming media and intelligent call routing across many sales and customer support channels. These next generation converged applications will be the key to leveraging the full value of converged IP networks.

Highlights

Converged networks have given users the ability to receive all forms of communications using a variety of end-user devices.

Taking convergence to the next level

Converged networks have given users the ability to receive all forms of communications using a variety of end-user devices. Laptops can become phones. Users can send instant messages from workstations to a mobile device. But many organizations, particularly those with a service component, must closely manage the efficiency and effectiveness of service delivery or risk customer dissatisfaction.

It is through converged applications that companies will truly optimize and integrate service delivery channels to help increase revenue, capture customer value and differentiate successfully. These benefits should be the driving force behind a migration to converged networks. Cost savings should be reinvested in the development of converged applications that encourage cooperation and integration between business units and enable businesses to differentiate themselves by supporting their customers with new services and functionality.

Breaking down communication barriers

Converged applications are software programs that extract information from the underlying converged network to seamlessly deliver a combination of data, voice, video and other information streams. While a converged network brings together multiple protocols and networks and allows them to flow and be managed over a single, integrated platform, the converged applications integrate dissimilar applications to remove built-in barriers that prevent seamless communication. In this way, converged applications give business leaders an opportunity to integrate historically separate sales and customer support channels (call centers, branch offices, retail venues, Websites, etc.) to:

- Enhance brand awareness and facilitate cross-selling
- Leverage realtime collaboration technologies (instant messaging, voice chat and video) to enhance customer interactions as well as to leverage product specialists
- Use self-service and remote systems to encourage the automation of low-yield tasks to help reduce costs and enable the reallocation of expertise.

Highlights

Gone are the days when every customer had a personal relationship with staff at his or her local bank.

Converged applications add business value

A converged application can inject new functionality into the enterprise and reshape the way we think of interacting and communicating with our colleagues and clients. In sectors like banking and insurance, for example, converged applications can help forge a new model of doing business that blends the best aspects of tradition and technology.

Banking on the future: converged applications in a financial services context

Gone are the days when every customer had a personal relationship with the staff at his or her local bank. Market pressures mean that banks must be big enough to handle the most demanding client's requests, but nimble enough to serve a diverse base of smaller clientele profitably. Converged applications can differentiate a bank from its competitors, delivering personalized service via the channel a client prefers (telephone, in person or on the Internet), while ensuring that internal processes are seamless and efficient.

For example, many customers begin their search for a bank service online. A potential customer with a question may opt to phone a bank's toll-free line to inquire about the details of a particular product or service. In most cases, this critical sales opportunity will be fielded by a call center employee. But

Highlights

It's not just that the sales opportunity is closely monitored: the real value is allowing customer to proceed through the transaction at their own pace.

a converged application could provide a "click to talk" icon on the product information Web page that routes the customer's voice, video or chat session to an employee with expertise on the specific product the customer is inquiring about. It could show the employee what the potential customer is looking at on his or her screen, and also provide a summary of any open accounts or previous interactions with the bank. This would give an advisor a chance to join the call session immediately or schedule an alternative meeting in person or via voice or video online.

It's not just that the sales opportunity is closely monitored: the real value is in allowing customers to proceed through the transaction at their own pace, at whatever time is convenient for them. They feel connected to a human advisor – just like at a small local bank – thereby personalizing their interactions, increasing their confidence and potentially improving their loyalty to the bank. Meanwhile, branch and area managers can locate and communicate with employees remotely using presence detection, multimodal wireless capabilities and IP audio/video conferencing—capabilities enabled by a converged network and applications—so they can act quickly and in concert in response to changes in the business and the market. Finally, the bank benefits by optimizing key product specialists across channels and bank branches. Overall, with converged applications, banks can return to their roots – offering person-to-person service – and still fully leverage the efficiency and cost savings of emerging technology.

Highlights

The challenge is to retain clients and grow key accounts while encouraging the use of more-efficient and less-expensive channels.

Quality of service: converged applications in an insurance context

Like many industries, the insurance sector is challenged by increasing commoditization. Carriers are struggling to find a balance between traditional, personalized channels of distribution and customer acquisition and scalable, low-cost methods. The challenge is to retain clients and grow key accounts while encouraging the use of more-efficient and less-expensive channels. Critical to these twin goals are the integration of processes, client history, claims data and policy data so that a client can receive the right service at the right time.

Converged applications can help insurance carriers meet these challenges. By adopting a single converged network platform to align sales channels and by unifying communications with converged applications, a carrier can exploit its knowledge of a client's history, bundle relevant policy and claims data, and enhance customer service. Specifically, converged applications are designed to enable insurance carriers to:

- Match expert skills to key clients dynamically across virtual and physical locations, so valuable resources aren't overloaded with mundane tasks.
- Migrate customers to low-cost channels for simple transactions, without forcing clients to repeat their goal or history with each hand-off.
- Streamline insurance distribution processes such as marketing and sales as well as the core processes of underwriting, policy administration and claims.
- Advance employee interactions with productivity tools and enhancements such as instant messaging, video conferencing and screen-sharing tools to better serve and sell to customers.

Highlights

This means realtime communications data, such as voice, video and instant messaging, can be distributed as easily as Web addresses.

As an insurance carrier progresses toward an integrated multichannel environment, supporting the environment with the appropriate network infrastructure and communication capabilities not only reduces duplicative networking costs, but also enables the expansion of capabilities and services. Many firms have focused on the cost benefits that converged voice and data networks can offer without embracing the technology's potential to transform business processes, improve functionality, maintain differentiation, increase customer retention and improve productivity.

Leading innovation in open-standards-based IP communications

Leading networking systems providers and PBX vendors (private branch exchange) have recognized a shift in the industry and are investing in the development of native IP communications (IPC) systems. An IPC system enables the transport and integration of applications, including traditional data, voice, video and fax, over IP-based networks on a single, converged business infrastructure. IPC provides the foundation for all media types, including video, to be integrated into a computing environment. Although individual provider strategies vary – from enhancing a traditional PBX operating system that leverages a rich-user-feature-set, to providing a completely new system designed from the ground up based on IPC – the move toward more open-standards-based systems has gained tremendous momentum.

IBM believes that the evolution of SIP (Session Initiation Protocol), a signaling protocol for Internet telephony, including presence, notification and instant messaging, will enable the integration of disparate types of data at the software application level. This means realtime communications data, such as voice,

Highlights

The fundamental value of SIP is its ease of integration with enterprise business processes.

video and instant messaging, can be distributed as easily as Web addresses. The flexibility of SIP allows such data to be easily passed to other parties to enable collaboration and expert input—worldwide, around-the-clock.

Although SIP is gaining popularity within the communications industry as a telephony protocol, by nature it is a general-purpose session-control protocol that can be applied to voice, video, instant messaging (IM) conferencing and realtime collaboration, among many other horizontal applications. Several standards bodies such as, the 3G Partnership Project (3GPP), CableLabs' Packet Cable Initiative, International Multimedia Telecommunications Consortium (IMTC), European Telecommunications Standards Institute (ETSI), the International Packet Communications Consortium (IPCC) and the Internet Engineering Task Force (IETF) are considering SIP to enable service integration across multiple networks and media types. SIP is to converged communications as HTTP is to information transactions on the Web. Like HTTP, SIP adopts the same text-based message format and carries the same type of MIME[2]-based content. SIP and HTTP also use similar URIs (uniform resource identifiers) to identify end points, and use the same DNS-based routing techniques.

The fundamental value of SIP is its ease of integration with enterprise business processes. SIP provides value by linking the next-generation converged communication infrastructure with the existing enterprise IT infrastructure. This can help support migration, enhance protection, potentially increase return on investment, lower total cost of ownership and help expand productivity for end users. SIP does not require a lot of memory or processing power and can be implemented in even relatively simple end-point devices from multiple vendors.

Highlights

Converged VoIP and ongoing SIP integration are the foundation for converged applications that drive real business-process enhancement.

Implementing SIP in the enterprise: IBM example

The potential converged applications have to improve the future is exciting. Even more compelling, however, is the real-world success we are seeing today within IBM. IBM's converged global network is expected to reduce the company's voice communications costs by 25 percent. Today, close to 100,000 IBM employees (about 30 percent of the IBM workforce) use IP transport for voice calls, and 40,000 IP telephones are in use. With SIP-capable products, IBM is paving the way for converged applications to access voice data just like any other traditional data object in an application.

Converged VoIP and ongoing SIP integration are the foundation for converged applications that drive real business-process enhancement. With the virtual elimination of geographic boundaries, standard services can be delivered consistently across the workforce. For example, contact center employees can reside almost anywhere around the world. Voice calls can follow employees regardless of their work location. And new integrated applications can provide modes of collaboration not possible before. IBM examples include:

- Presence – Presence applications allow individuals to provide realtime availability information regardless of their work location. These applications seamlessly integrate voice, instant messaging and e-mail communications, so people can efficiently utilize the most appropriate tools on demand. Coupled with policy engines (such as a privacy tool), presence applications can give IBM staff complete control over their communications, including the ability to set conditional rules for different types of communications.
- Conferencing – Remote conferencing offers a rapid, tangible cost reduction to many large organizations, including IBM. Fifty percent of IBM's internal telephony minutes are associated with conference calls involving a variety of conferencing service providers. IBM estimates that implementing an IBM enterprise IP conferencing application solution can reduce conference charges by an average of 50 percent.

Highlights

IBM's experience in architecting and implementing converged networks and converged applications internally helps us drive innovation services that can benefit our clients.

- Browser integration – Applications such as internal directories that are provided through tools like Web browsers and Lotus® Notes systems can be enhanced to provide "click to dial" capabilities for establishing voice communications. The use of standard programming interfaces allows for similar access to both voice services and e-mail services.
- Unified messaging – Unified messaging gives users the freedom to access and manage all their messaging tools, including voice, e-mail and fax, using either a touch-tone telephone or network-connected workstation. With IBM's large population of mobile employees, these messaging systems promise significant productivity benefits and improved responsiveness to clients.
- Enhanced remote and mobile employee support – Delivering consistent services and applications to IBM's workforce is as important as delivering them to our clients. IBM has already implemented a number of services, including hoteling, virtual private network (VPN) support over remote links, and voice service with call forwarding—to enable this. In Europe, a pilot program is currently evaluating the use of IP softphones, which allow a fully portable, consistent presence with a single Direct Inward Dialing (DID) number and tie-line number at a low cost.
- Integrated system management – As network technologies are converging, management processes must also converge. Where resources once were divided between voice and data systems, now there are many shared elements with common dependencies. IBM has developed systems management policies, tools and processes that leverage IBM's experience and expertise, including tools in fault management, configuration management, account management, performance management and security management.

IBM's experience in architecting and implementing converged networks and converged applications internally positions us to drive innovation of new and improved services and solutions that can benefit our clients.

Highlights

IBM is well-positioned to help you plan and execute an integrated multichannel sales and service environment.

The time is right for application convergence

Some firms are tasked with renewing their computing infrastructures and others are already in the process of converging their networks. They may be

- Looking to refresh the network
- Optimizing distribution channels
- Considering or implementing a merger
- Seeking to simplify their networks to reduce costs
- Undertaking an Internet or contact center infrastructure renewal program
- Interested in adding new services to an already converged network.

These situations provide a perfect opportunity to evaluate application portfolios and the way they support multichannel strategies. Networks are no longer solely a means of data transport, but also a platform from which to enhance capabilities and provide added value to customers. Likewise, converged applications will be a critical element of business success, and there are concrete benefits to be achieved now. This vision is leading IBM to create the future of converged applications and to bring that future to its clients.

IBM: well-positioned to lead business transformation

IBM is well-positioned to help you plan and execute an integrated multichannel sales and service environment.

- IBM has significant working relationships with more than 90 percent of the world's top financial services companies.
- IBM has strong partner relationships with device manufacturers, wireless carriers and key software companies. IBM has built strategic alliances with two top IP telephony vendors, Cisco Systems and Avaya.

Highlights

IBM experts can undertake an assessment of your multichannel operations and help determine the most effective use of Web-enabled technologies to support your contact center business needs.

- IBM has relationships with many customer relationship management (CRM) and contact center application vendors, whose products can ride on top of, or take advantage of, underlying converged IP networks.
- IBM brings to bear world-class middleware (WebSphere®) to integrate channels to legacy; great collaboration software (Lotus); and wirelessly enabled laptops (ThinkPad®).
- IBM solutions are based on open standards, including Internet-based protocols, which allow the easy addition of new applications and adoption of future technology developments.
- Finally, as a leader in innovation, IBM invested more than US$1 billion in wireless research and development in the last three years.

The experiences, processes and tools utilized by IBM to architect and deploy converged IP networks are available worldwide to our IBM Global Services experts.

Getting started

IBM Business Consulting Services experts can undertake an assessment of your multichannel operations and help determine the most effective use of Web-enabled technologies to support your contact center business needs. We can work with you to:

- Analyze the current environment and determine which transactions it is appropriate and desirable to migrate from voice to other channels.
- Understand the desired balancing required between assisted, unassisted and wholly voice interactions for different clients (or segments of clients).
- Determine the desired end-state architecture and the changes required in technology, process, training and organization.

- Develop a migration roadmap and a value proposition justifying the case for change.
- Leverage both IBM and third-party technology infrastructure to automate contact center activities.

IBM Contact Center Optimization solutions encompass:

- Interactive voice response (IVR) – Provides self-service options via the voice channel and immediate self-service options such as announcement of opening times, presenting of account balances, requesting new check books and more
- Computer telephony integration (CTI) – Connects various telephony components with host computers and applications servers
- Internet Protocol Contact Center (IPCC) – Enables the merging of data, voice and video communications over a common network infrastructure
- Voice portals – Allows Internet function to be accessed in a self-service manner (voice channel)
- Voice recognition – Uses the latest IBM speech recognition technology for today's multichannel, around-the-clock environment.

For more information

For more information about IBM Business Consulting Services or IP convergence and the power of converged applications, contact your IBM sales representative, or visit:

ibm.com/bcs

For further reading please see:

Enhanced Enterprise Communication: Transforming the bank branch into a proactive relationship center, white paper, G510-3859-00.

Transforming the insurance carrier into an integrated, multichannel sales and service organization utilizing converged communication technologies, white paper, G510-6011-00.

References

[1] Bingham, Brian J, Morris Edwards and Paul Strauss. *Validating the Business Benefits of Converged*. Communications, IDC: June 2003.

[2] Multipurpose Internet Mail Extension (MIME), a standard system for identifying the type of data contained in a file based on its extension. MIME is an Internet protocol that allows you to send binary files across the Internet as attachments to e-mail messages. This includes graphics, photos, sound and video files, and formatted text documents.

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