VoIP Deployment Options
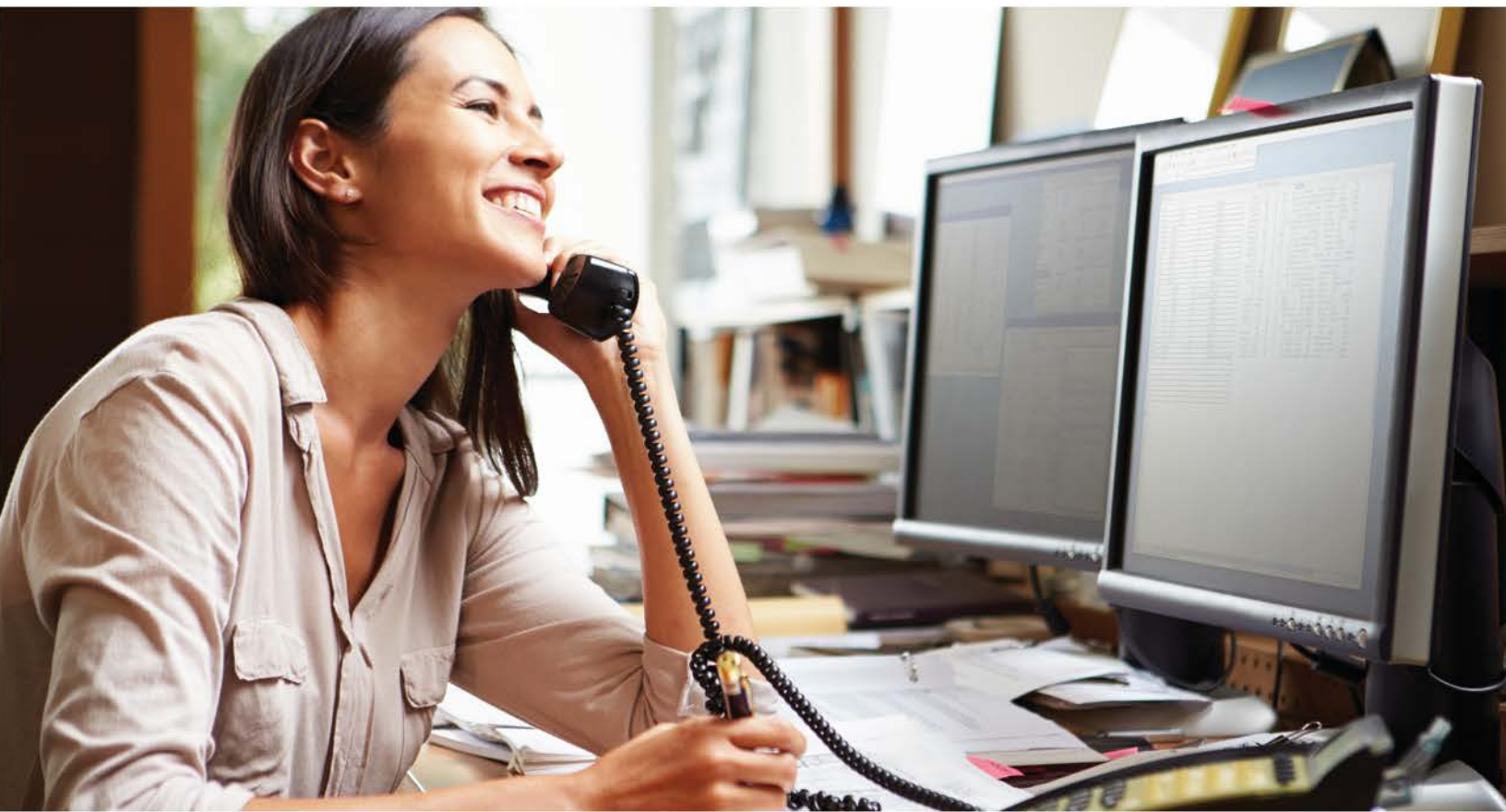
Whether cloud-based or on premises, IP-based voice platforms can deliver a wide range of significant business benefits.

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EXECUTIVE SUMMARY

IP communications technologies aren't just mature — they're mainstream. A recent survey by Forrester Consulting found that more than 60 percent of U.S. companies are already using Voice over IP (VoIP) and another 30 percent are planning to implement it within the next year or two. IP voice delivers so many cost, efficiency and reliability benefits that it has become an easy choice for organizations of all sizes and in all industries.

Deciding the best way to deploy an IP communications platform is a somewhat more complicated process, however.

In general, there are two distinct options for VoIP deployment — on-premises solutions in which the customer owns, administers and maintains all the required hardware and software, and cloud-based solutions in which the ownership and management burden is shifted to a third-party provider. Because each option brings different business benefits, it is important that organizations understand their differences.

This whitepaper outlines the business case for moving to IP-based communications, the factors to consider when selecting a platform and the relative strengths of each deployment option. Armed with this information, organizations can determine how to best implement an IP communications solution to meet their particular requirements.

WHY VOIP?

At the most basic level, IP communications platforms offer substantial cost savings and operational efficiencies compared to traditional phone systems. Various industry studies show that IP communications can reduce an organization's overall costs by anywhere from 3 percent to 40 percent.

Deploying IP communications brings immediate savings by virtue of the fact that organizations only need to support, manage and maintain one network connection. This brings significant cuts in hardware costs, cabling, real estate, and power and cooling costs.

VoIP can allow organizations to cut long-distance charges by uniting branch locations and teleworkers over WAN and VPN links, and reduce toll-free number costs by effectively routing inbound calls. Additionally, combining VoIP with cellular technology allows businesses to leverage their own internal Wi-Fi networks when paired with dual-mode cellular technology. This reduces charges for cellular calls.

The cost of moves, adds and changes (MACs) is dramatically reduced. Organizations with a traditional PBX can spend more than $100 for every move, add or change, but those costs can essentially be eliminated in a VoIP environment, where changes are easily and quickly handled using a browser-based software portal.

Browser-based management also delivers immense scalability advantages at little additional cost. Administrators can generally add handsets with no concern for hardware expansion, port availability or voicemail capability. Voice service can even be extended to remote sites over a WAN, and easily scaled up or down to meet changing requirements.

 More significantly, VoIP has become the cornerstone technology for numerous business-enabling applications that improve productivity, collaboration, customer service and disaster preparedness. The ability to link voice calls with information from email, contact management, customer relationship management (CRM) and other applications has revolutionized business communications.

VoIP also boosts worker productivity significantly by enabling employees to stay connected to the company communications network anytime, anywhere. Missed calls and connections are no longer a problem. Workers can collaborate easily, even across remote locations and while traveling.

Having remote access to VoIP features can greatly enhance network-based disaster recovery. The beauty of VoIP in a disaster is that the decentralized design of the Internet was specifically meant to accommodate routing failures. The user can access a web portal to redirect calls or, in some cases, anyone with a VoIP phone and a broadband connection can establish communications when wired telephone lines are out of commission.

These benefits explain why the technology has experienced an astounding 179,035.8 percent growth rate over the past decade, according to the research firm IBISWorld, which calls VoIP the best-performing technology of the 21st century.

ON-PREMISES VOIP

With an on-premises VoIP system, the organization purchases, deploys, operates and maintains all its own equipment, including an IP-PBX, servers, routers, cables and other devices. The IP-PBX is the switching system that routes all voice, data and video transmissions internally and transmits all external calls to the telecom provider's central office.

The organization is responsible for the cost of the equipment and initial setup as well as long-term maintenance and upgrades. However, an on-premises solution provides greater control over the telephony environment, including the ability to manage features, expansion and security. Organizations with well-defined business processes have greater flexibility to develop custom solutions to meet specific requirements.

While on-premises VoIP systems are easier to manage and maintain than traditional PBXs, they do require administration. If the organization has the necessary in-house expertise, an on-premises solution may also deliver lower monthly recurring costs for management and maintenance services. However, organizations lacking that expertise could wind up with a poorly performing system that does not meet their needs.

HOSTED VOIP

Hosted VoIP solutions leverage cloud computing principles to deliver business-class telephony features without the upfront costs and management expertise required of purchasing an IP-PBX. A service provider houses most of the equipment and handles all the resources the phone system requires to operate. Service is typically delivered on a simple "per-seat, per-month" cost basis, and upfront costs are a fraction of those for on-premises IP-PBX equipment.

Beyond reducing or eliminating much of the acquisition costs related to equipment purchase, configuration, deployment and maintenance, hosted VoIP delivers additional TCO advantages through ease of administration. User-friendly interfaces and web portals make it easy for customers to maintain, update and expand the system.

Since the equipment is owned by a service provider, organizations are relieved of the risks of equipment obsolescence. New features and software updates are typically "pushed" to the customer, ensuring access to the latest functionality and giving even small to midsize businesses (SMBs) enterprise-class capabilities.

With the service provider monitoring the system around the clock, a hosted solution also provides a high degree of confidence that performance issues will be resolved rapidly. Most providers also offer embedded continuity plans that provide redundancy and disaster recovery for customer calls and data. Disasters such as fires, weather events or T1 outages that might take down an on-premises solution often will not affect a cloud-based communications solution.

A recent trend making hosted solutions even more attractive is the integration of mobile VoIP clients. Users can leverage a single mobile device for both business and personal communications, and can access all their desk-phone tools such as four-digit dialing and call forwarding. Mobile VoIP clients also automatically and securely select the best available network — Wi-Fi or cellular — without any action by the user.

KEY CONSIDERATIONS

Traditional phone systems offered a limited set of features and few options, making the selection process relatively straightforward. IP communications systems, in contrast, are more like applications on the network. That makes them more flexible, scalable and feature-rich than their legacy counterparts, but also complicates the decision-making process.

Organizations need to consider the features and functionality they will need today and five years from now. In order to remain competitive, most organizations need to look beyond basic functionality such as call hold, call transfer, redial and speed dial and evaluate the potential benefits of unified communications features:

- **Audio and video conferencing**
- **Presence**
- **Instant messaging**
- **Softphone applications**
- **Mobile device support**

It's also important to look at how well the system meets key business requirements.

- **Capacity:** How many users / stations does the system need to support? Do you expect that number to grow?
- **Reliability:** How much downtime should you expect?
- **Access:** Can access to the system be extended to remote and mobile users?
- **Integration:** Can the system integrate with key business applications?
- **Security:** Is the system secure?
- **Business Continuity:** Is the system built upon a resilient platform with failover capabilities? In the event of a power interruption or a cut circuit, will the system reroute incoming calls?
- **Upgrades:** How frequently does the vendor introduce new functionality? Are upgrades difficult to implement?

Finally, organizations need to consider the total cost and business impact of the system, from the initial implementation to long-term maintenance and support.

- **Cost Structure:** Does the solution require an upfront capital investment or is it billed as a monthly fee? Do costs increase if your business grows?

- **Licensing:** Are there licensing costs associated with the system or handsets?

- **Infrastructure Upgrades:** Will LAN or WAN upgrades be required to support the system? What are the costs?

- **Implementation:** What are the implementation costs? How much in-house IT involvement is required?

- **Training:** Are administrator and end-user training included in the implementation fees?

- **Business Disruption:** To what extent will the implementation disrupt regular business processes? Will the cutover to the new system be smooth?

- **Administration:** How difficult is the system to administer? Can non-technical personnel be trained to handle routine moves, adds and changes?

- **Maintenance and Support:** Does the vendor perform maintenance? Are there additional fees for that? What about support?
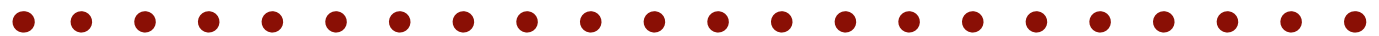
Study: Cloud Confidence Rising

Increasing customer confidence in the reliability, security and overall quality of hosted IP telephony and cloud solutions will drive continued market growth over the next several years, according to new analysis from Frost & Sullivan. The firm projects revenues will climb from $1.59 billion in 2013 to $9.53 billion by 2020.

The expansion of the remote and mobile workforce, the maturity of VoIP technologies, the move to cloud architectures for more ubiquitous and cost-effective access to communications and collaboration capabilities, and growing demand for personalization of applications and services, are key trends encouraging the shift to hosted IP voice solutions, the company reports.

However, the report says growth is somewhat limited due to the large installed base of premises-based solutions in North America, as well as customer concerns over cloud security. In some instances, the total cost of ownership of hosted solutions could be higher than that of premises-based alternatives, dissuading potential customers from migrating to third-party solutions.

CONCLUSION

Whether connecting with customers and colleagues, improving access to information, or enhancing productivity through collaboration, communication is the engine that drives business. As IP communications platforms continue to mature, organizations have come to realize the benefits exceed mere cost reductions. With the ability to migrate all voice, video and data applications and services to a single, unified network backbone, organizations can improve communication and collaboration, boost performance, ease staffing burdens, increase productivity, streamline customer service and improve business flexibility.

The benefits of VoIP are unquestionable. That doesn't mean it's easy. As with any significant technology implementation, organizations must do the proper upfront work to measure expected costs against projected benefits in order to justify the investment and set realistic expectations. VoIP costs can vary significantly depending upon the flavor of voice solution desired.

For organizations with sufficient manpower and expertise, on-premises VoIP may be the best solution. It offers better control over the communication environment and greater capacity for integrating with other key business applications. However, hosted VoIP is a compelling choice for organizations and branch offices without in-house expertise. The ability to future-proof communications through automatic upgrades offers incredibly attractive investment protection.

In fact, industry analysts say that as legacy on-premises systems reach the end of their useful lives, even enterprise organizations will consider hosted solutions. Cloud-based VoIP service offerings are becoming more competitive in terms of feature functionality, flexibility and price, and service providers are investing in technologies that allow them to reliably and securely deliver advanced features such as mobility, conferencing and contact centers. Those factors make it likely there will be a continued migration to next-generation IP communications solutions and services as organizations continue to gain confidence in the maturity and capabilities of the technology coupled with a better understanding of the benefits of the cloud.

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