Optimize the Microsoft Lync 2013 user experience and improve return on investment

Organizations are increasingly turning to Microsoft® Lync to drive down costs and drive up worker productivity through an integrated solution for unified communications and collaboration. The benefits of Lync® can be compelling: One study shows that enterprise companies can save millions of dollars over a three-year period while improving productivity, reliability, mobility and bring-your-own device (BYOD) initiatives using Lync.

Microsoft Lync deployments are gathering momentum as organizations derive huge cost savings and productivity improvements through using an integrated platform for voice, video, Web conferencing, instant messaging, collaboration, presence and private branch exchange (PBX) replacement.

More than 40% of U.S. enterprises with 500 or more employees were either conducting or had completed Lync trials as of early 2013, and 76% indicated that their businesses have or will include enterprise voice in their trials.¹ With annual Lync sales surpassing the $1 billion mark worldwide,² only 6% of enterprise companies surveyed said they had no plans to trial Lync,³ while 25% reported that Microsoft is their preferred vendor for IP-PBXs.⁴

Among the drivers for robust Lync implementations:

- **Enhancements in Lync 2013**, including new features and functionality for mobility and collaboration and native integration with other Microsoft applications such as SharePoint® and Exchange.

- **Explosion of mobile users relying on Wi-Fi** to stay connected with their colleagues and customers. These workers can use Lync on a wide range of mobile devices, such as notebooks, phones and tablets, while on the move.

- **Growing evidence of substantial total-cost-of-ownership savings and high return on investment (ROI):** A Total Economic

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¹Impact of Microsoft Lync on the Enterprise Voice Market—2013,” InfoTrack, July 2013
³Ibid, footnote No. 1
⁴Ibid, footnote No. 2
Achieving these benefits can be challenging for both IT professionals and line-of-business managers who don’t have the resources in place to explore and leverage Lync capabilities, particularly in uncharted waters such as enterprise voice. To maximize the vast potential of Lync, organizations need the expertise, technology and tools to deliver a high-quality user experience and to enable business processes with Lync.

Impact Study by Forrester Research Inc. indicates that an enterprise customer deploying 5,000 Lync seats could save approximately $2.36 million over a three-year period using Lync. Savings in this model would come from:

- Eliminating $1.3 million in costs associated with legacy PBX and Web conferencing solutions.
- Reducing telephony costs, such as mobile roaming and long-distance and conference calling charges by $1.7 million.
- Saving $3.9 million through optimizing IT staffing.⁵

The $2.36 million figure was based on a composite company created through interviews with enterprise customers, survey responses and financial analysis. Importantly, the net savings of $2.36 million would be achieved even with substantial investments in network hardware, Internet bandwidth and professional services. Perhaps of most interest to line-of-business (LOB) managers were the “soft” benefits respondents described in the Forrester survey, such as:

- **Improved productivity**: Survey and interview results revealed that workers benefit by having faster and better access to information and individuals.

- **Enhanced mobility**: Mobile workers and individuals working from their homes are better integrated with the company. This saves money, increases flexibility and supports BYOD initiatives.

- **Better reliability**: With an integrated solution in place for unified communications, there are fewer places where things can go wrong.

Similarly, a Dell-sponsored survey by Dimensional Research shows that the primary drivers for deploying Lync are improved internal communication, increased employee collaboration and reduced costs, including the costs of travel and telecommunications. Almost 40% of respondents also view Lync as a means of minimizing email load. (See chart.)⁶

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⁵The Total Economic Impact Of Microsoft Lync 2013,” Forrester Research, February 2014
Why partner with Dell for Lync?

Dell has extensive experience in helping organizations deploy or migrate mission-critical applications such as Lync to the newest version in order to improve productivity and enable greater IT efficiency. Organizations benefit from partnering with Dell in several ways:

- Satisfy the unique needs of IT, end users and business managers with repeatable consulting practices.
- Simplify projects with a single Microsoft-certified partner for a complete solution—infrastructure, end-user devices and services.
- Reduce planning complexity with best practices guidance.
- Trust Lync-qualified campus wireless solutions and end-user devices to deliver a high-quality experience.
- Monitor performance and create granular usage reports for management review and chargeback.

Addressing the opportunities and challenges of deploying UC&C

Given the benefits, it’s not surprising that full deployments of Lync are moving out of pilot stages to production in traditional and branch offices, virtual offices and call centers around the globe. New Lync deployments are replacing separate communications applications and services, including the PBXs that organizations have typically used for functions such as call answering, routing and management. These familiar old PBX systems are rigid and costly, relying on the provider to move and add extensions because each phone is associated with a specific user and the application interface isn’t available to IT.

Despite the benefits, IT organizations often face LOB and user concerns about moving off a PBX, and have skill and resource challenges of their own. Working with a Microsoft-certified partner that also provides flexible and comprehensive end-to-end solutions for Lync offloads much of the IT burden of working through stakeholder needs, design and deployment alternatives and interoperability concerns. Once Lync is deployed, a single-source provider such as Dell can also manage and
support the solution and help LOB customers increase Lync ROI by integrating communications into business processes.

As Lync adoption spreads across an organization, its potential to have a significant positive impact on results will expand exponentially. The more LOBs and end users incorporate Lync into everyday activities, the more the organization benefits from increased collaboration, reduced latency and lower costs.

Getting to this state, however, requires addressing challenges that impact users, LOB managers and IT. Following are some of those challenges and the solutions, by stakeholder, that help organizations get to maximum Lync ROI:

- **Users**
  - **Challenge:** Accepting Lync as a replacement for familiar but separate communications services and devices, in the office or on the go. Acceptance typically requires training, a consistently high quality of experience and the ability to use Lync on the device of choice, and often in a wireless campus environment. Delivering high quality of experience requires a modern network infrastructure to handle voice and video; in congested campus settings, quality of experience over Wi-Fi requires both device awareness and application-based policies across devices and environments.
  - **Solution:** Deliver user training and aids to help users get started more quickly, and enable Lync on users’ notebooks, tablets and phones. Optimize application delivery by assessing and upgrading outdated or insufficient infrastructure to provide robust, highly available desktop and mobile solutions. For Lync, outdated networks often lack sufficient bandwidth and traffic prioritization and orchestration capabilities to deliver the service levels users need. Deploy a network that provides Lync application awareness and quality of service policies to deliver a rich experience for users. Also, enable Lync call forwarding to these mobile devices so users can receive their calls even if not at their desks.

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1. Dell is recognized as a leading Microsoft partner, with 21 Gold competency certifications. Messaging, Communications, Customer Relationship Management, Identity and Access, Devices and Deployment, and Server Platform are among the many Gold competency certifications held by Dell.

• **Line-of-business managers**
  
  **Challenge:** Ensuring appropriate levels of security for devices and traffic and incorporating Lync into other business applications and processes to drive greater ROI.

  **Solution:** In addition to relying on built-in Lync encryption for secure data transmission, IT can remotely manage and secure company- and employee-owned devices with third-party mobile management solutions. Greater ROI is the result of both user adoption, which can be driven through use of management reports, and communications-enabling business processes across LOBs. Many organizations turn to third-party services for this integration.

• **IT organization:**

  **Challenge:** Beyond typical application infrastructure considerations, IT must ensure adequate bandwidth and/or Quality of Service (QoS) for a consistent voice and video experience. IT will also need to drive centralized information policy decisions; ensure secure on-site and mobile access from employee- and customer-owned devices, and enable integration with other existing or new business applications. Specialized skills are also required to address important decisions about the PBX and telephony, handsets and legacy and new room systems.

  **Solution:** IT can supplement on-board skills with an experienced third-party integrator, while also planning for agility and elastic scalability by conducting a thorough analysis of infrastructure and environment needs. In deploying Lync, the IT department will want to work with a vendor that can help to ensure success through on-premises, hybrid cloud and cloud solutions.

In the following sections, we look at how Dell enables organizations to improve quality of experience, reduce costs, strengthen security, improve adoption rates and enhance communications and collaboration.
Optimizing application delivery by upgrading the network infrastructure

The biggest challenge in delivering consistent quality in real-time communications is preventing network congestion, particularly for voice and video. Already strained by virtualization driving more east-west network traffic in the data center, many networks are simply not capable of handling the traffic volume and performance demands of phone calls, teleconferencing, virtual training and other types of communications.

For real-time unified communications—such as Lync voice, audio and high-definition (HD) video conferencing—adding raw bandwidth alone doesn’t ensure a consistent, high-quality user experience. Delivering a high quality of experience means having both sufficient bandwidth and traffic management to avoid the following real-time communications problems:

- **Network latency**, which is the time it takes one packet to travel from end to end in one direction. Each processing element of the network—including switches, routers, firewalls and the distance traveled over the network—adds to packet delay. Delays in excess of 250 milliseconds (msec) can result in two people “talking over” each other.
A 150-msec one-way delay is the recommended limit for maintaining excellent voice quality.

- **Jitter** is the variation in network latency between different packets, which can create audible voice quality problems at values of greater than 20 msec. The symptoms of excessive jitter are similar to those of high latency.

- **Packet loss** is the proportion of packets that do not arrive at the destination. Packet loss of 1% or less typically provides excellent voice quality, while a loss of 3% or less usually yields business communications quality that is superior to cell phone quality.

The mission-critical nature of telephony and enterprise conferencing leads many organizations to request a networking assessment from Dell as a starting point to prepare for unified communications and other changes that can affect delivery quality. Dell also provides a wide range of network solutions to address the particular challenges of bandwidth, congestion, latency, jitter and packet loss, including:

- **High-performance 10/40 Gigabit Ethernet (GbE) networking solutions** for the data center, optimized for east-west traffic. Dell Networking solutions free IT from legacy architectures and proprietary protocols while helping improve performance for virtualized environments and latency-sensitive applications such as Lync. Dell delivers efficient, economical and scalable data center fabrics with a complete portfolio of dense fixed-form-factor switches and multiple interoperable paths to software-defined networking (SDN).

- **Fast and efficient 1/10GbE access for campus and office.** With increased bandwidth and OpenFlow support, Dell offers users robust and easily managed networks serving up rich media and wired or wireless unified communications. Dell’s future-ready platforms are well positioned to take advantage of advances in SDN, while ensuring campus and office network longevity.

- **Lync-qualified wireless networking access points and controllers** address media quality problems caused by congestion that can occur on mobile devices due to Wi-Fi solutions that aren’t designed to handle Lync-encrypted traffic. Dell W-Series Wireless controllers and access points offer secure and reliable wireless access and management, automatically identifying and prioritizing encrypted Lync traffic to deliver high voice and video quality even in environments with high radio-frequency interference and client densities. These solutions enforce policies and security from a central location, encrypt data from the access point to the data center and provide troubleshooting metrics should problems occur.
Empowering LOB managers and users for greater ROI

For ongoing management, Dell offers a reporting tool called MessageStats for Lync, which helps administrators track usage and adoption across individuals, departments and the entire organization, as well as forecast appropriate infrastructure investments, identify potential performance problems and build chargeback reports. A comprehensive MessageStats tool for email and unified communications provides reporting and analysis across on-premises Lync and Exchange environments, and Office 365.

Application administrators and IT managers can automatically monitor for performance concerns with Spotlight on Messaging, which provides a single-console view for real-time diagnostics and problem resolution for Lync Server and Exchange Server. A diagnostic console helps to simplify troubleshooting, and a management console enables IT to monitor specific areas of concern after fixes are implemented to verify the effects of changes.

In addition to tools for reporting, usage tracking and maintaining service-level agreements for Lync and Exchange, Dell offers a wide portfolio of offerings to support and enable Lync deployments, including:

- **Security**: Mobile and identity management solutions for secure, reliable, single-sign-on access from anywhere on optimal devices.
- **Device diversity**: A rich portfolio of client devices for Lync, including Lync-optimized laptops, notebooks and desktop monitors,\(^8\) as well as virtualized desktop infrastructure. Lync room systems are also available through Dell and Dell partners.
- **Customization**: Custom integration with business-critical applications to complement native integration with Office, Exchange and SharePoint.
- **Support services**: Specialized Dell ProSupport for Lync\(^9\) includes collaborative assistance with third-party hardware and software issues; support for configuration, how-to and best practices recommendations on usage; remote assistance with deployment of patches and updates; and re-installation support (returning product to its original state).
- **Education services**: Lync training and use aids for end users to enable faster adoption, as well as IT training.

Enabling service-centric IT

On-premises, hybrid and cloud models provide IT with a wide range of choices in how to support today’s business needs while being prepared for new demands, including integrating communications into business processes.

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\(^{8}\) PCs Optimized for Lync, Lync.com

\(^{9}\) Available in U.S. and Canada
Environment and infrastructure decisions can be complex, particularly for IT departments considering enterprise voice and Lync virtualization. With more than 350,000 enterprise voice users deployed, Dell IT Consulting Services has global experience and repeatable processes to help navigate through questions and decisions involving both LOB and IT stakeholders.

- **On-premises solutions:** In addition to advanced networking solutions such as 10/40 GbE Ethernet and 802.11ac Wi-Fi solutions, Dell provides a wide selection of energy-efficient server and storage solutions for Lync deployment. Infrastructure management solutions range from discrete element management and networking policy management to comprehensive infrastructure monitoring, lifecycle automation and integration with partner products—designed to simplify deployment and reduce the administrative burden on IT.

- **Cloud solutions:** Dell provides Microsoft Office 365, including Lync, SharePoint and Exchange, in a range of value-added options.

**Conclusion**

The fact that Microsoft Lync is a billion-dollar-a-year product on its own is a testament to the power of unified communications and the fundamental shift that communications technology has made toward an IP-based environment. This paradigm shift will become more entrenched as enterprises continue to see the cost and productivity benefits of unified communications. For IT organizations, the challenge is no longer whether to support unified communications through solutions such as Lync, but how to do so most effectively and efficiently.

Given the variables and complexity that go into a successful Lync deployment, we recommend choosing a single provider that offers the full range of products and services to address the comprehensive needs of an enterprise. Dell solutions run the gamut from data center to network to endpoint devices on the desktops and in the hands of users around the world, as well as to specific tools that improve security and monitor and manage Lync across the enterprise.

Are you ready to optimize the user experience with Lync and to deploy Lync to improve ROI across your business? For more information about Dell solutions for Microsoft Lync, visit [Dell.com/UCC](http://Dell.com/UCC) or contact your Dell representative.