

Lifecycle Service and Support for IP Communications

By Wim Elfrink, Senior Vice President, World Wide Customer Advocacy Organization

An increasing number of companies are migrating from disparate networks to a single IP infrastructure that supports all data, voice, and video applications, including voice-over-IP (VoIP) business voice applications such as IP private branch exchange (PBX), real-time conferencing, unified voice mail, and phone-based text-to-speech translation.



In fact, according to a Computing Technology Industry Association survey of 500 businesses, more than half of those planning phone system upgrades this year are considering a converged system.

The benefits of a converged network are easy to understand, and that is boosting sales of IP Communications (IPC) solutions such as IP telephony and IP Contact Center, which enable voice- and media-rich communication over the IP infrastructure. What is often misunderstood is the complexity of the IPC deployment itself.

An IPC solution deployment affects every employee on the network. Unlike traditional network devices such as routers, which are managed by experienced, highly trained IT staff members, IPC devices such as IP phones are designed to be operated by users who might not be familiar—or comfortable—with new technologies. Additionally, the “always-on” availability of conventional voice service has set a precedent for users, who will have no tolerance for downtime with their IP voice applications. For the IPC solution to be completely successful—that is, not just technically correct but actually used daily by employees—such factors must be considered before, during, and after deployment. An examination of the IPC lifecycle is critical to this effort.

IPC Lifecycle Strategy

IPC, like every solution, requires a specific type of support at each stage of its lifecycle; without this support, the network might not deliver expected results. Consider, for example, what happens when a network does not effectively support its voice applications. Unlike data communication, which can be rerouted during transit, voice communication is instantaneous and expected to be “always on”; therefore, the quality-of-service parameters used for voice must be more stringent than those used for data. If the network is not prepared for voice—or if the IPC system is not properly maintained to prevent entropy within the network—then voice quality will decrease along with data quality. Employees might or might not notice if the delivery of their data is delayed, but they will be aware of a problem with their voice service immediately.

COMPANIES CAN IMPROVE STAFF PRODUCTIVITY BY AS MUCH AS 20 PERCENT AND DECREASE TOTAL COST OF OWNERSHIP BY WORKING PROACTIVELY IN THE EARLY PHASES OF THE NETWORK LIFECYCLE.

Given that an IPC solution is viable only if employees take full advantage of its applications and devices, it is incumbent on organizations to prevent problems such as entropy by implementing a lifecycle-based service and support strategy that addresses the unique requirements of IPC and its users. Such a strategy is associated with the lifecycle of the network itself (see Figure 1).

The lifecycle strategy for IPC enables a company to simultaneously address the technical and architectural requirements of its network and the operational and support needs of its business. It also helps the company reduce the risks and overcome the challenges associated with migrating from a traditional system to an IP-based solution.

Generally speaking, the important considerations for each stage of the IPC service and support lifecycle are as follows:

- **Prepare:** Establish business needs and goals for the IPC solution; examine the network architecture at a high level; determine which applications and devices will be required; evaluate product and solution choices; assess what will be needed to scale the network for future growth
- **Plan:** Examine the network architecture at a detailed level; evaluate the current state of the network and determine what must be done to improve its readiness for the IPC solution
- **Design:** Develop detailed configurations and designs to ensure that the resulting IPC solution will meet user needs and company expectations
- **Implement:** Implement IP software in the network infrastructure and servers; install user devices such as IP phones; train system administrators and users
- **Operate:** Maintain the IPC solution; take preventive steps to avert problems such as network entropy—for example, perform remote network monitoring to gain near real-time visibility into the network; this effort enables faster problem awareness and resolution
- **Optimize:** Re-evaluate business needs and goals; address new requirements; update software as necessary

Benefits of the Lifecycle Strategy

By adopting a lifecycle-based service and support strategy, companies are more likely to achieve expected performance from their IPC solution. As a result, they are also more likely to enjoy the many benefits that the solution can provide, including improved staff productivity, decreased cost of ownership, increased network availability, and increased business agility.

Improved Staff Productivity, Decreased Cost of Ownership

According to a recent Cisco Systems customer-validated quarterly business review, companies can improve staff productivity by as much as to 20 percent and decrease their overall total cost of ownership by working proactively in the early phases of the network lifecycle. Preventive efforts can help companies avoid re-work, ensure that important requirements are not missed, and

reduce or prevent major network problems, thus saving the network support staff hours and costs. For example, with suitable preparation, planning, and design, companies can ensure that there will be enough ports to support all existing and potential users once the network is activated. With enough ports in each location, employees can move among offices or buildings easily, and they can get to work immediately simply by plugging their devices into any available ports. They do not lose productivity—and the company does not lose money—waiting for an engineer to be pulled off another project in order to install additional ports.

Increased Network Availability

In that same quarterly business review, Cisco customers said they experienced a 30 percent improvement in network availability by focusing on lifecycle service and support. This degree of improvement is particularly important in today's highly competitive global market, in which companies cannot afford downtime, especially in their communications systems. Downtime can be prevented by properly maintaining the network during the operation and optimization phases of its lifecycle. Activities such as monitoring of telephony, conferencing, and other mission-critical IPC applications help to prevent a high degree of network entropy; thus, even when the unexpected arises—human error, a natural disaster, or other challenging circumstance—system administrators can quickly reconfigure the IPC solution and restore system function.

According to industry experts, network assessments are also critical to network availability. By conducting such an assessment early in the lifecycle, companies can invest in tools and resources that can help them effectively prepare the data network to transport voice—and quickly troubleshoot the converged network should problems arise during operation.

Increased Business Agility

Finally, Cisco customers who participated in the quarterly business review found that a lifecycle strategy increased their business agility by more than 15 percent. This figure is based on faster implementation and deployment of new features as a result of effective planning and preparation. For example, by ensuring that all requirements for a customer contact center are in place ahead of time, companies do not find themselves halfway through the project deployment only to discover that something critical is missing. Improved business

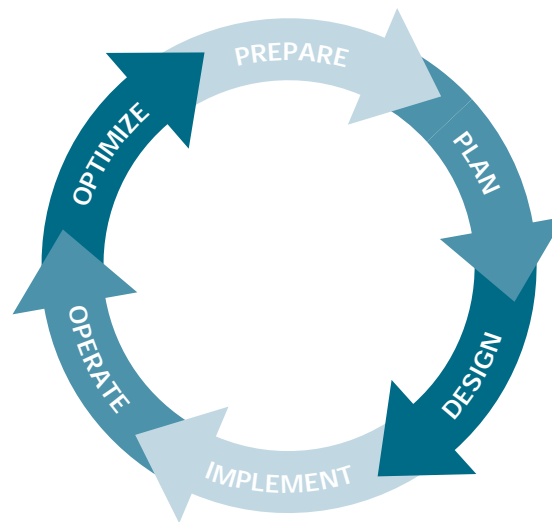


Figure 1.
Network Lifecycle

agility can also be attributed to network optimization efforts. By taking advantage of tools and knowledge-transfer opportunities provided by partners such as Cisco, companies can anticipate the emergence of common but complex networking challenges and then quickly implement the necessary solutions before problems arise.

Summary

IPC offers myriad benefits to companies and employees alike. But to take full advantage of its IPC solution, a company must do more than resolve the technical issues associated with migrating to IPC; it must also address the unique user requirements associated with an IPC solution. A lifecycle-based service and support strategy that is specific to IPC enables a company to take the specific actions that will help it succeed.

BY TAKING ADVANTAGE OF TOOLS AND KNOWLEDGE-TRANSFER OPPORTUNITIES, COMPANIES CAN ANTICIPATE THE EMERGENCE OF COMPLEX NETWORKING CHALLENGES AND QUICKLY IMPLEMENT THE NECESSARY SOLUTIONS BEFORE PROBLEMS ARISE.