

Cisco Virtual Office: Flexibility and Productivity for Your Workforce

The Cisco® Virtual Office solution provides secure, rich network services to workers at locations outside of the traditional corporate office, including teleworkers, full- and part-time home-office workers, mobile contractors, and executives. By providing extensible network services that include data, voice, video, and applications, the Cisco Virtual Office effectively creates a comprehensive office environment for employees regardless of their location



Challenge

The concept of teleworking has existed for a long time. Traditionally, one of the main concerns associated with widespread adoption has been workforce productivity. Specifically, how can employees stay connected and productive in a remote environment? Will they have access to the tools and resources that they need to do their job? And how can they effectively build trust with their employer that they can succeed in that environment?

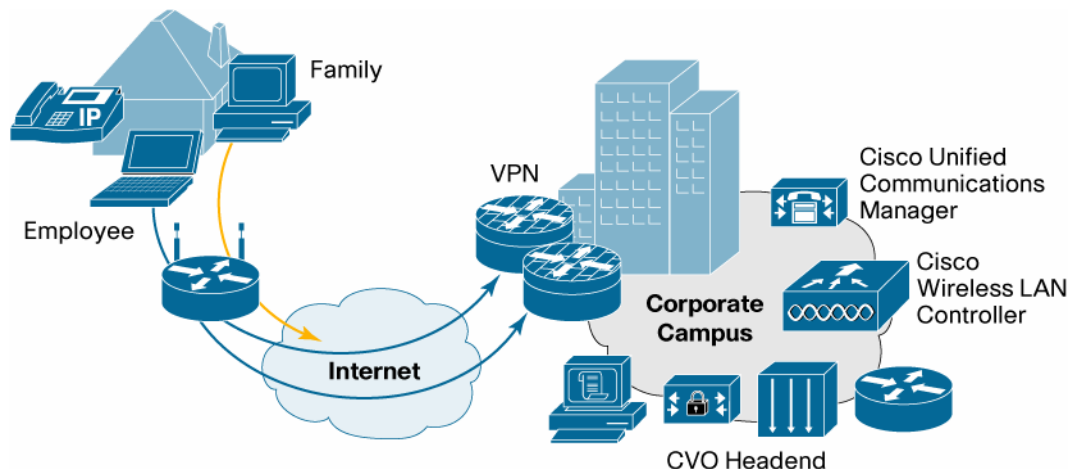
When you compare the social aspect of being in the office (face-to-face communications) with the convenience, flexibility, and time and cost savings of commuting, the equation becomes more difficult to quantify. As technology has matured, the network has helped eliminate many of these concerns. Today, we can use the network to best advantage for rich business communication and collaboration applications. By properly securing, maintaining, and managing this environment, employees can truly be productive anywhere outside of the traditional office.



Solution

The Cisco Virtual Office solution is a comprehensive set of products, technology, and services that provides secure, rich, and manageable network services to teleworkers and employees at remote locations (Figure 1).

Figure 1. Components of Cisco Virtual Office



- A remote-site presence: This equipment, which resides on the end user's premises, includes a Cisco 800 Series Integrated Services Router and a Cisco Unified IP Phone 7965G.
- A headend presence: This portion of the solution is responsible for remote-site aggregation; it includes a VPN router to aggregate and terminate the secure, encrypted tunnels from each remote-site location. This infrastructure also supports other VPN technologies such as Secure Sockets Layer (SSL) and Layer 2 Tunneling Protocol (L2TP) over IP Security (IPsec) VPNs, effectively serving as a single point of convergence for multiple secure access technologies. The headend also includes centralized management software for policy, configuration, and identity controls.
- Deployment and ongoing services: Service offerings from Cisco and approved partners support successful headend solution component deployment and integration, provide consultative guidance for automating the deployment and management of remote sites, and deliver ongoing operational support and optimization.

A typical Cisco Virtual Office deployment empowers you in your home or remote office by providing full IP phone, wireless, data, video, and even TelePresence services. With Dynamic Multipoint VPN (DMVPN) technology, these services are delivered securely and transparently. You can enjoy the experience of a single telephone extension and one wireless network that work in both your office and your remote office. In addition, for your home office, you can deploy the Cisco Virtual Office solution with secure “split tunneling,” allowing spouses or other family members to access the Internet through a different, dedicated network segment.

From an IT perspective, the Cisco Virtual Office solution provides a headend architecture for simplified management and operations. This architecture drastically improves the IT scalability, offers more robust and flexible security, and reduces the cost while improving the manageability of remote sites.

One method in which this scenario is accomplished is through a zero-touch deployment model. In this model, configurations of remote-site equipment are kept up-to-date and in compliance with corporate policies automatically. There is no need to preconfigure the remote-site routers. When deployed, the router is programmed to automatically “call home” to the management servers at the headend to check for any relevant updates in configuration or software. These updates are then “pushed” to the devices without any need for human intervention on the remote site, enabling organizations to properly secure their remote worker environment while effectively delivering the applications and services necessary to keep the user base productive.

This technology is facilitated through the headend architecture, which includes a VPN aggregation point that is provided in the form of a Cisco VPN router (typically a Cisco 3800 Series Integrated Services Router, a Cisco 7200 Series Router, or a Cisco Catalyst® 6500 Series Switch). This component also provides VPN convergence, terminating different VPN endpoints, devices, and technologies on a single device. In addition, the headend architecture includes Cisco Security Manager, Cisco Secure Access Control Server (ACS), and the Cisco Configuration Engine. Together, these features incorporate the ability to define networkwide policy, use identity for authorization, and actively update configurations at remote sites through a zero-touch deployment model.

Finally, the Cisco Virtual Office solution provides a full set of services from Cisco and approved partners. Examples include the Cisco Virtual Office Planning, Design, and Implementation Service; the Cisco Remote Management Service; and the Cisco Security Optimization Service. Together, these services provide holistic support for the deployment, integration, management, and optimization of the Cisco Virtual Office solution.

Teleworking and remote workers are trends that are gaining popularity. Here is a quick glance at how important and valuable this work model has become:

- Number of teleworkers by the year 2011: 112 million *
- Percentage of employees that work outside the corporate HQ: 90% **
- Average amount saved by employees per year on fuel who work one day per week from home: \$500
- Average commercial real estate savings per year for a full time teleworker: \$22,000
- Amount of carbon dioxide produced per 1000 miles driven: .45 tons ***

* Gartner Dataquest Insight: Teleworking, The Quiet Revolution (2007 Update)

** Nemertes Research—Building the Successful Virtual Workplace: Branch Office Challenges and Innovation

*** <http://www.epa.gov>

Solution Benefits

The Cisco Virtual Office solution addresses many of the critical requirements associated with remote working for both end users and organizations. In doing so, it also provides important benefits for three distinct organizational groups:

- For end users, Cisco Virtual Office enables schedule flexibility and better work-life balance by providing the ability to work more effectively at home. With the rising price of gas, it is also a way to control costs by saving time and money on commuting while reducing the emissions effect on the environment.
- For IT groups, Cisco Virtual Office simplifies the process of extending real-time, high-performance network services such as voice, video, applications, and data to remote locations. A resulting benefit is scaled effectiveness of the IT staff and reduced costs. For example, Cisco IT effectively supports more than 11,000 Cisco Virtual Office deployments with just a handful of resources. This support is particularly important because users at these locations have heightened expectations for the delivery of virtual-office services, and these locations typically do not have any IT staff for onsite support. Another factor is that services are delivered without any compromise to the overall security policy. Traffic is protected through VPN technologies, and authorization to access corporate resources is managed through strict identity controls.
- For businesses and organizations, Cisco Virtual Office improves productivity for the remote workforce while saving costs associated with energy, facilities, and real estate. The solution also facilitates better business resiliency, enabling the workforce to stay secure and connected while not at the office.

Ultimately, Cisco Virtual Office is a complete solution that improves profitability for the business, and does so in a secure and manageable environment.

A Differentiated Solution

Teleworkers and technology that enables teleworking has existed for many years, but the solutions in the past have typically lacked a critical component, creating a barrier to adoption. Perhaps the solution is not robust enough to handle communication and collaboration applications. Perhaps it lacks the proper security controls to comply with corporate standards. Or perhaps it does not use unified communications or wireless technologies, making it less convenient. Cisco Virtual Office delivers a truly comprehensive solution that addresses each of these concerns, providing mutual benefits to the end user, the IT department—and ultimately—the business.

For More Information

For more details about the Cisco Virtual Office solution, visit <http://www.cisco.com/go/cvo>.

For more details about the Cisco Virtual Office service offerings, visit http://www.cisco.com/en/US/services/ps2961/ps2952/Virtual_Office_Services_overview.html

For more details about Cisco teleworking solutions, visit <http://www.cisco.com/go/teleworker>.



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