Government Telework:
Build a Mobile, Inclusive, and Resilient Workforce

What You Will Learn

Government has long recognized the value of telework for continuity of operations, workforce recruitment, and environmental sustainability. Now several factors have come together to topple the few remaining barriers to widespread telework:

- Policy: The Telework Enhancement Act of 2010 mandates that agencies create formal telework programs.
- Culture: The new generation of workers is already used to communicating and collaborating with people in other locations, using collaboration tools such as instant messaging and video.
- Technology: Many government entities have built or are planning private clouds, and can use the same investment to securely host services for teleworkers.

This white paper, intended for government executives and managers planning telework strategies, describes new technologies that enable a mobile workforce to accomplish an organization's missions securely and cost-effectively over the network, from any location.

Why Telework, and Why Now?

The public sector has led the way in adopting telework. In its 2009 Telework report to Congress, the federal government Office of Personnel Management (OPM) reported that 103,000 employees in 78 agencies worked from home at least once a month. Forty-four agencies, or 56 percent, had integrated telework into their continuity of operations (COOP) planning.

Telework is part of a larger trend toward borderless collaboration in government. The vision is to create a sustainable, inclusive, and resilient government workforce that can securely collaborate to educate, protect, and serve–from any location. The notion is that work is what you do, not a place.

Benefits of telework include:

- **Continuity of operations**: Government workers can continue to work from home if they are kept from the office by weather, disasters, or pandemic. This risk was underscored by the February 2010 Washington D.C. snowstorm that shut down government offices, causing $70 to $100 million in lost productivity each day. Analysts estimate that a true pandemic could cause absenteeism rates of 40 percent or higher, disrupting vital government services. Government entities can avert the risk by setting up the workforce for telework.

- **High productivity**: Telework can provide a return on investment (ROI) from increased productivity. At Cisco, for example, teleworkers who use Cisco® Virtual Office estimated that they work an additional eight hours per week, before and after normal working hours. Cisco internal surveys indicate that for every 60 minutes employees save on commuting, they work an extra 40 minutes. Increasingly popular collaboration tools such as instant messaging and desktop video conferencing enable supervisors and coworkers to more easily interact with remote employees, and also help them feel more connected to the team.

- **Recruiting and retention advantage**: Offering a telework option helps government attract new college graduates and provides an appealing part-time option to retirees with valuable skills. In a 2010 FedScoop survey, 93 percent of respondents said that the ability to telework would make working for an organization more desirable. Top reasons cited include time savings (84 percent) and increased overall quality of life (76 percent). About 70 percent of those surveyed also mentioned reduced carbon footprint, productivity savings, and savings on transportation costs.

- **Improved morale**: Avoiding lengthy and expensive commutes improves job satisfaction, and satisfied employees are generally more productive. In an internal survey conducted by the U.S. Patent and Trademark Office survey, 99 percent of employees reported increased job satisfaction from participating in the Work-at-Home program. Managers can interact face-to-face with teleworkers throughout the day, using business video.

- **Environmental sustainability**: Reducing the number of trips to the office reduces government's carbon footprint.

- **Reduced office space costs**: In some agencies, the ROI from telework includes real estate savings through office consolidation. The Patent and Trademark Office saved $11 million in office space over the 13 years its employees have teleworked. Government contact centers are especially good candidates for office consolidation. Cisco Unified Contact Center solutions can route calls to the first available qualified contact center in any location, including home, and supervisors can view up-to-the-minute agent performance statistics.

[1] http://www.telework.gov/Reports_and_Studies/Annual_Reports/2009teleworkreport.pdf

[2] http://www.federaltimes.com/article/20101129/PERSONNEL03/11290301/1001

[3] Rebecca Witty, Gartner, April 2009

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Why Telework, and Why Now?
(continued)

"In a 2010 FedScoop survey, 91 percent of respondents said their responsibilities were well suited to telework, and 93 percent said that the ability to telework would make working for an organization more desirable."

Why Now: Convergence of Policy, Culture, and Technology

Multiple factors have come together to accelerate adoption of telework in government. One is policy.

Signed in December 2010, the Telework Enhancement Act of 2010 officially gives federal employees the eligibility to telework and requires agencies to establish telework policies. It also mandates that each agency designate a telework managing officer to oversee its telework program.

Today's social networking culture also makes employees and managers more comfortable with telework. The new generation of workers already has experience communicating and collaborating with friends and classmates in other locations using instant messaging, online communities, and video chat. They expect the same capabilities in the workplace.

The final factor setting the stage for large-scale adoption of telework in government is technology advances. Innovations such as cloud computing and virtual desktop infrastructures help to make sure that teleworkers can access the same voice, video, and data services at home as they could from the office, securely and with the same performance, to accomplish their goals. And telepresence and web collaboration tools enable them to participate in meetings as if they were physically present.

Cisco Teleworkers Work More Hours

In late September 2010, a Cisco employee somewhere in the world became the 20,000th to begin using Cisco Virtual Office at home, and many more employees use Cisco AnyConnect Secure Mobility Solution on their laptops and smartphones for occasional telework. Telework is an important part of the Cisco culture:

· 28 percent of the workforce is part of a distributed team, and 23 percent travel
· 63 percent of managers manage at least one person remotely
· 40 percent of Cisco employees do not work in the same city as their manager
· Over 70 percent work from home at least one day a week

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Technology Building Blocks for Telework

The four prerequisites for a successful telework program are technology, security, training, and policy. The technology building blocks, in turn, are a hosting platform for voice, video, and data services; collaboration tools; and a home setup.

Hosting Platform

The hosting platform, which resides in the organization's data center or collocation facility, hosts the organization's applications and voice services, and sometimes the teleworkers' data. The Cisco Unified Computing System™ is a cost-effective hosting platform because it unifies all the back-end technology needed for telework into a single system. That includes networking, compute resources, storage access, and built-in support for virtualization. A unified system costs less to purchase, manage and maintain, helping to reduce operational expense. Virtualization is useful for telework because it enables applications to operate on any server that happens to be available. During busy times, the application can operate on more servers so that performance remains consistent.

Some governments use Cisco Unified Computing System as part of a virtual desktop infrastructure (VDI). When employees log in to the departmental network from home, they receive a virtual desktop for the duration of their session. When they log off, the virtual desktop becomes available for someone else's use. An organization that provides virtual desktops does not need to worry about data leakage from stolen laptops because applications and data are stored in the cloud. They also reduce capital expense because thin clients cost far less than laptops and do not have to be replaced as often.

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Technology Building Blocks for Telework
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> "Low-cost, point-to-point and group video conferencing is a game changer in addressing the cultural barriers to telework. The expression 'seeing is believing' has basis in fact, and many supervisors and coworkers are more comfortable working with remote employees when they can see them. In addition, the remote employee feels more connected to the team."

Josh Sawislak
Senior Fellow, Telework Exchange

Collaboration Tools

Secure, cost-effective Cisco collaboration solutions help government entities capitalize on the power of the network to innovate and achieve sustainable operational efficiencies. Collaboration tools such as instant messaging, presence, web sharing, and video enable teleworkers to fully participate in teams with coworkers in any location. Work is what you do, not a place, so an employee's physical location is irrelevant. For example, suppose an employee needs information to complete a spreadsheet. A more efficient alternative to walking down the hall to find an available expert is to use Cisco Unified Personal Communicator or Cisco Quad software to find coworkers with the expertise. These tools also show whether the coworker is currently on the phone or online, and the teleworker can just click to dial or send an instant message. If the conversation becomes more involved, the teleworker can click again to escalate to a Cisco WebEx® session with voice, video, and web sharing.

In addition to enabling collaboration within a distributed workforce, business video helps to foster trust. Supervisors and coworkers who can see and hear teleworkers can communicate and collaborate more easily. In the Cisco telework program, business video is also seen as a benefit for teleworkers' morale because it helps them feel more connected to coworkers.

Cisco offers a range of business video tools to meet the spectrum of government telework requirements. One option is Cisco WebEx, which also enables collaboration on documents such as presentations and spreadsheets. Another option, Cisco TelePresence® Movi software, converts the teleworker's laptop or desktop into a high-definition video display, capturing video using a USB camera. Government executives, or employees who interact frequently in longer meetings, can use Cisco TelePresence System 500 Series, which provide ultra-high-quality video and audio quality that rivals an in-person experience.

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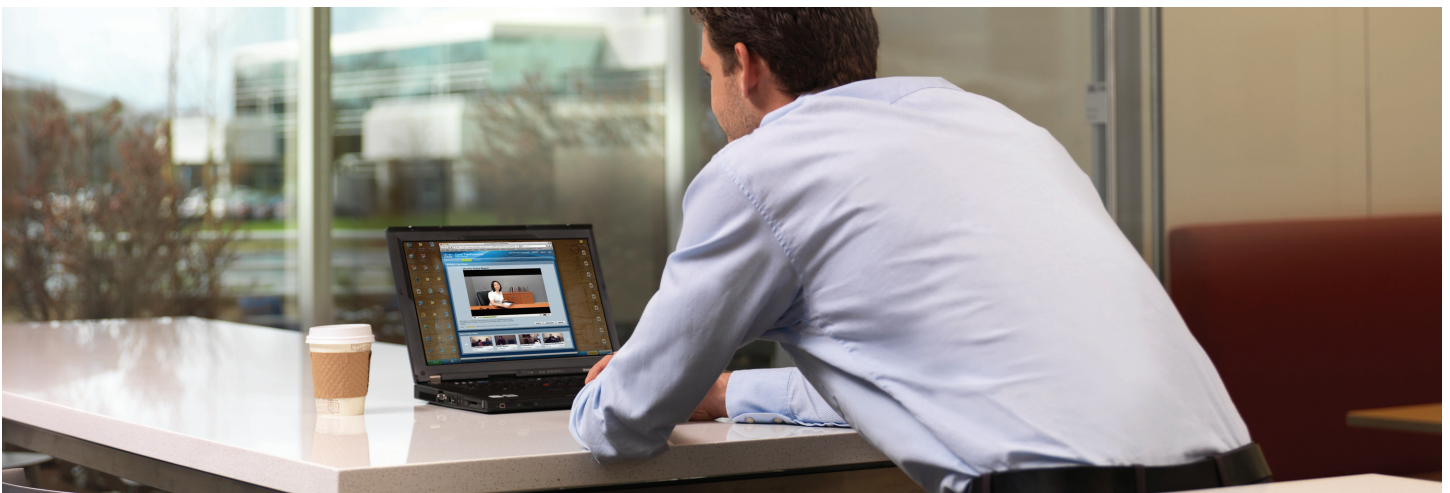
Home Setup

At home, employees need a laptop or thin client, an IP phone, a router or software that provides a secure virtual private network (VPN) connection to the organization's network, and optional WAN acceleration technology.

Cisco offers different VPN solutions to meet the needs of four types of teleworkers (Figure 1):

- **Frequent teleworkers**: Cisco Virtual Office provides access to the same voice and data services that employees would have in the office. It is designed for employees who telework much of the time or who work in organizations with high security requirements. Employees receive a Cisco 800 Series Integrated Services Router (ISR) with built-in wireless access, and a Cisco Unified IP Phone 7900 Series. Some organizations provide employees with laptops, while others, especially those working with sensitive data, give employees thin clients to access virtual desktops in the cloud. Regardless, employees need only one Ethernet connection in their home, and simply connect the ISR to the router provided by their Internet service provider. The organization's data center, in turn, needs a Cisco 7200 Series Router, Cisco Secure Access Control System server, and Cisco Security Manager software for policy, configuration, and identity controls. Cisco and its partners can provide guidance for automating the deployment, relieving government IT groups from having to manually configure each employee's gear.

- **Occasional teleworkers**: These employees can use a laptop with Cisco Unified Personal Communicator for collaboration, and the Cisco AnyConnect solution for secure VPN access. Unlike early VPN clients, Cisco AnyConnect is always on, saving teleworkers from having to repeatedly enter passwords and wait for a connection throughout the day. And if teleworkers work someplace other than their homes, Cisco AnyConnect automatically selects the optimal network access point and tunneling protocol. Government IT teams can centrally manage Cisco AnyConnect, just as they can Cisco Virtual Office.

- **Mobile workers**: Employees who spend much of their time in the field can connect with a tablet or smartphone and Cisco AnyConnect software. When fieldworkers can retrieve and submit information from wherever they are, they do not have to make as many trips to the office, increasing productivity and decreasing fuel costs and carbon emissions,

- **Home contact center agents**: Contact center agents can work from home using a laptop or PC with Cisco Unified Contact Center. The software intelligently routes calls to the first available agent with the appropriate skills.

Figure 1 Different Telework Setups Support a Range of an Organization's Missions and Budgets

Why Cisco
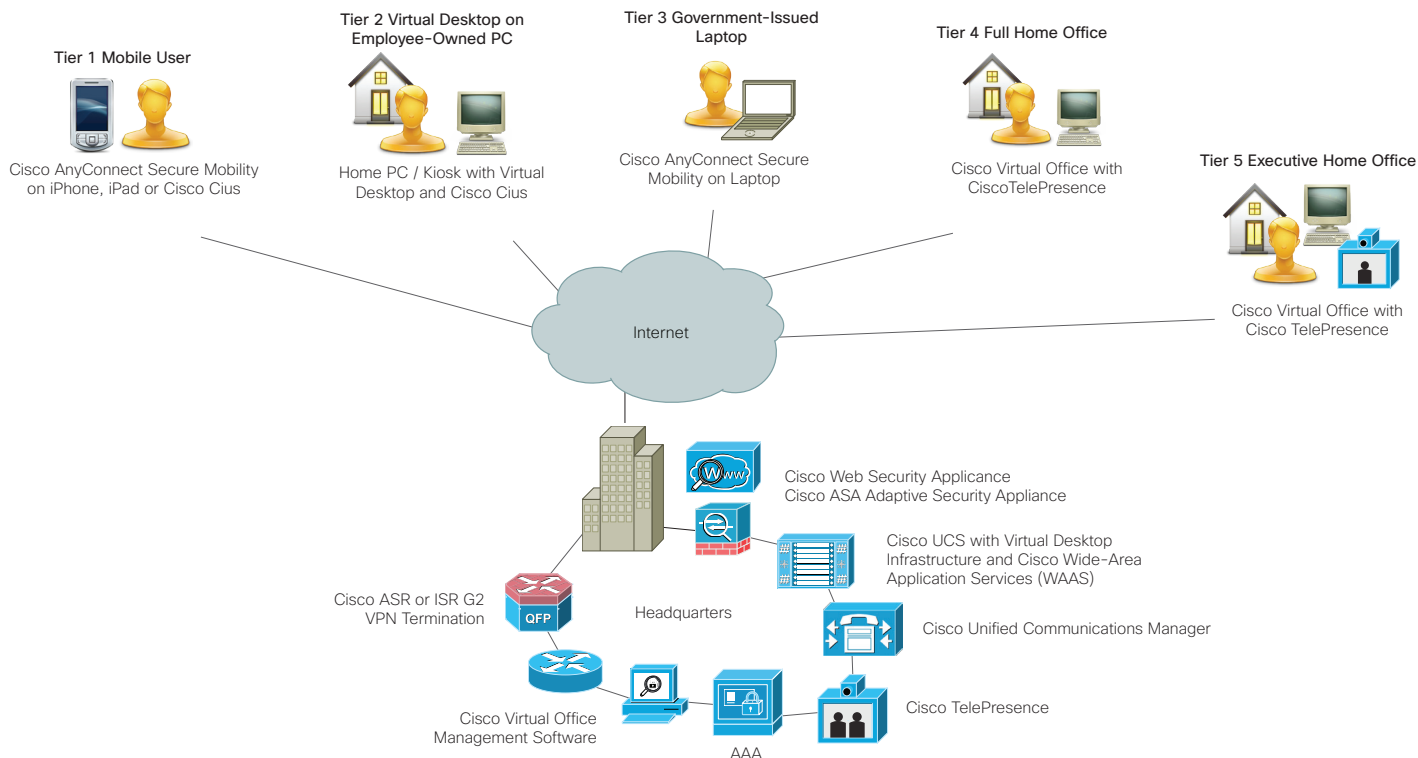
Government had the vision to recognize the benefits of telework for continuity of operations. Now the case for telework is even stronger because of policy mandates, government commitment to environmental sustainability, and recruitment challenges.

Cisco offers the technology and services that governments need to build a mobile, inclusive, and resilient workforce that can collaborate over the network from any location. Governments can introduce or expand telework programs that cost-effectively support an organization's missions because of:

- **Easy set up and ongoing management**: Both Cisco Virtual Office and Cisco AnyConnect are easy for employees to install and use with little assistance. Government IT groups do not need to manually configure employees' routers and IP phones. At Cisco, the IT department opens an average of only 1.2 technical support cases weekly for 100 Cisco Virtual Office clients.

- **Consistently excellent voice and video quality**: Cisco Virtual Office supports quality of service (QoS), which is the intelligence to recognize different types of traffic and assign priority based on the application type, sender, or recipient. Voice and video, for example, need priority over other types of application traffic sharing the same network.

- **Security**: Agencies can eliminate the risk of data leakage from stolen laptops by hosting virtual desktops in the data center, using the Cisco Unified Computing System as a platform. Cisco Virtual Office extends the office security posture to employees' homes.

- **Mobility**: Employees do not want to be tied to their desks at home any more than they do in the office. Cisco Virtual Office includes integrated wireless access.

- **Services**: Services from Cisco and partners can accelerate deployment by helping government agencies plan in advance for necessary infrastructure changes and identify features that will best meet mission requirements. Services can also help you build a multilayer defense against security threats and improve network reliability, maintainability, and performance. And post-deployment services optimize day-to-day operations.

- **Cisco Capital**: Cisco Capital provides government entities with highly competitive rates, flexible payment terms, and technology migration options for Cisco's teleworking solutions. Financing options can be customized to satisfy specific needs.

For More Information

To discuss telework options for your organization, contact your Cisco account representative.

To read about Cisco telework solutions in federal government, visit: www.cisco.com/go/fedtelework

For Cisco telework solutions in state and local government visit: www.cisco.com/go/govtelework

To read a case study of Cisco's own deployment of Cisco Virtual Office, including metrics on reduced carbon emissions, visit: www.cisco.com/go/cvo

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