Mobility & Desktop Virtualization—
Alternate Devices

The business world is getting more mobile every day, and the trend is not likely to change anytime soon, with the introduction and deployment of increasingly sophisticated wireless devices and the ever-increasing reach and availability of high speed networks, end users will have unprecedented access to information and mobile applications.

The mobility trend presents exciting opportunities for organizations in terms of information sharing, collaboration, and increased productivity. But it also presents a number of challenges such as the increased time and cost to support these devices, the lack of control over these devices, and the increased need to support personally-owned devices.

Many of these challenges can be addressed by another, fast-growing technology: desktop virtualization. And as such, a growing number of organizations are considering desktop virtualization as a way to support mobile users with alternate devices such as netbooks, smartphones and tablets.

Drivers for Change

Mobile devices have been around in one form or another for years. Why are organizations now looking to rethink how they support mobile users? There are a number of factors driving this.

For one thing, IT departments have increasingly less control over computing equipment, particularly mobile devices. The days of tight reins over user devices are fading into the past, as more employees bring their own devices into the workplace. (There are also problems with company-owned devices as workers today freely use the devices for both work and personal business.)

Clearly, there is a trend underway toward more user-owned

devices in the work environment, and an increased need to support these employee-owned devices. *CIO Insight* in January 2011 cited[1] a Gartner Inc. report on top IT predictions for 2011-2015, which forecast an increase in employee-liable devices.

By 2014, Gartner predicts, it will be commonplace for organizations to support corporate applications on employee-owned notebooks and smartphones. The research firm says the main driver for this will be the employees, who prefer to use their own mobile devices for business.

With such a proliferation of computing and communications devices, IT is being put in a difficult position. Users are demanding access for new devices. This runs contrary to IT's normal mode of operation, which is that if IT cannot control a device, it does not want the device to access the company network.

Another factor that's having an impact on IT's support of mobile users is the trend toward people working outside the main office. The growing use of mobile devices and high-bandwidth networks enables more people to work at home or in other remote locations.

Thanks to ubiquitous wireless and broadband services, an organization's workforce today is likely to include many individuals who work outside the office. There are potential benefits to letting employees work at home. For example, as Baseline.com reports,[2] findings from the Telework Research Network show that telecommuting would result in total savings of $31 billion per year through reduced employee turnover, and employees who telecommute or workshift would save an average $362 on gas expenses per year.

But the growth in remote workers presents new and sometimes daunting support challenges for IT. Even with the

1   "Gartner's Top IT Predictions for 2011-2015," *CIO Insight*, January 12, 2011
    http://www.cioinsight.com/c/a/Trends/Gartners-Top-IT-Predictions-for-20112015-799167/

2   "Why Telecommuting Makes Sense," *Baseline Magazine*, June 15, 2010
    http://www.baselinemag.com/c/a/Business-Intelligence/Why-Telecommuting-Makes-Sense-468835/

increased ability to support users remotely, the higher number of such users makes support a bigger burden for IT.

Other Challenges

Furthermore, workers have increased expectations for higher service quality. Users today want access to everything from anywhere, at anytime, and they expect their organization to be able to provide reliable and secure connectivity. In addition, they expect to have the same rich application experience on their mobile devices as they have in the office on their desktop computers.

IT faces other difficulties in managing the mobile infrastructure. Alternative mobile computing devices such as netbooks, smartphones and tablets don't run all business applications. Adapting applications to run on the new operating systems, particularly mobile platforms, creates complexity.

Going mobile requires effectively integrating rich mobile applications to back-end enterprise systems. As a result, it's important that IT anticipate these issues, and carefully weighs the advantages and disadvantages of the chosen mobile strategy—including choice of devices, development platforms and which business functions to support in a mobile environment.

The latest mobile devices, while exceptional from a performance standpoint, might not have the full functionality that is expected of business applications (for example, applications that need full features such as Windows Internet Explorer 8).

All of these trends and challenges can have significant consequences for IT executives who manage the mobility infrastructure in their organization. The proliferation of alternative mobile devices places an increased management burden on IT, because it must support many more devices, a variety of mobile operating systems and the integration of mobile business applications.

Potentially the organization might have to run different versions of critical business applications for the different devices in use. And some applications might not be available on all devices.

One of the biggest concerns of the mobility trend is the

increased security risk. Corporate data might be stored on a potentially insecure, user-owned device that is frequently taken out in the field. The devices might be lost or stolen, along with the data stored on the machine.

Software upgrades and patching becomes more complex with the growth of mobile devices. Each type of device has different upgrade and patching requirements and schedules, and IT needs to somehow keep track of these.

How Desktop Virtualization Helps

A growing number of organizations are finding that desktop virtualization can help address many of the challenges related to managing alternative mobile devices.

With desktop virtualization, the personal desktop environment is separated from a physical machine using a computing model that stores the "virtualized" desktop on a remote central server instead of on the local machine. As a result, when a user works from a remote desktop client, all of the operating systems, applications and data are run and stored centrally. The model allows users to access their desktop environment on any capable device, including traditional PCs and notebooks, tablets or smartphones.

Industry research forecasts steady growth in the desktop virtualization market. Gartner, in a 2010 report, predicted[3] that the hosted virtual desktop market will grow through 2014, reaching 74 million users. A growing number of desktop virtualization products and services are available today, and they can help organizations lessen management chores in the increasingly mobile environment.

With desktop virtualization, businesses can keep corporate data on internal servers, enabling tight control over access to the data as well as centralized backup of information. This centralized storage of data eliminates the concern of data being lost when a computing device is lost or stolen, because the data is separate from the device.

Another benefit of desktop virtualization is that it allows a wide variety of energy-saving, thin computing devices to get full access to feature-rich applications. The technology also simplifies application upgrades and patching, by enabling companies to handle these tasks from a central location.

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3 "Emerging Technology Analysis: Servers Deployed to Support Hosted Virtual Desktops," Gartner, March 18, 2010
   http://www.gartner.com/DisplayDocument?doc_cd=172961

Dell as your technology partner

Choosing a trusted and reliable desktop virtualization partner is critical to a successful implementation of the technology. Dell has the expertise and experience to help companies plan for and transition to a desktop virtualization environment. Dells proscriptive approach to providing solutions include the server hardware, software and services to implement a virtual desktop solution for every customer. Additionally, Dell enterprise mobility solutions complement Dell desktop solutions offering a way to get mobile devices under control.

Dell has partnerships in place with some of the leading desktop virtualization solution providers, and can help customers evaluate their current infrastructure and advise them on how to move to a desktop virtualization approach.

Managing a mobile environment is becoming increasingly complex, as organizations rely more on wireless devices and a growing number of employees use their own devices for work purposes. Dell's desktop virtualization solutions can help IT executives manage these growing mobile environments by moving control of applications and other components from the device to the data center.

For more information about how desktop virtualization can play a central role in a mobility strategy, visit Dell.com/virtualdesktop.