

# Navigating the Virtual Desktop Continuum



## Abstract

Your organization's workforce is diverse: some users work exclusively in the office, others are continually mobile, and many fall somewhere in between. This white paper explains how to choose a blend of desktop virtualization technologies that will best serve all of your users—while also keeping costs under control.

## Introduction

Not all employees have the same desktop and application requirements. Some require access to many applications to perform multi-faceted roles that change depending on the day; others may only need access to a subset of critical applications to perform more specific, repetitive tasks. Some employees require mobile computing, and some need huge amounts of computing power to run test analyses or crunch statistics. Because most organizations today have a diverse workforce with varying workspace needs, it is unlikely that a single desktop virtualization technology will be a "best fit" for your entire workforce.

This paper will help you provide your diverse and evolving workforce with the virtual desktops and applications they need, when they need them, using a dynamic mix of desktop virtualization technologies, without over-delivering and over-paying. Your users will be happy and you will enjoy faster ROI and lower TCO. Interested? Read on.

## A single solution set for the "virtual desktop continuum"



Figure 1. The virtual desktop continuum: users have different characteristics and different needs.

Choosing the best technology for each type of user optimizes your IT dollar.

### Understanding your users and their needs: the virtual desktop continuum

The virtual desktop continuum (Figure 1) describes the various types of users found in most organizations, from those who work only in the office to those who are fully mobile.

### Applying the virtual desktop continuum to virtualization planning

Considering the virtual desktop continuum as you plan your desktop virtualization project can save you time, money, and stress by helping you better align technologies to your users' needs (Table 1). You will most likely need to implement several different desktop

virtualization technologies. If you try to force all of your diverse users to adopt the same desktop virtualization technology, you will likely:

- Over-deliver or under-deliver functionality
- Pay more than you should because different desktop virtualization technologies have different acquisition and deployment costs
- Be limited by the capabilities of specific virtual desktop technologies

Choosing the best technology for each type of user optimizes your IT dollar, delivers the right technology for users to do their jobs (no more, no less), and provides a path for growth in the future.

### Different users have different requirements

Worker type	Description	Connectivity	Typical equipment used today
Desk worker	Inside the "four walls"; no roaming workspace required	Fully connected to the corporate domain at all working times	Desktop system
Campus worker	Inside the corporate campus, but roams between meeting locations	Fully connected to the corporate domain at all working times	Laptop or other mobile system
Day extender	Works from both home and office	Mostly connected to the corporate domain during working times	Laptop or other mobile system
Mobile executive	Inside and outside the corporate domain—floats between branch offices and customer sites, hotels, airports, etc.	Intermittently connected during work	Laptop or other mobile system
Road warrior	Mostly outside the corporate domain; nearly 100% "in the field" during work	Rarely connected except to synchronize	Laptop or other mobile system

Table 1.



## Desktop virtualization options

Virtualization Technology	Advantages	Disadvantages
<b>Hosted Virtual Desktop Infrastructure (VDI)</b> —Hosted virtual desktops and applications accessed via a network/Internet connection	<ul style="list-style-type: none"> <li>Centralized management</li> <li>Easier provisioning than physical PCs</li> <li>Strong security</li> <li>Data stays in datacenter</li> <li>Allows for desktop personalization</li> </ul>	<ul style="list-style-type: none"> <li>No Internet means no desktop or applications</li> <li>Expensive relative to other desktop virtualization techniques</li> <li>User experience is limited by network quality</li> </ul>
<b>Local VDI</b> —Virtual desktop images are created centrally and synchronized onto PCs and Macs when network connection is available	<ul style="list-style-type: none"> <li>Centralized management</li> <li>Better user experience than hosted solutions (VDI and TS)</li> <li>Desktop and applications work without network connection</li> <li>Allow users to "bring your own computer" (BYOC) - including Macs</li> </ul>	<ul style="list-style-type: none"> <li>Requires user to own a powerful PC or Mac—no support for thin devices</li> <li>Data is replicated to end points (protected and encrypted)</li> </ul>
<b>Terminal Server/Remote Desktop Session Host (TS/RDSH)</b> – Hosted virtual desktops and applications accessed via a network/Internet connection	<ul style="list-style-type: none"> <li>Centralized management</li> <li>Lower cost vs. hosted VDI</li> <li>Strong security</li> <li>Data stays in datacenter</li> <li>Ideal for task workers</li> </ul>	<ul style="list-style-type: none"> <li>No Internet means no desktop or applications</li> <li>Limited user personalization</li> <li>User experience is limited by network quality</li> </ul>
<b>Application virtualization</b> —Applications are encapsulated from the underlying operating system and become more portable and manageable	<ul style="list-style-type: none"> <li>Quicker and easier to deploy applications to physical and virtual desktops</li> <li>Overcomes some application compatibility issues.</li> </ul>	<ul style="list-style-type: none"> <li>Takes time to prepare each application</li> <li>Not all applications can be virtualized</li> </ul>

Table 2.

### Many options

#### Available desktop virtualization technologies

A variety of desktop virtualization technologies are available to help you meet the needs of your diverse workforce (Table 2).

#### Matching technologies to users

Which virtualization options best match the needs of your users? Table 3 below provides recommendations for delivering desktops and applications to users across the entire virtual desktop continuum.

Dell's virtualization solutions best match the needs of your users.

Worker type	Datacenter—Hosted Desktops		Distributed Desktops
	VDI	Session Host (Terminal Server)	Local VDI / Client side virtualization
Desk worker	●	●	
Campus worker	●	●	
Day extender	●	●	●
Mobile executive			●
Road warrior			●

Table 3.



Dell gives you the affordable desktop virtualization flexibility that others can't.

### Dell's solution: a single set for all of your users

We offer management of hosted VDI, local VDI, and Terminal Server—as well as blade PCs and application streaming—in a single solution set.

With Dell, you can grow into an extensible desktop virtualization solution that allows a change of direction without a costly rip-and-replace expense. Whether you choose to implement multiple desktop virtualization techniques now or build to it over time, we give you the flexibility that others cannot, at a lower cost.

### Workspace assessment

Understanding the needs and usage patterns of your users is the first step in selecting the appropriate desktop virtualization technologies for your organization.

Our Workspace Assessment tool will help you determine which virtualization technologies will best serve the needs of your users. It will also discover which applications are used by whom and how often, so you can assess your desktop, network, datacenter, and storage needs before planning your virtualization strategy. Download your free copy at [www.quest.com/Assessing](http://www.quest.com/Assessing).

### Conclusion

Our solutions for desktop virtualization are about choice and flexibility:

- Embark on a "work from home" initiative, and have choices among the ways to deliver a virtual workspace
- Enable BYOD and reduce hardware costs
- Empower workers to use Macs, tablets, netbooks, smart phones, thin clients, repurposed PCs, and Linux and Java devices within the traditional corporate "four walls"
- Mix and match virtualization technologies and techniques to best meet your needs in a cost-effective way
- Change platforms without changing your management software
- Manage a large network of diverse users from a central console
- Automate tasks and use wizards to decrease administration burden
- Quickly deploy Windows 7 and 8 to virtual desktops, regardless of device age

We are *unifying* desktop virtualization, providing a solution that simply does more! Find out how you can get started at [www.Quest.com/vWorkspace](http://www.Quest.com/vWorkspace).



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