

# Addressing Desktop Challenges

With VMware Virtual Desktop Infrastructure

## Desktop Challenges Today

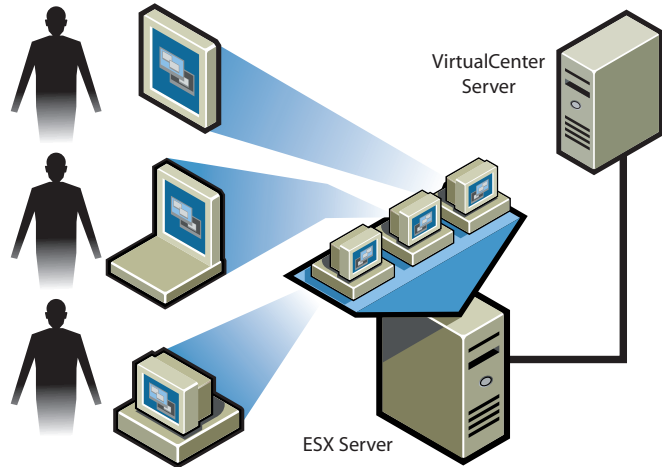
The fully-featured “thick-client” PC has traditionally been the ubiquitous workhorse of desktop computing. For many scenarios it has offered the best available combination of price, performance, and capabilities. However, for many use cases thick-client PCs are less than an ideal solution. Among their drawbacks:

**Difficult to manage:** Centralizing PC management is extremely difficult in the face of broadly distributed PC hardware and users who increasingly require access to their desktop environment from anywhere. Further, PC desktops are notoriously difficult to standardize because of the variety of PC hardware and users’ need to modify desktop environments.

**High total cost of ownership:** The relatively low cost of PC hardware is often more than offset by the high cost of PC management and support. Ongoing PC management including deployment of software, updates, and patches can be labor-intensive because of the need to test and validate deployment for a wide variety of PC configurations. Likewise, lack of standardization and the need for support personnel to troubleshoot issues in person raise support costs.

**Difficult to protect and secure data:** Ensuring that data on PCs is successfully backed up and can be restored when PCs fail or files are lost is a significant challenge. Even when data is successfully backed up, the risk of PC theft threatens the security of important data.

**Inefficient resource utilization:** The distributed nature of PCs makes it difficult to pool resources to improve utilization and reduce costs. As a result, PCs are often less than five percent utilized, remote offices require duplicate desktop infrastructure, and complicated remote desktop solutions may be required for mobile workers.



## Building a Better Solution with a VMware Virtual Desktop Infrastructure

Because of these drawbacks, organizations are increasingly evaluating and implementing alternatives to thick client PCs for many scenarios. In particular, companies have looked to host desktop images on server systems to enable them to centralize resources and improve manageability of their desktop computing infrastructure. Building a server-based desktop solution with a VMware virtual desktop infrastructure makes it possible to address PC desktop challenges while optimizing usability, manageability, total cost of ownership, and flexibility. With a virtual desktop infrastructure, complete desktop environments—operating system, applications, and configurations—reside in virtual machines running on servers virtualized by VMware ESX Server software. Administrators use VMware VirtualCenter to centralize management of all of the virtual machines in their environment. End users use remote display software to access their desktop environment from a PC or thin client.

With a virtual desktop infrastructure, administrators can:

- Build hardware-independent desktop environments
- Run multiple virtual machines simultaneously on the same system, each independent and isolated from others on that system
- Provision new virtual machines from templates in minutes

## Benefits of a Virtual Desktop Infrastructure

Customers who have implemented a desktop solution using a VMware virtual desktop infrastructure have seen benefits that include the following:

**Improved manageability:** VMware VirtualCenter makes it possible to centralize and streamline provisioning, configuration, resource management, and workload management for desktop environments.

**Streamlined deployment:** Desktop administrators can deploy new standardized, hardware-independent desktop virtual machines from templates in minutes and can automate more of the deployment process.

**Increased flexibility:** Users can access multiple desktop environments from a single client. They can also access their desktop environment from any connected client. Administrators can instantly archive or discard inactive desktop environments to reclaim resources for immediate reuse.

**Improved data protection:** Administrators can use the same backup processes they use in their datacenter today to ensure reliable desktop backups. Desktop recovery is dramatically simplified by the hardware independence of virtual machines. Ensuring data security is also simplified because all data resides in the datacenter.

**Better resource utilization:** Running multiple desktop environments on a single server allows customers to pool hardware resources effectively. It also provides the flexibility to easily reuse and dynamically reallocate computing resources to desktop environments.

**Reduced costs:** By centralizing desktop computing resources and standardizing desktop hardware, a virtual desktop infrastructure enables companies to reduce the complexity and cost of desktop support.

## Summary

A server-based desktop solution built with a VMware virtual desktop infrastructure offers a true alternative to the traditional thick-client PC. This solution enables organizations to improve manageability, reduce desktop total cost of ownership, improve utilization, and better protect critical data.

To learn more about VMware solutions and products, visit our website at <http://www.vmware.com> or contact your VMware representative

*"Without a means to host our existing standard desktop in the UK, we would not have been able to provide remote access to our Mumbai employees in such a short space of time, and VMware server virtualization proved to be the most flexible and cost effective approach."*

Andy Ruby  
Manager of Infrastructure Design  
Prudential UK

### Components of a Virtual Desktop Infrastructure

- **Hardware:**
  - Blade or rack servers to provide computing resources
  - PCs or thin-client terminals for end users
- **Software:**
  - VMware ESX Server to run virtual machines containing complete desktop environments
  - VMware VirtualCenter to manage servers ESX Server systems and the virtual machines running on them
  - Remote display software from third-party vendors to connect access clients to desktop environment