

## Virtual Desktop Infrastructure

### Do More with Less

#### WHAT IS VDI?

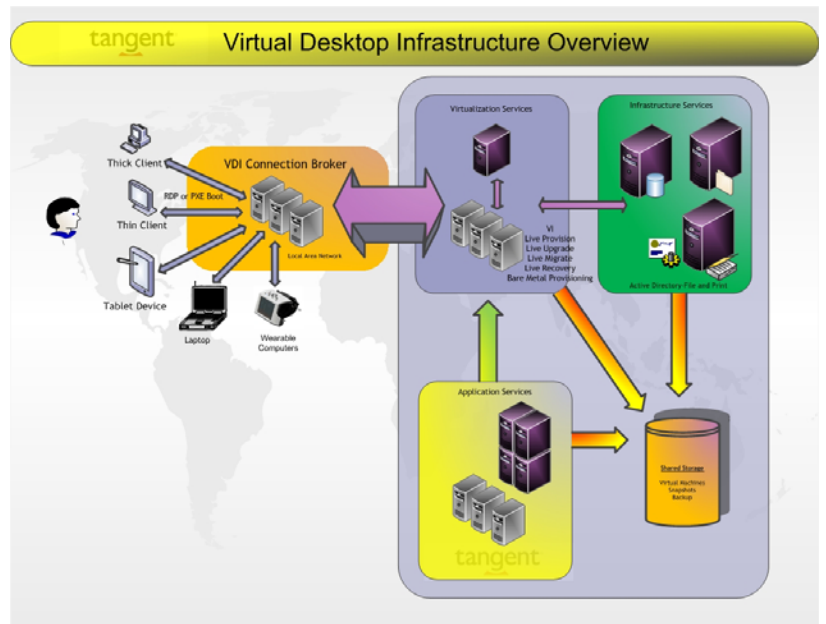
Most likely you have heard of Virtual Desktop Infrastructure, but what is it really? At its core, VDI leverages server virtualization technology to virtualize desktop operating systems rather than server operating systems. An end user connects to the hosted desktop from a physical system, such as a thin client or perhaps an actual desktop computer. The desktop experience is hosted on a server in the back office rather than on the system that the end user physically touches.

#### What are the Advantages of Virtualization

Server virtualization has become a hot topic in the computing industry. Server virtualization allows IT staff to “do more with less” by allowing them to run multiple virtual servers, also known as virtual machines, on a single physical server.

There are several advantages to server virtualization including:

- Running multiple virtual servers on a single physical server which in turn reduces the number of physical servers required in the datacenter
- A reduction in physical servers in turn reduces costs in power and cooling for the datacenter
- Increased application availability through failover mechanisms offered by virtualization software



#### Why should your Desktop be Virtualized

The advances in server virtualization can also be applied to desktop systems. A single, physical server can host many desktop systems but why would one want to virtualize desktop systems? Through desktop virtualization, IT administrators can easily and rapidly provision new systems. Desktop virtualization also makes it easier for administrators to deploy applications across the organization. Desktop virtualization can also extend the life of existing desktop hardware which in turn reduces the capital expenditures required for updating the hardware of desktop systems. It is also easy to implement hardware performance upgrades on desktop systems running in a VDI environment since only the servers hosting the desktops need to be upgraded rather than the individual desktop systems themselves.

#### What are the Advantages of VDI

Perhaps the biggest advantage of virtual desktops, especially in a large environment, is the reduced number of system images that IT administrators need to work with. Each physical system, whether it is a thick or thin client, accesses a virtual desktop hosted on a server running virtualization software, which in turn eliminates the requirement for multiple system images for all the various desktop hardware platforms deployed in the organization. This in turn carries the advantage of any new client hardware deployed in the future won't need a customized software image.



## Who Benefits from VDI

### COMMERCIAL

Information Technology staff in the corporate world are being asked to do more with less, especially in light of the current state of the economy. The Tangent VDI solution allows IT administrators to limit the number of corporate system images which they need to manage. A reduced number of system images are especially helpful when new patches are issued for various software packages as it reduces the total time required for testing the patches across the various system images.

### EDUCATION

The Tangent VDI solution provides an excellent platform for use in Education, especially in a computer lab environment. Traditionally, computer lab workstations would need to be imaged for a specific class and then require the system to be re-imaged for the next class. With a VDI environment, the actual terminals would only need their base image required to boot the workstation. When students log into the terminal, they would be connected to their own virtual desktop required for their class. Any work done within the virtual desktop will have no impact upon the actual client terminal that the student is using. This can be further augmented by deploying thin clients as the client workstation as the embedded operating system can be locked down for security purposes. IT resources will be freed from the burden of re-imaging lab systems which in turn allows them to work on other projects.

### MEDICAL

The Tangent VDI solution is a great fit for the Medical segment. More and more hospitals and clinics are moving to electronic records and it is now common place to find a computer in every patient examination room. Doctors are now using their computers to dictate patient information. Smooth desktop roaming will allow a doctor access to their specific desktop, no matter what room they may be in. This essentially allows a doctor's "desktop system" to follow them around the clinic or hospital without the need of carrying a system with them.

### FEDERAL

Tangent VDI provides a complete solution to lockdown and standardizes images that are deployed within a federal network infrastructure. With resources already tight, IT departments in the federal government must now cope with a new mandate, The FDCC, an OMB (U.S. Office of Management and Budget) mandate, requires that all Federal Agencies standardize the configuration of approximately 300 settings on each of their Windows XP and Vista Computer. The reason for this standardization is to strengthen Federal IT security by reducing opportunities for hackers to access and exploit government computer systems. The VDI infrastructure solution gives the federal government the ability to deploy one image out to everyone (preconfigured with the 300 changes) and then they will be able to from the management console have the ability to give Access or deny via ACLs. Permanently/temporarily assign a free VM to the user upon logon. If VM assignment is permanent, optionally grant the user additional privileges to the VM: Add user to the Administrators or Power Users group, allow user to take and revert to VM snapshot; upon user logoff, the VM may be suspended or powered down a VM pool expiration date may be specified. When the VM pool expires, the following action(s) may be performed: Suspend VM pool, Power off VM pool, Delete VM pool, and Specify access hours (by day and hour.) in summary giving the federal administrators the ability to granularly control access to their network environments.

### STATE AND LOCAL GOVERNMENT

With tax revenues down and the desire to get a much bigger return on hardware investments, it would be a natural fit for State and local government IT organizations to use VDI. With the ability have a longer Desktop life cycle, VDI virtualization will allow once thought useless desktop hardware to be useful again. Since all of the computing is being done on the back office equipment (Servers), you will now not be restricted by the power of your desktop hardware. Another advantage is the Tangent VDI solution allows IT administrators to limit the number of system images which they need to manage. A reduced number of system images are especially helpful when new patches are issued for various software packages as it reduces the total time required for testing the patches across the various system images.

### IN CONCLUSION

Virtual Desktop Infrastructure is more than just a buzzword in the Information Technology community. A VDI solution provides real world benefits to IT administrators and staff including the rapid provisioning of desktops, extending the useful life cycle of client systems, ease of application deployment, and a reduction of desktop images that need to be maintained.