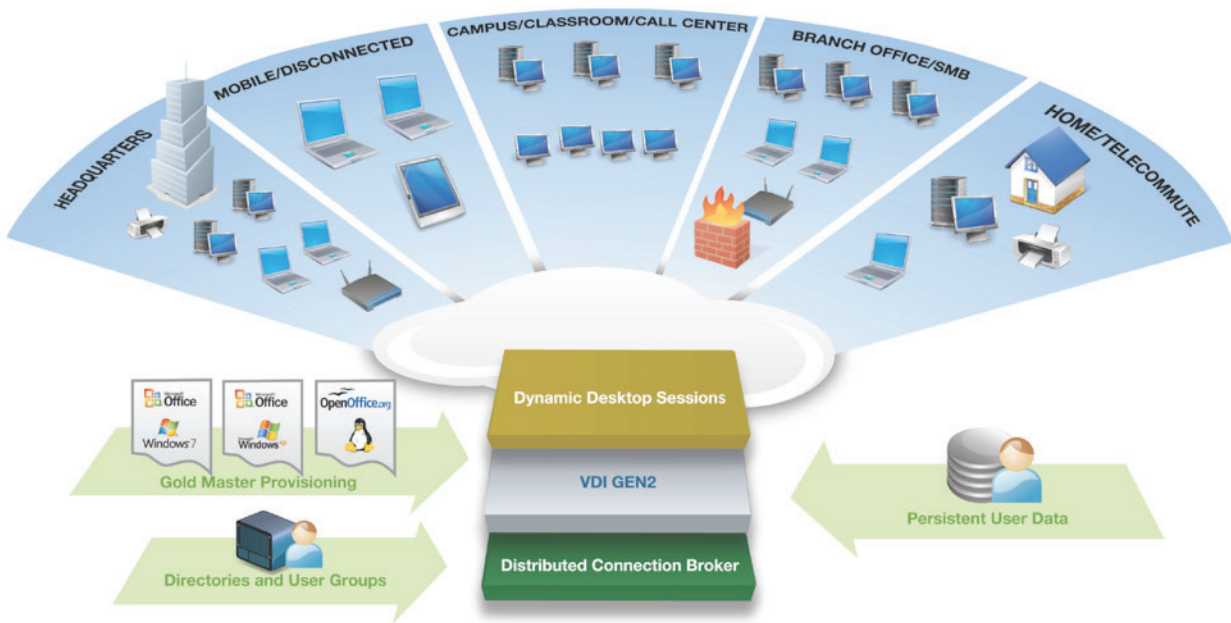# VDI 101

What is VDI?

With VDI, all programs, applications and data that traditionally resides on local storage of a desktop is "virtualized" and stored on a remote central server.

Tired of the annual PC refresh cycle? Or perhaps you are stressed out about an upcoming OS migration or the ever-growing list of security risks? Truth is, the cost and complexity of managing desktops has skyrocketed over the last few years. From installation and configuration to security and back-up, almost every organization is looking for a way to ease the burden that comes with PCs.

The era of stateful endpoint management is over. VDI – Virtual Desktop Infrastructure – offers a fresh look at desktop management delivering secure access to personal desktops. Anytime. Anywhere.

How does VDI work?

With VDI, the client device (desktop, laptop, mobile device or thin client) is separated from the operating system and is run as a "virtual machine" from a server rather than from local storage. This means that all programs, applications, processes and data used are stored and run centrally. While there is only one master image of the desktop, multiple users can maintain their own individualized desktops, all stored on a single, centrally managed server. When users log in, they essentially request a desktop, which is then "cloned" from the master image, and combined with his or her personal data and applications. This "virtualized desktop" is then delivered to the user device, wherever it is located. Virtual desktop infrastructures often include a connection brokerage layer that authenticates connections and dynamically assigns users to devices. This connection layer makes it easy for organizations to provision devices when a user signs on. Management tools allow IT to determine where users are and how long they have been connected; address maintenance and troubleshooting issues; establish security protocols; support printing and peripheral devices; balance loads; and much more.

What does VDI mean for business?

Organizations enjoy reduced risk and eliminate needless downtime. With VDI you have greater control over a user's desktop and corporate data. Whether on-site or remote, VDI offers real protection to ensure your valuable data can no longer be stolen, lost or destroyed.

What does VDI mean for IT?

VDI means never again having to rollout an update to every PC individually. With VDI, desktop are managed from a central location, so whether you are migrating to Windows 7, installing a new security patch or reimaging a single machine, it is easier than ever to administer a PC environment, even across tens of thousands of machines. IT can create a single image and seamlessly roll it out to every machine on the network with the push of a button. Additionally, should instability occur, IT can simply rollback to the most recent acceptable state and redeploy.

What does VDI mean for the end user?

Plain and simple, end users enjoy a seamless experience that is as good or better than they are accustomed to - they can access their desktop from any device (PC, notebook, smartphone, thin client) and from any location (work, home, library, airport, etc.) and access all data. Additionally, VDI often improves productivity by delivering "LAN-like" performance for branch office users, and bi-directional sync for offline users.

What is VDI Gen2?

We've come a long way since the traditional, first-generation server-hosted desktop solutions which were not only costly, but complex. VDI Gen 2 changed the game and finally allows companies to deliver on the promises of VDI. Gen2 removed the cost and complexity burdens and brought new features including integrated online, offline VDI and branch VDI; the ability to transcend on-premise and cloud; unified endpoint management and a high definition end-user experience.

What size company should deploy VDI?

VDI is ideal for companies of all sizes. VDI solutions can scale up to ten thousand clustered servers or scale down to a single-server configuration.

What types of machines and operating systems are fits for VDI?

Effective VDI solutions offer access to desktops from a variety of devices (both Windows and Linux), including tablets, netbooks, laptops and thin clients. Users can access personal data, as well as personal preferences such as bookmarks for their browsers.

Does VDI work for remote employees?

Yes. Organizations should seek VDI solutions that offer flexibility, combining online, offline and remote branch solutions. These solutions provide direct connections to free branch and remote employees from slow, unreliable WAN connections.

Additional Resources

Articles

- Understanding Successful VDI Implementation
- How Government Entitites Can Deploy Linux and Windows Virtual Desktops
- Managing User Profiles within Traditional or Virtual Desktop Settings

Case Studies

- **U.S. Department of Defense:** The solution for the mixed world of Windows and Linux
- **Chuo University:** A Desktop Cloud Environment for Anywhere, Anytime Learning
- **Gruppo api:** Reducing Operating Costs by 30% with VDI
- **LMU Munich:** Streamlines IT operations and improves service to students

Documentation

- VERDE VDI Datasheet

Whitepapers

- How VDI Secures Your Data
- Cut your Storage Costs in Half