Manager's Guide to VDI technology

— By SearchCIO.in

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Virtual desktop infrastructure or VDI technology is a hybrid computing architecture that brings benefits of virtualization to desktops. It is a way of freeing desktop environments from its dependence on physical client machines.

This guide for managers has been classified into seven VDI technology topics.

- **What is VDI technology**
- **Top market trends**
- **Pros and cons of deploying VDI technology**
- **Evaluating VDI technology: Key aspects to consider**
- **Deployment challenges to watch out for**
- **Top vendors and their solution offerings**
- **Further reading**

What is VDI technology?

VDI technology is a computing architecture wherein virtual instances of client OS and applications are contained within a physical server hosting a virtualized server environment. The virtual instances (of applications and OS) are sent as snapshots to client machines.

VDI technology concentrates the computing resources of an organization in a secure, centralized data center. The desktop environment runs from an isolated virtual machine located on the data center, alongside other virtual machines. VDI technology allows users to use their familiar OS with a certain level of customization. It also makes it simpler for administrators to manage infrastructure better.

VDI technology eases maintenance and security overheads while enabling optimum use of computing resources. It allows end-users to access their desktop environments from any device—desktop, laptop, smartphone, or thin client—from any connected location.

Top market trends

There continues to be a debate about who invented VDI: Citrix or VMware. Both these vendors dominate the VDI market currently.

The other big players in VDI technology are Microsoft, Oracle (Sun), Red Hat, Parallels, NComputing, etc.

Recently, Microsoft and Citrix have formed an alliance to offer combination products to compete with VMware.

Pros and cons of deploying VDI technology

Benefits:

- New desktops can be created and deployed quickly.

- Thin clients running off virtual machines tend to last two to three times longer than full-sized PCs.

- In VDI technology, the client OS can be managed centrally.

- The application compatibility problems are fewer compared to server-based computing (SBC) solutions.

- Hardware failures can be managed better.

- Secure, remote access to desktops is easy.

- VDI technology offers improved data security.

Disadvantages:

- Privacy and personalization restrictions should be imposed on users.

- Peripherals like printers and scanners may not work out of the box on the client machines.

- Resource-intensive applications, viz. as multimedia, do not perform satisfactorily when piped over a network.

- Network failures may interrupt work as VDI technology depends entirely on networks. End-users are dependent on the availability of a corporate or internet network to access their data.

- VDI technology deployment and management can be expensive.

VDI: Key evaluation aspects to consider

- Not all organizational networks today can benefit from VDI technology. Some may be served better by improved versions of traditional SBC solutions. Some computers in the network will need to be left non-virtualized. The choice depends on user requirements, applications used, and performance needs of individual workstations.

- VDI technology does not eliminate the need for traditional SBCs that perform well when applications are few and complexity low. An SBC solution that has been proven to work for you can continue to be used. If current SBC deployment is unsatisfactory, evaluate it for redesign before determining if a new VDI technology architecture would be suitable. Large and complex environments with SBCs might benefit from a combined VDI and SBC solution.

- Most organizations may be best served by adopting a hybrid approach, with an optimal mix of SBC (for task-oriented users), VDI technology (for power users), and thin clients (stock traders, graphic designers, etc) which deliver the most benefit and platform flexibility to the organization.

Deployment challenges to watch out for

Deploying VDI technology may involve a change management challenges. Project heads need to ensure buy-in of users for its adoption. Managers should consider the following factors while deploying VDI technology:

- VDI technology implementations may require IT infrastructure upgrades to run effectively.

- VDI technology requires large network bandwidth, storage, and memory resources. Running VDI technology may require server upgrades.

- Time needs to be given for users to get familiar with VDI technology.

- Power users may feel frustrated due to significant reduction in user control over desktops.

- Users may be reluctant about VDI technology adoption due to restrictions on storing private data.

Top vendors and solution offerings

VMware	**VMware View**	Its 2.0.0 and 2.1.0 releases were sold under VMware VDM name; with 3.0.0 release in 2008, VMware changed the name to VMware View.
Microsoft	**Remote Desktop Service (RDS)**	RDS allows a user to access applications and data on a remote computer using Remote Desktop Protocol (RDP). RDS is Microsoft's implementation of server computing for thin clients.
Citrix	**XenDesktop**	XenDesktops are part of Citrix's Delivery Center (CDC) suite that includes XenDesktop, XenApp, XenServer, and NetScaler. CDC delivers VDI technology on-demand.
Red Hat	**RHEV for Desktops**	Red Hat Enterprise Virtualization for Desktop's version 2.2 was released in June 2010. Can offer publishing of RHEL5 and Windows XP to client desktops.

Further reading

Definition from Whatis.com: What is VDI technology?

Case study: Forbes Marshall's journey towards VDI

News: Perfetti moves to Windows 7 on VDI

News: Kotak Bank's IT projects to cover VDI, analytics

Tip: Calculating the return on investment from VDI

Tip: VDI technology implementation: Three things to avoid

Tip: Four reasons why VDI might not be right for you

Tip: Lock down systems by switching to a VDI technology

Tip: What technology makes VDI possible?