



VDI and Education

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A g e n d a

VMware Virtual Desktop Infrastructure

What is VDI?

Solution Components

Key Benefits

VDI Architectures Types

Pain points: 25 Years of PC MIS-Management

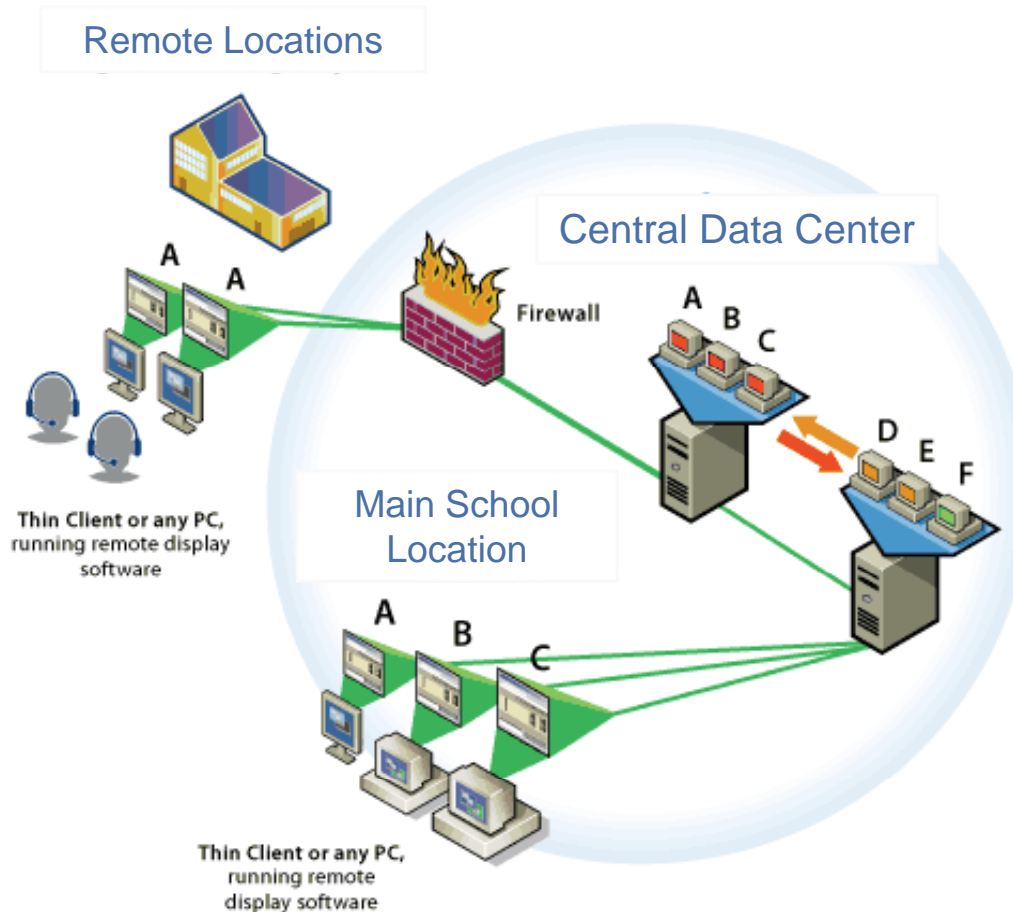
PC management paradigm

- > OS & Applications tied to desktop hardware
- > Single Operating system per desktop
- > Manage users (including contractors, remote workers) and hardware together for extended enterprise
- > Users are either desktop or laptop users

Challenges

- > Management of hardware, OS and applications time consuming and expensive
- > Low and Inefficient utilization of desktop resources
- > Difficult to securely track and control data and apps across the enterprise
- > Secure end point lock down difficult
- > Minimal flexibility and mobility for the global enterprise work force
- > Low end user satisfaction

Virtual Desktop Infrastructure (VDI)



- Remote desktops within a firewall
- Users need access to their own desktop (not shared)
- Thin clients offer improved reliability and economics
- Reduced mgmt & support problems
- Allow Students to “break” systems and have them restored before the next class begins

Why do We Actually Want to Control End-User Devices?

Reason #1: Productivity

- Your job: deliver users consistent, reliable access to educational applications and specific data
- The device is part of that equation

Reason #2: Network Security Risks

- Environments with missing patches, out of date anti-virus, missing firewalls can introduce infections or breaches

Reason #3: Software Licensing Compliance

- Installing on unmanaged devices can be a violation of commercial licenses
- Install on managed devices is often violation of personal software licenses
- Students installing illegal software

Reason #4: Sensitive School Data Risk

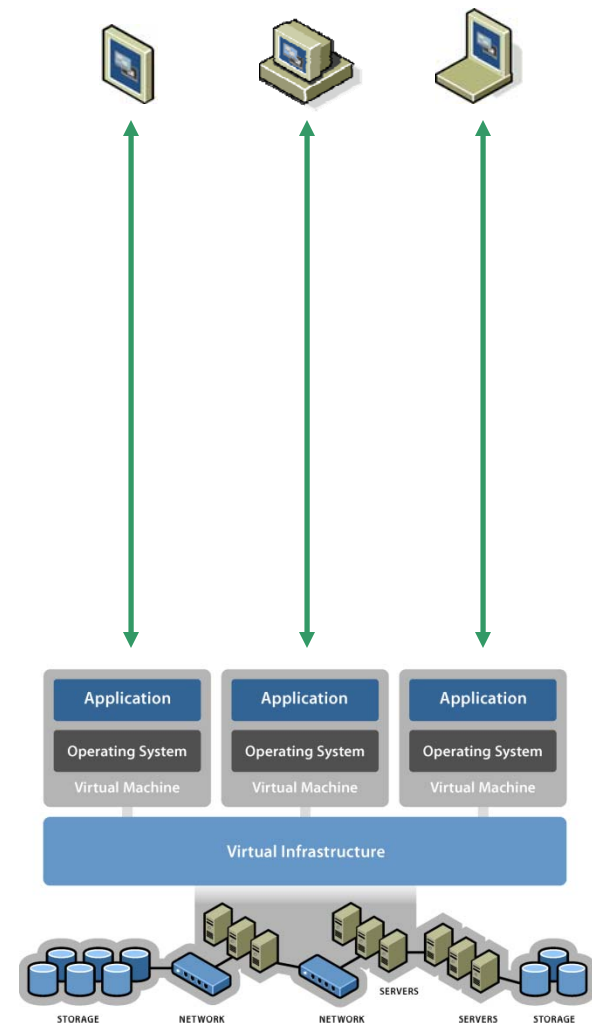
- Accidental loss or theft via email
- Theft from infections or key loggers
- Theft from lost/discarded personal hard drives or portable media

Reason #5: Keep costs as low as possible

- Supporting more, varied, unknown devices presents likely increases in costs

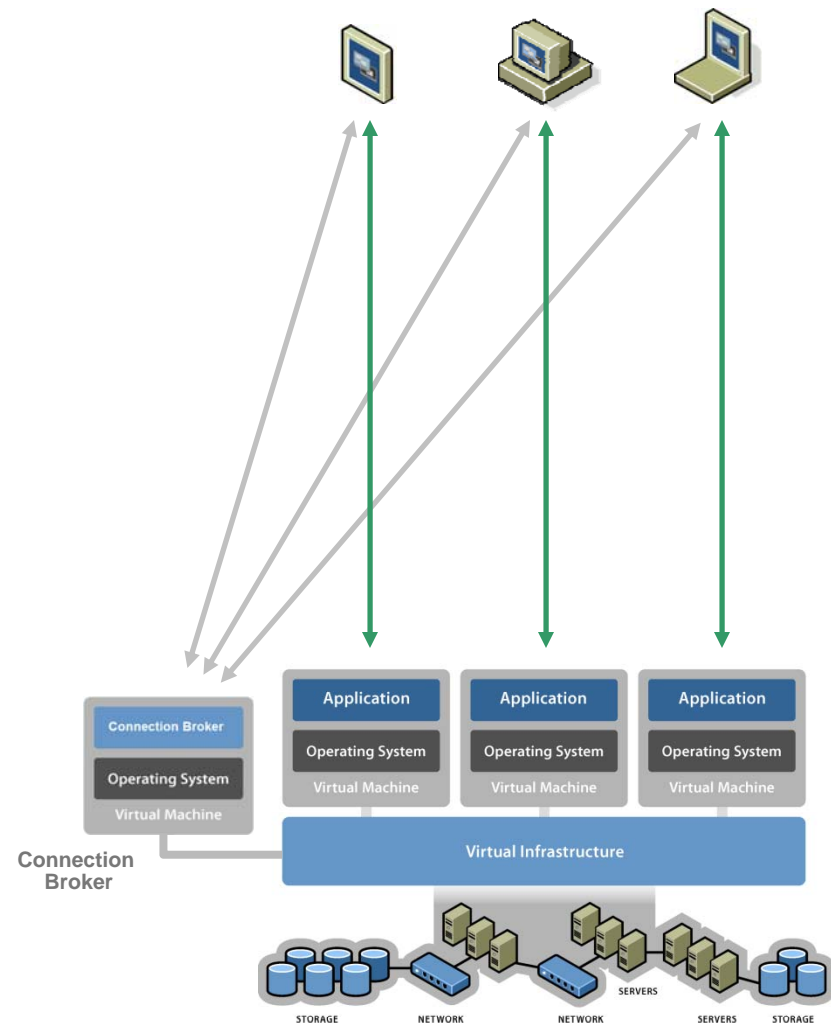
VDI Architectures – Basic Implementation

- A “One-to-One” relationship between endpoints and Virtual Machines is established
- End-users are assigned the hostname of a VM which belongs to them.
- Connections take place over an existing secured corporate network.
- Remote viewing of VMs is done through desktop RDP software or the built-in features of a thin client.



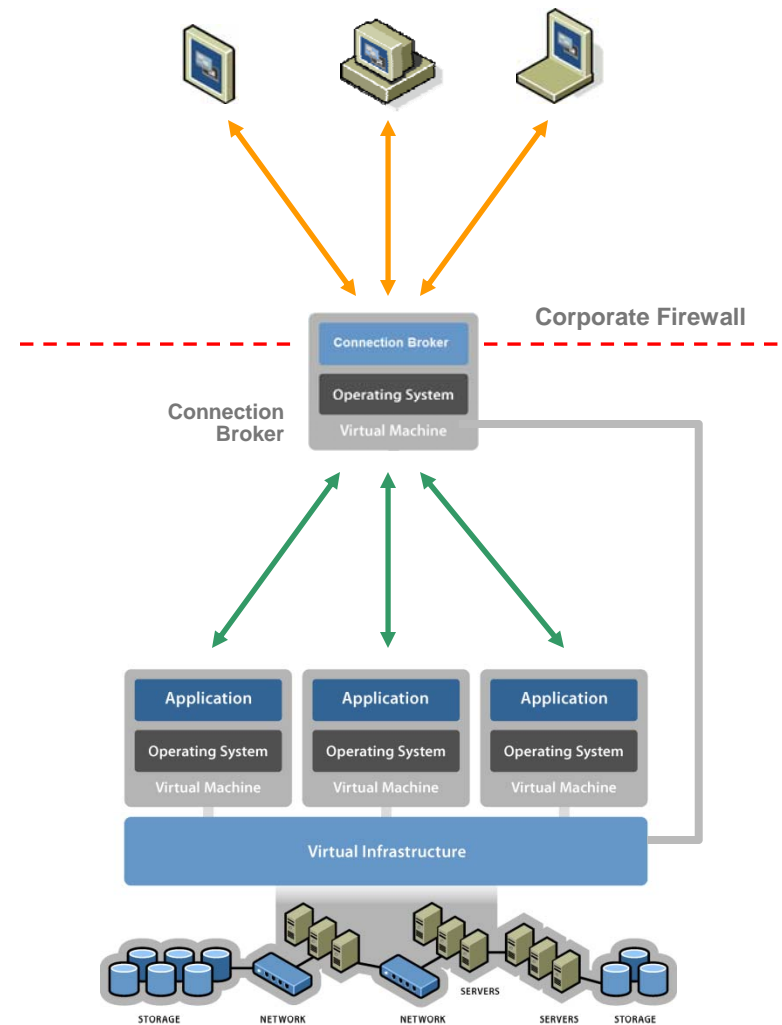
VDI Architectures – Simple Brokering

- End-users are given a web address on the school network for the connection broker.
- After authenticating, the connection broker provides a list of available resources to the end-user.
- Enables pooling, provisioning, and other advanced management features.
- Integrates with Directories (AD) and VirtualCenter.

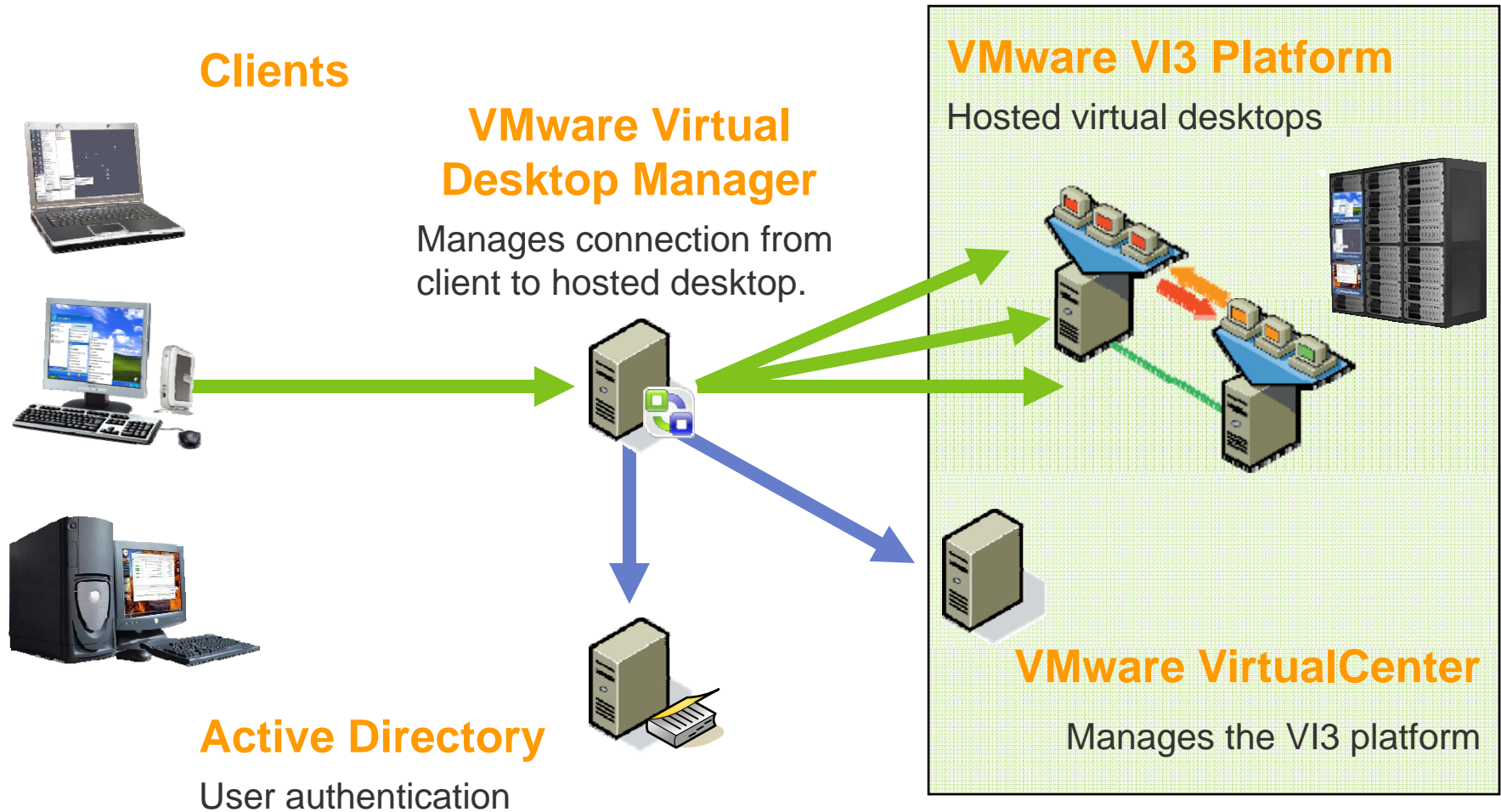


VDI Architectures – Tunnelled Brokering

- End-users are given a public web address for the connection broker.
- After authenticating, the connection broker provides a list of available resources to the end-user.
- The connection broker links the end-user via an encrypted tunnel to the VM.
- The encrypted tunnel is a mini-VPN component designed to route only RDP traffic.



Key Components of VMware VDI



Key Benefits of VDI

CENTRALIZATION

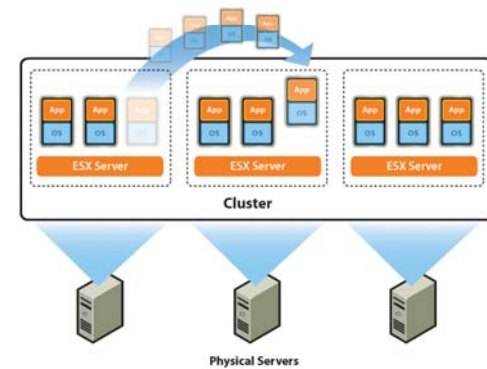
- Close to IT Operations
- Application Performance
- Security

COMPATIBILITY

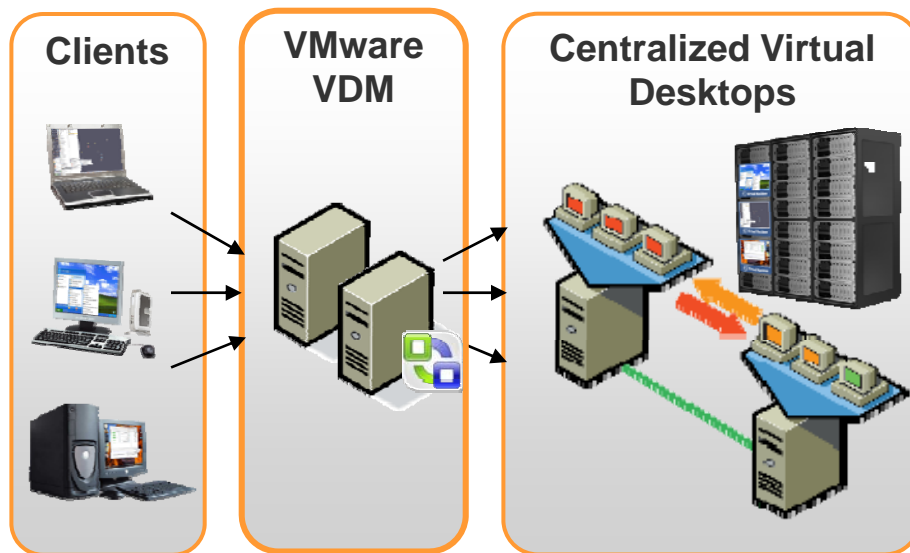
- Real Desktop Operating Systems
- Isolation

VIRTUALIZATION

- Homogenous Virtual Hardware
- VDI is Virtual Infrastructure



VMware VDI - Summary



- **Enterprise-class, scalable connection broker**
- **Automatic desktop provisioning with optional “smart pooling”**
- **Desktop persistence and secure tunneling options**
- **Microsoft AD integration**
- **Usability enhancements (such as USB redirection)**

Benefits of VMware Virtual Desktop Infrastructure (VDI)

- End-to-end enterprise-class desktop control and manageability
- Familiar end user experience
- Tightly integrated with VMware’s proven virtualization platform (VI3)
- Scalability, security and availability suitable for organizations of all sizes



Advanced Logic
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Thank You

THANK YOU