

## **Case Studies:**

# **Desktop Virtualization**

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# Why Virtualize?

Business Drivers	Technology
Common and Consistent Desktops	<ul style="list-style-type: none"><li>• No software at the end point; ALL software centralized on servers</li><li>• Clone from template</li></ul>
Business Continuity	<ul style="list-style-type: none"><li>• VM is simply a file; highly mobile</li><li>• Abstracted from hardware</li></ul>
Backup of Data	<ul style="list-style-type: none"><li>• Centralized access to all desktops</li><li>• SAN</li></ul>
Security of Data	<ul style="list-style-type: none"><li>• No local storage / Only bitmaps to the display</li><li>• Full control over USB</li></ul>
Environmental Impact	<ul style="list-style-type: none"><li>• Energy efficiency of shared server hardware</li><li>• Energy efficiency of end point device</li></ul>

# Finding a Solution

## Criteria

- Client: All hardware, no software
- Server: No proprietary hardware
- Purpose-built for VDI / server-based desktop virtualization

## Alternatives

- Traditional Thin Clients
  - Still have local OS and drivers to manage
- PC Blades
  - Dedicated (proprietary) HW
  - One-to-one mapping
- Multi-tier/Proxy Server
  - Requires middle server to translate protocols to client

# Case 1: CC County Health Services

- Basic description of organization
  - Employees, Regional Health, servicing x people, # sites, etc., etc.
- Business drivers
  - HIPAA requirements
  - Business Continuity
  - Ability be operational within minutes of a disaster
  - Environmental Impact
  - Space Constraints
  - Mobility of the device

# Before Virtualization

- Few desktops available in the event of a disaster
- Active Directory
  - Used for authentication only
- PC of no use until someone is there to use it

# After Virtualization

- Technical solution
  - VMware ESX and Virtual Center
  - Pano Logic, Inc.
    - Pano Device and Pano Desktop Service
    - Pano Logic Management Server
- Results
  - Enhanced workflow
    - Ability to connect immediately after disaster
    - If the virtual machine is not on, use VC to turn it on
  - Imaging
    - Use a single image. If software needs to be updated, simply create a template
  - Data Security

# Case 2: Allergy Medical Group

- Basic description of organization
- Business drivers
  - HIPAA requirements
  - Space Constraints
  - Ability be operational within minutes of a disaster
  - Mobility of the device

# Before Virtualization

- Single Desktop
- Active Directory
  - Used for authentication only
- User Data
  - Stored locally on individual machines

# After Virtualization

- Technical solution
  - VMware ESX and Virtual Center
  - Active Directory
    - Roaming profiles
  - Pano
    - Pano Device and Pano Desktop Service
    - Pano Logic Management Server
- Results
  - Enhanced workflow
    - Capability to move from machine to machine without losing access to data
  - Data Security
    - Data is backed up and available to the end user from ANY Pano device or PC

# Best Practices

- Client should have no OS
  - Moving the desktop to the datacenter should not create the need for two operating systems
- Maintain openness of server hardware
  - Don't lock yourself into proprietary hardware at the data center level
- Segregation of OS and User Data
  - OS and applications comprise the VM image
  - Use AD, roaming profiles and group policy to house User Data outside the VM
- Network Connectivity
  - Consider location of virtual desktops to application servers
- Directory Architecture
  - Leverage the Directory structure (remove the need for a parallel user account infrastructure)
  - Keep profiles small
- Licensing
  - Talk to your Microsoft Rep

# Thanks

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