Bring Your Own Device

Quick Facts

About Us

- 20th Year
- Grand Rapids & Royal Oak
- 25 Staff

Approach

- Vendor Agnostic
- Non-reseller
- Professional Services Only

Partnerships

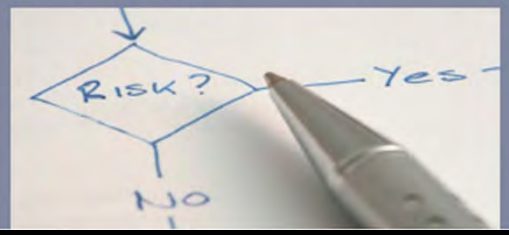
- Microsoft Gold
- VMware Enterprise
- Cisco Premier
- Novell Platinum
- Citrix Silver

Expertise

Project Management

Project Management

Our Certified Project Management Professionals (PMP) control projects to balance the three core constraints of budget, time and scope.



Infrastructure

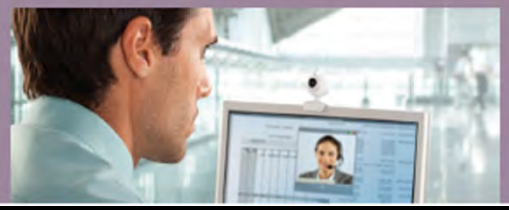
Infrastructure

Our infrastructure services span the network and its integrated systems of servers, storage, applications and computing devices.

Collaboration

Collaboration

Portals, document management systems, instant messaging, presence awareness, voice and video conferencing are part of many solutions we design and implement for our clients.



Access & Identity Management

Access & Identity Management (AIM)

Security and identity management systems control access to networks. Our certified security experts can develop and deploy solutions that ensure your systems are in compliance.

Agenda

- Why the move to personal devices?
- How and what technologies are involved?
- Advantages and disadvantages of personal devices
- Managing personal devices
- 4 different corporate policies
- What's next

Sign of the Times

- 1995 – Employee Car

- 2005 – Employee Cell Phone

- 2015 – Employee Computer

Why The Move To Employee Owned Devices?

- Cost savings
- Convenience
- Already in service
- Cost savings
- Increased employee satisfaction
- Increased employee productivity (WAH)
- Cost savings

Industry Analysis

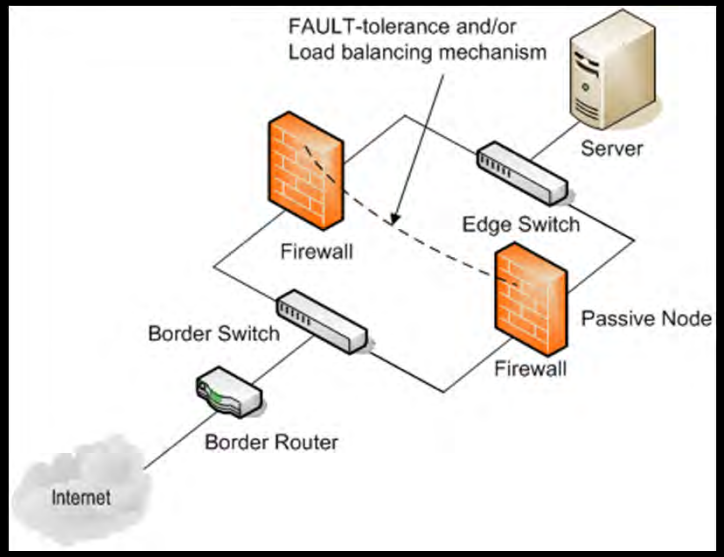
- Gartner projects a 9-40% savings using employee PCs
- 1 in 10 use personal computers for primary work device <u>today</u>
- 50% use personal computers for work at some time
- 43% of companies have a written policy, with specific rules

What Technologies Are Typically Involved in BYOD?

- Robust remote access systems
- U3 boot devices
- Corporate image on employee device
- Remote session environments
- “Mobile” access technologies
- Virtual desktop environment

Robust Remote Access Control

- Firewall(s)
- Intrusion detection
- Encrypted communications
- Remote proxy servers
- Two factor authentication
- Load balanced / Fault tolerant internet connections



U3 Boot Device

- U3 boot devices
- Boot employee laptop from USB Flashdisk
- Run operating system and applications from flash drive
- Store data on U3 device

Corporate Image on Employee Owned Device

- Create corporate standard image
- Install directly to EOD
- Install in virtual session on EOD
- Time-Bomb the image or remove during offboarding

Citrix Remote Desktop Sessions

- Proven technology – 15+ years
- Used successfully on thousands of applications
- Understood by most IT groups
- Strong support network
- Best if used with application virtualization

Mobile Access Technologies

- Cell phone
- Smartphone
- Netbook
- IPad / APad

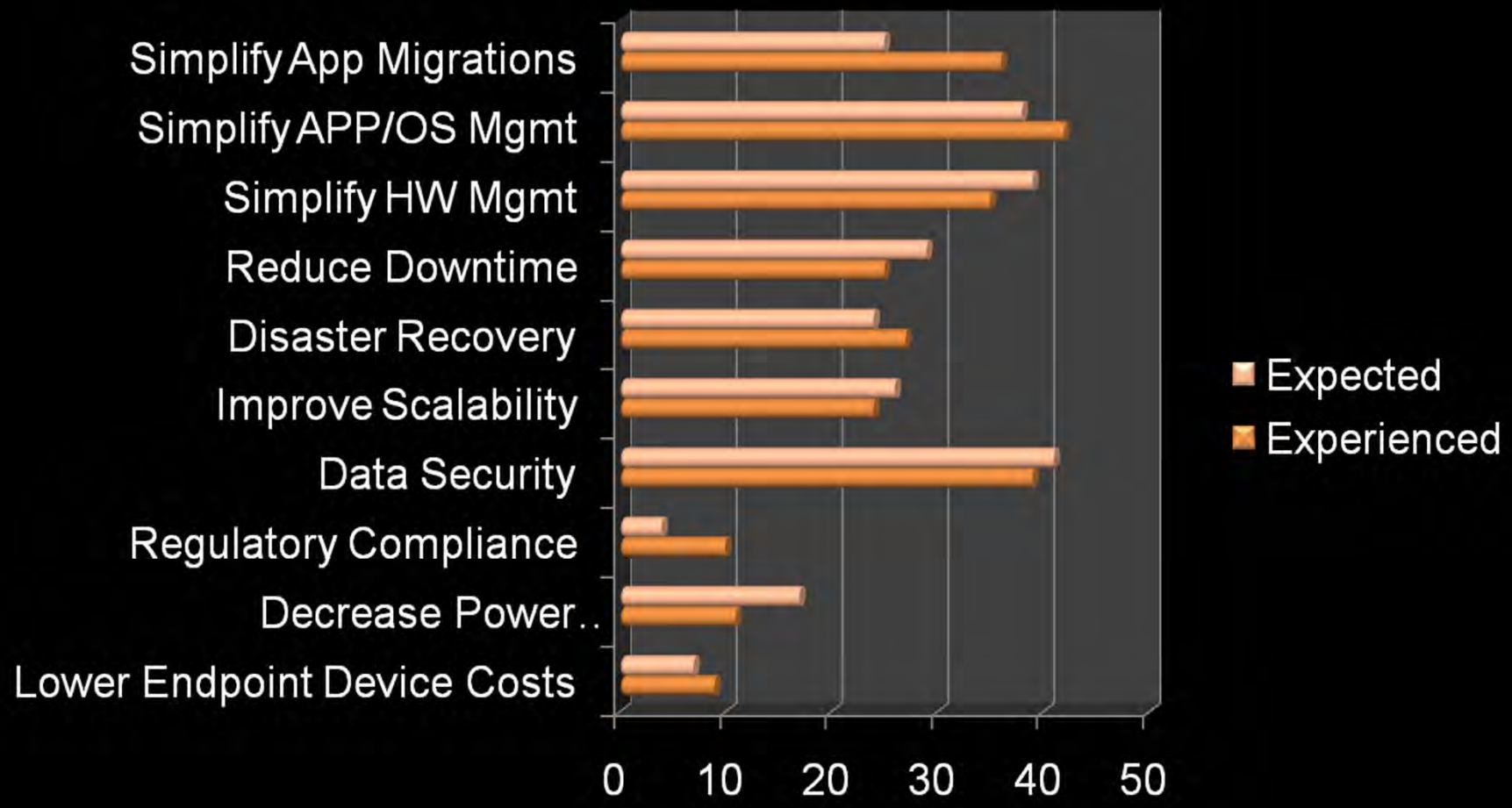
Virtual Desktop Infrastructure

- Remote control of virtual desktop
- Robust internal data center infrastructure
- Variety or remote access devices
- Integrates into your existing desktop strategy
- Improves security

Virtual Desktop Benefits

- Longer life of endpoint devices
- Centralized administration
- Improved security
- All data stored in datacenter
- Speed of deployment
- Single image – hardware independence
- Better hardware utilization
- Higher availability
- <u>Endpoint device is irrelevant!!</u>

IT Management Virtualization Expectations



2008 IDC Report

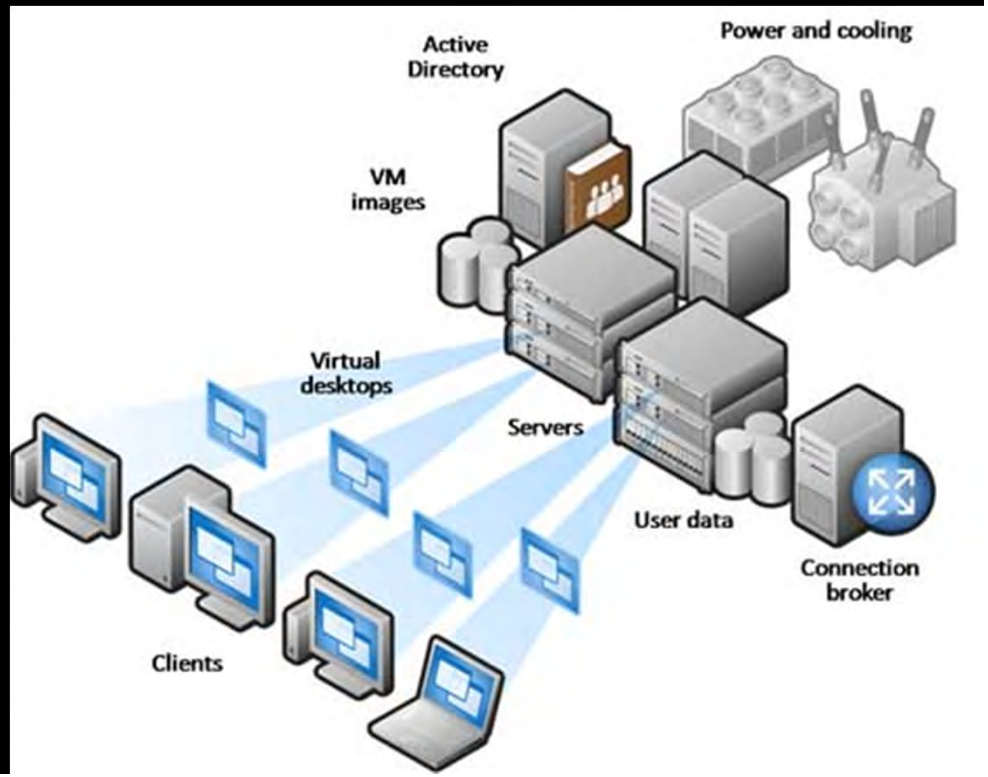
Physical vs. Virtual

Cost	Physical Desktop	Virtual Desktop
Client hardware	$400	$300
Server hardware	-	$250
Virtual desktop solution	-	$220
PC deployment costs	$185	$25
Operations: Support, software deployment, backup, security, virus protection	$600	$392
End-user operations: Training, self-support	$2215	$704
Annual downtime cost	$90	$30
TOTAL	$3490	$1921

Gartner TCO Comparison of Corporate Owned PCs with Server-Based Computing

Virtual Desktop Components

- Virtualization platform
  - Highly available, resource load balancing
- Connection Broker
- Hosted desktop
- Application deployment process/solution
- Endpoint
  - Desktop, laptop, thin client, **employee owned device**



Possible Drawbacks

- Large initial investment
  - Servers for virtualization infrastructure
  - FC or iSCSI SAN for shared storage
  - Network infrastructure
  - Cost benefit analysis
- IT training / expertise
- Reliance on network connectivity
- End-user experience

Key Players

- VMware
  - View
  - Virtual Infrastructure / vSphere
- Citrix Systems
  - XenDesktop
  - XenApp (Presentation Server)
  - XenServer
- Microsoft
  - Remote Desktop Services (Terminal Services)
  - Hyper-V
  - Windows Server and workstation operating systems

Disadvantages of Employee Owned Devices

- Commingled data
- Security, higher risk for infection
- Theft or loss of company data
- Incompatibility… OpenOffice on a Mac?
- Employee equipment damages corporate assets
- Higher support costs without proper policies

BYOD Policies

- Policy # 1 – We Take On All Comers

TCTexas

"We struggle with this one - most of our equipment is donated, and some of it is employee owned. I state that personal equipment is be allowed, but it first has to be turned over to IT for a complete reload and AV install, etc, and will be a monitored computer as long as you wish for it to be used here. When you depart or wish to have it removed, IT will reload it with your software if you wish, or simply erase "

http://community.spiceworks.com/topic/107246

BYOD Policies

- Policy # 2 – Live & Let Live

TheReal_Joe

"The equipment policy basically says that the company is not responsible for damage to anything not owned by the company, and that the user is responsible for anything damaged by their personal equipment, as determined by IT.
When they see that, most of them decide it's not worth the risk. Or they don't care, and sign it anyway.

http://community.spiceworks.com/topic/107246

BYOD Policies

- Policy # 3 – Father Knows Best

Sosipaterl

"If they really need something specifically the company buys it for them. If there is no business case for the company to purchase it they ***don't*** *get it."*

http://community.spiceworks.com/topic/107246

BYOD Policies

- Policy # 4 – Acthung! We Are in Charge

Noitall

"Simple, the employee can bring in products they buy, but the second they hook them up they belong to IT. Problem solved. This goes ***double*** *for netbooks, ipads, etc."*

http://community.spiceworks.com/topic/10

How Do I Get Ready?

- Employee purchase plan / policy
- Corporate insurance
- Select one or more technology options
- Written corporate support policy
- Confirm your software licensing rights

Case Study - Citrix

Here are the basics:

- Workers apply to their managers, who decide whether they're a good choice for the program. About 10 percent of Citrix's work force participates.
- The company gives workers $2,100 to buy a machine, based on the company's calculations of its total cost of ownership of the devices.
- Employees are required to install antivirus software that the company provides.
- They are required to buy a service contract with an outside provider (Geek Squad, Dell, etc.) Citrix provides application support, but not device support.
- They **must** connect through Citrix's SSL VPN, Secure Access Gateway. It uses XenApp for application delivery and XenDesktop to create the corporate image on those machines.

Case Study - Citrix

- Company saved 15-20% on TCO
- > 50% spent more than stipend
- < 25% kept corporate desktops
- 41% chose Mac OS-X

What is Next?

- IT Business Edge Article
  - http://www.itbusinessedge.com/cm/blogs/all/employee-owned-laptops-is-more-control-worth-added-cost/?cs=10394
- Gartner Article
  - http://www.gartner.com/it/page.jsp?id=696007

Thank You

Royal Oak

306 S. Washington Ave.
Suite 212
Royal Oak, MI 48067
p: (248) 546-1800

Grand Rapids

15 Ionia SW
Suite 270
Grand Rapids, MI 49503
p: (616) 776-1600

www.cdh.com