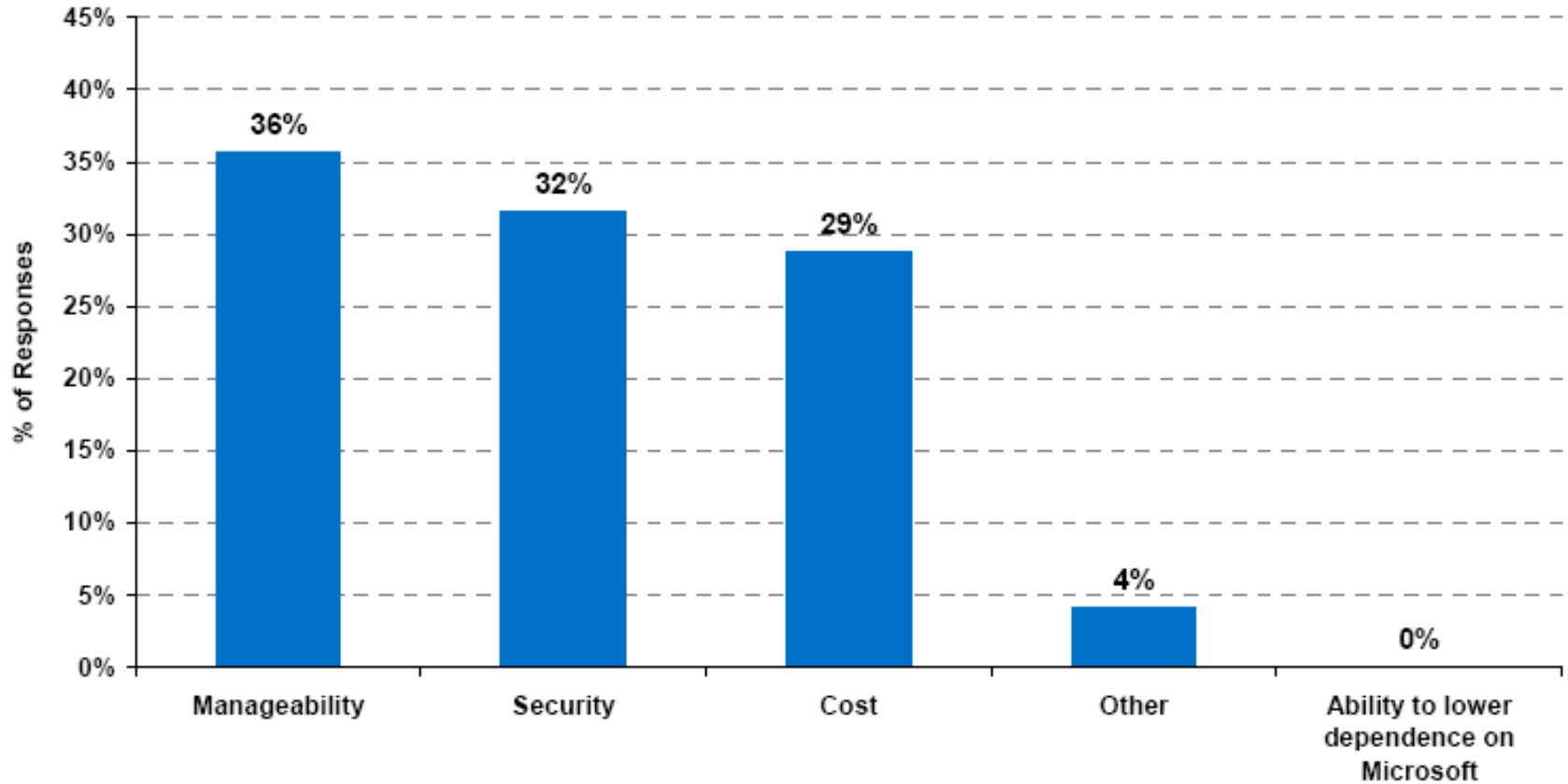

Parallels OS Virtualization: PARALLELS VDI

CIO's Primary Drivers of Desktop Virtualization



Source: Goldman Sachs IT Spending Survey.

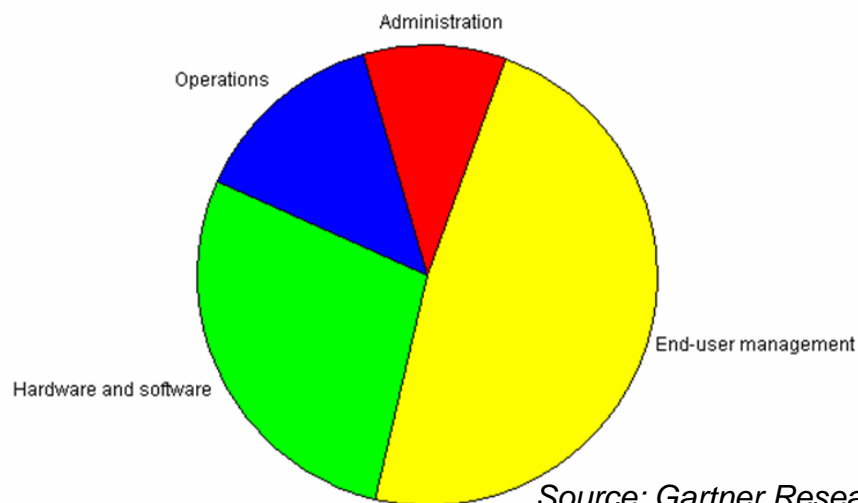
Today's Enterprise Desktop Challenges

- Desktops *are* Enterprise Infrastructure
- Decentralized desktops are hardest to secure, manage & maintain
- Enterprise IT is faced with a massive desktop refresh cycle - “Windows 7”
- IT budgets are *still* under pressure

Physical Desktop TCO

Non-hardware/software costs dominate total PC costs

Hardware and software make up less than 30% of total PC total cost of ownership



Source: Gartner Research

VDI Scenarios



Development Outsourcing

Developers in remote offices around the globe, working from home, or in clients offices



Task Workers

Task workers (e.g. call center) only require basic applications. Current solutions over deliver at much higher cost



Global Disaster Planning

Backup offices in case of disaster with full capability to run the business via remote connections

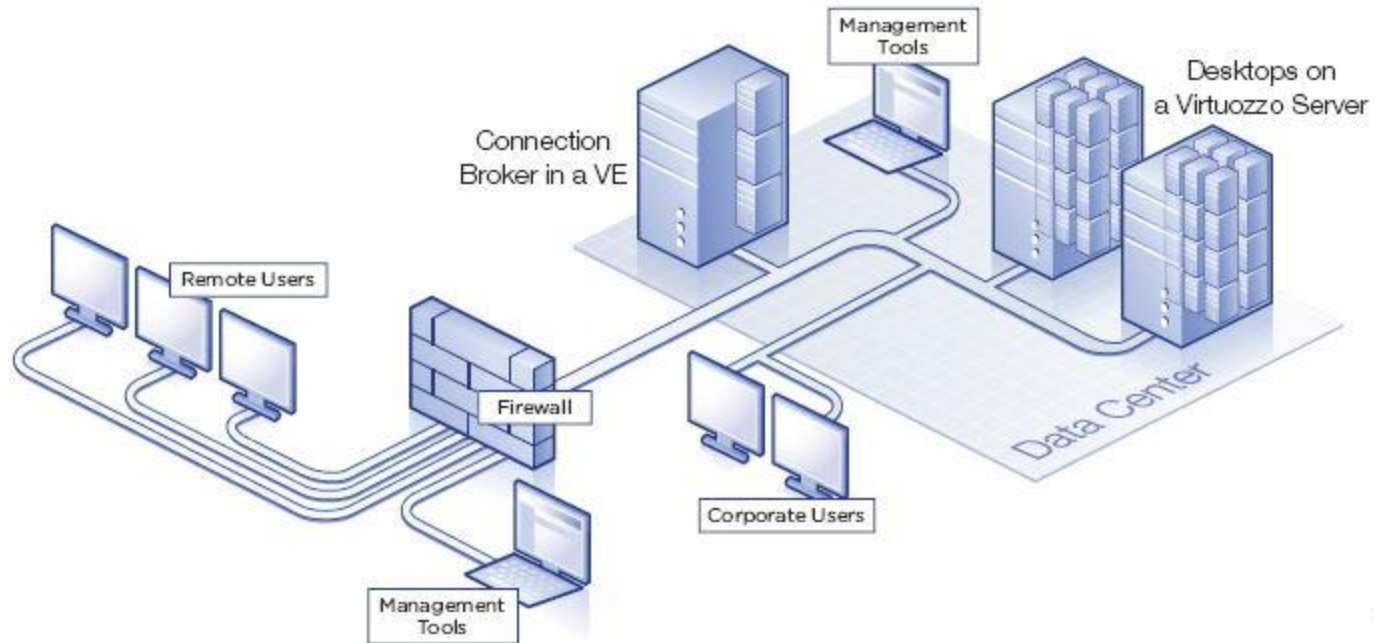


Data Security

Controlled access to centralized data repository. Data never leaves the data center

Parallels Virtual Desktop Infrastructure overview

Desktops served from secure centralized servers in the Data Center



Parallels VDI Overview

User Interface

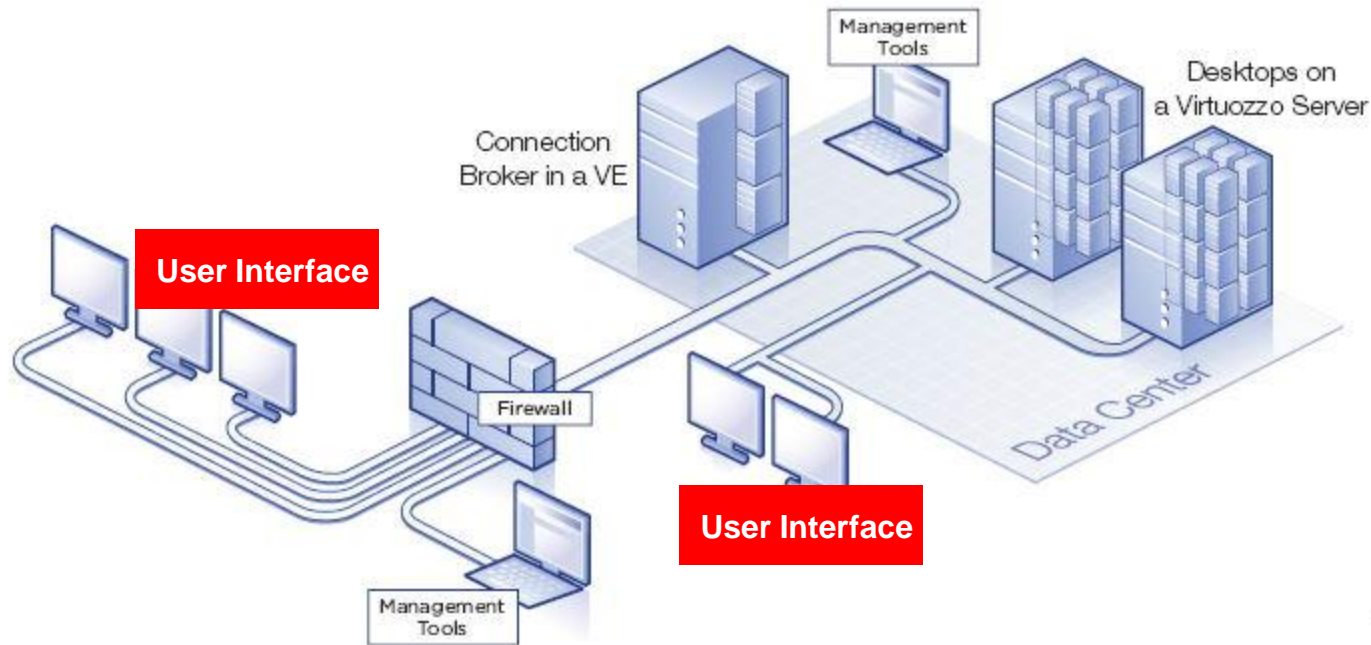
Virtual Desktops

Connection Broker

Management Tools

Your Choice

- Access Virtual Desktops with
 - Existing Hardware
 - New Thin Clients
 - Employees and contractors home based systems
- Access Virtual Desktop from inside & outside the firewall
- 128 kbit bandwidth enough for office app workload



Parallels VDI Overview

User Interface

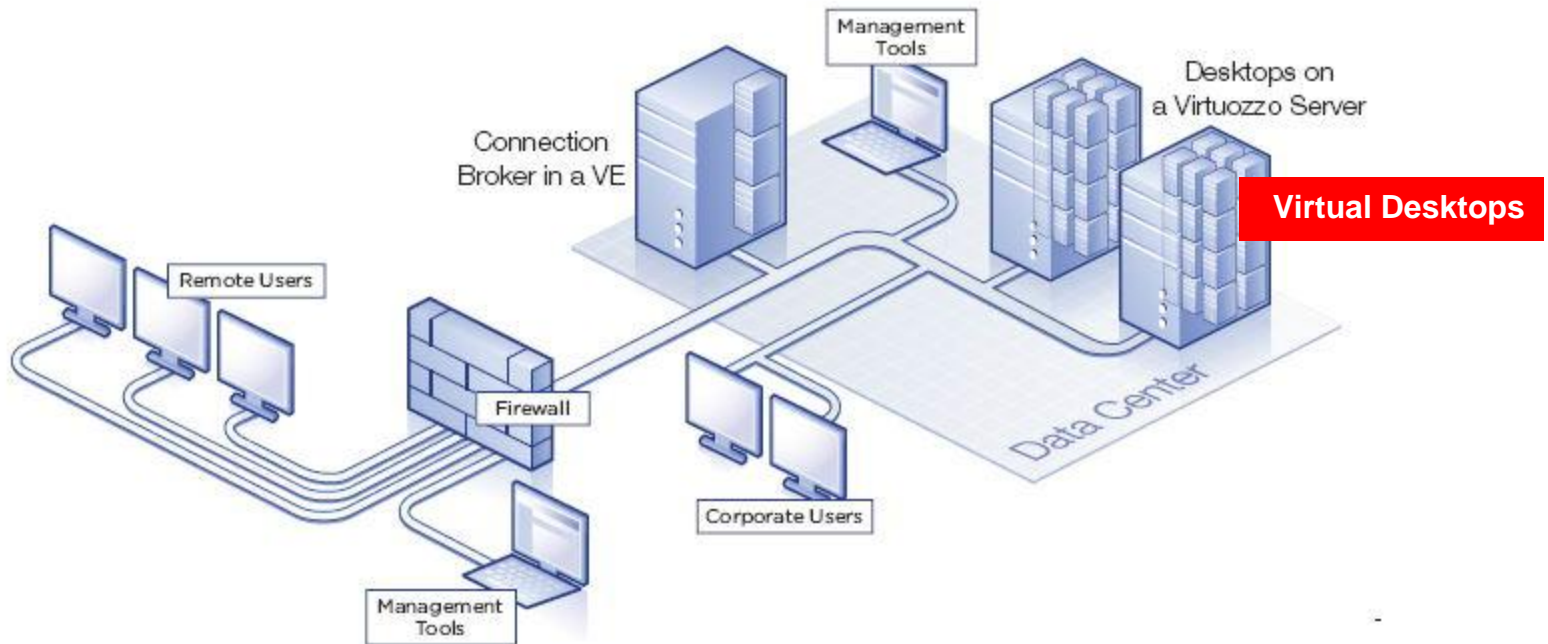
Virtual Desktops

Connection Broker

Management Tools

Fully Functional Desktop in the Data Center

- Virtual Desktop based on Parallels Virtuozzo Containers
- Virtual Desktops hosted on servers in the Data Center
- Look and feel like Windows Vista or XP or Windows 7
- Delivers complete isolation for each desktop
- Create customized desktops (e.g power users... task workers)



Parallels VDI Overview

User Interface

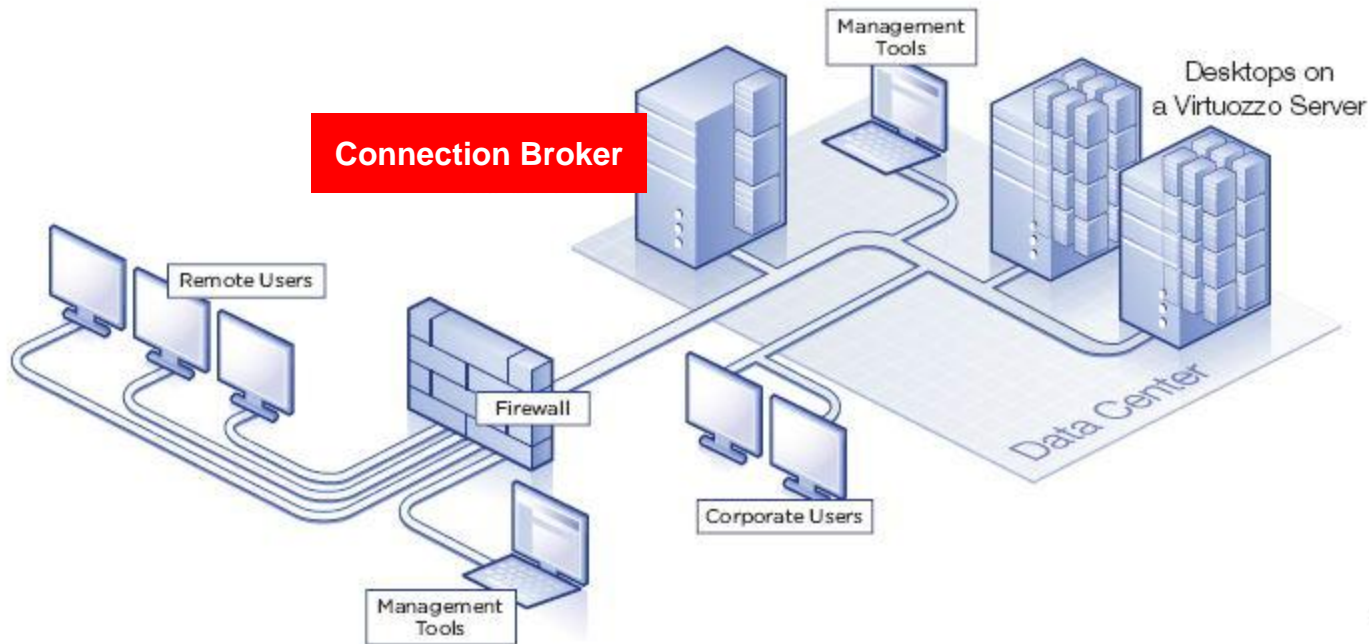
Virtual Desktops

Connection Broker

Management Tools

Connection Broker by Ericom or Quest

- Authenticate and receive back the address of the hosted desktop
- Connect to the hosted desktop using some type of remote display protocol (for example, RDP)
- Print from thin clients w/o drivers
- Multimedia acceleration (flash, silverlight, video и др.)
- USB devices support
- Bi-directional audio
- Local Text Echo



Parallels VDI Overview

User Interface

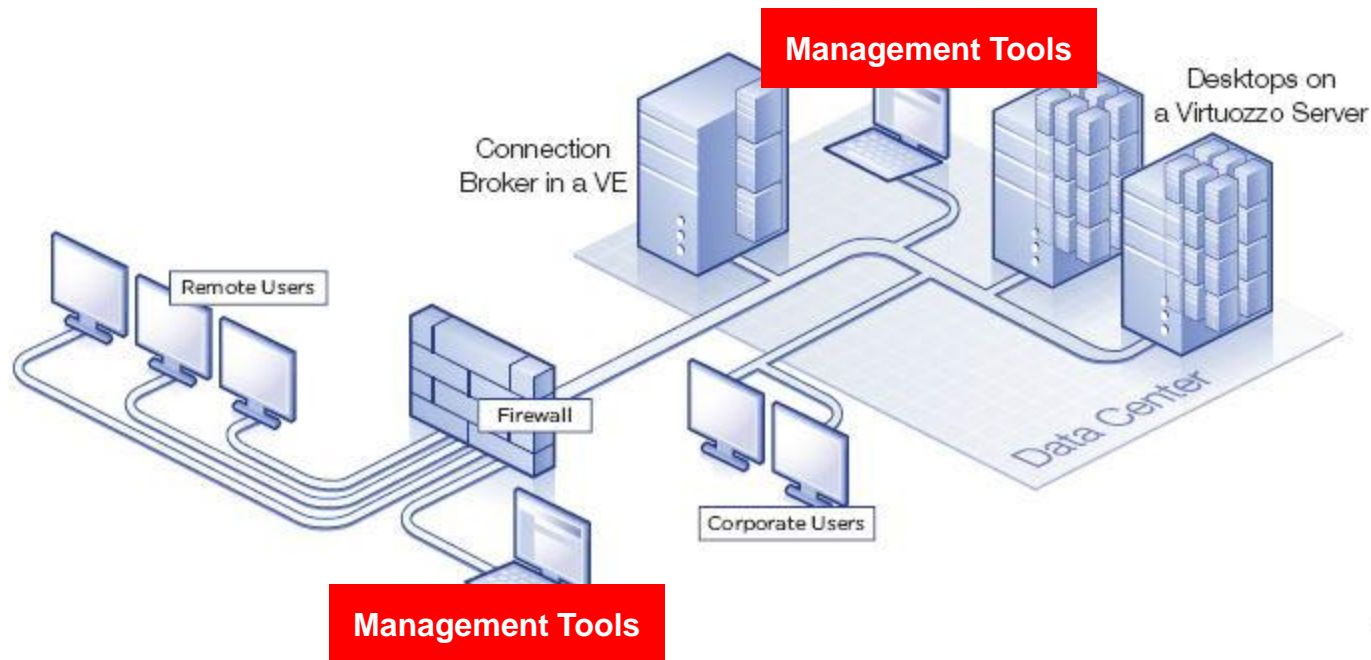
Virtual Desktops

Connection Broker

Management Tools

Managing Virtual Desktops

- Deploy Virtual Desktop within seconds
- Setup predefined virtual desktop configurations
- Leverage Active Directory policies
- Create user groups and add applications to individuals or users in seconds
- Update and upgrade desktops quickly w/ global updates



Why Parallels Virtuozzo Containers for VDI?

Highest Desktop to Server Ratio

- 3-5x desktops per server over Hypervisor-based VDI solutions

Global Updates and Patch Management

- Seamlessly and easily apply patches and updates to all desktops at once

Low Cost and Dynamic Storage

- Most efficient use of storage with ability to grow storage as needed

Fully Dynamic Resource Management per Desktop

- Ability to dynamically increase/decrease CPU, memory, storage allocations

Fast Provisioning of Desktops and Applications

- Deploy new desktops and applications to individuals and groups in seconds

Desktop Computing Options (Competition)

	Traditional Client	VDI - Hypervisor VMware/Citrix XenDesktop	VDI – Container PVC	App Virtualization Citrix XenApp
Full Desktop Experience	Yes	Yes	Yes	No
Utilization	Significant Underutilization	Optimized	Optimized	Optimized
Density	1	34-60 desktops*	130-140 desktops*	N/A
Isolated Desktops	Yes	Yes	Yes	No
Global Patching	No	No	Yes	Yes
Provisioning Time	Hours to Days	~10 minutes	~1 minute	N/A
Global Security Management	No	Partial	Yes	No
Disk Usage	Fixed - 60GB min	Dynamic -15GB/VM	Dynamic -.5GB/CT	N/A
Dynamic Resources	No	Partial	Yes	No
Global Backup and DR	No	Partial	Yes	No
Performance Overhead	Zero	~10-15%	~1-5%	N/A
Target Applications	Vista & XP	Vista & XP	Windows Server Compatible	Windows Server Compatible

* Assumes 2-Quad core 64-bit Server & OS

Desktop Infrastructure TCO comparison!

3 times more cost effective than standard PC infrastructure
30-90% savings over competing solutions

TCO 3-years for 1000 desktops	Parallels Heavy & Light Workloads	VMware Light Workload	VMware Heavy Workload	Citrix Xen Desktop	Citrix XenApp	PC
Hardware incl. 3-years warranty	\$268,667	\$438,167	\$526,167	\$449,167	\$313,167	\$600,000
Software OS + Virtualization incl. Maintenance	\$392,750	\$444,000	\$444,000	\$604,000	\$603,055	\$204,000
Administration	\$73,200	\$171,900	\$277,500	\$190,200	\$98,400	\$1,650,000
Facilities (Space, Power etc)	\$86,870	\$124,401	\$170,593	\$130,175	\$95,531	\$194,000
TCO 3-years total	\$821,487	\$1,178,468	\$1,418,260	\$1,373,542	\$1,110,158	\$2,648,000
TCO 3-years per seat	\$821	\$1,178	\$1,418	\$1,374	\$1,110	\$2,648
Difference	100%	143%	173%	167%	135%	322%