

## Cloud client computing infrastructure:

The first virtual desktop infrastructure aligned to your software strategy



# Solving real-world challenges



**Increasing student access while limiting costs**



**Optimizing flight information while reducing costs**

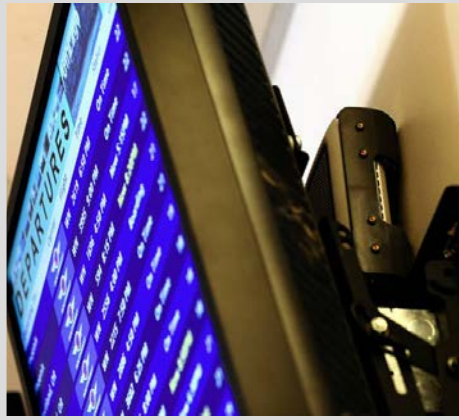


**Remaining operational after a disaster**



**Complying with federal regulations**

# Real results with Dell Cloud Client Computing



**75%** IT resources redirected to more strategic tasks including expanding desktop coverage

**\$100M** savings by system standardization

**Reduction** of energy and maintenance cost

**200** hours if IT staff saved

**100%** readiness in case of disaster

**\$1M** IT savings in a secure environment

**Increased** anytime access to patient data and enhanced records security





# What can desktop virtualization do for **you**?

## Centralizing desktops in the data center

### Empower the workforce

Enable BYOD, improve user experience and manage any device

### Optimize IT resources

Reduce IT resources, scale and speed deployments

### Improve security

Control data, apply policies, comply with regulations and monitor risk

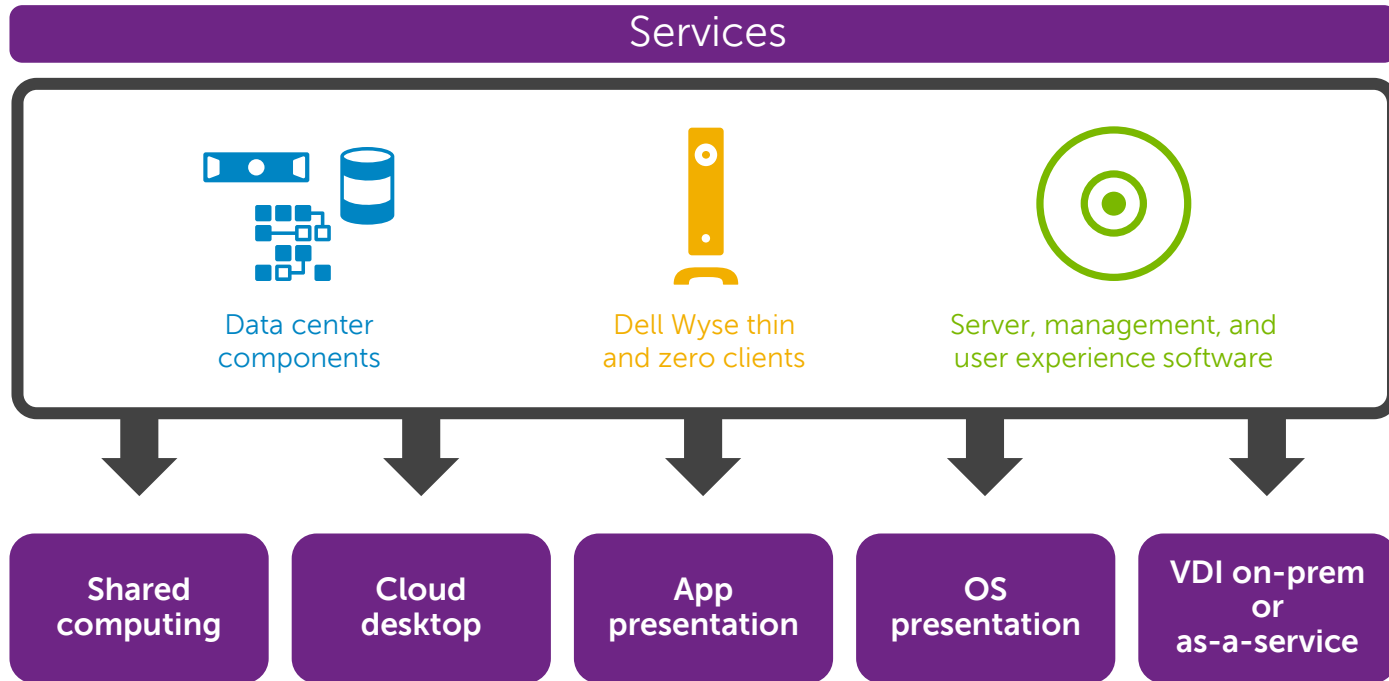
### Manage costs

Monitor and optimize total cost of ownership



# What is Dell cloud client computing?

A true solution: Data center, cloud clients, software and services



# Focused Innovation

Enhancing value with creative innovation

Inventor of thin clients

- First Virtual Desktop **Appliance**
- **Pre-configured** End-to-End solution for enterprise (server, storage, networking, services, end points)
- First **DaaS** enterprise grade solution

2011

- Introduced support for **Unified Communications** with Microsoft Lync
- **Advisor** tool to streamline VDI planning

2012


- **Converged VRTX** for DVS remote office, branch offices
- Graphic intensive application with **virtual and shared GPUs**
- Optimized **NVIDIA driver** for virtual graphics
- Custom scripting for Citrix deployments





2013



# Aligning to your software strategy

Delivering innovation and experience no matter your software choice



Choice of software	Solution innovation	Customer experience
 	<b>Agile</b> Open & heterogeneous architecture, built for now & in the future with optimized components	<b>#1</b> In customer satisfaction for IT Service & Support (TBR)
	<b>Efficient</b> Reference architectures & automated deployment templates maximize efficiency	<b>100K+</b> Hours of engineering effort ensure optimal quality of solutions
	<b>High Quality</b> Pre-packaged end-to-end solutions & services paired with unified support ensures high quality IT services	<b>400+</b> Dedicated CCC sales specialist professionals active globally building and sharing expertise

# Preconfigured solution

Desktop virtualization scalable from 10 to 50000 users



## Enterprise-class hardware

- **Compute:** PowerEdge Blades, Rack Servers
- **Storage:** Compellent/ EqualLogic
- **Networking:** Force10/ PowerConnect

## Leading hypervisors & software

- **Hypervisor:** Microsoft Hyper-V, VMware ESX, Citrix XenServer
- **VDI:** VMware Horizon View, Citrix XenDesktop, Dell vWorkspace, MS Server RDS

## End-to-End solution

- Deployment & unified support services for infrastructure
- Flexible infrastructure configuration choices
- Thin Clients, Workstations, PCs

**34%**

Decrease in power consumption<sup>1</sup>

**12+**

Reference architectures

**5x**

Faster time to value<sup>4</sup>

Source: (1) <http://bit.ly/XTbeVc> (2) <http://dell.to/15hteHa> (3) <http://dell.to/12wgWjR>

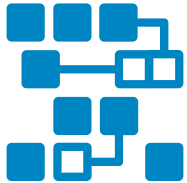
**>100K engineering hours invested in 3 stacks**





# Desktop virtualization portfolio

Solutions that scale with your needs



## Data Center Components

DVS 10 seat



DVS\Appliance



DVS Enterprise VRTX



DVS Enterprise



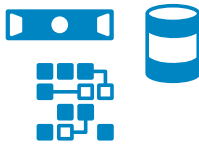
Rapid  
deployment

Maximum  
flexibility



# Optimized components

Should you choose to build your own



**Dell  
Servers**

**Minimize CapEx**

**19%**

Lower cost per desktop<sup>1</sup>

**Minimize OpEx**

**63%**

Less power consumption<sup>1</sup>

**Enhance  
performance**

**73%**

Better performance<sup>1</sup>



**Dell  
Storage**

**42%**

Lower cost<sup>2</sup>

**20%**

Power consumption savings

**3X**

Lower latency during boot storm<sup>2</sup>



**Dell  
Networking**

**61%**

Average savings

**1**

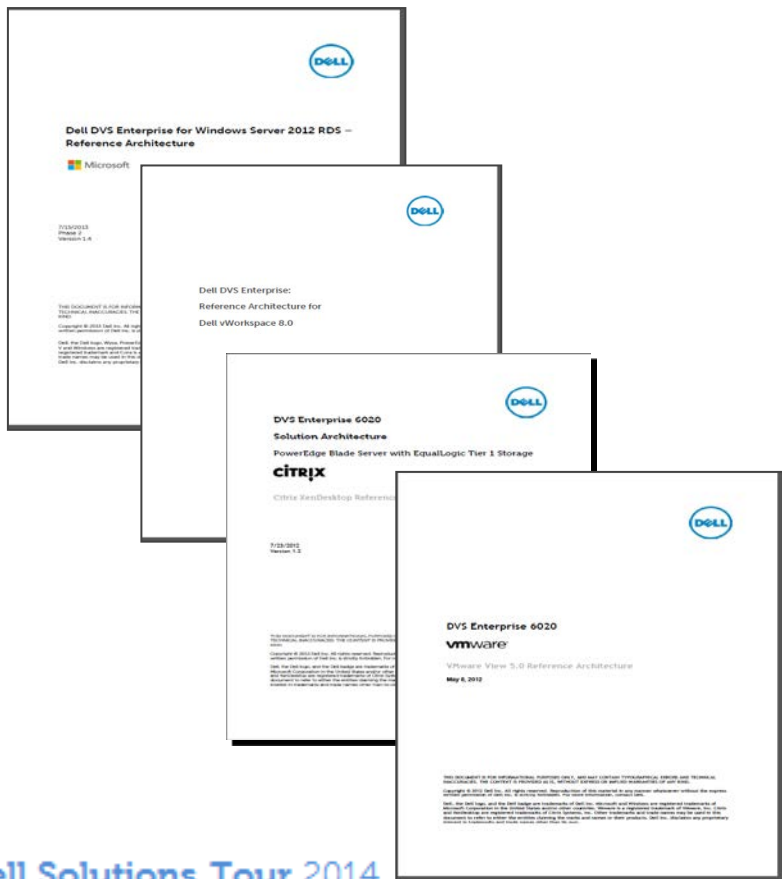
Tool to manage servers, networking and storage

**100%**

Line rate throughput with low latency



# Dell Reference Architectures



- Comprehensive document of build criteria
- Various compute form factors
- Storage considerations
- Horizon Platform design
- Graphics support
- Lync 2013
- Workload sizing
- End Point recommendations
- Best Practices

# Understand what is possible with a Dell Wyse zero or thin client?

**Desktops &  
Applications**

**1080p video  
including Flash**

**Up to 6 monitors**

**High quality  
bi-directional audio**

**2D & 3D  
graphics**

**Fast wired or  
wireless networking**

**Secure  
authentication**

**Just about any  
peripheral**

**Desktop and mobile  
devices**

# Dell Wyse cloud clients

## Most secure

Virus-immune  
Dell Wyse ThinOS

- Zero attack surface
- Ultra-secure Windows Embedded Standard and Linux thin clients



Reduce risk

## Easiest to manage

Automatic and cloud-based  
endpoint management

- Self-managed clients
- Cloud Client Manager cloud-based fixed/mobile device management



Empower IT,  
embrace  
BYOD

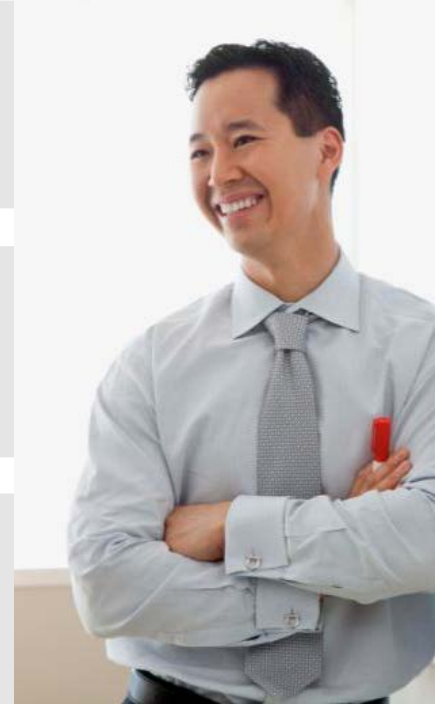
## Price/performance

Broadest portfolio of  
endpoints and software

- Endpoints designed for Citrix, Microsoft and VMware
- Dell award winning Monitor and print solutions












Price per  
performance  
for any  
budget



\*220+ patents; global thin client leader, units and revenue, per IDC for calendar 2012

# Dell Wyse cloud client portfolio

Broad selection to meet any worker type/application mix/performance/budget

	Zero Client	Thin Client	Mobile Thin Client	Cloud Desktop
Powerful	 P25/P45    Xenith Pro 2	 Z class	 14" X class	 X and Z class
Mainstream	 Xenith 2	 D class	 11.6" Xc class	 D class
Value	 E class (for WMS)	 T class	 Cloud Connect	

Performance ↑

Mainstream

Value

Flexibility →





# Dell Services for Cloud Client Computing



Consulting

Implementation

Management

Support

**5**

Global Command Centers

**96%**

Customer satisfaction for end-user deployment

**60+**

countries offering Same Business Day response

**115+**

million systems supported

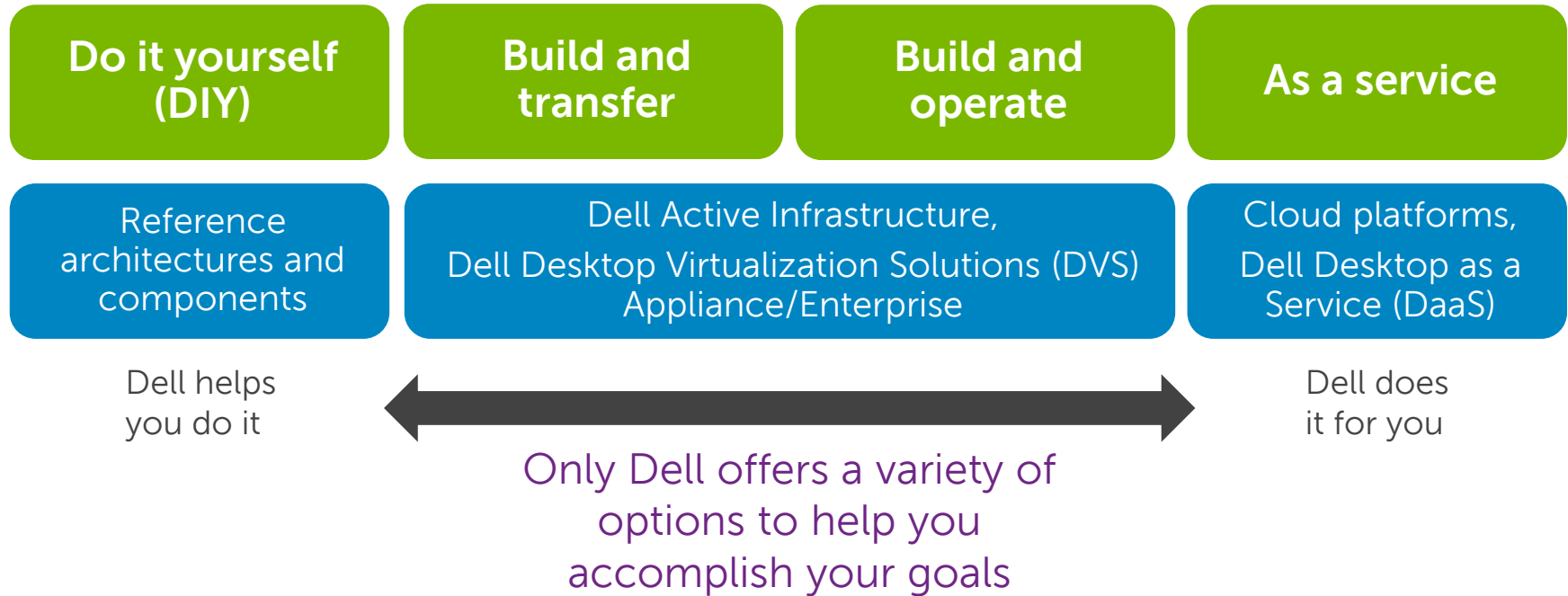
**80**

countries and 18 languages supported



# Flexible implementation models

Suits your unique needs and goals to improve TCO and ROI



# Lessons learned: Defining the right compute model for the right use case

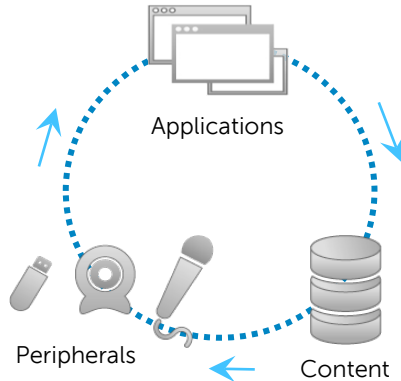
1

Define users based on function



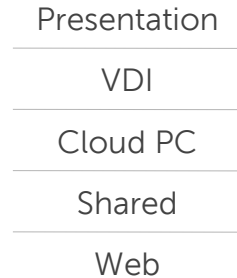
2

Create user profiles based on user type



3

Identify app delivery model based on user profile



# Lessons learned: Defining the requirements

4

Is there a preferred software partner?

vmware

CITRIX

Microsoft



5

Understand policies & business requirements



HIPAA



PCI



Data storage



6

Requirements for Proof of Concept

Trial/testing

Online demos

Dell Solutions Center



# Why Dell? A reliable approach to Desktop Virtualization

## Pre-tested, preconfigured solution stack

Dell Desktop Virtualization Solutions provide a complete Integrated Solution Stack for rapid deployment and optimized operations

## Flexible delivery models

Either do it yourself, or have Dell deliver a fully managed solution – pick the ownership model that best meets your needs

## Open architecture

Dell Desktop Virtualization Solutions leverage mainstream desktop virtualization software and open standards based architecture

## Vertical-specific platforms

Dell is delivering platforms that are customized to best meet the unique needs of certain use cases

# Cloud Client Computing awards 2013

Recognized for Innovation and customer service



## 2013 Virtualization Review Reader's Choice Award:

- Wyse T10 – WINNER!



## Best Of TechEd:

- DVS Enterprise for vWorkspace



## Computerworld Honors Laureate WINNERS!:

- Silicon Valley Education Foundation  
- Ministry of Foreign and Internal Trade and Telecommunications of Serbia



## Best Of Synergy:

- Dell DVS Enterprise Integrated Storage for Citrix XenDesktop 7



## Best Mobile Apps 2013:

- PocketCloud – WINNER!



## Dell Product of the Year Award:

- Cloud Client Manager – WINNER!



## The Annual American Business Awards-The Stevies:

- PocketCloud



## Virtualization Review's VMworld 2013 Best of Breed:

- Best Desktop/VDI: Dell Desktop Virtualization Solutions



- Office/SharePoint App Developer  
- YouthSpark Citizenship  
- Windows 8 App Developer





## Challenge

- Reduce real estate & desktop mgmt. costs
- Develop off-shore capability
- Rapid response to business opportunities
- Increase endpoint security

## Results

- 600 desktops today, adding 250 now
- 35% reduction in real estate costs
- 200% faster call desktop rollout
- Reduced deployment and testing effort

## Dell approach

- Dell Poweredge servers
- Dell Compellent storage
- Dell Wyse zero clients



# Next steps

Today - meet with Dell cloud client subject matter experts in the expo

Learn more by attending future events and workshops. Search [www.dell.com/events](http://www.dell.com/events) for upcoming events in your area.

Schedule a post-event Whiteboard Session to address your specific requirements. Contact your account team for details.

Discover how Dell Solution Centers can help your business. Discover more: [www.dell.com/solutioncenters.com](http://www.dell.com/solutioncenters.com)

Visit: [www.Dell.com/cloudclient](http://www.Dell.com/cloudclient)

