Dell cloud client-computing solutions for Citrix

End-to-end solutions that empower increasingly mobile users with access to critical data and applications from wherever they are.
Dell cloud client-computing and Citrix XenDesktop: Working together to empower your mobile workforce

Dell cloud client-computing solutions for Citrix® are designed from the ground-up to help you address complex challenges not met by traditional client deployments to empower your mobile workforce.

**Grow your mobile enterprise**
Amplify your mobility strategy by making it possible for your end users to be productive anywhere, any time, from the device of their choice.

**Stay agile and efficient**
Scale rapidly, securely and cost-effectively to address dynamic requirements, enable workforce mobility, connect new partners and efficiently onboard new employees.

**Keep your data and applications secure**
Reduce vulnerabilities through centralized policies, sophisticated security solutions and mediation and virtualized, centralized data storage.

**Control your IT costs**
Reduce hardware refresh cost, facilitate migrations from Windows XP to Windows 8 and simplify image and patch management with TCO-optimized solutions that fit your need and budget.
Best in show...

Dell’s solution for Citrix XenDesktop was recognized with the ‘Best of Synergy’ award for 2013. With an innovative approach which supports a range of 50 to 1,000 users in a pooled VDI environment this innovative compute, storage, and networking infrastructure has a total cost of less than $200 per user.

<table>
<thead>
<tr>
<th>Joint innovation</th>
<th>Solution innovation</th>
<th>Customer experience</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Simplifying VDI</strong></td>
<td><strong>End-to-end</strong></td>
<td><strong>#1</strong></td>
</tr>
<tr>
<td>Jointly engineered solutions to make VDI easier and faster to deploy</td>
<td>From the data center to the endpoint device, optimize your Citrix VDI environment with the best of Dell infrastructure components</td>
<td>In customer satisfaction for IT Service &amp; Support (TBR)</td>
</tr>
<tr>
<td><strong>Agile</strong></td>
<td><strong>Efficient</strong></td>
<td><strong>95%</strong></td>
</tr>
<tr>
<td>Open &amp; heterogeneous architecture; built for now &amp; the future.</td>
<td>From reference architectures to pre-configured stacks, Dell Wyse Datacenter adjusts to your unique needs</td>
<td>Customer satisfaction with Dell ProSupport service</td>
</tr>
<tr>
<td><strong>Partnership</strong></td>
<td><strong>High quality</strong></td>
<td><strong>42k+</strong></td>
</tr>
<tr>
<td>Dell’s 15 year relationship with Citrix helps ensure fastest time-to-market with new releases and optimized and tested configurations.</td>
<td>End-to-end solutions &amp; services paired with unified support ensures the best performing solution, fit to your specific requirements</td>
<td>Dedicated services professionals active in 90 countries</td>
</tr>
</tbody>
</table>

Dell and Citrix: Better Together
What Dell and Citrix mean to your VDI implementation

- **Leadership in cloud client-computing solutions that support your mobile workforce.** Dell’s mobile computing vision and industry-leading product portfolio for Citrix XenDesktop mobile workforce software maximizes performance with advanced security and centralized management while maintaining an optimized user experience.

- **Reduced complexity with complete end-to-end solutions.** From the data center to the endpoint device, our jointly developed solutions integrate features and functionality from both the Dell and the Citrix portfolios. Leverage integrated solution stacks for fast, standardized deployment, or use the Dell Services process to design a program that fits your specific requirements.

- **Accelerated time-to-value with Dell and Citrix jointly-engineered architectures.** Based upon the latest Citrix releases, choose from multiple infrastructures, deployment options and services to fit your workloads. Our cross-trained sales teams help you select the solution that meets your needs today and smartly grow with an architecture that flexes as your needs change.

- **A partnership driven by continuous innovation.** Ongoing engineering alignment between Dell and Citrix mean that Dell is able to match Citrix XenDesktop release-for-release to provide infrastructure stacks and Dell Wyse client solutions that are optimized for Citrix.
Dell Wyse Datacenter with VRTX
for Citrix XenDesktop®

Dell VRTX provides enterprise-level VDI capabilities within a converged infrastructure which can be used in a normal office environment. Best suited for organizations with IT resources whose requirements place a high priority on efficient deployment and management of their VDI infrastructure, both as stand-alone and in remote locations.

The solution uses Dell purpose-designed reference architectures to speed time-to-value and streamline day-to-day operations and management. Provided with a choice of stacks which support from 250 to 600 users, these solutions deliver desktop virtualization as an IT service to meet dynamic business needs and maximize efficiency by improving the utilization of staff and infrastructure.

Learn more here.

Dell Wyse Datacenter
for Citrix XenDesktop®

Ideal for organizations with a sophisticated IT environment and IT resources that are interested in robust, flexible and highly scalable desktop virtualization supporting a range of graphics and collaboration capabilities, which provides the optimal price/performance ratio for their workload.

Based upon industry standards, the solution is available with blade or rack mount server architectures. It enables a high degree of choice through an array of pre-qualified components, while still pre-engineered to speed time-to-value. Dell Wyse Datacenter simplifies the deployment of virtualized desktops for environments ranging from 50 and scaling to 50,000+ users.

Learn more here.

Dell Wyse Datacenter for Virtual Workstations
for Citrix XenDesktop®

Delivers high-end, workstation class VDI through a scalable, configurable and highly flexible approach that provides an ISV-certified solution with high-performing Dell infrastructure components.

The solution is the only single-vendor end-to-end virtualized workstation available in the market today, serving from a handful to thousands of users. It incorporates certifications for key applications and Dell Solution Centers provide a process for certifying additional applications and proof-of-concept testing.

Learn more here.
Office-optimized innovation for small and medium sized organizations, branch & remote offices

Ideal for those organizations seeking a robust, enterprise-grade desktop virtualization solution that can run in an office environment. The converged infrastructure - servers, storage and networking - simplifies the deployment of virtualized desktops for environments of 50 to 600 users, supported by reference architectures and services which speed time-to-value.

Learn more here.

At a glance

- Delivers the benefits of desktop virtualization in an integrated stack that costs about the same as a high-end desktop workstation PC
- Designed to provide cost-effective enterprise-class VDI for smaller organizations and remote/branch office locations
- Unique shared internal storage architecture removes cost and complexity
- Works with an array of thin/zero clients including Dell Wyse zero clients optimized and verified for Citrix XenDesktop
- Broad available range of Dell Services helps maximize the value of your VDI investments.

Benefits

- Office-optimized dimensions, acoustics and security leverages industry standards-based hardware and software components for the optimal balance of performance and cost per user
- Allows standalone operation for up to 600 users, or extend the capabilities of a centralized VDI program to a multi-location enterprise
- Flexible, high-performance infrastructure that can be managed using simplified tools

- Optional support for high availability (HA) and redundancy
- Provides unified communications and collaboration (UCC) support for Microsoft Lync 2013, leveraging Citrix HDX™ 3D Pro RealTime Optimization Pack for scalable real-time audio and video conferencing
- Available Dell services include design/deployment, infrastructure managed services, remote monitoring management, and virtual desktop management.

Components

- Citrix XenDesktop
- Choice of VMware vSphere or Microsoft Hyper-V hypervisors
- Dell PowerEdge VRTX converged infrastructure in 250 or 600 user configuration
- Dell ProSupport 3yr, 24x7 available.
**Optimized price/performance**

Ideal for organizations with sophisticated IT environments who are seeking a robust, configurable and scalable desktop virtualization solution with a broad range of component choice. Simplifies the deployment of virtualized desktops for environments ranging from 50 to 50,000 users, supported by reference architectures and services which speed time-to-value.

**At a glance**

- Designed to deliver cost-effective, enterprise-class VDI, enabling efficient scaling as adoption increases
- Unique internal storage option starts at less than $200/user for infrastructure
- True hardware virtualized graphics capability with vGPU which enables high end/3D graphics performance
- Available SANless option reduces cost of storage and supports high I/O requirements via SSD hard drives.
- Works with an array of thin/zero clients including Dell Wyse zero clients optimized and verified for Citrix XenDesktop
- Complete end-to-end solution, including servers, storage, networking, services and your choice of endpoints for 'better together' operation.

**Benefits**

- **Configurable VDI infrastructure** leverages industry standards-based hardware and software components for the optimal balance of performance and cost per user
- Protects your IT existing investment by supporting select compatible non-Dell components within the architecture
- **Scalable and flexible** high-performance infrastructure - rapidly deploy pilots in just a few days, and expand to full deployment with one solution that scales from 50 to 50,000 users
- Optional support for high availability (HA) and redundancy
- Includes a choice of PowerEdge blade or rack server configurations and storage options
- Supports true vGPU virtualized graphics, from basic to high end graphics/3D visualization, with HDX™ 3D Pro enabling virtualized graphics for OpenGL applications in pass-through configuration using available NVIDIA K1/K2 cards
- Provides unified communications and collaboration (UCC) support for Microsoft Lync 2013, leveraging Citrix HDX™ 3D Pro RealTime Optimization Pack for scalable real-time audio and video conferencing
- Available Dell Services for Dell Wyse Datacenter include design/deployment, infrastructure managed services, remote monitoring management, and virtual desktop management.

**Components**

- Citrix XenDesktop
- Choice of VMware vSphere or Microsoft Hyper-V hypervisors
- Dell PowerEdge rack or blade servers
- Dell EqualLogic, Compellent, or internal storage
- Dell Networking converged fabric
- True vGPU virtualized graphics with NVIDIA GRID K1/K2
- Unified communications, MS Lync 2013
- Dell ProSupport 3yr, 24x7.

**Design Your Solution.**

**ROI/TCO Calculator**

*Related Videos - link to the Dell cloud client-computing Advisor*
A complete, tested and configurable virtualized workstation solution

Delivers high-end, workstation-grade Virtual Desktop Infrastructure (VDI) through a scalable, configurable and highly flexible approach that matches the Dell Precision® brand capabilities with high-performing Dell infrastructure components. The solution enables organizations to retain complete control of their sensitive data while increasing asset utilization and overall management quality to ensure their users have workstation class performance for their graphically-intensive workloads wherever and whenever they need it. In its full data center configuration with the Dell PowerEdge R720 servers, the solution can also be used to deliver other types of desktops for task and knowledge workers, enabling organizations to manage all VDI deployments through a single infrastructure.

At a glance

- Designed to deliver workstation-class VDI with lower TCO than traditional physical workstations
- Citrix XenDesktop optimizes data and graphic intensive workloads
- Works with thin clients optimized for Citrix XenDesktop
- Certified with Autodesk AutoCAD®, Siemens PLM NX®, Tecnomatix® and Teamcenter Visualization®, PTC Creo®, and Dassault Systemes SolidWorks®
- Dell Solution Centers provide engagement process for certifying applications and proof-of-concept testing
- Complete end-to-end solution including servers, storage, networking and your choice of endpoints designed for 'better together' operation.

Benefits

- Reliable and secure need-based virtual access to applications and data
- Improved data protection and disaster recovery
- Device independent, enabling BYOD
- Workstation-class performance in line with the Dell Precision® brand promise
- Centralized infrastructure is easily scalable based on user and performance needs

- Full end-to-end solution with certified configurations supports workstation-class needs
- Centralized management of workstations and desktops reduces OPEX.

Components

- Citrix XenDesktop
- Choice of VMware vSphere or Microsoft Citrix XenServer hypervisors
- Dell PowerEdge rack or blade servers
- Dell EqualLogic, Compellent, or internal storage
- Dell Networking converged fabric
- True vGPU virtualized graphics with NVIDIA GRID K1, K2 and K2A
- Unified communications, MS Lync 2013
- Dell ProSupport 3yr, 24x7.
## Key features and benefits by platform

<table>
<thead>
<tr>
<th>Wyse Datacenter with VRTX</th>
<th>Wyse Datacenter</th>
<th>Wyse Datacenter for Virtual Workstations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Infrastructure</strong></td>
<td>Dell converged pre-integrated infrastructure, pre-cabled and pre-racked for faster deployment</td>
<td>Modular, highly customizable infrastructure</td>
</tr>
<tr>
<td><strong>Modular, scalable architecture?</strong></td>
<td>Modular - from 250 up to 600 users</td>
<td>Yes, grow within the rack or add additional units - from 50 to 50,000+ users</td>
</tr>
<tr>
<td><strong>Hypervisors</strong></td>
<td>Microsoft® Hyper-V® or VMware® vSphere</td>
<td>Microsoft® Hyper-V® or VMware® vSphere</td>
</tr>
<tr>
<td><strong>Broker Software</strong></td>
<td>Citrix XenDesktop Version 7.1</td>
<td>Citrix XenDesktop Version 7.1</td>
</tr>
<tr>
<td><strong>Windows 8 - # of user VMs supported</strong></td>
<td>Up to 600 standard users</td>
<td>Ranging from 90 (Professional) to 170 (Standard) users per R720 server, based upon the hypervisor selected</td>
</tr>
<tr>
<td><strong>Management tools/software &amp; deployment</strong></td>
<td>Dell openManage Essentials / iDRAC7 Enterprise for Blades; ‘Active Deploy’ scripts for installation</td>
<td>Dell EqualLogic SAN HeadQuarters / Dell openManage Essentials / iDRAC7 Enterprise for Blades; ‘Active Deploy’ scripts for installation</td>
</tr>
<tr>
<td><strong>Dell compute and storage platforms</strong></td>
<td>Dell PowerEdge blade servers; internal Tier 1 storage</td>
<td>Dell PowerEdge rack or blade servers; Dell EqualLogic, Compellent or internal Tier 1 storage; support for external storage, external storage; SSD and SANless storage options available</td>
</tr>
<tr>
<td><strong>High IOPS environments</strong></td>
<td>Not available</td>
<td>Available Atlantis Ilio</td>
</tr>
<tr>
<td><strong>Dell Networking</strong></td>
<td>Available Dell Networking Converged Fabric</td>
<td>Available Dell Networking Converged Fabric</td>
</tr>
<tr>
<td><strong>3rd party storage</strong></td>
<td>Not available</td>
<td>Yes, based upon industry standards</td>
</tr>
<tr>
<td><strong>3rd party networking</strong></td>
<td>Not available</td>
<td>Yes, based upon industry standards</td>
</tr>
<tr>
<td><strong>Solution Reference Architectures</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Dell Wyse zero clients</strong></td>
<td>Yes, optimized for Xenith 2 and Xenith Pro 2</td>
<td>Yes, optimized for Xenith 2 and Xenith Pro 2</td>
</tr>
<tr>
<td><strong>Persistence</strong></td>
<td>Configurable to include persistence</td>
<td>Configurable to include persistence</td>
</tr>
<tr>
<td><strong>High Availability (HA)</strong></td>
<td>Available</td>
<td>Available</td>
</tr>
<tr>
<td><strong>Virtualized Graphics (3D)</strong></td>
<td>Not available</td>
<td>GRID support with pass-through for NVIDIA K1/K2 cards, vGPU</td>
</tr>
<tr>
<td><strong>Unified Communications (UCC)</strong></td>
<td>Available Lync 2013 with Citrix HDX</td>
<td>Comprehensive 3-year hardware and software support, including access to experts 24x7x365</td>
</tr>
<tr>
<td><strong>Dell ProSupport</strong></td>
<td>Comprehensive 3-year hardware and software support, including access to experts 24x7x365</td>
<td>Comprehensive 3-year hardware and software support, including access to experts 24x7x365</td>
</tr>
<tr>
<td><strong>Dell Professional Services</strong></td>
<td>Optional consulting &amp; design services Pre-Integrated, pre-cabled initial hardware deployment services with optional VDI software deployment Managed services for efficient operations</td>
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</tr>
<tr>
<td><strong>Dell Cloud Client Computing Advisor</strong></td>
<td>Template-ordering</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Dell Wyse cloud client solutions optimized for Citrix

Purpose built for Citrix

The Dell Wyse® Xenith™ series is the first available zero client designed specifically for Citrix XenDesktop environments:

- A Wyse Xenith zero client runs three times faster than comparable devices and enables users to be up and running in just six seconds
- Dell Wyse Xenith clients deliver the Citrix HDX experience with zero delays, management or security risks — and almost-zero energy use
- The Dell Wyse TCX suite integrates seamlessly within Citrix® XenApp, Citrix® XenDesktop to enhance the user experience with breakthrough multimedia and audio capabilities.

Xenith 2

- **Excellent performance**: Optimized for Citrix HDX and Citrix XenDesktop; supports dual HD ‘L shaped’ screen rotation
- **Super secure**: No attack surface for viruses and malware
- **Instant-on**: Powers on in just 6 seconds; goes from standby to on in 2 seconds
- **Zero management**: Plug-n-play operation with auto discovery and zero configuration, and hands-off management
- **Well-connected**: Connects to LAN, WAN and Wi-Fi network; adapts to the latest network security and protocols
- **Green**: Draws less than 7 Watts of power in operation
- **Flexible mounting**: Mount horizontally or vertically on or under your desk, on the wall or behind your display.

Xenith Pro 2

- **Ultimate performance**: Optimized for Citrix XenDesktop, HDX 3D and HDX 3D Pro
- **Super secure**: No attack surface for complete immunity to viruses and malware
- **Green**: Draws less than 9 watts of power in operation
- **Rich User Experience**: Exceptional computing power and performance combined with Citrix HDX technology provide dazzling multimedia and exceptional unified communications; it also supports dual-digital, high-resolution, ‘L shaped’ screen rotation.

Learn more here.

Learn about Dell services

Dell.com
Dell Services  End-to-end lifecycle services

An industry-leading $8.5 billion end-to-end services portfolio

**Support and Deployment**
- End-to-end lifecycle services
- Transform
- Connect
- Inform
- Protect

**Infrastructure**
- Development & Maintenance
- Management & Support
- Modernization
- Testing
- Business Intelligence & Data Warehousing
- Enterprise Applications
- Industry applications

**Business Process Outsourcing Services**
- Consulting & Social Media Services
- Customer Service
- Finance & Accounting
- Healthcare
- Knowledge Process Outsourcing & Analytics
- Life Insurance
- Procurement

**Application Services**
- End-User Computing
- Unified Communication & Collaboration
- Virtualization & Private Cloud
- Data Center
- Education & Training Services

**Deployment Services**
- End-User IT Outsourcing
- Data Center IT Outsourcing

**Support Services**
- End-User Deployment Services
- Enterprise Deployment Services
- Asset Resale and Recycling

**Security Services**
- Cloud on Demand
- Cloud Dedicated
- Cloud for HPC
- Dell DaaS on Demand
- Cloud Transformation Services

- Enterprise Applications
- Industry applications

- Consulting & Social Media Services
- Customer Service
- Finance & Accounting
- Healthcare
- Knowledge Process Outsourcing & Analytics
- Life Insurance
- Procurement

- End-User Computing
- Unified Communication & Collaboration
- Virtualization & Private Cloud
- Data Center
- Education & Training Services

- End-User IT Outsourcing
- Data Center IT Outsourcing

- End-User Deployment Services
- Enterprise Deployment Services
- Asset Resale and Recycling

- Cloud on Demand
- Cloud Dedicated
- Cloud for HPC
- Dell DaaS on Demand
- Cloud Transformation Services

- Managed Security
- Security and Risk Consulting
- Counter Threat Unit (CTU) Intelligence
- Incident Response and Digital Forensic Services

- End-to-end lifecycle services
- Design & Optimize
- Implement & Deploy
- Manage
- Support
- Protect

Learn more here  Continue
Dell is widely recognized as a world leader in VDI. We provide a suite of end-to-end services that allow you to evaluate, design, pilot, implement and manage your desktop virtualization solutions.

**Consulting**
- VDI Architecture
- Blueprint Assessment
- JumpStart Training
- Network Optimization
- Remote Consulting

**Implementation**
- Image Creation
- Application Packaging
- Procurement
- Deployment Services
- Configuration
- Integration
- Pilot & Testing

**Support**
- Pro Support
- L1 EU support
- L2 VDI Support

**Management**
- Managed Services
- Availability Monitoring
- Network Management
- Data Management
- Managed Firewall

**Dell Wyse Reference architectures and components**
- Do it Yourself
- Active infrastructure, Dell Wyse Datacenter Appliance / Enterprise
- Dell Wyse VDI
- Dell WaaS On Demand
- Build and Transfer
- Build and Operate
- Workspace as a service

**Learn about typical Use Cases**
- Dell helps you do it.
- Dell does it for you.

**Leader**
- Magic Quadrant: Overall Leader, Desktop Outsourcing Services, North America (2012)
- 96% customer satisfaction for end-user deployment
- 115+ million systems supported

**Leader**
- 80 countries supported
- 18 languages supported
- 60+ countries offering same business day response

**Leader**
- Magic Quadrant: Overall Leader: Data Center Outsourcing & Infrastructure Utility
- “There was no downtime during our migration to Dell Compellent.”
  - Sean Kenny, Rio Salado College
- 5 global command centers

Dell.com
LA Unified School District

Challenge
Limited tech support staff with over 186 schools to support and a large region to cover.

Solution
Dell Wyse Simplified Appliance.

Business Impact
• Deployed a complete lab in a single day
• Introduced remote support for computer labs
• Significantly decreased number of support calls.

Seattle Children’s Hospital

Challenge
Improve system responsiveness, simplify management of IT infrastructure and reduce IT costs, without impacting business performance.

Solution
Dell Wyse Datacenter with Citrix XenDesktop and XenApp with Wyse Xenith zero clients.

Business Impact
• Accelerated system connectivity and responsiveness
• Near elimination of desktop technical issues
• $1.2 million of IT staff time saved over a five-year period
• Achieved a three-fold increase in desktop performance and $6 million cost avoidance
• Estimated annual energy savings of $300,000.

Essex Industries

Challenge
Reduce hardware and support costs while enhancing service quality for end users and customers.

Solution
Dell provided an end-to-end infrastructure for the virtualization project, including servers, storage arrays and network switches. It also simplified operation by providing native support for Citrix® XenDesktop™, Essex’s chosen desktop virtualization software.

Business Impact
• Data-center hardware costs cut by 90 percent
• Desktop hardware costs reduced by $50,000 a year
• Labor savings of $60,000 a year
• End-to-end support delivered by Dell
• Global desktop access delivered on any device.

Your next steps
Next steps in your journey

Speak to Dell or contact a Dell PartnerDirect associate. Both are able to help you with consultancy, planning and advice.

1. Learn
Join a feasibility workshop
Explore your needs and establish your requirements for cloud client computing.
Learn more here.

2. Discover
Get hands on
Nothing beats seeing everything in action for yourself. Take advantage of a one-to-one demonstration at a Dell Solution Center.
Dell Solution Center.

3. Engage
Plan for success
Meet with Dell or your Dell PartnerDirect partner who'll help you plan, execute and activate your strategy.
Get in touch.
Find a partner.
For detailed information on Dell Desktop Virtualization Solutions, please visit

www.dell.com/virtualdesktops

For general information on Dell cloud client-computing and the full end-to-end solution please visit

www.dell.com/cloudclientcomputing