Cloud computing is changing every aspect of enterprise IT service delivery. What started out simply as the virtualization revolution has spawned into a large scale transformation as IT organizations across the globe embark on the journey to take their services ‘to the cloud’. Massive service providers, online retailers, and Infrastructure as a Service (IaaS) vendors continue to develop new technologies for massive scale data center management while application and desktop services are becoming even more abstracted from the underlying physical hardware pushing enterprise IT into the cloud-era.

The rapid time-to-value of self-service automation and advanced orchestration across compute, network, and storage resources has brought about undisputed advantages and these principles are changing the way enterprise IT organizations think about and design for service delivery from both an operational perspective and a fundamental shift in the relationship between IT and their users. Citrix is leading the transformation to cloud computing with platform components that are simplifying cloud orchestration and cloud management for enterprise and service provider customers worldwide.

Citrix is changing the role of IT as enterprises transition into the cloud-era through solutions and products that transform any Windows application or desktop into a cloud service delivered across any network, to any device. XenDesktop 7 is the first phase of the transformation as it represents a complete redesign of existing application and desktop virtualization technologies into a new unified solution that will cloud-ready application and desktop service delivery from any type of private, public and hybrid cloud. The redesign of XenDesktop is much more than a single product release, it’s a complete transformation that will take all Citrix solutions from the PC-era to the cloud-era. XenDesktop 7 is the first step in this transformation enabling enterprises to couple cloud computing with application and desktop virtualization to realize the combined resource optimization, infrastructure agility and economic benefits from a single platform. As with any enterprise migrating to the cloud the transformation is a progressive process; therefore, the transition of making XenDesktop 7 a cloud-ready platform was focused these key business drivers:
• Changing nature of service delivery and support. The virtualization movement and subsequent cloud-era have dramatically changed the way IT protects and delivers applications, desktops, and data to an ever-increasing mobile workforce. Increased adoption of virtualization technologies and cloud-based solution architectures bring about a myriad of benefits, but also introduce additional layers of complexity for each new variation in the provisioning and delivery process. Advancements in virtualization have added more layers as both physical servers, virtual servers and associated storage now need to be configured, managed and monitored independently across private, public or hybrid clouds. To reap the larger benefits, the once simple service delivery workflow has been expanded to account for the additional layers, including physical or virtual, and locations, including private, public or hybrid cloud, that are now embedded within in solution architecture.

• Operating System migrations. Whether you are migrating your employees to the newest desktop operating system or looking to move mission-critical business apps to the latest server operating system, any kind of operating system migration has historically been complex to execute, costly in means of both administrative time and project funding, and ultimately required exhaustive application validation testing and employee migration training.

• Hardware sizing challenges of virtualization. Virtualization technology has revolutionized the IT industry, but with all the infrastructure flexibility, hardware consolidations, and cost savings benefits virtualization provided it also exasperated the process of hardware sizing. When building out the virtualization infrastructure, IT admins have to appropriately size server processing power, memory, hard drives and in many cases shared storage solutions for both current user load and future growth. In addition, the constant improvements in hardware technology make each sizing and purchase process a new challenge.

XenDesktop 7 has been redesigned from the ground up to be a unified, cloud-ready solution for delivering both applications and desktops on any type of cloud infrastructure by offering open APIs capable of leveraging any virtual infrastructure technology, storage infrastructure and complex network topologies to deliver a single, unified platform. XenDesktop 7 now enables enterprise IT to build a common service delivery architecture for all Windows apps and desktops leveraging common policies and tools that simplify deployment and management.

• By delivering Windows apps and desktops as a cloud-like service, XenDesktop can handle multiple versions and instances of both Windows Server and desktop operating systems from a single platform. XenDesktop 7 is built to leverage any virtual infrastructure or cloud management platform. Whether using the included XenServer, leveraging the performance and rising popularity of Microsoft Hyper-V, or building on an existing VMware vSphere infrastructure, XenDesktop is built to be hypervisor, storage and network agnostic. Citrix XenDesktop 7 is the first solution to be fully integrated for cloud solutions. Virtual apps and desktops can be deployed on popular cloud platforms including Apache CloudStack or the CloudStack-based Citrix Cloud Platform or Amazon Web Services (AWS) making it easier than ever to dynamically expand the infrastructure footprint.
• Through embedded cloud integration XenDesktop 7 simplifies the hardware and storage sizing and planning process by allowing IT admins to deliver both applications and desktops from a single instance to simplify smaller deployments or span deployments across a variety of private, public, and hybrid clouds making it easy to quickly expand the infrastructure footprint and putting less restrictions on upfront planning and sizing. If the environment is oversized it can be easily scaled down to reduce costs and if it’s undersized it can quickly be expanded, making it easier for admins to always have they infrastructure they need to deliver a high performance user experience.

• A unified platform for all virtual app and desktop delivery enables IT admins to deliver a complete range of virtual apps and desktops while consolidating management, monitoring and maintenance tasks. By implementing XenDesktop 7 common service delivery architecture for all Windows apps and desktops, admins can leverage centralized policies, consolidated tools for both apps and desktops, and the advanced monitoring capabilities of EdgeSight making it easier than ever for administrators to deliver a full desktop workspace that includes apps and data while allowing others secure mobile access to a Windows app on their tablet or smartphone.

XenDesktop 7 is the only cloud-ready software platform to deliver mobile, secure access to a complete collection of app and desktop virtualization solutions.
The high-level XenDesktop architecture consists of the following key components:

- **Receiver.** Citrix Receiver is a universal thin client that runs on virtually any device operating platform, including iOS® and Android® in addition to Windows, Mac® and Linux®.

- **HDX Technology.** HDX technology is a set of capabilities that deliver a “high definition” access experience for virtual apps and desktops, on any device and over any network even with voice, video and 3D graphics applications.

- **NetScaler Gateway.** NetScaler Gateway is a secure apps, desktop and data access solution that gives administrators granular application- and data-level control while empowering users with remote access from anywhere.

- **StoreFront.** StoreFront provides a self-service subscription service via an enterprise app store, giving users convenient access to all the apps and desktops they need.

- **Apps and Desktops:** Any type of Windows application or virtual desktop hosted on a Windows Server or Desktop OS running in private or public cloud, centrally managed, and delivered on-demand to thousands of users worldwide.

- **XenDesktop Controller.** Controller centrally manages user access to virtual apps and desktops located in the datacenter through user and computer-based policies.

- **Citrix Director.** Director provides real time trend and diagnostic information on users, applications and desktops to aid helpdesk staff with troubleshooting.

- **EdgeSight Performance Management.** EdgeSight provides long-term trending, analytics and performance data tools for capacity management and assuring Service Level Agreements.

- **Citrix Studio.** Studio provides service design wizards for creating and managing infrastructure and resources to deliver desktops and applications thereby simplifying production deployments.

Employees across the enterprise have varying performance, personalization and mobility requirements. Some require offline mobility, others need simplicity and standardization, power users need a high-performance, fully personalized desktop and almost every employee needs simple, secure access to a Windows app from their tablet, smartphone or laptop. XenDesktop meets all these requirements in a single solution. With XenDesktop, IT can deliver every type of virtual desktop or app, hosted or local, optimized to meet the performance, security and mobility requirements of each individual user while optimizing ongoing management and deployment costs.

- **Secure, mobile access to Windows apps.** XenDesktop takes enterprise Windows apps mobile by centralizing mission-critical business apps in the datacenter and delivering secure remote access on any device, anywhere. Taking Windows app mobile has never been easier, XenDesktop can dynamically recognize a mobile device and automatically transform the application display for native mobile device features including touch-friendly
menus, finger swipe scrolling and pop-up controls. Even highly complex 3D graphical apps from the manufacturing, design, engineering, and construction industries can be accessed on tablets and smartphones with HDX 3D Pro technology. XenDesktop with HDX 3D Pro technology is the first software virtualization solution to support hardware-based GPU sharing of OpenGL based 3D professional graphics apps for smooth graphics performance and breakthrough deep compression technologies that maximize performance over low-bandwidth, high-latency networks.

- Flexible, cost-effective desktop virtualization. XenDesktop delivers a wide range of desktop virtualization technologies to meet the needs of both employees and IT. XenDesktop offers a fully flexible and personalized desktop OS-based VDI deployment for power users through integrating Personal vDisk technology. While also offering a locked-down, shared Windows server desktop with a full Windows 7 or 8 theme that is ideal for mainstream users and management efficiency. Only XenDesktop lets you completely customize desktop virtualization performance, flexibility and price through the following different options:
  - Pooled VDI. Through XenDesktop central image management technology, admins can develop and manage a single desktop OS instance and seamlessly, on-demand provision that one instance out to thousands of users dramatically simplifying desktop patching and management while allowing employees to access their virtual desktop from a variety of devices and locations.
  - Personalized VDI. Unlike a Pooled VDI deployment where user changes and customizations are prohibited or discarded between sessions, Personal vDisk technology enables user personalization and customizations to persist between desktop sessions. It provides users with the customized and personalized desktop experience they demand combined with the storage efficiency, centralization and management benefits of Pooled VDI.
  - Shared, server-based desktops. Based on Remote Desktop Shared Hosted (RDSH) technology, XenDesktop enables multiple user sessions to connect to a single server with access to an isolated instance of a Windows server desktop for the most cost efficient, high performance virtual desktop solution designed to meet the needs of the mainstream workforce.

- Desktop virtualization to-go with XenClient. While the goal of leveraging virtualization is to centrally manage and host desktops and apps in the datacenter. There are cases where employees must be able to view and modify documents or data when disconnected from the network and offline. In these cases, XenClient permits administrators to stream and synchronize an entire managed desktop OS down to a local computer so that it can be taken offline as a complete encrypted file system with powerful policy enforcement.

- Mobile access to physical desktops with Remote PC Access. Citrix delivers the most flexible desktop virtualization solution in the marketplace by supporting remote access to the physical PCs in the workplace, as well as virtual desktops in the datacenter using the same broker, gateway appliance and universal client components.
XenDesktop 7 transforms any Windows application or desktop into a cloud service delivered across any network, to any device. By deploying this expanded app and desktop delivery platform today, you will be positioned to take advantage of the exciting future automation and orchestration capabilities of cloud computing. To learn more about XenDesktop 7, go to [www.citrix.com/products/XenDesktop](http://www.citrix.com/products/XenDesktop).