# New Citrix XenDesktop Brings
# JIT to the Virtual Desktop

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## Management Summary

**Citrix is bringing the *just-in-time* manufacturing to desktop virtualization, with a new strategy for provisioning desktops out of the data center at lower cost and with greater efficiency.** Citrix has announced its new approach to desktop delivery, which is designed to provide on-demand desktops for delivery to thin clients and PCs around an enterprise, focusing upon simplified lifecycle management and minimal provisioning.

While desktop virtualization has been around for some time, previous solutions have tended to be somewhat cumbersome, slow to deploy, complex to secure, and costly to maintain. **By providing a specialized solution that creates standardized desktop images that only incorporate the functionality required, Citrix hopes to provide considerable savings for large corporate clients across a wide array of areas, including provisioning, management, and storage.**

This refocusing upon the desktop virtualization is very much in line with current IT thinking, particularly with the problems encountered in rolling out *Vista* across the enterprise. **The convergence of Vista rollout with a variety of drivers for centralization, including compliance, data security, and desktop TCO concerns has made this a particularly good time to release this range of products.**

Desktop virtualization makes it possible to centralize desktops in virtual machines hosted by the data center. Users can access their desktop through a thin client at their workplace, accessing a normal Microsoft *Windows* environment and standard applications in a manner that is indistinguishable from running everything on a local PC, except for the costs and time required to make it happen. **Centralization, in itself, provides a wide range of benefits, because it becomes immediately possible to manage most-to-all of the company's desktop workstation resources from a single location, including storage, backup, security, and networking.**

As desktop virtualization has risen in popularity it has, however, created a range of new problems. Among these is the fact that virtual desktops might create their own version of "PC sprawl," with numerous desktop images being stored, and some even abandoned. **User experience can also deteriorate under intensive usage and the storage costs can grow prodigiously. To date, lifecycle management has not been well addressed for virtual desktops, and companies have been relatively slow to consider the implications and requirements of optimizing the virtual environment.**

**Citrix has been working to remedy this situation by developing a range of desktop virtualization technologies that enable a new generation of application and desktop delivery.** Its solution is based around Just-in-Time (JIT) manufacturing, a concept that has proven highly successful in building things like automobiles, but shows equal promise in deployment of virtual desktops. Read on to learn more.

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## The Citrix Virtual Desktop Solution

Citrix's solution optimizes by creating on-demand virtual desktops assembled as needed in Just-in-Time (JIT) approach. Desktops are created from user settings, virtualized applications, and operating system streaming to create an image that can be delivered to user platforms via a high speed delivery protocol (see Exhibit 1, below).

JIT is a powerful concept used in manufacturing, based on elimination of waste. Equipment, resources, and labor are made available only in the amounts required and at the time required to do the job. Only the necessary items are created in the necessary quantities at the necessary time. JIT has proven extremely effective in increasing productivity, improving work performance and product quality, and saving costs. The basic idea is that anything that is excess to actual requirements will incur costs throughout the production cycle. **Citrix is bringing this type of thinking to the desktop workspace by componentizing and virtualizing desktop delivery based upon performance requirements.**

Applications are separated from the desktop itself, and delivered via Citrix *XenApp*, a rebranding of the company's widely-used *Presentation Server* product. Citrix is a leader in the application virtualization area and is able to leverage this to provide a leaner remote desktop environment with enhanced functionality for applications. **Virtual Desktop centralization provides the basic resource for managing the complete lifecycle of desktops across a distributed enterprise, offering efficiencies in delivery, scaling, and updating.** Separating the desktop operating system from the applications makes it possible to optimize the user experience by focusing upon deployment of key applications and making them work effectively and efficiently within this environment.

The improvements that Citrix is touting in its release of the new XenDesktop include a variety of special features.

- **Superior user experience** – The user experience is enhanced by an "instant on" capability and immediate (zero configuration) access to printers and USB mass storage. Delivering the applications separately makes it possible to fine tune features for particular applications and provide an optimized user experience on this basis.
- **Simple desktop provisioning and management** – Desktop provisioning and management is simplified by an easily understood process that walks the user through Desktop image creation, provisioning, personalization, and delivery.
- **Reliable desktop access management** – Desktop access management is turned into a reliable and repeatable process that includes management of desktop assignment and sessions, under a robust framework ensuring session reliability, high availability, and secure remote access.
- **Desktop Optimization and suppor**t – Desktop optimization and support are provided by a range of tested Citrix solutions for performance monitoring and WAN optimization.
- **Broad desktop delivery ecosystem, with numerous deployment choices** – The desktop delivery ecosystem contains, in Citrix's view, all of the companies that it is partnering with in

## Exhibit 1 – Citrix XenDesktop On Demand Desktop Assembly
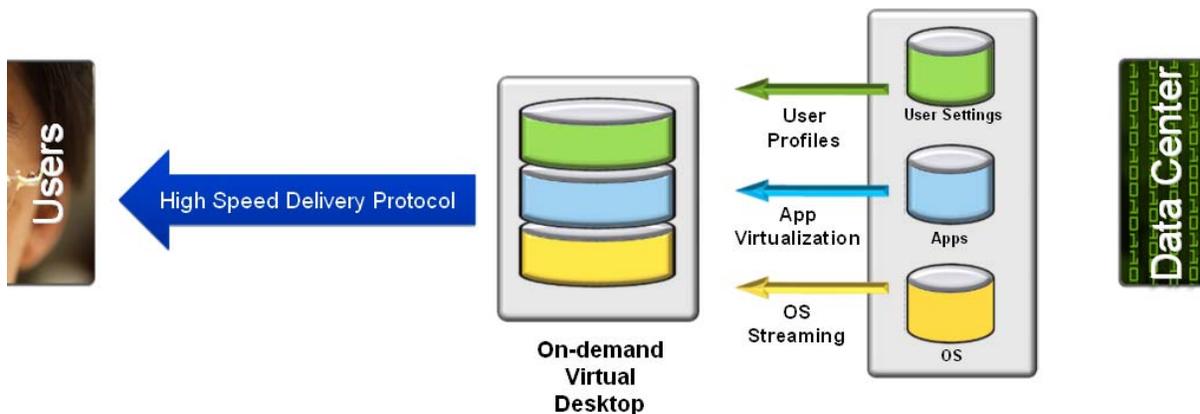


*Source: Citrix*

this space, including Microsoft, HP, IBM, NetApp, Wyse, CSC, and others. The solution is open, and also will support virtual servers from VMware (*ESX Server*) and Microsoft (*Hyper-V*).

XenDesktop is being delivered as a family of solutions. The *Standard Edition* provides entry level desktop virtualization, the *Enterprise Edition* is aimed at scalable and cost-effective desktop delivery, and the Platinum Edition provides an end-to-end desktop delivery solution. Details of these configurations are provided in Exhibit 2, at the right.

While the most intriguing solutions are only available with the Platinum edition, it is worth noting that XenDesktop is an upgradable solution. The Platinum edition adds performance monitoring, desktop support, WAN Quality of Service, and an *EasyCall* feature (e.g., click on a highlighted telephone number to initiate a phone call). The Standard edition has an annual license fee of $45 per user, while the Platinum license is $140 annually per user. These products can also be purchased under a perpetual license, with support and updates provided on an annual fee basis, after the first year.

Citrix is viewing its primary target for the new desktop features as knowledge workers requiring a personalized Windows desktop rather than task workers who have benefited from simple standardized server-based desktop delivery mechanisms.

## Conclusion

The new range of XenDesktop desktop virtualization solutions from Citrix promises real change for the data centre by providing an easily deployed scheme for centralizing desktop delivery resources. As computing moved out to the workstation on the edge of the network during the past two and a half decades, enterprise-level assurances of security and control have fallen by the wayside. **Increasingly, companies are becoming aware of the logic of centralization for security, compliance, and control as well as for cost effectiveness. The logical way to do this and still provide the personalization and ease of access that users have come to expect is to put virtualized machines in the corporate data center.** However, while a loose approach to this was possible in the beginning, it is now apparent that a more optimized infrastructure is essential. Without such an infrastructure, the benefits of

## Exhibit 2 – Citrix XenDesktop Features by Edition

| Feature | Standard | Enterprise | Platinum |
|---|---|---|---|
| **Virtual Desktop Delivery Controller** | ☑ | ☑ | ☑ |
| ***Secure Remote Access*** | ☑ | ☑ | ☑ |
| **Virtual Machine Infrastructure** | ☑ | ☑ | ☑ |
| **- Multi-server management** | ☑ | ☑ | ☑ |
| **- Resource Pooling & XenMotion** | | ☑ | ☑ |
| **Virtual Desktop Provisioning** | | ☑ | ☑ |
| **Virtual Desktop Performance Monitoring** | | | ☑ |
| **Virtual Desktop Support** | | | ☑ |
| **WAN Quality of Service** | | | ☑ |
| **EasyCall** | | | ☑ |

*Source: Citrix*

centralization can become lost in a cloud of multiple non-standard desktop images with redundancies in applications provisioning, networking, and storage. This type of situation has been experienced by the manufacturing industry in the past, and its solution was to create a leaner approach through Just-in-Time manufacturing. The rationale is that you pay for any excess that you deploy on a regular basis through the entire lifecycle of the process; in manufacturing, that would be in added material and production steps; in desktop virtualization, it is in storage, efficiency of deployment and manageability.

While the new Citrix solution does not represent a revolutionary escalation of desktop virtualization technology, it does point the way to the future, and in that sense, certainly represents a *next generation*. Centralization is not only useful, but, increasingly, it is also necessary. This being the case, desktop virtualization provides numerous advantages – but only if it can be deployed efficiently and without straining resources. The Citrix XenDesktop virtualization scheme definitely is worth considering, particularly if you have a large and dispersed base of desktop users who need to work with typical *knowledge worker* applications.

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