

# Citrix VDI-in-a-Box

## Challenges

Educational institutions want to:

- Provide anywhere, any-device access
- Eliminate or reduce frequency of expensive 3 – 5 year PC refresh cycles
- Cut desktop support costs and streamline desktop management
- Increase access to computing resources

## Solution

Citrix® VDI-in-a-Box™

### Citrix VDI-in-a-Box at work

- Deploy and centrally manage desktops for less: VDI-in-a-Box virtual desktops cost less than PCs and reduce maintenance and support costs by 80%
- Leverage a broad range of endpoints from iPad and Android-based tablets to old repurposed PCs
- Provide a rich user experience powered by Citrix HDX technology
- Start small and scale as you grow with minimum upfront capital investment
- Use your hypervisor of choice: open architecture supports XenServer, vSphere or Hyper-V

“VDI-in-a-Box saves our district thousands of dollars on hardware purchases each year. We’re able to lengthen our PC refresh cycles and also redeploy old hardware with this architecture.”

- Jack Howell, Manager IT  
Infrastructure, Medina City Schools

## Do more with less: increase end-user access while lowering IT costs

Universities, colleges, schools, libraries and training centers such as yours are struggling to meet multiple conflicting goals: to increase access to your labs and computing resources while lowering costs and reducing energy footprint, support students wanting to bring in their favorite tablets or devices without increasing costs, migrate to Windows 7 without expensive hardware upgrades, and improve overall service levels and functionality for students and teachers.

Citrix® VDI-in-a-Box is an all-in-one VDI software appliance that enables Windows® administrators to deliver centrally managed virtual desktops to any user, anytime, on any device, all for less than the cost of a PC. VDI-in-a-Box helps resolve your conflicting goals and meet them all by enabling you to:

- **Deploy virtual desktops for less than the cost of PCs.** VDI-in-a-Box eliminates more than 60 percent of VDI infrastructure (see Figure A) including management servers and shared storage area networks (SANs). It delivers high availability through a grid of inexpensive off-the-shelf-servers, reducing the cost of deploying a virtual desktop to less than \$500 per desktop (see Figure B).
- **Provide access to resources using iPads, Android-based tablets, thin clients, Macs, or repurposed PCs.** VDI-in-a-Box supports rich anytime, anywhere access through a range of endpoint devices, from repurposed PCs to state-of-the-art computing devices, at school and at home.
- **Save money on PC refresh cycles.** Organizations must replace PCs every few years as they become obsolete, but these refresh cycles are expensive. With VDI-in-a-Box, you can save money on the refresh cycle: instead of buying new PCs you can either repurpose old ones by using them for access to virtual desktops or you can swap them out for less-expensive thin clients.
- **Reduce desktop support and management by up to 80 percent.** Most schools have limited IT resources, and supporting PCs takes time and money. VDI-in-a-Box makes virtual desktops much easier to manage than PCs and allows you to quickly set up your virtual desktops in less than an hour. If a desktop misbehaves, the user simply logs out,

logs back in and receives a new desktop. Updating the master image automatically updates all the desktops, eliminating the need to “touch” each device to deploy a patch or update. Our education customers report an average of 80 percent reduction in desktop maintenance and support costs with VDI-in-a-Box.

“The VDI-in-a-Box deployment for our Windows 7 rollout is – fitting together beautifully. VDI-in-a-Box is simple to set up, with minimal costs and it gives us the flexibility to easily manage and test different desktop versions.”

- Mark Penny, Systems Architect,  
University of Leicester

- **Offer hardware-independent labs and training rooms.** With VDI-in-a-Box, you can extend your physical lab resources, creating different virtual lab environments that students and teachers can access from anywhere, including their homes.
  - **Multiple virtual labs.** Using desktop templates, you can easily set up multiple virtual labs that run on any end-user device, even students’ home computers. Each template can provide different applications and environments, and students can easily switch between the virtual labs or even have multiple virtual labs open simultaneously.
  - **Remote access.** Offer students and teachers the same performance and responsiveness they expect in the lab, no matter where they are, using secure remote log in.
  - **Lower support costs.** Update labs easily by updating the master images. There is no need to update physical or virtual desktops individually.
- **Offer high-definition user experience, support for mobile devices and seamless access to printers and peripherals.** VDI-in-a-Box delivers rich graphics and user experience with the Citrix HDX™ protocol. It offers built-in support for USB devices, local and network printers and a wide variety of peripherals.
- **Provide a virtual computer to everyone.** Teachers and students increasingly need computer access to prepare classes and assignments, but PCs take up valuable classroom space and become difficult to maintain, track and manage. Laptops create a security problem as they store sensitive data that may get lost or stolen. With VDI-in-a-Box, you can use a few servers in the office and provide every student and teacher with a virtual computer that they can access securely from anywhere.

Figure A

## Simplify desktop virtualization

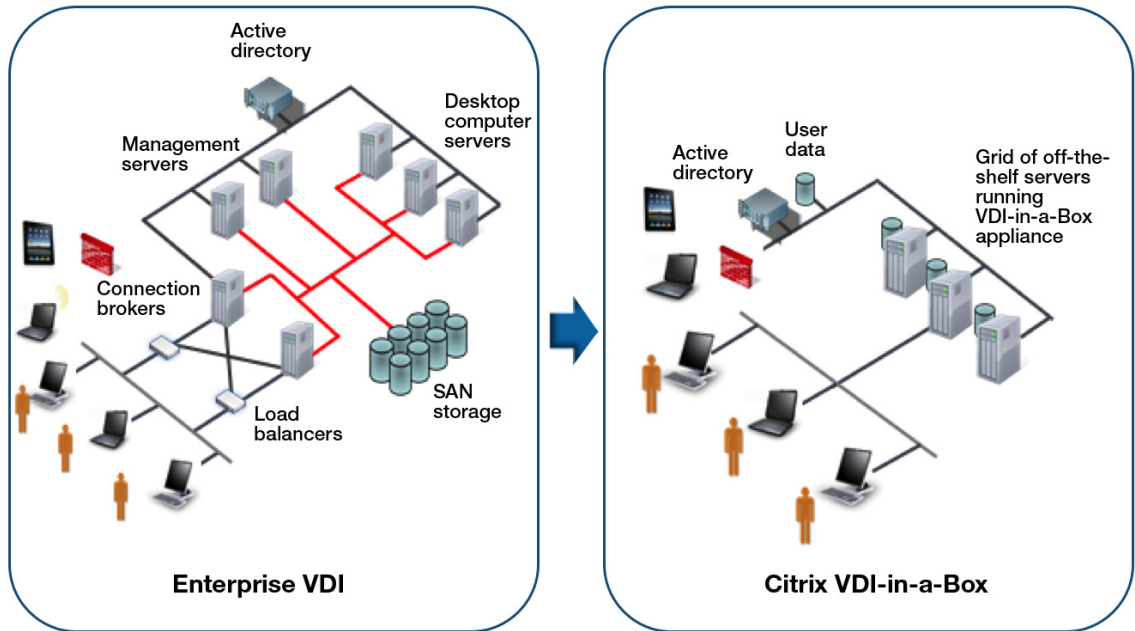


Figure B

Upfront acquisition cost per virtual desktop with VDI-in-a-Box is under \$500

Component	Cost / CCU Desktop
Off-the-shelf server*	\$100
VDI-in-a-Box with Citrix HDX	\$160
Hypervisor**	\$0 to \$65
Microsoft VDA license***	\$0 to \$100
<b>Total</b>	<b>\$260 to \$425 per Desktop</b>

\* Off-the-shelf server cost based on pricing a server from Dell.com website as of Feb 2011.

\*\* Hypervisor cost is zero with XenServer, upto \$65/desktop with VMware vSphere/ESXi as of Aug 2011.

\*\*\* MS VDA is not required with MS Software Assurance (\$0), retail price is \$100/primary device/year.



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### About Citrix

Citrix Systems, Inc. (NASDAQ:CTXS) is a leading provider of virtual computing solutions that help people work and play from anywhere on any device. More than 230,000 enterprises rely on Citrix to create better ways for people, IT and business to work through virtual meetings, desktops and datacenters. Citrix virtualization, networking and cloud solutions deliver over 100 million corporate desktops and touch 75 percent of Internet users each day. Citrix partners with over 10,000 companies in 100 countries. Annual revenue in 2010 was \$1.87 billion.

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