



MOOSE VIEWS

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Moose Views

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New Releases from Citrix

As you may know, Citrix released new versions of both XenApp and XenDesktop a few weeks ago, as well as a new version of Citrix Receiver. Here's what's new:

XenApp v6.5

- Now compatible with Windows Server 2008 R2 SP1.
- "Windows Desktop Experience" - back in May, Citrix released the "Service Provider Automation Pack" for XenApp 6. This Automation Pack, initially made available only to Citrix Service Provider partners, was a series of PowerShell scripts that did a number of things for service providers who were using XenApp to provide "Desktop as a Service" (like us). One of those things was to make the XenApp desktop look very much like a Windows 7 desktop. XenApp v6.5 now installs the Win7 look and feel by default.
- Citrix AppCenter—a new management tool that replaces the Delivery Services Console and snaps into the Microsoft Management Console (MMC).
- Session Pre-Launch—This allows you to automatically start a XenApp session as soon as a user authenticates to the farm, so that the session will already be running when the user launches the first XenApp applications...thus shortening the time required to launch it.
- Session Linger—This allows you to keep a session alive for a configurable amount of time after a user closes all applications, rather than terminating the session immediately, so that if the user decides that s/he really needs to (for example) send that one last email, you don't have to instantiate a new session before the user can re-launch Outlook.
- Fast Reconnect—as the name implies, speeds up the process of reconnecting to disconnected sessions.
- HDX Enhancements:
 - Flash redirection has been improved by reducing the "chattiness" of the client/server communication required to launch a Flash player session on the client device. This allows Flash redirection to perform well over WAN connections with latencies as high as 200—300 ms.
 - Audio policies can be configured through AppCenter, including the new "audio plug-n-play," which allows audio peripherals to be connected and automatically detected and used during the course of a XenApp session.
 - "HDX Realtime" - Webcam multimedia conferencing support.
 - "HDX 3D" - yields better performance for graphics-heavy applications by running XenApp on a *physical* server that contains a high-performance graphics processing unit (GPU).
 - Dynamic Windows Preview support, including Taskbar Preview, Windows Peek, Flip, and Flip 3D...provided you're running an Aero-capable Win7 client device with the new Citrix Receiver.
- Migration Center—a set of tools for importing application, folder, server

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Happy Birthday, Ice Cream Cone!

September 22nd is widely accepted as the official anniversary of the invention of the ice cream cone. The ice cream cone is believed to have been invented by Italo Marchiony, an Italian immigrant, who was granted a patent in 1903 for a mold that could make waffle cups. He claimed to have been making them since September 22, 1886, and selling them from a cart on Wall Street in New York City.

Other reports say that the Menches Brothers first served ice cream in edible cones at the 1904 World's Fair in St. Louis, Missouri. Still others say that the true inventor was E. A. Hamwi, a Syrian immigrant pastry maker who was also at that World's Fair. When he saw that the ice cream vendors had run out of bowls, he fashioned his waffles into a cone shape and sold them to the vendors to use. There are, in fact, many others that claim that they were the first to invent the ice cream cone.

Regardless of who invented this convenient container, be sure to enjoy a scoop or two this September 22nd, in honor of the ice cream cone itself.

What Does 2048-bit SSL Mean to You?

SSL is a core technology for secure transactions on the Internet. If you're using the software Citrix Secure Gateway or one of the Access Gateway appliances (whether physical or virtual), you've got an SSL certificate on that gateway device to insure that the traffic to the client device out there in Internet-land is encrypted.

We've written before about encryption technologies, and about the concept that you don't have to make a code unbreakable — you just have to make the task of breaking it “computationally infeasible,” which means that it would take a ridiculous number of years to break it using any technology that's likely to be available between now and the time you don't care anymore about whether it's broken.

It turns out that breaking traffic encoded with the most widely used form of SSL—which used RSA public key cryptography with 1024-bit keys—is no longer computationally infeasible. Therefore, the National Institute of Standards (NIST) recommended the use of 2048-bit keys beginning January 1, 2011.

Traffic encrypted with 2048-bit keys is roughly a billion times more difficult to break than traffic that uses a 1024-bit key. It is expected that 2048-bit keys will be secure at least through the year 2030.

Unfortunately, encrypting and decrypting traffic using 2048-bit keys requires quite a bit more computing horsepower as well—some have reported needing as much as 30x the infrastructure to get the same performance.

That may not be significant if you only have a couple hundred remote XenApp or XenDesktop users coming through

your SSL gateway. But if you have several hundred, or even thousands, of remote users, or if you're running a large Web server farm that is SSL-secured, this may represent a significant and expensive problem.

What do you do if you're looking at the possibility of having to beef up your infrastructure to handle the increased load of 2048-bit SSL processing? Turn to the Citrix NetScaler.

The NetScaler hardware appliances contain specialized SSL-offload chips that are specifically designed to process larger RSA keys. The combination of the SSL-offload hardware and the latest NetScaler software yields SSL performance ranging from 1,000 Transactions Per Second (TPS) for the MPX 5500 to as high as 45,000 TPS for the MPX 21500.

(To put that number in perspective, the MPX 21500 could handle about 220,000 TPS with 1024-bit keys. That should give you a feeling for the computational impact of doubling the key length.)

So if your server infrastructure is suddenly limping along now that you've upgraded to 2048-bit keys (you have upgraded to 2048-bit keys, haven't you?), check out the NetScaler appliance before you throw more servers at the problem. It just might be the answer.

NOTE: The virtual NetScaler appliances (VPX models) *will not* give you this kind of SSL performance, simply because, since they're virtual appliances, they have no specialized SSL off-load hardware. You shouldn't expect to support more than about 300 concurrent SSL connections on *any* NetScaler VPX version.



New Releases from Citrix (continued)

Configuration, and other XenApp objects from XenApp farms running earlier versions of XenApp.

- Improved printing performance, including additional Universal Printing policy settings.
- Enhancements to application packaging and streaming.

XenDesktop v5.5

- Improved Flash redirection (see description above under “HDX Enhancements”).
- Windows Media redirection with end-to-end flow control and frame-dropping capability. Priority is given to smooth audio playback and audio-video synchronization at the expense of video quality.
- RDP protocol support now includes support for RDP v7.1 with RemoteFX (which requires virtual desktop to be running on Hyper-V R2 SP1).
- Windows 7 Aero redirection.
- Full multi-monitor support for Win7 desktops.
- Supports the multi-GPU pass through feature coming in XenServer v6 (now in beta release as “Project Boston”), and support for

GPU accelerated deep compression with NVIDIA Fermi GPUs.

- Supports the Microsoft WDDM display driver model, allowing users to access their multi-monitor Win7 workstations remotely from client devices that have fewer monitors. The software will intelligently collapse applications from the multiple monitors on the host system to the available monitors on the remote client.
- HDX plug-n-play, including support for TWAIN-compliant scanners.
- Supports read-only access of client-drives mapped into the session.

New Citrix Receiver v3.0

- This version of Receiver replaces the Online Plug-in for Windows. Online Plug-in v13.0 is embedded in Receiver v3.0.
- Multi-stream ICA—when used with XenApp v6.5 or XenDesktop v5.5, the new Receiver can leverage multiple virtual channels that can be set independently to different TCP port numbers so that quality of service (QoS) can be enforced with routers and other network

devices:

- “Very High,” for real time activity such as VoIP or Webcam conferences;
- “High,” for interactive traffic such as screen refresh and keyboard/mouse input;
- “Medium,” for things like client drive mapping and client/server copy operations;
- “Low,” for background activity such as printing;
- UDP to handle audio streams
- Smoother audio when network latency fluctuates (i.e., “jitter”).
- Improved echo cancellation when using speakers and microphone.
- Supports the XenApp v6.5 Session Pre-Launch feature.
- Aero Support.
- Seamless taskbar grouping—taskbar icons associated with applications published via XenApp 6 or 6.5 are grouped by application, just as local application icons are.

Don't Overlook Windows ThinPC

If you're trying to figure out what to do with those old workstations, think about this: Windows ThinPC (“WinTPC”) is a stripped-down version of Win7 that will run on any system with a 1 GHz or faster 32-bit x86 processor, 1 Gb or more of RAM, 4 Gb of available disk space, and a DirectX 9 graphics device with WDDM v1.0 or later driver. It will basically turn that machine into a device that's functionally equivalent to a Win7-embedded thin client—but with one big difference.

Since you must have Software Assurance on the client device in order to obtain and install WinTPC on it, you don't need to buy a Virtual Desktop Access (VDA) license to access a virtualized desktop. A VDA license is roughly \$100/year; Software Assurance for a PC is roughly \$55/year (less if you're on a Microsoft Enterprise license agreement).

“But wait,” you say, “I don't have SA on my desktops, and it's too late to add it now.” OK. But not long ago, I priced out a new Dell Vostro mini-tower system on their Web site—\$349 for a 3.2 GHz dual-core processor, 3 Gb of RAM, 320 Gb disk drive, Win7 Pro, and 1 year of next-business-day on-site service. You've got 90 days to add SA to new PCs. Compare the total cost to the cost of a Win7-embedded thin client and a VDA license, and you'll be surprised at how competitive it is. And, in my opinion, a sub-\$500 PC is every bit as disposable as a thin client. If it fails, it will probably cost you more to diagnose and repair it than to simply replace it. It's worth checking into.

Would You Like To Submit An Article, Story, or Tip for Moose Views?

Do you have a funny story or a resource you want to share with other subscribers?

Send it to me! We are always looking for new and useful content to add to Moose Views, including partners who want to submit articles!



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- Voice over IP Phone Systems



Solving a School Problem

A middle school was having a unique problem. Some of the girls were beginning to use makeup and would spend a considerable amount of time in the bathroom applying it. While that was of no real concern, there was a problem with what the girls did next. Many of them would press their lips to the mirrors, leaving dozens of little lip prints all over the glass.

Finally the principal decided that something had to be done. She discussed possible solutions with the school custodian and then decided to talk with the girls. She called several of the girls into the bathroom to have a meeting with her and the custodian. They both explained to the girls that the lip prints were causing much more work for the custodian each day. The principal then asked the custodian to demonstrate to the girls how much work it was to clean the mirrors.

The custodian took a long-handled brush, dipped it into the nearest toilet, and proceeded to scrub the mirror. With a smile, he turned and said, "See, I have to do that every day."

From that day on, there was never another lip print on the mirrors.

Conversation with a College Student

Dear Dad,

School i\$ really great. I am making lot\$ of friend\$ and \$tudying very hark. With all my Stuff, I \$imply can't think of anything I need, \$o if you would like, you can ju\$t \$end me a card, a\$ I would love to hear from you.

Love, Your \$on.

The Reply:

Dear Son,

I kNOW that astroNomy, ecoNomics, and oceaNOgraphy are eNOugh to keep even an hoNOr student busy. Do NOt forget that the pursuit of kNOWLEDge is a NOble task, and you can never study eNOugh.

Love, Dad

This Month in History

- September 1, 1830—"Mary Had a Little Lamb" was published.
- September 2, 1666—The Great Fire of London started and burned for three days, destroying over 13,000 houses but killing only six people.
- September 3, 1777—The American flag was flown for the first time in battle at Cooch's Bridge in Maryland during the Revolutionary War.
- September 4, 1781—The founding of "El Pueblo de Nuestra Senora La Reina de Los Angeles de Porciuncula" (know today simply as Los Angeles, CA).
- September 5, 1847—Jesse James was born in Centerville, MO (the guy who rode with Quantrill's Raiders, not the guy who was married to Sandra Bullock).
- September 7, 1936—Buddy Holly was born in Lubbock, TX.
- September 8, 1900—The worst disaster in U.S. history occurred as a hurricane hit Galveston, TX, killing more than 8,000 people.
- September 10, 1955—"Gunsmoke," TV's longest-running Western, premiered on television.
- September 15, 1982—"USA Today" was first published.
- September 17, 1862—The Civil War Battle of Antietam took place on the banks of the Potomac River in Maryland, resulting in the wounding and deaths of over 25,000 Union and Confederate soldiers.
- September 19, 1893—New Zealand became the first country to allow women to vote.

Coming Events

View all coming events with registration links at:

<http://www.mooselogic.com/events>