



MOOSE VIEWS

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Moose Views

is a monthly newsletter prepared by Moose Logic to bring you information and tips on maintaining a trouble free network.

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XenClient and XenVault Coming This Month

Last week (August 25 to be precise) Citrix formally announced XenDesktop 4 Feature Pack 2, which is expected to be available by the end of this month, and, of course, will be available at no charge to XenDesktop customers with current Subscription Advantage.

Feature Pack 2 includes two new pieces of technology: XenClient and XenVault. We've written extensively about XenClient in these pages, so we won't rehash that in this article—but you need to know about XenVault.

If you're a Citrix user, you probably know that we have, for a long time, had administrative control over whether users who are running applications remotely via XenApp or XenDesktop can save data back to a disk drive on their client device.

If you're using a Citrix Access Gateway with SmartAccess policies, you can get even more granular. The same user, presenting the same set of credentials, may be allowed to save, or be blocked from saving, to the client device depending on the *access scenario*—i.e., where the user is connecting from, whether the user is using a company-owned client device, etc.

But in any case, once you've allowed data to be saved to the client device, you have now lost control of that data. It could potentially be copied to a USB drive or burned to an optical disk. It could be emailed

to someone. The client device could be lost or stolen. But it's a risk we often feel we have to take so our mobile users can remain productive.

XenVault, which was first pre-viewed at last May's Citrix Synergy event, addresses this risk. It's a new plug-in for the Citrix Receiver. As such, its deployment and configuration are controlled by the Citrix Merchandising Server—the preferred tool for installing and configuring Citrix client software.

When XenVault is pushed down and installed, it creates a secure, encrypted (256-bit AES) storage area on the client hard disk. Applications deployed via Citrix—whether executed remotely on a XenApp server or XenDesktop virtual PC, or streamed for local execution—will **only** be allowed to store data in this encrypted location. Furthermore, while the user can use Windows Explorer to view the files in the encrypted location, s/he will **not** be able to copy them to a non-secured folder, nor to open them with applications other than those specified by the administrator.

If a laptop is lost or stolen, the administrator can issue a "kill pill." The next time the Receiver checks in with the Merchandising Server for updates, the encrypted area will be locked or deleted.

So now you can allow users to store data on client devices while still insuring data security!

This Month in History

- September 1, 1939—Germany invaded Poland, touching off WWII
- September 2, 1666—The Great Fire of London started and burned for 3 days...destroying over 13,000 houses but killing only 6 people.
- September 3, 1777—The American flag was flown for the first time in battle during the Revolutionary War
- September 4, 1882—Thomas Edison threw the switch that lit a building with electric lights for the first time
- September 5, 1847—Jesse James was born in Centerville, MO
- September 7, 1998—Google was incorporated.
- September 8, 1966—*Star Trek* premiered on television
- September 9, 1850—California became the 31st State.
- September 10, 1955—*Gunsmoke*, TV's longest-running Western, premiered.
- September 11, 2001—May we never forget the World Trade Center attack
- September 12, 1854—*Lassie* premiered on television. Oddly enough, all six of the dogs who played Lassie on TV were actually males.
- September 14, 1814—*The Star Spangled Banner* was composed by Francis Scott Key
- September 15, 1902—The Chicago Cubs turned the first double-play ever in professional baseball. And, yes, it was "Tinker to Evans to Chance."
- September 16, 1620—The *Mayflower* set sail from England.
- September 17, 1787—The delegates at the Constitutional Convention in Philadelphia voted unanimously to approve the proposed Constitution of the United States.
- September 18, 1793—George Washington laid the cornerstone for the U.S. Capital building
- September 20, 1984—*The Cosby Show* premiered on television.

Special Offer from Marathon

Do you have a critical application that simply *cannot* go down? It's certainly possible in a virtualized infrastructure (such as VMware, Hyper-V, or XenServer) to implement "high availability" in the form of an automatic restart of a critical VM.

But an automatic restart isn't quite the same thing. By definition, it means that your system *has* gone down, and will be unavailable during the time it takes to restart the system. And, depending on your application, you may have lost some data in the process.

Marathon Technologies' everRun family of products can keep that critical application running *without* requiring you to learn how to manage a Microsoft Cluster, and *without* requiring that your application be cluster-aware.

The latest generation, Marathon everRun 2G, incorporates an OEM version of Citrix XenServer. When you install everRun 2G on a pair of servers, you end up with a pair of XenServers that support a higher level of availability than XenServer by itself can provide.

This higher availability comes in two flavors:

Level 2 Protection

Level 2 protection is also referred to as *component-level* fault tolerance. For example, you might have an Exchange Server running on "Host A." Marathon will reserve resources on "Host B" for that Exchange Server, and (if you're using local disks as opposed to a SAN) mirror the data between your two hosts.

If the disk subsystem on Host A fails, Marathon will transparently redirect disk I/O across the high-speed availability link between your

two hosts, so that Exchange begins using the copy of the data that resides on Host B. When you repair the disk issue, *the system automatically self-heals*.

Likewise, if a NIC fails on Host A, Marathon will seamlessly begin redirecting network I/O through the network interface of Host B.

If the entire host fails, the "standby" copy of Exchange on Host B goes live, and service is restored after a very brief interruption.

This protection can be bi-directional. In other words, you might have an Exchange Server running on Host A that is protected on Host B, while also having a SQL Server running on Host B that is protected on Host A (see picture on next page).

But what if you can't even tolerate a brief interruption? That's where you need...

Level 3 Protection

Level 3 protection is also referred to as *lock-step* operation. Rather than having a copy of the protected VM in a standby state, *both copies are active*, and executing instructions in lock step with each other. They are maintained in an identical state at all times. If one host fails, the protected virtual machine is still running on the other host, and your critical application doesn't miss a beat!

You need to note, however, that Level 3 protected VMs can have only one virtual CPU assigned to them, whereas Level 2 protected VMs can have multiple virtual CPUs.

The latest version of everRun 2G supports up to four hosts in an availability pool, and would allow a VM running on any server in the pool to be protected on any other server in



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Services We Offer:

- MooseGuard™ Support Services
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- Virtualization Solutions
- Storage Solutions
- General Network Repair and Troubleshooting
- Network Design & Implementation
- Disaster Recovery
- Virus Protection & Removal
- Network Security
- E-mail & Internet Solutions
- Spam Filtering
- Voice over IP Phone Systems



Riddles for Kids: School Daze

- Q: Why was the puppy so well-behaved in class?
A: He wanted to be the teacher's pet!
- Q: Why is the library the tallest part of the school?
A: Because it has so many stories!
- Q: Where do students sit when they are learning math?
A: At multiplication tables!
- Q: What was the little snake's best subject in school?
A: Hiss-story!
- Q: Why are fish such good students?
A: Because they like to hang around in schools!
- Q: Why did the clock get into trouble at school?
A: Because it tocked in class!

Tardy Tim

Tim was constantly late to work. He just couldn't seem to get up in the morning. His boss was becoming very impatient with him and finally told him he would be fired if he came to work late one more time. Tim was desperate, so he went to his doctor for some help. His doctor gave him some pills and told him to take one before bedtime.

Tim slept great that night and even woke up before his alarm clock went off. He ate a leisurely breakfast and drove at a normal pace to work.

"Boss," he said when he got work, "my doctor has fixed my problem. The medication he gave me worked!"

"That's great," replied his boss, "but where were you yesterday?"

Organizing Tip

If you need to get rid of clutter around the house, try the following:

1. Get up early in the morning and do your sorting while you're feeling cold-hearted and grumpy.
2. Wear clothing without pockets, so you can't easily squirrel anything away.
3. Sort things into three boxes: "Trash," "Charity," and "Emotional Withdrawal."
4. Throw the "Trash" box away, give the "Charity" box to your favorite charity, and seal up the "Emotional Withdrawal" box and put it on the shelf.
5. After a year, throw away the "Emotional Withdrawal" box *without opening it*. You'll never even remember what was in it.

(Thanks to Don Aslett for these tips: <http://www.donaslett.com>)

Coming Events

Registration links at:

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

Marathon Technologies Live Webinar—"Best Practices for the 'Always On' Organization" - Wednesday, September 15, 11:00 am Pacific Time

Moose Logic / WatchGuard breakfast seminar, Thursday, September 9, 9:00 am, WatchGuard Seattle office.

Moose Logic Weekly Webinar Series, every Wednesday at 9:00 am Pacific Time—see <http://www.mooselogic.com/events> for upcoming topics. Also see <http://www.mooselogic.com/webinars> for archived recordings.