

[Tech Field Day VFD3 - Atlantis Computing](#) [ILIO USX - Bring the USX-y back](#)

We are here at day of of Tech Field Day: Virtualization Field Day 3 and it has been a busy day already! We just finished up our session with Atlantis Computing here in San Jose looking at their ILIO VDI and the USX platforms which were pretty cool!

They make a great pitch with some powerful key values: Less storage, better performance, less risks with simpler designs and automated deployment, disaster recovery, fast provisioning.

VDI your way

Atlantis brings VDI solutions that cover both persistent and stateless VDI options, so the advantage with using this is that you aren't bound to a particular model of deployment. Even better, the win comes with the performance and operational features that ILIO provides.

Their hardware partnerships are a sign of how strong of a presence they have in the industry. Both in large scale, service provider style stateless VDI supporting vendors such as IBM, HP, Dell, Disco, NetApp and EMC.

There is a lot of focus on the write-cache sizing and the reduction of issues with their distinct way of providing VDI services with Microsoft, Citrix and VMware.

While their VDI is a mature product and shows to be a proven product with lots of reference cases and customer deployments, I have to admit I was here for the next product ☐

Atlantis ILIO USX - some serious storage virtualization goodness

It is interesting that [Atlantis ILIO USX](#) is kind of like a sleeper hit when you think of the SDS ecosystem based on the heavy players that are marketing solutions that are available today, or coming soon. I had looked briefly at Atlantis ILIO on the VDI side in the past, so this was a great deep-dive into the USX product with the team that created it.

SAN + NAS + DAS = Total Storage Pool

Yes, you read that right. The Atlantis ILIO USX product layers its control plane on top of the existing storage infrastructure regardless of where it sits. The advantage comes with the in-memory delivery of the storage pool and then presenting the pooled storage. Say what?! Let's take a look at what the high level view is:



Image courtesy of Atlantis Computing: <http://atlantiscomputing.com/products/usx>

The aggregated storage pool is held behind a VM which does the caching of the storage by presenting the storage pool as a single iSCSI or NFS to the hypervisor. There is also inline de-

duplication happening which gets an even greater efficiency.

The underlying storage can be comprised of SAS/SATA/Flash/SSD to create a hybrid storage platform. The real features that come into play are actually working in conjunction with the pooling of storage by providing quick cloning and provisioning, up to 5x de-duplication, and significant cache utilization to reduce the latency from hypervisor to the storage by holding hot data in the cache layer.

Where did my committed write happen?

This is a hot question that was put out at the table today. The challenge with read/write caching is the write portion. What happens when we front the actual spinning disk storage with a RAM cache and still have to wait for the write to be committed? Basically, the USX platform doesn't change how that happens.

The USX scenario is that new data blocks are moved directly to disk for write confirmation to ensure integrity, but future writes can be held in-memory as committed writes and the pushed down to the persistent storage.

What if it breaks?

This is the question we have to ask every vendor when we look at providing an intermediary platform in storage or networking for your hypervisor. So the question I had was simple: "What happens when it breaks?"

The answer is that there is HA built into the product to be able to manage underlying failures and latency at the hardware storage layer. Ok, that didn't quite answer the question, but there were a lot of assurances that HA and failure scenarios have been accounted for as a primary feature of the product.

There are a lot of interesting features that are built in with ILIO USX, and the potential is there for some really interesting development on this platform and it definitely deserves a full review against your current storage environment and your future state.

One more thing...

✘ There is a hard limit of minimum 10GbE infrastructure to be supported for production on the ILIO USX platform. This is to ensure that the latency to the underlying storage is as low as possible so that the failure risk is lowered with the in-memory workloads getting committed back to the persistent storage layers.

This could be challenging for many in the SMB space, but for enterprise customers with 10GbE or higher infrastructure in place, this reduces one step to evaluating Atlantis ILIO USX as a potential fit for your data center.

USX and VSAN

I was particularly please to see their documentation on the Atlantis ILIO USX running with VMware VSAN. With the pending GA release of VMware VSAN, there are always questions on not just how it will perform on its own, but how it can become a part of the overall data center and cloud storage portfolio.

The Atlantis ILIO USX platform has already accounted for that. VMware VSAN can be added into the scalable storage platform and they have shown some great numbers running with VSAN in the platform:



Image courtesy of Atlantis

Computing:

http://www.atlantiscomputing.com/downloads/Atlantis_ILIO_USX_and_VMware_VSAN_Solution_Brief-2-9-2014.pdf

Truthfully, I am still working out the scenario where we would want to run VSAN in conjunction with ILIO USX given that USX seems to provide a similar feature set, but VSAN is a licensed, non-free product. Again, this is beta (as is VSAN at the time of this writing) so it all requires further research to find the ideal use-case. To take a look at the USX and VSAN solution brief, you can click the image below.



There are lots of great questions that people will have for Atlantis, so I encourage you to reach out to them via Twitter [@AtlantisILIO](https://twitter.com/AtlantisILIO) and visit them online at <http://www.atlantiscomputing.com> for all the info. It is worth a look to see what you think of the platform for sure. We also didn't discuss pricing as the product is in beta, so that will have a significant impact on the rate of growth of Atlantis ILIO USX in the SDS marketplace.

DISCLOSURE: Travel and expenses for Tech Field Day - Virtualization Field Day 3 were provided by the Tech Field Day organization. No compensation was received for attending the event. All content provided in my posts is of my own opinion based on independent research and information gathered during the sessions.