





### Minimize Risk and Control Costs for Virtualized XenApp Deployments



# Atlantis ILIO for Citrix XenApp:

- Automates and accelerates provisioning of large-scale XenApp implementations
- Simplifies operations and management at scale for XenApp
- Reduces risks of cost overruns and project delays
- Lowers CAPEX and OPEX costs by up to 80 percent
- Eliminates storage-related performance problems

"After deploying Atlantis ILIO in our virtualized XenApp environment, we reduced our logon times by 40% relative to well-performing SSDs, decreased application launch times by 30-40%... and increased our user density per instance by 20%."

 Jonathan Eyton-Williams, Practice Lead – End User Computing, Kelway International

"The US Army Medical Command has slashed user login times from five minutes to 30 seconds in an 11,000 user desktop virtualization project with the help of Atlantis ILIO software..."

- Computer Weekly

#### Migrating to Virtualized XenApp

Many businesses are in the process of migrating from physical Citrix XenApp implementations with Microsoft Windows Server 2003 to virtualized XenApp with Windows Server 2008R2 or 2012. Virtualizing Citrix XenApp has tremendous benefits in terms of increasing server density, streamlining management and lowering operational costs when compared to physical XenApp implementations. However, it also comes with infrastructure challenges that must be addressed to ensure a successful migration and deployment.

#### **Virtualized XenApp Challenges**

Implementing the right storage architecture is the single biggest challenge to the successful deployment of a virtualized XenApp environment. Scalability, performance and cost are just a few of the storage-related risks that desktop administrators must face. Unpredictable storage requirements can delay project deployment and result in poor performance caused by storage or network bottlenecks. Any disruption of application or hosted desktops' performance leads to increases in helpdesk calls, reductions in productivity and ultimately users rejecting the new virtualized XenApp implementation.

#### Atlantis ILIO for XenApp™Minimizing Project Risks

Atlantis ILIO® enables customers to deploy XenApp with no storage or SSDs by using server RAM as primary storage for XenApp instances. Atlantis ILIO dramatically reduces PVS Write Cache storage requirements, eliminates the risk of Write Cache growth and delivers an unparalleled user experience. As the project scales, the solution continues to provide amazing application performance without the risk of storage cost overruns. Starting with Citrix XenApp 7.5, customers can also deploy Atlantis ILIO with Citrix Machine Creation Services (MCS) to simplify virtualized XenApp implementation, while delivering the additional storage performance required by MCS.

#### **Delivering Management at Scale**

Atlantis ILIO simplifies and automates the deployment of infrastructure to support thousands of XenApp sessions, while enabling high availability. Atlantis ILIO Center Deployment Services tools have been used at some of the largest desktop virtualization projects in the world to automate deployments, provide fast provisioning and scale up Citrix XenApp rollouts. Atlantis ILIO Center tools helps prevent configuration mistakes and eliminates the time-consuming process of integrating servers, storage and networking. Atlantis ILIO seamlessly integrates with the hypervisor's high availability capabilities to provide automated recovery when a server or rack encounters a failure.



#### **Atlantis ILIO Center Deployment Services Provides:**

- Fully automated multi-datacenter XenApp deployments
- Push-button automation that includes deployment, configuration, storage sizing, and data store creation
- Atlantis ILIO Fast Clone technology that can provision thousands of XenApp sessions in minutes

#### **Atlantis ILIO for XenApp Key Benefits**

- Risk Reduction Neutralize PVS Write Cache risks and enable simplified deployments with MCS with automated deployment and fast cloning
- Scalability Provides linear scalability without requiring costly and complex storage infrastructure
- Cost Reduce XenApp CAPEX/OPEX by up to 80%, driving down storage and networking costs
- Performance Deliver predictable performance to improve user experience and reduce helpdesk calls
- Flexibility Works with any storage and any server hardware to simplify XenApp implementations

#### "The Atlantis ILIO enhanced write capability is extremely important to the scalability of Citrix XenApp."

- Shawn Bass, Independent Consultant

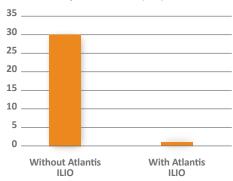
#### **Providing a Consistent User Experience**

Virtualizing XenApp introduces storage and network performance challenges that cause published desktops and application sessions to run poorly and freeze, resulting in more user helpdesk calls. Atlantis ILIO In-Memory Storage Technology™ enables organizations to deploy XenApp using server RAM as primary storage for application and desktop sessions with shared storage for user profiles. This unique solution delivers a fantastic user experience, eliminates storage-related performance problems and significantly reduces helpdesk calls.

#### **Controlling Deployment Costs**

Atlantis ILIO storage optimization software enables customers to virtualize XenApp and migrate to newer XenApp platforms with no additional SAN/NAS storage or SSDs required, while lowering the CAPEX and OPEX costs by up to 80 percent. The simplified storage and network architecture costs less to operate and is more reliable than traditional shared storage or local SSDs. In addition, Atlantis ILIO eliminates storage and network bottlenecks to provide hundreds of IOPS per XenApp user session, thereby increasing the number of users per server.

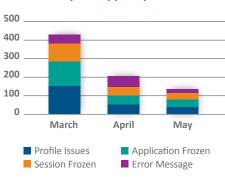
## XenApp Storage Capacity per Instance (Gb)



#### **Delivering Maximum Flexibility**

Atlantis ILIO works with all the major server hypervisor platforms (Citrix XenServer, Microsoft Hyper-V, VMware vSphere). Also, it can be deployed with any combination storage and servers without complex configuration requirements.

#### **Monthly XenApp Helpdesk Calls**



Helpdesk calls were cut by 70% after Atlantis
ILIO was deployed to a XenApp users

As a software-only solution, Atlantis ILIO has the flexibility to deliver a complete solution leveraging the investments businesses have already made. This provides customers with a high performance, scalable solution to get virtualized XenApp projects started sooner and delivered on-time.

Starting with XenApp 7.5, customers can deploy XenApp images using Provisioning Services (PVS) or Machine Creation Services (MCS). With Atlantis ILIO, storage IOPS are no longer a constraint for Citrix MCS or for PVS, giving customers the flexibility to choose the provisioning model the best fits their desktop management operations.

### Unique Atlantis ILIO In-Memory Storage Optimization Technology

Atlantis ILIO In-Memory Storage Optimization Technology has been proven and deployed with more than 500,000 virtual machines. Using intelligent real-time, policy-based optimization software, Atlantis ILIO can eliminate up to 90% of the IO before it reaches the underlying storage hardware, making it possible to run XenApp instances using RAM as primary storage.

Atlantis ILIO In-Memory Storage optimization services includes:

**In-Memory Architecture** — Atlantis ILIO runs VMs completely in server RAM to deliver high-speed, low latency runtime storage

**IO Processing** — Atlantis ILIO processes IO operations in real-time at the compute layer to lower latency and reduce network traffic

Inline De-duplication — Atlantis ILIO performs inline de-duplication in real-time on-the-wire with microsecond latency, eliminating up to 90% of storage IO traffic

**Real-Time Compression** — Atlantis ILIO compresses the optimized blocks In-Memory with microsecond latency

**IO Blender Fix** — Atlantis ILIO coalesces small random blocks generated by the hypervisor into larger sequential blocks, greatly improving storage access and efficiency

**Fast Clone** — Atlantis ILIO can clone VMs in as little as 4 seconds with no network or storage traffic

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