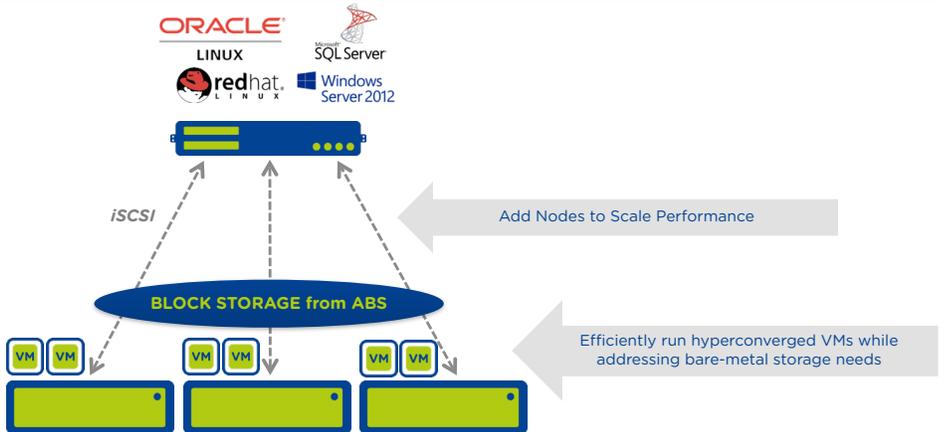


# Nutanix Acropolis Block Services

Acropolis Block Services (ABS) enables IT administrators to use Nutanix for bare-metal production applications, including Oracle RAC and Microsoft SQL Server, by simplifying deployments. Infrastructure can be consolidated onto a dynamic scale-out, highly performant, and resilient platform.

## BRIDGING THE WORLDS OF PHYSICAL AND VIRTUAL

Despite the many benefits of virtualization, some workloads often remain on bare-metal servers because of licensing constraints, legacy application portability, or investments in existing infrastructure. In this context, storage silos for these non-virtualized workloads continue to exist. ABS eliminates these silos by delivering the same simplicity Nutanix offers for virtualized workloads and file storage for physical workloads. In so doing, ABS bridges the physical and virtual worlds, consolidating infrastructure into a single unified platform.



## NOT JUST ANOTHER BLOCK DEVICE

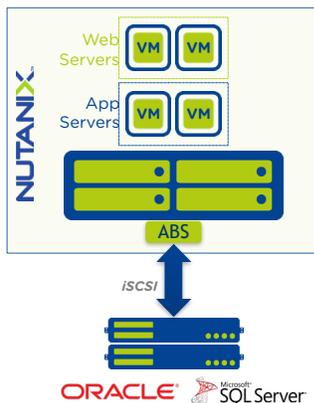
ABS exposes storage from Nutanix through direct, block-level iSCSI access while maintaining high availability, scalability, and performance to the physical or virtual servers accessing Nutanix storage. Applications including Oracle RAC, Microsoft SQL Server, and IBM DB2 can run outside of the Nutanix cluster on either bare-metal or virtualized servers. ABS is built with web-scale technology at the core for effortless scaling, even from a small starting footprint. As a result of the consolidation, all applications can now use the same infrastructure for virtualization, file, and block services. This can significantly increase efficiency, reduce risks, and make management a breeze.

## ABS for Production Three-tier Applications

ABS enables the production database tier to run on bare-metal servers, while the web and application tiers run on virtualized infrastructure.

## ABS for Server Investment Protection

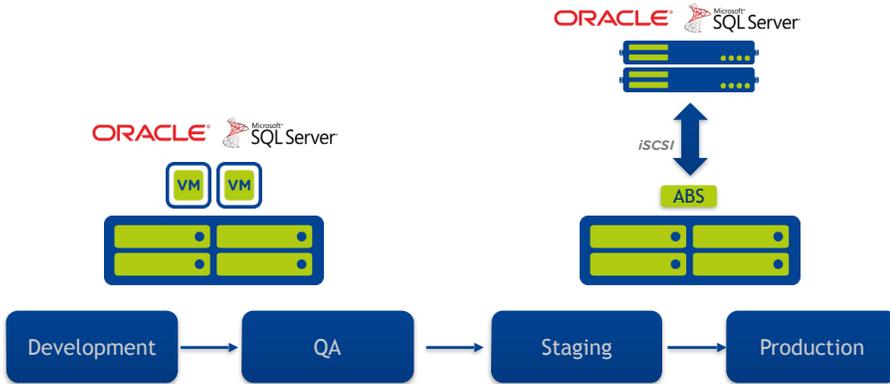
When IT amortization cycles are misaligned and storage is being retired but servers are not, ABS can be used as a bridge to a fully hyperconverged environment. Initially, ABS can be used to replace the storage being retired. Once the servers are also ready for retirement, it is a simple matter to move the applications onto Nutanix running as hyperconverged virtual machines. Since the application's data remains unchanged on the cluster, moving them is an easy, copy-free operation.



ABS for Production Three-tier Applications

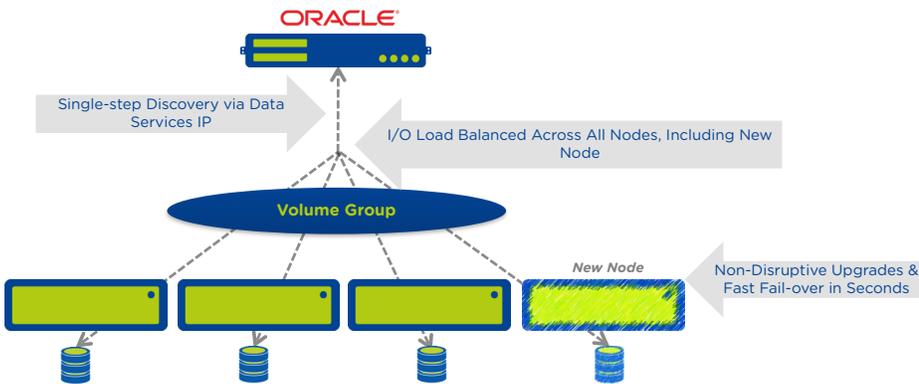
## ABS for Development and Test

Nutanix native clones can be used to clone a production bare metal database already using ABS for its storage for more efficient workflows. This can include leveraging virtualization for development and test databases, then running staging and production databases on bare metal using ABS.



## INNOVATING ON BLOCK STORAGE

Nutanix manages storage allocation and assignment for ABS through Volume Groups (VG). A VG is a collection of volumes known as virtual disks (vdisks). ABS presents VGs to both VMs and physical servers as iSCSI LUNs. Once the servers are whitelisted inside the Prism management interface, the LUNs are discovered through the iSCSI discovery process over a single virtual IP called the Data Services IP. Space savings are inherent in the platform, as vdisks are thinly provisioned and **deduplication**, **compression**, and **erasure coding** can be set in a straight-forward manner. Because iSCSI is used as the block protocol, servers accessing ABS can utilize existing network infrastructure. One of the biggest benefits available by adopting ABS is that client-side configurations can be dramatically simplified, without requiring Multipath Input Output (MPIO) to achieve scale, load balancing, and high availability.



## BENEFITS

- **Lower Acquisition Costs** – Eliminate Fibre Channel SANs by moving bare-metal database storage to the commodity x86-based Nutanix platform.
- **Scale Capacity and Performance Together** – ABS performance seamlessly scales with the size of the Nutanix cluster, eliminating fork-lift upgrades.
- **Single Server Scalability** – A single high performance server can take advantage of the aggregate IOPS delivered by several Nutanix nodes.
- **Field Proven Reliability and Availability** – ABS can provide five 9's or higher availability.
- **Automatic Fail-over/Fail-back** – Failover of iSCSI LUNs takes seconds and is easily tolerated by Windows Server Failover Clustering and many other applications.

ABS is available in the Acropolis Starter, Pro, and Ultimate editions. Pro or Ultimate are required when using ABS to connect to a non-Nutanix cluster.

**“Nutanix is changing the storage game yet again by bringing the simplicity and availability of its web-scale engineering to the broader non-virtualized applications,”** said Mr. Madhu Pajeer , IT Team leader, Masdar – UAE. **“Using Acropolis Block Services has enabled us to further simplify our storage environment and focus on innovation at the application level.”**

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