MOSMB Use Cases

Futuristic SMB 3 stack for forward thinking companies

MoSMB (SMB with Mojo) is Ryussi's SMB2/SMB3 user mode server stack designed to run crucial enterprise workloads such as Enterprise File Server, Microsoft Hyper-V, SQL Server, etc. It is built to be feature-rich, fully compliant, light-weight, low footprint and proprietary license bearing.

MoSMB's versatile nature and customizability makes it an excellent choice for varied enterprise use cases.

The modern enterprise, small or large, needs to deploy and manage business applications, databases, virtual workloads, home directories and file sharing.

MoSMB's advanced architecture and rich feature set make it well suited for a number of SMB 3.0 enterprise use cases.

Additionally, cloud computing has gained immense popularity among mid-size and small business, enabling many organizations to accelerate their business without the need for investing in computer software and hardware.

MoSMB high throughput and low latency capabilities help support the cloud infrastructure related use cases for high speed and reliable data storage and data migration.

There are some additional workloads and environments like HPC, Big Data and Object Storage which need conventional file system functionality and interface.

MoSMB as a NAS Gateway can meet these requirements and also offers scope for customization as may be needed in some cases.

MoSMB can support the following use cases:

HYPER-V OVER SMB

Hyper-V can store live virtual machine files, which includes configuration, virtual hard disk (VHDX) files, and snapshots on MoSMB file shares. This use case requires a number of SMB 3.0 features to be supported and MoSMB supports the requisite feature set.

ENTERPRISE FILE SERVER FOR SQL SERVER, SHAREPOINT AND EXCHANGE DATA

Organizations can deploy business critical applications such as Microsoft SQL Server, Microsoft Exchange and Microsoft SharePoint on MoSMB enabled NAS. These applications require very low latency, high availability and cost-effective storage platforms as can be provided by MoSMB

HOME DIRECTORY

MoSMB enables organizations to store user data with greater efficiency and consistency in centralized storage instead of individual user PCs. MoSMB supports dynamic shares and granular ACLs which are key features for supporting Home Directories

HDFS DATA STORAGE FOR HADOOP WORKLOADS

With SMB3 access to HDFS, you can export the HDFS cluster as a share on client machines and use native command line, scripts or file explorer UI to view HDFS files and load data into HDFS file system. MoSMB enables file-based applications to perform file read and write operations directly to Hadoop over the network using SMB3 protocol and thereby expands the integration of Hadoop into existing toolsets.

NAS GATEWAY FOR HPC SYSTEMS

The high-performance I/O requirements and massive scalability needs of HPC introduces unique challenges for data storage and access. MoSMB provides network file services over multiple nodes in an HPC cluster. Its active-active scale-out feature provides parallel network i/o paths for any underlying HPC cluster. Multiple storage devices, multiple nodes and multiple paths to data are utilized to provide a high degree of parallelism, reducing bottlenecks & providing high availability.

SECURE SMB 2/3 STACK FOR EMBEDDED DEVICES

MoSMB has been designed as a small footprint, highly portable and flexible SMB 2/3 stack which can be integrated into non-Windows embedded devices such as scanners and printers to enable file and print sharing functions in a Windows networking environment

EFFICIENT DATA ARCHIVAL SOLUTIONS

Using MoSMB, archive platforms can be built with all-flash, hybrid and cloud storage systems into a single cluster that provides an efficient tiered storage solution.

HYPER-V BASED VDI INFRASTRUCTURE

Many organizations often use Hyper-V to run VDI VMs. Hyper-V requires SMB 3.0 capable NAS to store Hyper-V VMs. The VDI infrastructure also requires the NAS to offer a share for the user home directories. MoSMB satisfies these requirements with the speed and reliability that VDI use case needs.

HIGH SPEED MEDIA WORKLOAD

With the availability of SMB 3.0 multi-channel support, MoSMB can now handle single client streams that exceed the bandwidth limitation of a single 10GbE connection. Media and Entertainment businesses with acquisition and production workflows that are compatible with SMB 3.0 multi-channel implementation can now take advantage of automatically load-balancing a single SMB stream over multiple 10GbE network connections.

CLOUD ADJACENT STORAGE

For enterprises considering using public cloud environments, a MoSMB based NAS infrastructure adjacent to major public cloud regions, is an excellent option which not only avoids public cloud lock-in but

also enables a cost-effective, low latency, high throughput, reliable and secure storage

storage through pluggable object storage drivers to function as an SMB object storage gateway.

INTELLIGENT DATA MOVER

As an Intelligent Data Mover, MoSMB can continually migrate inactive data to low-cost cloud storage based on intelligent policies

NAS GATEWAY TO OBJECT STORAGE

Organizations typically want a wide range of IO functions provided by file systems while retaining the scalability, ease of use and the cost advantage of object storage. MoSMB can interface with object

APPLICATION CONSISTENT HYPER-V BACKUP SOLUTION USING RVSS

Seamless backup and replication solutions for critical workloads can be built using MoSMB RVSS capabilities. This enables making application-consistent backups of a VM, if Microsoft Exchange, Microsoft SQL, or any other VSS-aware application running on virtual hard disks (VHDXs) in the virtual machine