EMC ATMOS CLOUD STORAGE

A platform to store, archive, and access unstructured data at scale

DATA, APPLICATION, ACCESS DEMANDS

The way we create, consume, and store information continues to evolve at record pace and scale. The already Zettabyte-scale digital universe is projected to double every year, driving companies to find more efficient ways to manage unstructured data - such as images, emails, videos, and text - for longer periods of time. Consumers demand instant access to information over the Web from any device, forcing developers to HTTP-enable traditional applications or redesign for Web and Mobile.

SHIFT FROM TRADITIONAL STORAGE

Traditional file-based storage (Network Attached Storage- NAS) was not designed to meet cloud-scale demands. It lacks key attributes such HTTP and Mobile access, metadata support, and multi-tenancy. It also requires manual provisioning that not only ties applications to storage and locations but must be re-coded any time the infrastructure changes.

EMC ATMOS DESIGNED FOR CLOUD-SCALE

EMC Atmos is a scale-out object storage platform purpose-built to store, archive, and access unstructured data and support unlimited applications and services at cloud-scale. Atmos provides key cloud features including: A global namespace, distributed active/active architecture, multi-tenancy, meta-data driven policies, REST API-driven storage, metering & chargeback - necessary to deploy private, public or hybrid cloud storage.

OPERATIONAL EFFICIENCY AT SCALE

MAXIMIZE STORAGE EFFICIENCY

Unlike traditional NAS that relies on hierarchical file systems, Atmos is a scale-out object architecture that stores unstructured data as objects with associated metadata. To access a file, applications don't need to know the file's location or any complex mapping; they only

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need the unique object ID. There are no RAID groups, LUNs or file systems to manage. This eliminates manual storage provisioning tasks - so storage is available on demand - freeing IT to focus on value-driven activities.

ELIMINATE OVERHEAD

Atmos' scale-out object design enables an active/active architecture. Objects are automatically replicated across nodes in the infrastructure so content is always available and resilient to failures of any component in the system including drives, disk trays, racks, or even entire sites. This eliminates the need for a dedicated replication and backup infrastructure and ensures high availability.

SCALE SEAMLESSLEY

The Atmos Global Namespace ties together all Atmos storage across multiple sites into a single storage cloud. The Global Namespace abstracts storage from the application and provides a common view - independent of location - making scaling seamless. Atmos self-configures any time capacity, applications, services, or tenants are added. Atmos is also self-healing in the event of a node or component failure, continuously monitors performance and provides instant alerting.

GAIN MORE USABLE CAPACITY

Atmos is a multi-tenant system that provides a single, shared pool of storage across tenants. It isolates users, applications, and departments as separate logical tenants for maximum security. True multi-tenancy provides a single storage infrastructure for many users, applications and services across globally distributed systems -- and is the key to delivering a storage–as-a-service model.

AUTOMATE DATA ACROSS ITS LIFECYCLE

Metadata-driven policies make managing billions of objects simple. Atmos policies are easy to configure through an intuitive GUI. Policies can be customized and self-managed at the object, tenant, application, or user levels. Data value automatically drives data placement, retention, disposition and tiering for complete data lifecycle automation. Policies also drive the number, type and location of replicas to automate data protection. Atmos provides synchronous and asynchronous replication policy options with a unique GeoParity feature that can split objects into data fragments across a storage cloud for up to 65% greater efficiency.

INSTANT ACCESS FROM ANY DEVICE

Web, Mobile and traditional applications access Atmos via a broad range of supported methods including: HTTP, Web Services, Content Addressable Storage (CAS), and file-based access. S3 applications can use the Atmos native S3 API to seamlessly migrate to Atmos.

Users and developers easily share, access, and store data easily using a wide range of plug-ins and tools. HTML5, AtmosFox and AtmosChrome plug-ins provide developer's access to Atmos through any device in their browser of choice. One time, secure collaboration in or outside the firewall is available with Atmos Web Access Shareable URLs with expiration. Windows and Linux workstations can use Atmos GeoDrive add-on software for instant access to any Atmos cloud.

CLOUD SERVICES

ATMOS SDK

Atmos provides a native REST (Representational State Transfer) API to write platform-independent Web services applications. The Atmos software development kit (SDK) features a wide range of language bindings and 'helper' code snippets including mobile platforms - enabling fast, easy access to programming. Atmos also supports S3 to support applications written to the S3 API.

STORAGE-AS-A-SERVICE

Atmos provides the infrastructure for Service Providers and Enterprises to deliver private, hybrid, or public cloud storage services.   In fact, more than 60 Global Service Providers use Atmos to power their public cloud storage offerings. Together, Atmos and the Atmos Cloud Delivery Platform enable Service Providers to deliver storage-as-a-service. Developers can use Web services to build custom, differentiated services. Service Providers can stand up a storage service even faster with Atmos Cloud Delivery Platform portal software. It enables users to sign up for service instantly and tracks consumption, trending and bandwidth information for metering and chargeback.

FLEXIBLE DEPLOYMENT OPTIONS

Atmos provides a wide range of software and hardware options to match size, feature, and location requirements.

Atmos software options

- **Atmos CE** - Complete Edition provides full Atmos functionality designed for distributed locations including: multi-site active/active, multi-tenancy, full policy controls. Deployed on Atmos hardware.

- **Atmos LE** - Light Edition offers a subset of Atmos functionality to meet cloud archive and centralized data centers including: 2 sites, 1 tenant / 1 subtenant, limited policy controls. Deployed on Atmos hardware.

- ****Atmos VE** - Virtual Edition provides full Atmos functionality of Atmos deployed on any VMware-certified third-party storage, including: EMC Celerra, CLARiiON, Symmetrix, VNX, VNXe, and Isilon

Atmos hardware options

Atmos provides three purpose-built storage systems: small/medium compute, dense, and capacity. Enterprises and Service Providers have flexibility and can choose the model that best fits their requirements for today and far into the future. All Atmos systems use Intel processors, offer 1-6 TB drives options, and use standard racked, cabled, and configured components. Atmos systems are node-based with flexible expansion nodes. Detailed information about hardware specifications is available in the Atmos Hardware Specification Sheet on www.emc.com/atmos.

EMC ELASTIC CLOUD STORAGE

Ready for Atmos.next? EMC's third object-based storage offering, Elastic Cloud Storage (ECS™), delivers all the great benefits of Atmos in a completely software-defined platform. Consolidate your workloads, scale effortlessly, and protect your investment in Atmos by migrating over to ECS. For more information, please visit www.emc.com/ecs or try ECS today for free at our Free & Frictionless download page: www.emc.com/getecs.

**As of Q2 2014, Atmos VE is for Proof- of-Concept systems only. For production deployments, please refer to the Atmos Appliance or ECS for a software-defined solution.

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