

EMC CLOUD STORAGE SOLUTIONS FOR GOVERNMENT

THE BIG PICTURE

EMC Atmos: multi-tenant distributed cloud storage for unstructured content

Because storage is such a key element and advantage to cloud deployment, EMC has developed a powerful new storage-offering category we call cloud optimized storage. A key component for delivering cloud solutions, EMC® Atmos™ is a multi-petabyte storage solution that combines scalability that is massive enough to meet the requirements of any federal agency, with automated data placement to distribute information across the nation and around the globe. This complete HW/SW solution from EMC runs on low-cost, high-density hardware and makes vast amounts of information readily available to users regardless of where they are or what device they are using for access. Because Atmos, despite its massive global scale, is operated as a single Unified namespace, management and configuration are easy and cost effective. EMC Atmos is available in configurations ranging in initial size from 60 TB to 720 TB. The following are just a few Atmos features:

- Policy-based information management
- Massive global scalability
- Streamlined delivery with object metadata and policy filters
- All-in-one data services, from replication to versioning
- Automated systems management to reduce administration costs
- Multi-tenancy serving multiple applications from the same infrastructure
- Browser-based administration tools allow administration from any browser

EMC Atmos is compatible with the proven capabilities of the EMC storage solutions portfolio. EMC enables the optimized end-to-end information authenticity and integrity, provided by EMC Centera, which is necessary for archive storage and regulatory compliance.

GIVE YOUR AGENCY THIS NEW ADVANTAGE

Federal agencies, like private sector enterprises, stand to gain tremendous advantages from the ability to have virtually unlimited computing and storage assets residing in multiple locations, all efficiently, economically, and securely operating as a single entity. This is the core of the many game-changing advantages that cloud computing delivers. The cloud model we are providing at EMC enables convenient, on-demand network access to a shared pool of configurable computing resources. This includes networks, servers, applications, storage, and security safeguards, however widely the physical assets and users communities are distributed. The remarkable gains in efficiency and cost savings flow from the cloud-based ability to rapidly and holistically store, provision, and release all required resources with minimal management effort or interaction with a service provider. Your agency becomes its own service provider.

Primary solutions that EMC cloud computing and storage can provide include:

- **Multi-site data management**—When you need single-point, rules-based management for vast quantities of content produced, consumed, and stored in multiple locations nationwide or worldwide.
- **Intra-agency and inter-agency data sharing**—When the missions of your various user communities demand secure storage and rapid distribution of shared data assets combined with utmost data confidentiality, all controlled from a single point.
- **Analytical and scientific research**—When authorized analysts and knowledge workers need rapid, easy access to actionable data regardless of where that data was created or in which data center it currently resides—including secure, large volume storage as an online service.

EMC CAN DELIVER ALL THE CLOUD HAS TO OFFER

It is essential to the nature of all federal agencies, whether civilian, defense, or intelligence entities, to have work sites and users across the country and often around the world. All work must adhere to strict business processes and policies, with trusted supply chains, specified accepted applications, and multiple levels of storage requirements, all governed by differing levels of access and security. This complex, policy-sensitive, widely dispersed storage and usage environment—that has been a costly and confusing obstacle to operational performance in the past—is ideally suited to cloud computing and storage today.

Specifically, our EMC cloud storage experts can work with government agencies to plan, configure, deploy, manage, and maintain comprehensive cloud solutions that accomplish all of the following and more:

- **Location independent resource pooling** scales the entirety of resources pooled together in the cloud to serve all users regardless of their physical location.
- **On-demand self service** enables your users to provision storage resources exactly as they need them from their own workstations, without having to contact or interact with a service administrator.
- **Ubiquitous network access** makes capabilities available to your authorized users via their standard Internet browser.
- **Rapid elasticity** means that all pooled cloud resources can be rapidly provisioned and purchased in an “elastic” manner without limitations on quantity or time.
- **Measured service** automatically controls and optimizes resource use via metering of key service elements, such as bandwidth, which provides transparency for both provider and user.

WHICH CLOUD DEPLOYMENT STRATEGY IS THE BEST FIT FOR YOUR AGENCY?

Because the needs and resources of every federal organization vary, we suggest careful consideration of three different approaches to cloud deployment.

1. **Private cloud**—EMC deploys the infrastructure and operates it exclusively for the client organization's data center. This deployment is the obvious choice for nearly all DoD and Intelligence Community organizations and many Civilian agencies with widely dispersed geographic locations. Infrastructure is deployed and operated exclusively for an organization or enterprise.
2. **Public cloud**—EMC Atmos-powered storage services offer Internet-accessible, on-demand, and secure public cloud storage-as-a-service. EMC Atmos has partnered with service providers in multiple geographies, such as AT&T, Peer 1, and Hosted Solutions, to provide public access to large volumes of stored data via standard web browsers. This creates an ideal environment for civilian agencies that have requirements to bring informational resources to the public, share information with private sector entities, or provide access to public service information. Some DoD and IC entities may also have specialized requirements, such as recruitment, that could be served by public cloud deployment.
3. **Hybrid cloud**—EMC can compose and deploy two or more clouds with public and/or private characteristics and then bind them together for data and application portability—while each cloud remains unique. Agencies gain all the benefits of federation by being able to deploy both a private internal cloud and a public cloud, for specific applications and transactional needs, with the ability to move data seamlessly between them. Further, Atmos storage HW/SW can be combined with EMC Atmos-powered storage services to create virtually unlimited secure storage as an online service.

EMC IS READY TO HELP WITH YOUR CLOUD DECISION

Moving into a whole new realm is a big decision. Our cloud experts will sit down with you to discuss all the possibilities and determine the appropriate approach for your agency's current and anticipated needs. First, we recommend a thorough inventory and analysis of your legacy applications and storage requirements leading to a cost/benefit analysis to help you make baseline decisions. What can be cost-effectively migrated to cloud? What new applications should be created with consistency to a common cloud infrastructure? Security is always a primary consideration, especially for DoD and IC organizations. Fortunately, proven EMC security services are already being delivered to the cloud by RSA®, not only to authenticate and authorize, but tracking all the way down to the individual data element.

Once your fundamental decisions are made with expert consultation, we can natively integrate cloud principles and construct new programs to match your specific agency needs. We then integrate your new Atmos storage HW/SW, along with new apps and possibly EMC Atmos-powered storage services, into your new cloud baseline. In addition, we migrate those legacy applications that make sense from a cost and utility standpoint. The result: your new massively-capable, globally distributed computing and storage infrastructure, your cloud.

TAKE THE NEXT STEP

For more information on EMC Cloud Solutions for Government, go to FedCloud@emc.com

EMC², EMC, Atmos, Centera, RSA, and where information lives are registered trademarks or trademarks of EMC Corporation in the United States and other countries. All other trademarks used herein are the property of their respective owners. © Copyright 2010 EMC Corporation. All rights reserved. Published in the USA. 08/10 Solution Overview H7288.1