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Case Study

How Presidio Federal Helped the Department of Energy

Tackle Today's — And Tomorrow's — Data Challenges

One needs to look no further than the [Federal Data Strategy](#) to know that, in today's world, data is the lifeblood that fuels informed government decision making and mission success. From policy and mission execution to constituent services, access to relevant information gives government leaders the insight they need to make more effective decisions. Moreover, as data-centric technology becomes more ubiquitous across the country and digital government becomes the order of the day, the amount of data agencies are expected to store, analyze and manage will only continue to grow. And as the COVID-19 pandemic necessitates the need for timely, useful information there's no better time to make use of that data. As a result, many [policies around data storage and sharing shifted](#), encouraging data use for government agencies.

But data alone isn't enough to offer the robust, prompt insights government leaders need. To make the most of data, agencies also require strategic underlying architectures that can support effective storage, analysis and use.

IBM Elastic Storage Servers (ESS)



Cost Effective



Secure



Shared Storage



Large Processing Capabilities

Sparking Better Data Architecture at the Department of Energy

The U.S. Department of Energy (DOE), which spans dozens of offices and research labs, collects and houses countless high-value data points a day. This data is used, among other things, to [track and model](#) energy use across the country, explore more efficient energy use and delivery, as well as tackle some of the U.S. government's greatest challenges, [like the COVID-19 pandemic](#).

As the need for greater virtual capabilities increased, the DOE required cost-effective and secure data storage capabilities for its large volumes of unstructured data. Additionally, they needed a system that offered shared storage and allowed them to fulfill and holistically manage large, complex processing requirements.

To better architect its IT environment for data storage and use, the DOE turned to [Presidio Federal](#), a trusted IT services and solutions provider that advises many of the DOE's national labs on the correct mix of technology to support its overall IT environment. Presidio Federal ultimately placed more than 25 petabytes of usable capacity in three different Elastic Storage Server (ESS) clusters for DOE labs in the U.S. with the aim to provide the DOE with the architecture and storage capabilities it needs to support current and future storage requirements.

The move to IBM ESS consolidated the DOE's disparate storage systems into a single storage platform, which simplified the agency IT team's ability to manage large amounts of unstructured data, while simultaneously minimizing the need for the additional software licensing that comes with several siloed storage systems. The result was a simpler, more cost-effective solution. The system also provided greater security via the [IBM Security Guardium Key Lifecycle Manager](#), which centralized, simplified and automated the agency's encryption key management process to help protect encrypted data. Finally, the technology allowed the DOE to lay the groundwork to innovate for the future, as IBM's ESS clusters are designed to allow the agency to tap into emerging technologies, like high-performance computing (HPC), artificial intelligence (AI), machine learning (ML) and deep learning (DL).

Supercharging Data with IBM ESS

With thousands of nodes and hundreds of engineers behind the technology, IBM's ESS clusters are designed to support customers like the DOE who have large amounts of unstructured data to contend with.

The ESS platform offers agencies like the DOE the ability to support their agency's mission on many levels: high performance and high reliability at scale, as well as high flexibility to support a multitude of different workloads in a single name space or distributed global name space. At one of the many DOE National Labs, for example, Presidio Federal installed a file system capable of supporting and scaling emerging technologies like HPC and AI/ML, as well as modern cloud deployments, which can help agencies confidently pilot and grow AI programs, as well as enable big data analytics and enhance productivity for data science. Moreover, labs and offices across the DOE network can access the data stored in the IBM ESS system, enabling shared storage service for all mission critical big data.

The Results

Ultimately, Presidio Federal was able to identify the DOE's need to consolidate and simplify data storage and provide them with a single platform to fit all their current data processing and management needs, but also a technology with the flexibility and processing capabilities necessary to innovate, grow and protect their data for years to come.



Curious how Presidio Federal and IBM can help pair your agency with the right technology to simplify data storage?

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