How government technology leaders can increase efficiency with AWS GovCloud (US)

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OVERVIEW

How government technology leaders can increase efficiency with AWS GovCloud (US)

Government technology leaders and the supporting industrial base want to use the most advanced technology available to enhance mission impact, elevate national security, and transform the citizen experience. At the same time, they want to spend and operate technology platforms efficiently while safeguarding sensitive government data through alignment with regulatory compliance programs and standards such as FedRAMP High, ITAR, and DoD SRG IL-4/5.

How can leaders in highly regulated environments operate efficiently, spend budget wisely, and promote rapid, innovative mission outcomes while aligning with a broad spectrum of regulatory requirements? The answer is simple: Amazon Web Services (AWS) and AWS GovCloud (US) provide cloud technology that underpins a foundation of highly compliant government efficiency. Here's how the AWS GovCloud (US) seven pillars of compliant efficiency enable government technology leaders to operate and modernize IT efficiently:

Seven Pillars of Compliant Cloud-Based IT Efficiency with AWS GovCloud (US)

1. Accelerated Compliance
2. Comprehensive Security
3. Resiliency Automation
4. Cost Savings and Control
5. Generative AI Transformation
6. Digital Asset Management
7. Multi-agency Industry Collaboration

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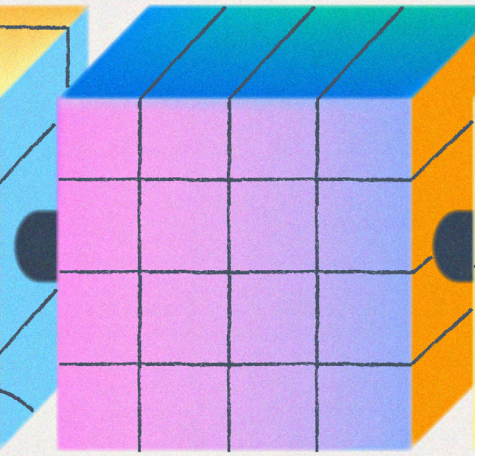

Efficiency gained through accelerated compliance

AWS GovCloud (US) promotes efficient compliance with regulatory standards.

Government technology leaders often need to support specific regulatory compliance requirements like FedRAMP High, ITAR, and DoD SRG IL-4/5 while promoting efficiency. AWS GovCloud (US) accelerates compliance processes through inherited security controls and automated compliance monitoring to reduce the time and resources typically required for authorization processes. AWS GovCloud (US) compliance artifacts in AWS Artifact accelerate authority to operate (ATO) through pre-validated security controls and documentation. Built-in compliance controls automate continuous monitoring and reporting to reduce the amount of manual effort traditionally required for maintaining compliance. FedRAMP High and DoD SRG IL4/5 compliance is maintained through security controls, continuous monitoring, and annual reassessments by AWS security professionals to reduce the compliance burden on the government. CMMC certification may be streamlined through pre-configured environments and controls that align with DoD requirements. AWS GovCloud (US) compliance programs and isolated, dedicated infrastructure enable leaders to gain efficiencies in handling controlled unclassified information (CUI), International Traffic in Arms (ITAR) data, and even addressing compliance requirements for U.S. data sovereignty. U.S. Defense Logistics Agency, for instance, was able to migrate five critical applications to AWS GovCloud (US) and enter compliant production in just 138 days – almost six weeks ahead of schedule.

Learn more about AWS compliance programs →

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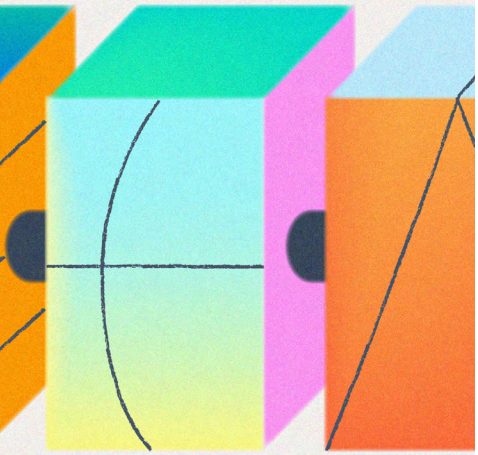

Efficiency gained through comprehensive security measures

AWS GovCloud (US) delivers security efficiency through continuous and automated protection.

Government technology leaders are tasked with protecting highly sensitive data and systems against sophisticated global cyber threats. AWS GovCloud (US) offers compliant, best-in-class security capabilities that streamline and automate these traditionally resource-intensive tasks. AWS security services offer the latest security protections to reduce the need to invest heavily in ongoing infrastructure security updates. The platform replaces manual security checks with automated, real-time visibility and threat detection. Security incident response and remediation are automated to reduce response times while maintaining audit trails, and customers also have access to the AWS Shield Response Team, which offers a human component to incident response. AWS GovCloud (US) supports the efficient deployment of zero-trust architectures to reduce the time and resources required to implement comprehensive access control systems. The platform efficiently manages DDoS protection with automated defenses that scale dynamically to reduce the need for complex mitigation infrastructure. This security approach enables leaders to maintain stronger security postures with fewer resources. To exemplify benefits of security in the platform, the U.S. Census Bureau moved its 2020census.gov website to AWS GovCloud (US) to provide centralized security management and ultimately protect citizen information.

Read more about security at AWS →

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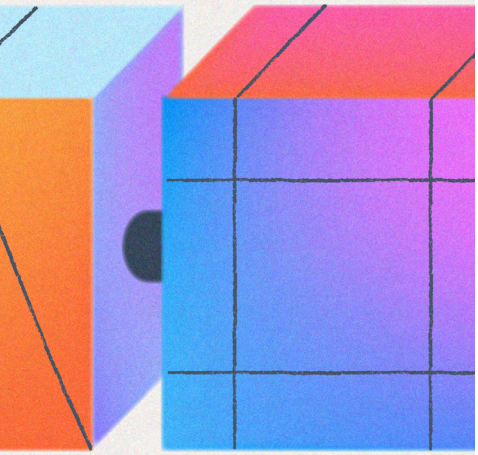

Efficiency gained through workload resiliency automation

AWS GovCloud (US) increases operational efficiency with resiliency planning, automated monitoring, and recovery.

Government technology leaders must ensure mission-critical systems remain operational under all conditions while reducing operational expenses. AWS GovCloud (US) elevates government workload resiliency through automated, cost-effective solutions that efficiently eliminate traditional redundancy expenses and manual maintenance. Multi-Region geographic redundancy may be implemented across AWS Regions without the need to maintain multiple physical data centers to reduce infrastructure costs and operational overhead. Multi-AZ architectures provide high availability through automated workload distribution to help eliminate single points of failure and manual intervention costs. Self-healing infrastructure capabilities automatically detect and remediate common issues to reduce system downtime and government administrative overhead. Automated failover processes with Amazon Application Recovery Controller and AWS Elastic Disaster Recovery ensure efficient recovery from unplanned disruptions without complex manual procedures or additional staffing.

Resilience testing, monitoring, drift detection, and chaos engineering and testing are possible with AWS Resilience Hub and AWS Fault Injection Service to help prevent and reduce government cost impact caused by a system outage. Continuous backup strategies with AWS Backup execute automatically to help promote efficient data protection without the cost of manual oversight. Resilient cloud architectures increase operational efficiency by minimizing downtime, automating routine tasks, and precisely aligning resiliency requirements with mission needs and budget constraints. The U.S. Department of Veteran Affairs, for example, used AWS GovCloud (US) to improve performance and redundancy for the VA Active Directory infrastructure and better track application usage and cost data to maximize efficiency while ensuring mission-critical resiliency.

Learn more about resiliency in AWS GovCloud (US) by reading this whitepaper →

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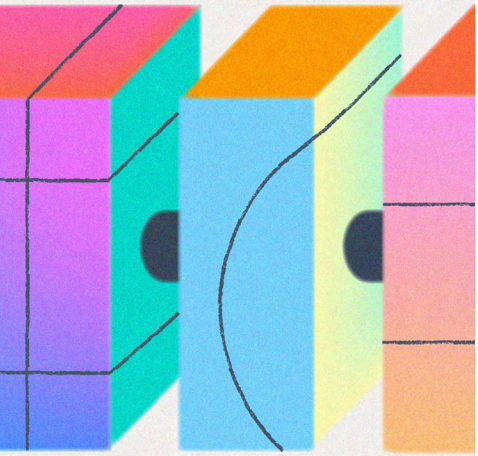

Efficiency gained through increased cost savings

AWS GovCloud (US) enables efficient IT spending and consumption models.

There is unprecedented pressure on government technology leaders to operate in highly regulated environments while optimizing IT spending, delivering enhanced services, and maintaining their compliance postures. AWS GovCloud (US)'s cost optimization capabilities enable efficiency by offering a pay-as-you-go consumption model so that leaders can eliminate overprovisioning by precisely matching cloud resources to mission and citizen demand. AWS GovCloud (US) drives efficiency by automating maintenance and operational tasks to reduce physical infrastructure management costs and the associated government staffing requirements. The platform minimizes infrastructure investment by replacing upfront capital expenditures with flexible operational costs to eliminate hardware procurement cycles and ongoing facility expenses. Through AWS Cost Explorer and AWS Budgets, leaders gain real-time visibility into IT costs to promote data-driven decisions about resource allocation and proactive cost control measures. The result is a more efficient, cost-effective, and compliant IT operation that provides leaders the agility to adapt to evolving and dynamic mission needs. As an example, NASA JPL was able to quickly acquire IT resources on-demand and save money for the Mars Curiosity Rover and the Perseverance's Mars 2020 missions.

Read more about cost optimization →

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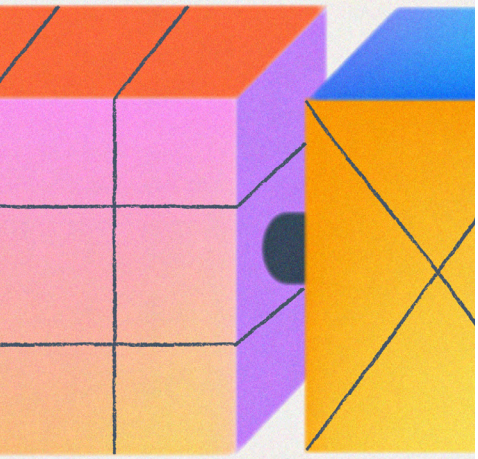

Efficiency gained through compliant generative AI transformation

AWS GovCloud (US) enables the government to transform with generative AI.

Government technology leaders seek to harness the power of generative AI to promote efficient mission and citizen service outcomes while maintaining regulatory compliance. AWS GovCloud (US) provides a secure, compliant foundation for generative AI that can rapidly transform government service delivery and operational efficiency. Through pre-built, compliant AI services like Amazon Bedrock, Amazon SageMaker, and Amazon NOVA Foundation Models, leaders can rapidly deploy capabilities like intelligent virtual assistants and automated processing systems that dramatically reduce service delivery times and staff workload, driving speed to mission. These cloud-based AI capabilities with supporting GPU infrastructure facilitate workforce productivity gains by automating routine documentation, analysis, and administrative tasks, allowing staff to focus on high-value activities. Real-time data analysis capabilities accelerate operational mission decisions by quickly processing vast amounts of information into actionable insights. Operations may be streamlined through AI-enhanced workflows that reduce processing times and human error while maintaining detailed audit trails. Research and discovery are accelerated through AI-assisted analysis, pattern recognition, and predictive analytics that enable scientists to create greater value from their data while optimizing resource allocation and mission outcomes. As an example of visionary generative AI adoption, the Energy Department partnered with the Treasury Department to apply advanced analytics to complex data structures, resulting in a deeper understanding of crypto financial data and promoting scientific discovery.

Read more about how to get started with generative AI in this whitepaper →

Learn more about generative AI solutions in this blog →

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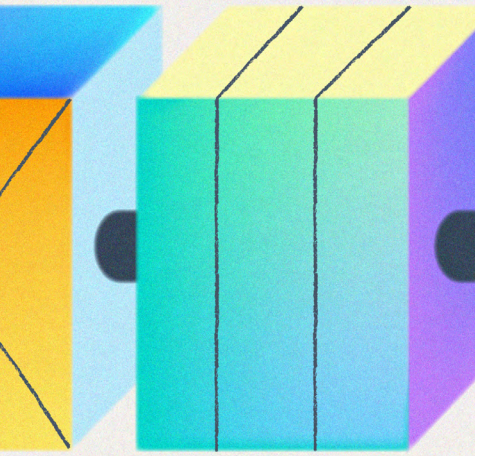

Efficiency gained through smart digital asset management

AWS GovCloud (US) increases Digital Asset efficiency through automated management and security.

Government technology leaders must efficiently manage, protect, and deliver an ever-growing volume of digital assets while ensuring compliance and citizen accessibility. AWS GovCloud (US) enables the efficient management of critical digital assets—from citizen identification documents like driver's licenses and passports to health records, land records, digital currencies, and official certifications. The platform enables the efficient storage and retrieval of massive digital collections with storage services like Amazon S3 while automatically scaling to meet growing citizen service demands. Intelligent storage tiering automatically moves digital assets to the most cost-efficient storage architecture based on access patterns, helping leaders efficiently manage and reduce costs for high-volume assets like vehicle registrations, health records, and professional licenses. Built-in versioning and lifecycle policies efficiently maintain asset history and compliance requirements for sensitive documents like medical records and benefits documentation without increased administrative burden. Automated metadata tagging and classification streamline the organization and discovery of frequently accessed government credentials and official records to reduce the time spent on manual categorization. Access controls and encryption ensure that sensitive citizen assets remain secure while being readily available to authorized users. These practices enable the efficient management of digital assets at scale while maintaining privacy and security compliance. As an example, the Treasury Department partnered with AWS to use machine learning with financial digital asset management to elevate customer experience. As leaders accelerate their digital transformation, AWS GovCloud (US) provides the secure, compliant foundation needed to efficiently manage the future of digital government assets while reducing operational complexity and cost.

Learn more about digital assets innovation in this blog →

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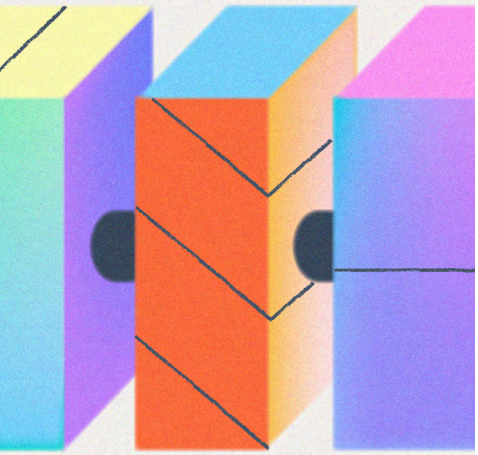

Efficiency gained through multi-agency and industry collaboration

AWS GovCloud (US) boosts government collaboration efficiency while simplifying integration.

Government technology leaders, as discussed in the example above of the Departments of Energy and Treasury, often require collaboration across agencies and with industry and academic partners to promote rapid innovation. AWS GovCloud (US) streamlines cross-agency collaboration through secure, automated data warehousing platforms like Amazon Redshift. This capability enables instant, granular, and fast data access without the need to copy or move data and eliminates inefficient information sharing. Open data platforms allow different entities to register their datasets for consumption; users only have to prepare and submit data. The platform enables secure data sharing through controlled, compliant mechanisms that protect sensitive information while allowing authorized access across organizational boundaries. Generative AI platforms like Amazon Bedrock with Amazon NOVA FMs may then be deployed to gain insights from structured and organized datasets. Cross-agency workflows are automated through standardized processes that reduce coordination overhead and accelerate multi-agency initiatives. Shared cloud services frameworks are efficiently deployed and managed so agencies can leverage common capabilities while reducing redundant investments and operational costs. Common development environments ensure consistent practices across teams to help increase productivity and reduce integration challenges. Joint innovation initiatives are accelerated through standardized collaboration tools and secure workspaces like Amazon Workspaces that enable efficient solution development. Public-private partnerships are strengthened through secure, efficient integration capabilities that enable leaders to leverage industry expertise while maintaining appropriate controls and oversight. Some examples of partnerships are when AWS collaborated with the USDA to help fulfill the USDAs food security mission, with the U.S. Census Bureau to break down data silos, and when NASA leveraged AWS to enable NASA scientists to collaborate with external partners.

CONCLUSION

The bottom line: AWS GovCloud (US) enables government efficiency through compliant cloud innovation

AWS GovCloud (US) enables efficiency and underpins innovation for highly regulated cloud environments.

AWS GovCloud (US) makes compliance more efficient by providing built-in ITAR, FedRAMP High, and DoD SRG IL-4/5 controls to accelerate authority to operate (ATO) while reducing administrative overhead. The platform's security is enhanced through US citizen-operated, isolated, U.S. sovereign region environments that maintain the highest regulatory compliance standards without additional government resource investment. AWS GovCloud (US)'s dual-region architecture, with three Availability Zones each, enables resilient solutions, often at a lower cost than on-premise environments. Availability zones optimize protection against disruptions and performance through synchronous, replication, and low latency, protecting against operational risks while enabling leaders to match availability requirements to mission needs and budget constraints.

With AWS GovCloud (US), government technology leaders can revolutionize agency IT operations, streamline processes, and increase the impact of finite critical resources.

CONCLUSION

Government technology leaders can transform their agencies through the economic efficiency of AWS GovCloud (US). This purpose-built cloud platform helps revolutionize government IT operations, streamline processes, and increase the impact of finite critical resources. It enables leaders to optimize resources, reduce costs, and enhance security while improving mission effectiveness and citizen services. Leaders can embrace the power of Generative AI, digital asset management, and collaboration to accelerate and elevate government effectiveness by adopting cloud-based solutions in AWS GovCloud (US). By embracing its agility and scalability, leaders can accelerate mission outcomes to meet evolving government technology needs in the modern digital age, creating a more responsive and future-ready compliant technology platform for the nation's most critical technology assets.

Read more about government efficiency →

Contact the public sector team for more information on efficiency in regulated cloud environments →

ABOUT THE AUTHORS

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David is a technical business development manager for Amazon Web Services (AWS), focused on serving public sector civilian and financial customers using the AWS GovCloud (US) Regions. In this role, David works closely with customers to ensure alignment of their mission goals and technology strategies with the capabilities of the AWS GovCloud (US) Regions. David is also interested in global economics, digital assets, cloud security, and cloud resiliency and is the lead for the AWS GovCloud (US) digital assets, supercomputing, perimeter protection, modernization, and resiliency product strategies. He is a doctoral candidate at the Liberty University School of Business and holds an MBA, MS, and BS, as well as several Project Management Institute credentials, such as the PfMP.

Shawn Asfeld

Shawn is a Senior Solutions Architect for AWS GovCloud (US). He has extensive experience working with federal and civilian customers to build a wide variety of secure and compliant workloads in AWS GovCloud (US). Shawn's current focus is helping customers and partners build solutions on AWS GovCloud (US) to meet various levels of compliance, including FedRAMP, CMMC, and DoD authorization. He earned a BS degree from Texas A&M University and is an AWS-certified solutions architect professional.

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Michael is the global head of financial Innovation and digital assets at Amazon Web Services (AWS) and leads AWS Global Executive Relations. He works with US and international governments on cloud computing and is responsible for emerging technology innovation and implementation. In 2023, he was appointed to represent Amazon on the US Commodity Futures Trading Commission's (CFTC) Technology Advisory Committee. He previously served as the first US Treasury attaché to Qatar and Kuwait and has served in senior roles with two presidential administrations and under three Treasury Secretaries.

Heather Luciano

Heather is a Senior Marketing Manager at Amazon Web Services (AWS) supporting Government Regions (GovCloud, Secret Cloud, and Top Secret Cloud) customers. She is responsible for generating awareness of and interest in AWS services in sovereign and classified regions through strategic, multichannel marketing campaigns, content, and events. She has worked in marketing, editorial, product, and sales with public sector customers across government, nonprofit, multinational, education, and healthcare organizations throughout the technology and media sectors. She holds an MBA from NYU Stern School of Business, an MA from CUNY Graduate Center, and a BA from James Madison University and has been recognized for her charitable work in education and literacy through service on various nonprofit and industry boards and committees.