Top 5 IT priorities for government

Support the evolving mission with Red Hat technologies

Build a security-focused, flexible IT foundation for evolving mission needs

Regardless of the mission, federal government civilian agencies have 5 IT priorities in common:

- ▶ **Cybersecurity resiliency.** Facing more frequent and sophisticated cyber threats, governments need to fortify defenses, accelerate incident detection and response, and improve resilience. At stake are continuity of operations (COOP), data privacy, and public trust.

- ▶ **Cloud adoption and optimization.** Strategically moving select data, applications, and citizen services to a cloud environment helps to increase agility and IT efficiency.

- ▶ **Data management, analytics, and artificial intelligence (AI).** Growing agency data sets contain actionable insights for decision-making, personalized citizen experiences, predictive maintenance, and content creation with generative AI (gen AI).

- ▶ **Modernization of IT infrastructure.** Modern IT infrastructure enhances application performance, reliability, scalability, and operational efficiency. Modern infrastructure also supports interoperability, allowing different departments' applications to share data.

- ▶ **Digital services delivery and citizen experience.** As an alternative to call centers, digital channels like web portals and apps can make government services more convenient, efficient, and cost-effective.

This overview summarizes the mission value of these 5 IT priorities and explains how Red Hat® technologies can help to achieve them.

Cybersecurity resiliency

Civilian agencies are battling unrelenting cyber threats from nation-states, criminal organizations, and malicious individuals. Federal agencies reported over 30,000 IT security incidents in FY 2022.[1] Agencies have been directed to implement zero trust architectures and adopt cloud technologies to prevent, detect, assess, and remediate cyber incidents. Protecting private citizen data such as health, property, and financial records is imperative for maintaining public trust and confidence in government systems.

How Red Hat can help

Implement a zero trust architecture. Zero trust is a security model based on a policy to "never trust, always verify" users, devices, and digital transactions, even if they are inside agency walls. Use Red Hat Trusted Software Supply Chain to code, build, and monitor software using proven platforms, trusted content, and real-time security scanning and remediation.

1 *U.S. Government Accountability Office. "High-Risk Series: Urgent Action Needed to Address Critical Cybersecurity Challenges Facing the Nation." 13 June 2024.*

Infuse security throughout the software development lifecycle

Red Hat created the Secure Software Management Lifecycle (SSML) approach, which directly aligns with National Institute of Standards and Technology Secure Software Development Framework (NIST SSDF SP-800-218), the Open Worldwide Application Security Project (OWASP), and various International Organization of Standardization (ISO) standards. By using the SSML framework, government agencies can reduce the number of vulnerabilities in released software, mitigate the potential effect of undetected or unaddressed vulnerabilities, and address the root causes of vulnerabilities to prevent future recurrences.

"Shift left" by performing security tests early in the software development lifecycle. The goal is to find vulnerabilities and fix defects as early as possible. Adopt shift-left testing using Red Hat Advanced Cluster Management for Kubernetes. Available in self-managed and fully managed cloud editions, Advanced Cluster Management includes hundreds of built-in controls to enforce security-focused practices throughout the DevSecOps process. These practices are based on standards such as Center for Internet Security (CIS) Benchmarks and National Institute of Standards and Technology (NIST) guidelines. Advanced Cluster Management integrates with agencies' existing DevOps tooling and workflows.

Cloud adoption and optimization

Running workloads in public clouds instead of the agency datacenter can increase agility and make it more efficient to introduce and support new citizen services. Migrating workloads to a cloud environment can also cut costs as a result of pay-per-use pricing, reduced infrastructure maintenance, and the cloud provider's economies of scale.

How Red Hat can help

Standardize technology across the hybrid cloud. Simplify IT operations by using a consistent technology stack everywhere–datacenter, public clouds, and at the edge. Red Hat Enterprise Linux® and Red Hat OpenShift® can be deployed in any environment, and distributed government IT teams can manage all environments from any location, using the same tools. Microsoft Azure Red Hat OpenShift for Microsoft Azure Government and Red Hat OpenShift Service on AWS have achieved FedRAMP Agency Authority to Operate (ATO) at the High Impact Level.

Automate repetitive tasks. Automate tasks such as deployment, configuration, and cloud resource management using Red Hat Ansible® Automation Platform. Automation avoids human-caused errors that can interrupt citizen services or create security vulnerabilities. It also gives government IT teams more time to strengthen system security, improve existing service delivery, and introduce new services to better meet citizen needs.

Modernize applications. Many of today's government applications are large, monolithic systems written in the early 2000s. Few people know how to maintain these traditional applications. A change to a single line of code can potentially break the entire application, and application components cannot be distributed across different locations. In contrast, modern microservices-based applications consist of independent services that communicate via application programming interfaces (APIs), making them more efficient to build, test, deploy, and update. The goal is to build a modern software factory that continually produces high-quality, security-focused applications. Simplify the shift to microservices-based applications using Red Hat OpenShift and Red Hat Service Interconnect.

AI, analytics, and data management

Every citizen interaction, sensor reading, document, and email is a source of insights that can help improve decision making and citizen services. To turn data into actionable insights, agency IT teams need the technology to prevent data leakage, avoid application latency when large data sets are sent across the network, and maintain AI model accuracy. For AI at scale, agencies also need the flexibility to train and run models anywhere, including the edge, and standardized processes for AI application development.

Build a modern software factory

A software factory is the digital equivalent of an assembly line, producing consistent, reliable cloud-native applications with minimal human intervention. Red Hat technologies automate the develop, build, test, release, and deliver phases to help government teams release updates consistently and with attention to security.

How Red Hat can help

Maintain data privacy. To keep up with rapid changes in science and healthcare knowledgebases, some agency personnel are using commercial AI tools not approved by their IT teams, such as ChatGPT. This practice exposes the agency to risks from data leakage–from the inside out, as when personally identifiable information (PII) or personal health information (PHI) leaves the agency network, or from the outside in, as when machine learning (ML) models learn from inaccurate or biased information. Prevent data leakage by using Red Hat OpenShift AI to host open source alternatives to commercial AI chatbots, hosted within the agency's trusted computing environment.

Operationalize AI/ML. Every hour that government data science teams spend managing IT infrastructure is an hour less available to develop ML models and AI-based applications to support the mission. Gain more time for innovation by automating infrastructure management with Red Hat OpenShift. If more graphic processing unit (GPU) resources are needed for AI model training, for example, OpenShift automatically adds them. Red Hat OpenShift increases efficiency for data scientists and developers by giving them a single interface to access multiple AI tools, frameworks, and built-in monitoring and logging functions.

Boost application performance by running applications closer to data and users. Today it is common to transmit data to the datacenter or cloud for model training and analytics. Reduce latency by hosting workloads closer to data and users. Red Hat OpenShift can be deployed in the cloud, agency datacenter, and many edge environments.

Modernization of IT infrastructure

Aging government software platforms and applications are costly to maintain and pose significant operational challenges. Modern platforms help to improve government efficiency. For example, automated DevSecOps workflows help developer teams more quickly introduce new citizen services and experiences. Application interoperability allows departments to share data, helping to improve the citizen experience and avoid the costs of managing duplicate data sets. Another aspect of modernization is breaking up monolithic applications into smaller microservices that are simpler to update and can be distributed across different environments, including at the edge.

How Red Hat can help

Extend operating system lifetime. Red Hat Enterprise Linux® has a 10-year lifecycle. When it comes time to upgrade, minimize service interruption by using Red Hat Leapp utility, which makes it unnecessary to remove the older version before installing the newer version. If an upgrade is not feasible for a particular application, Red Hat provides extended lifecycle support.

Simplify container adoption. Ease the transition to containers using Podman, an open source tool for developing, managing, and running containers on Red Hat Enterprise Linux. Add orchestration and automate Day 2 operations by migrating workloads to Red Hat OpenShift.

Automate routine tasks. Automate deployment, rebooting, security patching, and configuration changes with Red Hat Ansible Automation Platform. Use the time saved to automate more tasks or build new digital capabilities to support the mission.

Proactively identify risk. Every Red Hat subscription includes Red Hat Insights, a cloud service that provides visibility into operating environments so that staff can identify and address risks before they spread. Red Hat Insights has received FedRAMP ATO at the High Impact Level, certifying it for the government's most sensitive unclassified data in cloud computing environments.

Use U.S.-based support

Red Hat Confirmed Stateside Support gives Red Hat government customers the appropriate support resources and data handling to meet federally mandated security requirements. For example, support staff are U.S. citizens working on U.S. soil.

Run applications in the optimum location. Red Hat solutions provide the same capabilities, user experience, and security baseline in any location–public cloud, datacenter, or edge. Freely move workloads in response to new performance requirements, changes to cloud providers' pricing and tools, and other factors.

Digital services delivery and citizen experience

Citizens expect digital services from the government to be as convenient and accessible as the private-sector services they use for shopping, submitting insurance claims, and managing their finances. The digital experience needs to be personalized, intuitive, and accessible to people with disabilities. If the experience falls short, citizens will abandon digital channels and call the contact center, increasing costs.

How Red Hat can help

Deliver digital services from a hybrid cloud or multicloud environment. To support the mission, digital services need to scale, be security-focused, and adapt rapidly to changing government and citizen needs. Work with Red Hat Consulting to deliver digital services cost-effectively from a cloud environment.

Improve the citizen experience with AI. Red Hat specialists in AI and government can coach your team to use Red Hat data management and AI tools to personalize the digital experience for citizens. Deepen your knowledge with Red Hat Training, instructor-led or self-paced, in-person or online.

Lower the costs of digital service delivery. Use Red Hat technologies to modernize the IT infrastructure used for digital channels, improving the citizen experience while lowering costs throughout the software development lifecycle.

Learn more

Read about how Red Hat is helping civilian agencies achieve mission success.

About Red Hat

Red Hat helps customers standardize across environments, develop cloud-native applications, and integrate, automate, secure, and manage complex environments with award-winning support, training, and consulting services.

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