

## Whitepaper

# Secure Managed Cloud Solutions That Power Public Sector IT Transformation

In the quest to transform IT, public sector organizations continue to seek ways to migrate applications to the cloud and improve the constituent experience.

Numerous cloud options exist, as do the potential for roadblocks.

The White House released the Cloud First Policy in 2011 as a strategy intended to accelerate the pace at which the U.S. Federal government realizes the value of cloud computing by requiring agencies to evaluate safe, secure, cloud computing options first before making any new investments. Government agencies have experienced success by deploying sub-sets of applications in the cloud, such as enterprise email. Successful deployments have increased the confidence and willingness of organizations to identify and research the migration of mission-critical applications to the cloud.

While cloud-based technology is a critical component of IT transformation because it can help agencies provide better, more responsive services, public sector organizations are facing a quandary. While the push for IT transformation allows agencies to strengthen technology's role as an enabler of the mission, agency officials are often hesitant to move to a cloud environment because they are concerned that mission-

critical applications will not perform as well as they do on-premises. Most agencies are not in the software development business, and unable to re-platform existing mission-critical applications plus the supporting services tied to those applications to public cloud architectures in a realistic timeframe.

## Virtustream Powers Public Sector IT Transformation

Expectations for public sector IT transformation are rising while significant budgets are devoted to maintaining existing investments. For example, approximately 70% of the \$95.7 billion U.S. federal IT budget in the fiscal year 2018 will be spent on operating and maintaining existing IT investments<sup>1</sup>. To keep pace, public sector organizations need a solution that allows them to transform their IT quicker with an accelerated time to value. Virtustream Federal Cloud enables organizations to not only cut costs from the most expensive and time-consuming mission-critical applications, but also leverage guaranteed availability and performance backed by industry-leading SLAs, rigorous end-to-end security, and government-specific compliance solutions. Virtustream's patented MicroVM cloud resource allocation and management technology allows fine-grained measurement of compute, memory, network, and storage consumption. This lets organizations pay a predictable amount for the resources that are used, reducing inefficiencies and creating significant cost savings, while eliminating the cost of overhead from unused or underutilized virtual machines.

<sup>1</sup> Office of Management and Budget, 2018 Federal Budget for Information Technology  
[https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/budget/fy2018/ap\\_16\\_it.pdf](https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/budget/fy2018/ap_16_it.pdf)





## Barriers to IT Transformation

Moving workloads to the cloud require CIOs to plan, and a considerable part of this exercise revolves around the architecture and management of the solution. It is no secret—public clouds can offer substantial cost savings but only if upfront planning, design, and development occur. The problem is the majority of today’s mission-critical workloads do not fall into the category that makes it easy for public sector organizations to migrate and gain Authority to Operate (ATO) quickly and cost-effectively. Most public cloud providers do not allow organizations to realize true IT transformation since they must still perform most of the management activities to support the workload and the end-user base.

Why do mission-critical applications pose such a problem for public sector organizations? Let’s consider the traditional IT burden that public sector organizations face today. At the core, traditional IT involves infrastructure to be managed: facilities, networking, storage, and servers. Public cloud does a great job of transferring the CAPEX costs of maintaining infrastructure to an OPEX model. The problem is traditional enterprise applications that power public sector organizations usually aren’t cloud-native, i.e., built from the ground up to take advantage of the scale-out model of general-purpose clouds. Traditional public sector applications require significant I/O, processing, and memory resources with assumed infrastructure resiliency. These applications are built on a scale-up model, and can’t be quickly moved to general-

purpose cloud providers. To avoid suffering performance problems, these applications must be rewritten from scratch to take advantage of the general-purpose clouds’ scale-out model, or, the public cloud infrastructure must be drastically over-provisioned to support performance requirements – a costly and time-consuming prospect.

This leads us to another problem: resources and budget. Most public sector organizations are in the business of serving their constituency—not developing code. In an era of tightening budgets, public sector organizations struggle with the desire to modernize their IT by moving to the cloud but ultimately put migration projects on the back burner because of lack of resources and time. Organizations often lack the precious resources and skills to redesign and build their mission-critical applications in a general-purpose public cloud model.

## Is Your Agency Ready For Self Service?

While numerous public cloud solutions offer public sector friendly compliance attestations, the problem is that existing applications often have different use case characteristics, which may complicate application cloud adoption planning. The key is choosing the right cloud for the proper application because cloud solutions are not created equal. Different cloud platforms are optimized to support different workloads—an application that runs well on one cloud might not run well on another, for example.

Beyond application architecture, the core theme of the general-purpose public cloud model is “do it yourself.”



While these public cloud solutions offer an array of solution components, organizations must design and build their solution from the tools available. Agencies are on the hook to understand all the intricacies of these elements and how they interact with other solutions components to create the cloud-native workload. Rearchitecting these backbone workload applications will take resources and time, and while the self-design focus is excellent for organizations with access to sandbox developers, it requires the clients to figure out what is needed for a secure, resilient enterprise platform. The goal is to find a partner that will go beyond FedRAMP validation to coordinate the tools, processes, and procedures in its data center with the customer's security paradigm.

### **Do It Yourself – At What Cost?**

Public cloud solutions offer the ability to move away from the CAPEX buying cycle to an OPEX model with low infrastructure as a service cost models. It is not uncommon for public cloud solutions to publish price cuts on numerous solution components regularly. Agencies have been provided with a clear mandate to move to the cloud while budgets often remain flat. The public cloud pricing model is a tempting way to transform their existing IT.

Let's consider, however – at what cost? While it is true the public cloud solutions can offer significant cost savings; it is often the unknown and hidden costs that can increase the overall price tag of rearchitecting and supporting a mission-critical scale-up workload into a cloud-native scale-out model. We have touched on how from a design standpoint that general-purpose public cloud architectures are targeted for devops. The self-service model is just that – self-service, where customers still shoulder the IT operational burden or are forced to rely on long-term third-party agreements for services. Organizations that wish to maintain operational control over their workloads must also factor the costs of maintenance, onboarding, administration, and governance tasks, which demand valuable skillsets at a time when there is a shortage of knowledgeable staff.

### **Federal-Grade For The Most Mission-Critical**

Virtustream offers public sector organizations a better path to the cloud with secure and cost-effective managed cloud solutions that allow them to run the complex, mission-critical applications of today coupled with the

ability to build the cloud-native applications of the future. With almost ten years of cloud experience, Virtustream cloud and managed services solutions are purpose-built from the ground up to increase the ability of government agencies to support a mission-focused agenda.



Virtustream Clouds, including Virtustream Federal Cloud, were built to handle mission-critical applications for the most complex, highly-secure IT landscapes in the world. Our value proposition is simple: we simplify increasingly complex agency environments.

Virtustream helps public sector and federal government organizations drastically increase the performance and reliability of their mission-critical applications – including SAP, Oracle, Microsoft, and many others. With vast experience and proven, repeatable processes, Virtustream helps public sector organizations navigate the complexities of digital transformation and modernization.

### **Security and Compliance Come Standard**

Virtustream understands that different applications have different use case characteristics and reinforces why we have architected and operated Virtustream Federal Cloud to address the specific requirements of migrating mission-critical applications. For federal clients, this includes understanding their security requirements such as FedRAMP, and the U.S. Department of Defense (DoD) Cloud Computing Security Requirements Guide (SRG). Our approach to cloud ensures continuity of operation and shortens time to value for our customers without compromising essential aspects like security and compliance. Virtustream Federal Cloud is accredited and holds a Joint Authorization Board (JAB) Provisional Authority to Operate (P-ATO) at FedRAMP Moderate, and hosts customers with corresponding FISMA ATOs that inherit platform FedRAMP controls.



Virtustream can also support International Traffic in Arms Regulations (ITAR) compliance for those customers who do not meet the Controlled Unclassified Information (CUI) requirement to be placed in the standard Virtustream Federal Cloud.

Virtustream also provides the U.S. Department of Defense (DoD) and approved mission partners with on-premises private cloud services. DoD customers can migrate mission-critical applications and employ enterprise-class managed services, all fully contained within DoD data centers to enable and support data categorized as Impact Level 5 (IL5) production workloads.

### **Accelerating Time to Value**

Virtustream Federal Cloud helps public sector and federal government organizations increase the performance and reliability of mission-critical applications while simultaneously helping them manage and contain costs from their most expensive and time-consuming mission-critical applications. Virtustream enables agencies to step into the cloud today by deploying existing applications with minimal changes and gain ATO sooner, versus taking a giant leap to re-architecting every application from scratch to be cloud-native.



### **Reduce Complexity and Realize True IT Transformation**

While agencies have a clear mandate to embrace cloud technologies, many soon realize that it takes considerable time and resources to plan, re-architect, and manage the new solution on traditional self-service public clouds. Cloud platform infrastructure is only part of the mission-critical workload story. Unpredictable costs, increasing complexity, and knowledge gaps are just a few examples of today's leading impediments to well-run IT operations. With Virtustream, public sector organizations need not go it alone.

Virtustream begins the planning and migration process by giving federal government IT leaders a comprehensive view of their technology consumption, so they can quickly and precisely identify opportunities for growth. Using Virtustream Advisor – a proprietary analysis and planning tool – consultants assess current IT assets and provide a clear picture of workloads, consumption, and performance. The result is a transparent, data-driven, CFO-friendly proposal for migrating mission-critical IT to the Virtustream Federal Cloud platform. Besides Virtustream Advisor, Virtustream's other planning and migration services include cloud advisory, onboarding, and product implementation.

Through Virtustream Managed Services, organizations can realize true IT transformation through comprehensive IT management solutions that raise the bar on current operations and ensure that the most value and performance is gained from information infrastructures. Using industry-leading methods and innovative tools, our advisors provide real-time metrics to detect, diagnose, repair, and report on issues in the most complex business IT environments.

### **Continuously Monitor Risk and Compliance**

Actively protecting data is instrumental in keeping any public sector IT environment running efficiently. Automation is now imperative to address continuous monitoring requirements and the increasing cost and complexity of regulatory compliance in areas such as FISMA, FedRAMP, and HIPAA. IT executives and commanders need a common operating picture of their portfolio of programs that provide a consolidated risk dashboard of all assets and data sources. That's where Virtustream Viewtrust comes in. Viewtrust is an optional risk management and continuous compliance monitoring solution that offers proactive monitoring of risks across enterprise cloud and non-cloud environments to address risks surrounding five key areas: cyber risk, compliance risk, IT operational risk, audit readiness, and IT asset management. Agencies can layer Viewtrust both on- and off-premises to continuously monitor an increasingly diverse and complex landscape of systems to address information and network security, operational risk, and regulatory compliance needs to meet auditing and compliance requirements.

### **Efficient Audit Package Creation**

Audits are a time-consuming effort, and organizations



face a rapidly-changing regulatory and business risk landscape with audit approaches that are not positioned to address the increasing volume and complexity of risk. Fewer resources and increased responsibility for audit teams require changes to how organizations approach traditional audit processes that were built around point-in-time, static audit planning. Decentralized documentation captured in multiple tools and systems make it difficult to integrate, and there is often static reporting and limited coordination of objectives among risk, compliance, and audit groups. Unfortunately, audit reports and artifacts are often out-of-date when they are completed due to stale information.

Viewtrust significantly reduces the time spent completing all six steps of the National Institute of Standards and Technology (NIST) Risk Management Framework (RMF) and improves on the traditional, manual compliance process which can be prone to high error rates and inherent operational delays. Through workflow-based automated methodologies, Viewtrust manages the complete audit package lifecycle from initiation to validation to certification and accreditation and helps implement hundreds of auditable operational processes for IA controls, change control management, asset management, and remediation. Viewtrust also integrates directly with the Defense Information Systems Agency (DISA) Enterprise Mission Assurance Support Service (eMASS) system for automated publication of compliance statements, assessments, artifacts, and Plan of Action and Milestones (POA&M) into eMASS.

## Begin Your Transformation

To learn more about how Virtustream can help transform your agency's operations to deliver better services to your constituents while beating budget pressure, contact your Virtustream account manager or reseller partner today or [click here](#) to begin your transformation.

### About Virtustream

Virtustream, a Dell Technologies Business, is the enterprise-class cloud service and software provider trusted by enterprises worldwide to migrate and run their mission-critical applications in the cloud. For enterprises, service providers and government agencies, Virtustream's xStream® Management Platform and Infrastructure-as-a-Service (IaaS) meets the security, compliance, performance, efficiency and consumption-based billing requirements of complex production applications in the cloud - whether private, public or hybrid.

