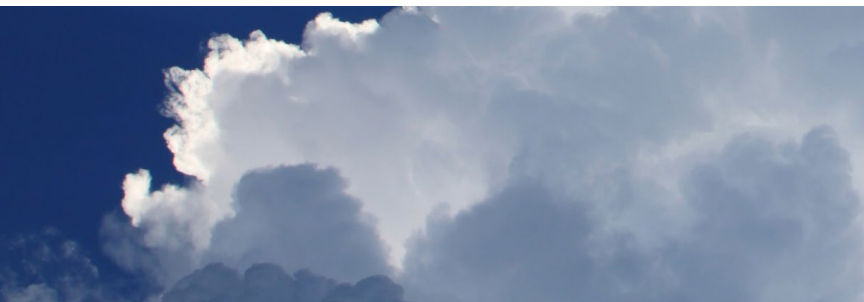


THE BUSINESS OF CLOUD



 Hitachi Data Systems
Federal

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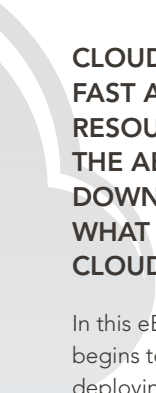
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INTRODUCTION



CLOUD IT PROMISES A HOST OF BENEFITS, INCLUDING FAST AND SIMPLE ACCESS TO A SHARED POOL OF RESOURCES AND SERVICES TO DRIVE DOWN COSTS, THE ABILITY TO SCALE THOSE RESOURCES UP AND DOWN QUICKLY – AND THE OPTION TO ONLY PAY FOR WHAT YOU CONSUME. HOWEVER, THE BUSINESS OF CLOUD CAN BE TRICKY.

In this eBook, ViON, in partnership with Hitachi Data Systems Federal, begins to untangle the intricate web of complexities that often impede deploying a Cloud computing solution. We'll help you decipher common Cloud terminology, address key procurement issues along with some of the most pressing security, financial and management concerns surrounding Cloud.

We recognize that Cloud computing can seem overwhelming. With the right information and the right experts on your side, you'll be better positioned to capture and leverage the flexibility, innovation and cost savings of Cloud. Find out how to determine which Cloud model is best for your organization, overcome common procurement barriers, and minimize inherent security, financial and management risks to move into the Cloud with confidence.

[Read on to learn more.](#)



1: CHOOSE THE RIGHT MODEL

When it comes to Cloud, there is no “one size fits all” model.

Determining the type of Cloud that will work best for your organization entails asking some direct questions. What problems are you trying to solve with Cloud? Do you want to own your own infrastructure? Are there specific security measures or regulatory mandates you must adhere to or classified data that you must protect? Your answers to these questions, along with quite a few more, will help you select the deployment and Cloud service model that’s right for your business or agency.

If you’ve started exploring Cloud, you’ve likely heard quite a few technical terms and acronyms. Do you want your Cloud infrastructure to be on-prem or off-prem? What are the key differences between a Public and Private Cloud? Is IaaS, PaaS or SaaS the best match for your service needs? Armed with a basic understanding of the most common types of Cloud deployments and service models, you’ll be better positioned to make the right choices from the start.

COMMON CLOUD DEPLOYMENT TERMS

- **On-Premise (On-Prem):** Your Cloud technology is located on site in your data center. Businesses and agencies who work with highly sensitive data or who want to maintain ultimate control over all aspects of their Cloud typically choose on-prem deployments.
- **Off-Premise (Off-Prem or Hosted):** Your Cloud infrastructure is located at a remote location and managed by a Cloud Service Provider (CSP).
- **Public Cloud:** Shared among a set of customers, Public Clouds are also referred to as multi-tenant Clouds. Public Clouds provide easy access to data and work best for organizations working with non-sensitive, unclassified data and who don’t want to own the Cloud infrastructure.

- **Private Cloud:** Dedicated to a single customer, Private Clouds are not shared with anyone outside of your organization. They provide a safer environment for sensitive and classified data and are often the best choice for government agencies or highly regulated industries such as healthcare, insurance and finance.
- **Hybrid Cloud:** A blend of Private and Public Cloud attributes, Hybrid Clouds foster mixed use, with some shared and some dedicated technology. Hybrid Clouds may be the right choice for organizations who need the flexibility to easily access and share business applications and non-sensitive data as well as protect classified data and assets.

COMMON CLOUD SERVICE MODELS

- **Infrastructure as a Service (IaaS):** A CSP owns the Cloud infrastructure and provides usage-based consumption or pricing. However, you will be responsible for operating and managing the Cloud environment yourself.
- **Cloud Managed Services:** Your CSP takes responsibility for management and operations of your Cloud infrastructure, which is either owned by your organization or provided by the CSP.
- **Platform as a Service (PaaS):** The CSP provides the entire Cloud environment, including all of the tools, software and service capabilities. PaaS fosters fast application development, deployment and enterprise value by allowing you to develop new applications and services within the Cloud without any of the infrastructure costs or Cloud management complexities.

- **Software as a Service (SaaS):** With SaaS, you gain access to the software you need but there is no physical infrastructure to manage or maintain. SaaS also reduces or eliminates many of the licensing costs associated with owning software. Salesforce® and Microsoft® Office 365 are prime examples of SaaS.

“Until the agencies assess their IT investments that have yet to be evaluated for suitability for migration to the cloud, they will not know which services are likely candidates for migration to cloud computing services, and therefore will not gain the operational efficiencies and cost savings associated with using such services.”



2. OVERCOME PROCUREMENT BARRIERS TO CLOUD ADOPTION

As Cloud computing is relatively new and the industry is in the early stages of moving to the Cloud, many government buyers are learning as they go. Overcoming procurement barriers to Cloud adoption and making smart purchasing decisions is critical to successful deployments. Several challenges need to be addressed, including:

- Anti-Deficiency Act Concerns
- Modifying Service Level Agreements (SLAs)
- Structuring Contracts for Cloud Success
- Making the Case for Cloud with a Strong Business Case Analysis

Many government agencies cite concerns regarding Anti-Deficiency Act compliance as the primary reason they are shying away from Cloud. However, with proper procurement planning and awareness, it should not be an issue.

The key to overcoming concerns regarding the Anti-Deficiency Act is who has title and ownership of the equipment. If you purchase Cloud Services, you must use Operations and Maintenance (O&M) authority. So, at the end of your services contract, you will not be able to take ownership of the equipment associated with Cloud Services, even if the equipment has been properly depreciated and still has life left in it. You simply cannot use services money to make an equipment acquisition. And your CSP cannot relinquish ownership of the equipment supporting your Cloud to the government. Should you want to purchase the infrastructure and equipment tethering your Cloud, you will need to use Other Procurement Authority (OPA) rather than O&M funds.

Making the right purchasing decisions regarding Cloud also means modifying SLAs for Cloud and asking the right questions about service levels, standards and metrics. SLA's must be adapted to be more specific for Cloud computing. Ambiguity regarding Cloud terminology, roles and responsibilities as well as metrics can often be a barrier, so agreeing on a common vocabulary of Cloud terms, clearly defined roles and responsibilities for everyone involved in the contract, along with metrics that can be measured and mapped to specific business objectives is essential.

Practical planning for Cloud procurement should include developing a business case that includes rigorous, systematic analysis of the return on investment (ROI) of various Cloud solutions before signing on to a preferred system.

Moreover, as all Cloud contracts and SLAs are unique, and Cloud computing entails a huge range of possibilities, you will likely need outside help from a lawyer, preferably experienced in structuring Cloud computing contracts. Identifying the core elements for which Cloud stakeholders will be responsible and creating a checklist of items that can and should be discussed between all parties involved is a good starting point. CSPs, customers and end-users should all be involved in contract negotiations, with everyone's expectations and requirements captured in the contract.

TOP 5 CHALLENGES TO IMPLEMENTING CLOUD COMPUTING SERVICES IN FEDERAL GOVERNMENT:



1. Meeting Federal Security Requirements

2. Overcoming Cultural Barriers

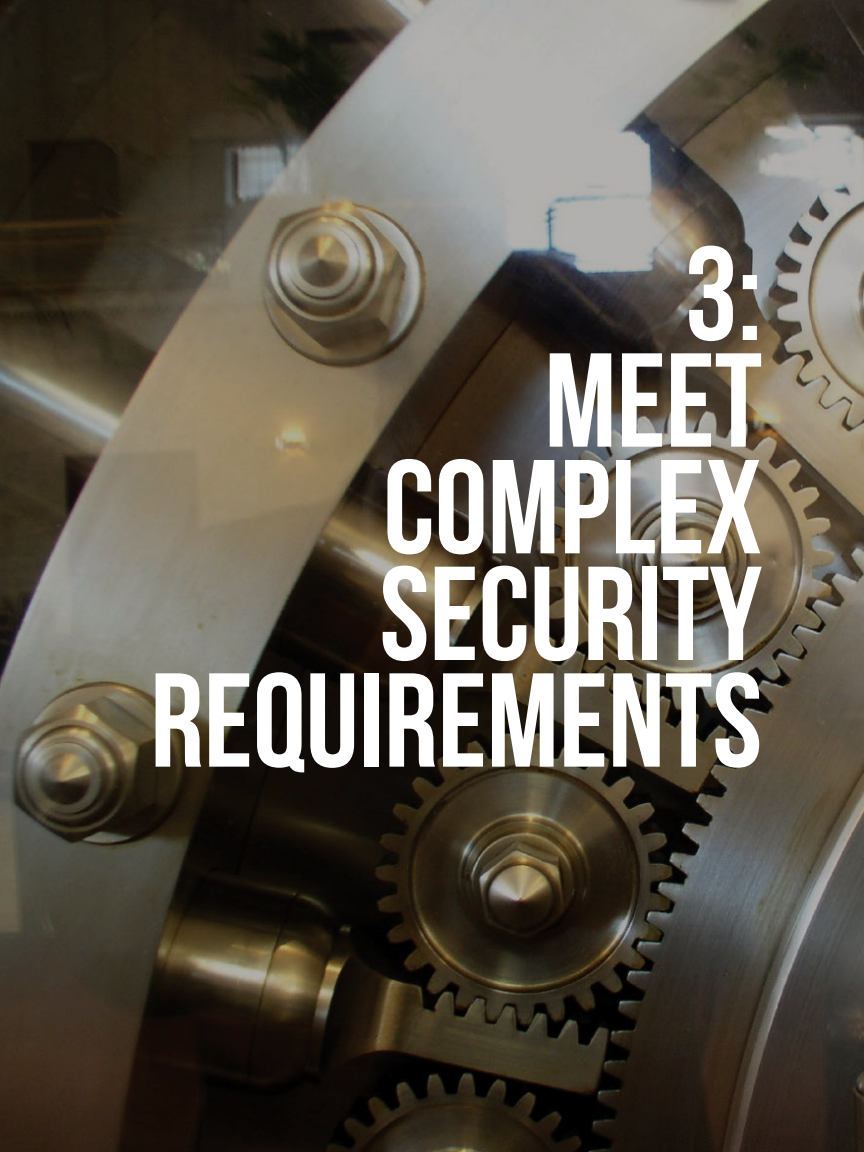


3. Meeting New Network Infrastructure Requirements

4. Having Appropriate Expertise for Acquisition Processes



5. Funding for Implementation



3: MEET COMPLEX SECURITY REQUIREMENTS

Different agencies have different thresholds for risk. Some organizations are not concerned enough about security. For others, any lack of visibility or control over each and every aspect of security and data protection is unthinkable.

Stringent security compliance standards may seem like a barrier to Cloud entry, particularly for government agencies and highly regulated industries such as healthcare and financial services. But with the right Cloud model (likely Private), automated toolsets that analyze data integrity and control end-user authentication, along with expert guidance from a security-cleared partner, it's easier than you may think to protect data and systems while ensuring compliance.

When it comes to security, you must maintain a balanced approach. That may entail balancing the need to provide easy access to information with controlling access to more sensitive data through end-user authentication, for example.

Keep in mind that on-premises Private Clouds are probably best suited to meet the stringent security demands of government agencies and provide a variety of options to manage and protect sensitive systems and data. You can then work with a CSP or industry expert to determine which, if any, of your systems, applications and/or data can move to either an off-premises Private or Hybrid Cloud, depending on your mission-critical objectives. A Cloud expert, like ViON, will also work with you to ensure that your assets are protected across the entire data lifecycle and while data is on the move or at rest.



4: MINIMIZE FINANCIAL RISKS

Lengthy procurement cycles coupled with the high costs of modern Cloud-enabled infrastructure can be off-putting for many budget-strapped organizations and public agencies are actually mandated to spend public funds prudently. By moving away from the long-established practice of buying and managing infrastructure that quickly becomes outdated, to an on-demand Cloud model, where IT is a commodity and operating expense rather than a traditional acquisition, organizations can drastically cut costs and minimize financial risks while maximizing Cloud benefits.

Cloud services create predictability. First of all, you are not carrying depreciation on your books. You are no longer responsible for year-over-year maintenance or tech refreshes. You don't have to maintain massive data centers. All you have to do is know what your workloads and business needs are, then a CSP can ensure that you have the proper Cloud resources to meet demands and extra capacity, and storage can always be added on-demand.

ViON Agile Cloud Solutions, including ViON Agile Cloud Platform, ViON FlexCloud Services and IaaS, allow you to combine an array of flexible features and options to create the very best value for your organization. As technology is delivered via a pre-integrated, shared infrastructure pool, you get access to the resources you need without over-buying. Your Cloud environment is right-sized to your demands, so you only have to pay for what you actually use. Plus, with advanced Cloud-enablement software and ViON Extreme Virtualization Technology enabled by Hitachi Data Systems Federal's virtualization solutions, you can reduce resource deployment by 20 percent while achieving 100 percent of your targeted computing capacity.

The background of the image is a vibrant blue sky filled with large, fluffy white clouds. In the bottom left corner, a dark, jagged rock formation is visible, adding a sense of ruggedness to the scene. The text is overlaid on the right side of the image.

5: SIMPLIFY CLOUD MANAGEMENT

With IT resources already stretched to the max and limited staffing flexibility (or Cloud expertise), adding Cloud management to the mix may seem like a recipe for disaster. Choosing the correct Cloud model, determining the right applications to move to the Cloud, and leveraging Cloud Services from an established expert advisor all serve to simplify Cloud management and ultimately pave the way to Cloud.

Not only does an On-Demand Cloud model require far less up-front capital, it shifts the burden of implementation and on-going maintenance and management onto the CSP. They take care of assessing demand, ordering equipment, architecting, provisioning, maintenance and management, so you don't have to.

Your team no longer has to worry over or engineer technical specifications, manage network bandwidth, or oversee routers and switches to meet SLAs. Instead, you just need to know that your response times are being met, backups, data protection and archives are running properly, and can be recovered according to your SLA. You will have on-call professionals who understand the intricacies of Cloud, can provide proper visibility, and ensure that you're adhering to the security standards required. IaaS Cloud Offerings typically allow you to automate provisioning, billing, government approvals and more, to further simplify management and provide a clear contractual audit trail. Meanwhile, your resources are free to innovate and develop better systems and applications to serve your customers and constituents.

A close-up photograph of a hand pointing upwards with the index finger. A bright, starburst-like light emanates from the tip of the finger, creating a lens flare effect. The background is a soft, out-of-focus grey. The text '6: STEP OUTSIDE YOURSELF' is overlaid on the right side of the image in a bold, white, sans-serif font.

6: STEP OUTSIDE YOURSELF

Traditionally, organizations have had separate server, storage and networking teams all working autonomously at the infrastructure level, with support and application organizations as well as integration managers working within their distinct environments, each with their established roles and rules. The business of Cloud often means stepping outside of those established rules, roles and IT infrastructure.

As business demands have evolved and technology shifts to the Cloud, organizations no longer have the luxury of long application or infrastructure deployment cycles. And with the advent of pre-configured, pre-tested converged infrastructure platforms, there is simply no reason to have so many teams and individuals working independently to engineer and deploy Clouds. The fact is, with Cloud, the role of IT has evolved into a customer-centric and stake holder - facing service delivery model rather than IT groups lurking in server rooms and back offices.

Most importantly, moving toward Cloud doesn't have to be a solo adventure. Why go it alone when you can rely on the services and solutions of established Cloud solutions and experts? ViON's Agile Cloud Platform, with Extreme Virtualization and Vpool Technology, and ViON IaaS let you utilize ViON's Cloud expertise and cutting edge, validated technology from industry-leading providers, such as Hitachi Data Systems Federal.



WHY VION?

With more than 35-years history of trusted customer relationships and over a decade of proven success in delivering a strong portfolio of Cloud solutions, ViON understands the unique needs of today's government agencies and commercial enterprises.

ViON works with you to create a customer-intimate Cloud model, focusing first on the business problem, then architecting the right Cloud solution to meet specific needs. We take time to understand your goals, mission requirements and projected outcomes, then proceed using a consultative approach to determine the best deployment option and Cloud service model for business or agency.

ViON also offers streamlined procurement for scalable processing and storage options within a single contract. Because of our strong understanding of Office of Management and Budget (OMB) requirement and purchasing practices, ViON can eliminate the need to go to bid when our government customers need additional processing speed or additional storage.

Best of all, ViON is one of the few industry leaders that offer 24x7x365 support to their clients and has built our company around providing superb customer service. If you need help with making decisions about, deploying or supporting your Cloud, ViON will be there. Visit www.ViON.com to learn more.