VDI

VIRTUAL DESKTOP INFRASTRUCTURE:
ENABLING A COST-EFFECTIVE & FLEXIBLE WORKFORCE

ViON

CISCO

A Brief
Introduction

As IT administrators and chief information officers, you face a particular challenge: facilitate the ability for your agency to work remotely, while reducing costs, protecting your data and assuring compliance. Your employees need flexibility in the way they work, as well as the ability to connect to resources anywhere, anytime.

Thanks to advances in technology, today you have an unprecedented opportunity to change the way your agency operates. IT leaders are exploring the potential of Virtual Desktop Infrastructure (VDI) to reduce costs and simplify desktop management. VDI provides remote access to desktops, data and applications hosted in the data center, enabling users to work from different devices, from a computer, tablet or even smartphone. This means that you can access information and applications from any location.

VDI also gives IT administrators the power to centralize desktop management and more efficiently adapt to workforce changes like mobility, telework and bring-your-own-device (BYOD).

"If we look at the government workforce of the future, it's got to be more agile and mobile," said **Jeremy Savoy, Product Manager of Server Solutions,** ViON Corporation, in an interview with GovLoop. "At the end of the day, VDI is really that first cornerstone leading into a truly mobile workforce, and it's an enabler to transition to a much more agile workforce."

Prior to advances in virtualization technologies, IT administrators could not meet the flexibility that your work requires. But today, by taking data and applications off your devices and hosting them in a data center, your agency's IT department can now provide a flexible and secure work environment, and reduce infrastructure expenses.

VDI in Practice

How can your organization gain improved security, high availability and improved efficiencies by virtualizing your work? Take for instance the example of a network of community hospitals, serving around half-million residents. With off-site facilities and outpatient services, health administrators must be able to connect staff and physicians across hospitals to improve services, cut costs, and realize greater productivity with fewer resources.

In an effort to cut costs and improve efficiencies, hospital administrators decide to embark on a BYOD initiative, powered by a VDI infrastructure to support remote capabilities for staff and physicians. By being able to view patient data remotely, staff can make better decisions on how to serve patients throughout the entire network of hospitals. Using their personal devices, staff members are able to immediately get access to data and information from virtually any connected location, while maintaining all the necessary privacy concerns. For hospital administrators, this will lead to cost savings, improved physician morale, and savings on hardware and IT costs.

Another example comes from the Multi-level Secure (MLS) desktops often used in government agencies. These desktops are used in everything from responding to emergencies or cyberattacks, or for anyone who needs to quickly share real-time data, intelligence or confidential documents.

In order to keep citizens safe, those using MLS desktops must be assured they have the proper security and infrastructure in place to do their job. But for IT administrators, MLS desktops can create a nightmare scenario. With so many different desktops, operating systems, applications, security clearances dictating accessibility, how can an IT administrator create a safe and secure environment for employees?

Many agencies have looked to VDI as a solution. In particular, the use of thin clients and centralized management of resources has helped agencies make sense of complex workloads. In essence, VDI is allowing agencies to maintain the flexibility they require ivn their work, and allowing IT to create a safe and secure work environment that provides operational enhancements.

Our next section builds on these examples and helps identify how you can bring VDI to your agency.

Public Sector Benefits of VDI

As the public sector continues to become more mobile and agile, VDI offers the right infrastructure to meet workforce demands. Below we've identified several benefits of VDI and the value it brings to government agencies.

❶ CENTRALIZED AND SIMPLIFIED DESKTOP MANAGEMENT:

With VDI, IT departments can realize simplified management of desktops by taking data and applications off of end-user devices and hosting them in the data center. This centralization of desktop environments lets IT organizations automate desktops and application management, decreasing operational costs.

❷ LOWER TCO:

Agencies can realize reduced capital expenditures and operating costs by adopting VDI solutions. ViON reports that agencies can reduce CapEx and OpEx costs associated with traditional desktop deployments and maintenance by virtualizing.

❸ PATCHING AND IT SUPPORT:

A common challenge for IT is keeping computers up-to-date with the most recent security patches. With VDI, this process is centralized for administrators and they can gain better network visibility and spot security gaps more efficiently.

❹ IMPROVED DATA SECURITY:

Since desktop images and user data are centralized, IT can maintain version control of documents by hosting them in a central location versus individual devices. VDI also facilitates automated back ups for improved data security. Also, since information is centralized, data is de-duplicated, which reduces storage requirements and ensures access to information. The centralized storage of critical information in a secure data center is essential, as it helps maintain version control of documents by hosting them in a central location versus individual devices.

❺ ROBUST DISASTER RECOVERY AND BUSINESS CONTINUITY SUPPORT AND SHORTER DATA RECOVERY TIMES:

With VDI, if a service disruption is to occur, agencies can still get access to their most essential documents. This is helping build more resilient agencies, and able to deliver services no matter what event might occur.

❻ EASIER BYOD ROLLOUT AND MANAGEMENT:

Across the public sector, VDI is supporting the mobile workforce by providing remote users access to the applications and information they need, 24/7.

❼ REDUCTION IN STORAGE FOOTPRINT:

With software defined storage capabilities, agencies can deploy 4-7 times the number of desktops on the same storage footprint, reports ViON.

VDI offers transformational benefits for you and your organization, from better data security to employee flexibility. So how can you bring VDI to your workplace?

The Importance of
Converged Infrastructure

Converged infrastructure brings together multiple information technology components into a single solution. For many public sector agencies, adopting VDI has been a challenge, and in some cases, has been unsuccessful because of improper scoping of infrastructure. However, ViON's VDI solutions address this problem up front.

"There are a couple of key things we can do to avoid improper VDI sizing and insure proper scalability," said Savoy. "The first thing you would want to look at are Converged Infrastructure platforms. These platforms combine servers, storage, networking and management into a single platform and have been validated with specific workloads to scale up and out in a known fashion, ultimately providing faster time to value and significantly reduced risk."

Savoy added that converged infrastructures have three main benefits:

● **TIME TO VALUE**

Improve IT agility and reduce deployment time from months to weeks with a flexible, pre-validated architecture that shortens the time needed to design, plan, and test.

● **ENHANCED EFFICIENCY**

Slash both administration time and TCO by 50% with a converged virtualized infrastructure that is easier to manage and more efficiently stores data than the alternatives.

● **REDUCED RISK**

Minimize business disruption with a pre-validated platform built on a defined architecture that eliminates deployment guesswork and accommodates ongoing workload optimization.

When coupled with converged infrastructure, VDI offers many benefits for government. IT administrators can have confidence that they have deployed a safe and secure solution that meets the demands of a changing workforce. ViON offers converged infrastructure solutions that include components from Cisco, NetApp, VMware and Atlantis Computing.

Created by NetApp and Cisco, FlexPod is a converged compute, networking and storage solution. Its components include Cisco Unified Computing System (UCS) servers, NetApp unified storage systems and the Cisco Nexus networking fabric. FlexPod has been deployed in small, medium and large organizations and can scale as needed, supporting both virtual and non-virtual environments.

With VMware's Horizon View, IT can automate desktops and application management to reduce costs and increase data security through a centralized desktop environment. That is one of the major benefits of the VMware solution – it allows IT to manage remote desktops and applications through a single location. This streamlines management for IT, and allows them to easily scale end users as needed. This gives employers greater freedom and increased control, and helps deliver desktops to multiple platforms while providing a seamless user experience.

The Atlantis Computing offering provides software-defined storage products for VDI. This solution reduces risks when deploying VDI and eliminates complex storage performance design in deployments. With Atlantis ILIO (In-Line-IO-Optimization), VDI deployment is accelerated and ViON reports the cost of virtual desktop falls below that of a traditional PC. This allows users to gain the performance of a PC remotely, without compromising security.

Making VDI a Reality
in Your Agency

In order to leverage VDI at your agency, you must determine your strategic goals for a VDI implementation. This may include facilitating a remote workforce or simplifying IT management of the desktop. Once you've established your objectives, you must then explore various technology options that will allow you to make a smarter VDI investment.

After you've decided that implementing a Virtual Desktop Infrastructure solution is the right move for your organization, it's important to research your options and figure out the best way to enable deployment. Two ways VDI can be deployed are on-premise or cloud computing solutions.

When VDI is deployed on-premise, agencies may need to invest in data center infrastructures like servers, storage and networking solutions. They might have to also consider hiring or retraining staff to manage the VDI environment for tasks such as adding new devices, expanding services or providing IT support to employees. This model provides IT with the utmost control over SLAs, capacity and performance of the VDI implementation.

The cloud solution is an additional way to deploy VDI. Cloud takes the financial burden and management away from an agency and places that responsibility on a vendor. The cloud model mitigates costs by moving from a CapEx funding model to an OpEx model through managed services. This mitigates the burden on IT, enabling them to focus less on management, and more on strategic initiatives.

For your agency either deployment model might work – the choice is largely dependent on performance and SLA requirements, budgets and current staffing. But if you choose an on-premise model, it's essential that you understand the benefits of a converged infrastructure.

How ViON's On-Premise
Private Cloud Can Power VDI

Like VDI, cloud computing has changed the way government does business. With cloud computing's ability to quickly and rapidly provision services, scale as demand changes, and provide access to information across devices, government agencies can witness powerful returns when cloud is leveraged with a VDI infrastructure.

ViON offers organizations the ability to deploy an on-premise private cloud for VDI. This means that ViON would own the infrastructure, which is purchased on behalf of the agency and resides on a customer's premise, but the agency would pay based on consumption. Agencies can scale up or down for their storage needs, depending on their usage. This enables a more dynamic environment and meets the needs of organizations as their needs change over time.

The advantage of this pay-per use model is that agencies receive a very high-performing system on premise that they can access only when needed. Without having to own the physical infrastructure, agencies receive all the benefits of premiere infrastructure, without the

financial burden. By having resources on premise, agencies can easily scale to meet their business objectives and requirements. Additionally, since data is residing on premise, organizations can be confident in the security of their information, and have the network visibility and control that is needed to protect critical information.

Through the private cloud offering, agencies can create and acquire a cloud based on their business needs, security requirements, and build to their standards. ViON offers the technical expertise in the design, installation, configuration and maintenance of data center technology for a private cloud. With over 31 years of experience, ViON provides the necessary partnerships, knowledge and performance to meet the complex demands of public sector IT.

"The VDI solution that ViON is bringing to market provides a better-than-PC experience for end-users. So we're really all about delivering on the promise of VDI," said Savoy.

By deploying a VDI solution, agencies can witness the benefits of a more mobile and agile workforce, providing employees with the technology infrastructure to work anywhere, anytime, with confidence that their information is safe and secure. And they can provide this experience while streamlining IT workload and management requirements.

About ViON

ViON Corporation (ViON) is a small, veteran-owned corporation, established in 1980, and headquartered in Herndon, VA. We specialize in designing, delivering and maintaining storage and server solutions to enterprise-wide data centers throughout the federal government and public sector & commercial marketplaces. We excel in solutions addressing Enterprise Storage, Disaster Recovery, Server Consolidation, Business Continuance and File Services in the Windows, UNIX and z/OS environments.

ViON leads as the most certified vendor of storage, services and critical IT solutions. Our customers choose us because we provide a cost-effective storage environment capable of delivering the right data to the right people – no matter what/no excuses.

ViON offers Assured Computing as one of our unique solutions for disaster recovery problems facing Agencies today. Assured Computing is comprised of ViON plus our partnerships with the market leaders in storage and storage management. It is the combination of teamwork, business sensitivity and technical leadership that enables us to provide value added solutions for our customers.

About GovLoop

GovLoop's mission is to "connect government to improve government." We aim to inspire public sector professionals by serving as the knowledge network for government. GovLoop connects more than 100,000 members, fostering cross-government collaboration, solving common problems and advancing government careers. GovLoop is headquartered in Washington D.C. with a team of dedicated professionals who share a commitment to connect and improve government.

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10 Questions You Should Be Asking About VDI

Savoy reminds us that there are dozens of different VDI solutions for agencies to explore. To assure VDI success, agencies must first conduct a thorough assessment of their needs, and measure those against what the market offers.

"At the end of the day, there are a lot of different solutions out there," said Savoy.

"Understand your goals for VDI and then create a plan to get there, instead of picking the technology first."

To help you understand what you should consider when looking at a VDI deployment, GovLoop and ViON have provided ten sample questions set to start the conversation within your agency.

❶ What kind of services will our platform require?

❷ How have we assured that the platform will be reliable and meet our business requirements?

❸ What kind of track record does the vendor have?

❹ What are the current market offerings?

❺ How will our solution support workforce needs today and in the future?

❻ How can we integrate existing solutions into a platform?

❼ Have we collaborated with employees to know what kind of services they demand?

❽ How does cloud come into play? What kind of cloud offering do we need to protect our data and information?

❾ What kind of pay model is best for us? How can we accurately forecast costs? What does our budget outlook look like in the next 3-5 years?

❿ How will we measure ROI and performance of the system? What are our indicators?