

VMWARE WORKSPACE ONE
IS A BETTER CHOICE
THAN CITRIX

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“VMware data center and desktop virtualization solutions enable us to slash costs, accommodate district growth, and deliver outstanding customer service to students, faculty, and administrators—all without increasing the size of our IT staff.”

BROOKS MOORE,
DCS TECHNOLOGY
HELP DESK MANAGER,
ALEDO INDEPENDENT
SCHOOL DISTRICT

Introduction

The intended audience for this paper is IT decision makers and line-of-business owners that are tasked with transitioning their workforce into a modern place of work. The insights presented here will be helpful for executing a digital workspace transformation strategy.

The Future of Work

Automation. Robotics. Artificial intelligence. Organizations across the globe are becoming technology driven to remain competitive in the era of digital commerce. Broad trends in the industry are leading organizations to become more nimble in managing the activities of their workforce and providing state-of-the-art customer service. Choosing who to partner with for your organization’s digital transformation will be one of the most critical decisions you make. The purpose of this paper is to help you with that choice.

This paper provides guidance for selecting the best digital workspace solution to enable a more productive workforce. It focuses on comparing two solutions: Citrix Workspace Services and VMware Workspace ONE™.

VMware has steadily prepared for the digital workspace transformation by building innovative products designed with the future in mind while Citrix has chosen to “retool” existing technology. The Just-in-Time Management Platform (JMP), virtual storage area network, mobile workflows, and network micro-segmentation are a few of the game-changing technologies VMware has developed to help organizations transform the way they work. Citrix has repurposed legacy products and called the digital workspace “a framework for describing desktop and application delivery technologies.” Sounds like a description of the same technology they have sold for the past 20 years.

One Platform – All Use Cases

If given the choice, most IT administrators would prefer to use one platform throughout their environment, saving time spent installing and managing separate infrastructures. With VMware, administrators can use a single platform for their virtualization and digital workspace management needs. The VMware Software-Defined Data Center (SDDC) is the only platform optimized for VMware Horizon® and other end-user-computing (EUC) products. This single platform provides the following unique advantages:

- Reduced CapEx and streamlined management
- Trusted brand with leading statistics for reliability, performance, robustness, and security
- Reduced support costs and increased uptime

The industry’s leading virtualization platform brings together three critical technologies under one umbrella: storage (VMware vSAN™), computing (VMware vSphere®), and networking (VMware NSX®). Tailored integration with Workspace ONE results in real benefits, including a substantial reduction in storage costs, simplified network provisioning, mobility, micro-segmentation, and extensive 3D graphics support.

VMware leads in innovation with its Instant-Clone Technology. This revolutionary capability, built into vSphere, allows a booted-up parent virtual machine (VM) to be quiesced and “hot-cloned” to produce derivative VMs rapidly. An instant clone leverages the same disk and memory of the parent, with the clone starting in an already “booted-up” state. This process bypasses the cycle time incurred with traditional cloning, where several power cycle and reconfiguration calls are usually made. Citrix does not offer the time-saving capabilities available with VMware Instant-Clone Technology.

Four Pillars of Differentiation

VMware Workspace ONE is a powerful digital workspace solution that addresses the requirements of organizations needing a secure, simple, and cost-effective approach to modernizing their workspace. The four major categories of competitive differentiation that demonstrate VMware leadership in innovation are: 1) Unified Endpoint Management, 2) Virtual Desktops and Apps, 3) a Secure, Identity-Defined Workspace, and 4) Comprehensive Cloud Service.

Gartner
Magic Quadrant

VMware Named a Leader in Gartner Magic Quadrant for Enterprise Mobility Management

ESG Report

ESG Lab Validation of Workspace ONE: Integrated Workspace Provides Simplicity, Security, and a Seamless User Experience

Unified Endpoint Management



OS/App Lifecycle Management



Asset Analytics Tracking, Inventory



IT Automated Workflows



PCLM Capabilities

Virtual Desktop & Apps



Real-Time App Delivery



Monitoring & Analytics



User Environment Management

Security & Identity-Defined Workspace



Micro-Segmentation



One-Touch SSO & MFA



Data Loss Prevention



Conditional Access



Identity Integration



Unified App Catalog

Comprehensive Cloud Service



Cloud



Hybrid



VMware Cloud Foundation



Hosted & Remote Services

Figure 1: Workspace ONE Key Differentiators

UNIFIED ENDPOINT MANAGEMENT

Complexities at the endpoint are disrupting previous management paradigms. End users and their evolving use of devices, apps, and content have driven the demand for a consumer-like experience across all their workspaces. As mobile and other new devices increasingly become standard for businesses of all sizes, separate management tools across siloed organizations lead to increased IT complexities and costs. Further, with more and more remote and mobile users off network or off domain, traditional PC lifecycle management (PCLM) solutions do not provide the real-time management and security capabilities required by today's IT organizations.

IT must pivot from a device-centric to a user-centric management approach in order to enable common security and management policies across endpoints and provide a consistent user experience. Workspace ONE supports all major operating systems including Android, iOS, Windows 10, macOS, Windows CE, QNX, and Tizen, and frameworks like Android Enterprise and Samsung Knox. VMware has close relationships with major OEMs, enabling same-day support for new releases and the latest features. VMware is the exclusive UEM partner for Chrome OS devices.

Unify the management of every endpoint—smartphones, tablets, laptops, rugged devices, wearables, peripherals, and IoT devices—across the organization with Workspace ONE. Manage the full lifecycle for all endpoints—from onboarding to retirement—and even manage macOS and Windows desktop and laptop devices right alongside mobile devices using a modern approach. Easily register devices during initial power-up with configuration tools like Apple Device Enrollment Program and Windows Out-of-Box enrollment. IT can also leverage user self-service workflows and corporate credentials to initiate device registration. Configure enterprise resources such as email, VPN, Wi-Fi, apps, content, intranet sites, and other backend resources with device profiles.

Workspace ONE UEM has key advantages over Citrix:

- Cradle-to-grave control over operating system and applications
- Lifecycle management allows IT to centrally deploy, upgrade, and end-of-life their most changeable assets
- Asset analytics for tracking and inventory provides key insights into the systems and operations information, resulting in higher SLAs
- IT automated workflows provide structure and tracking of process requirements for compliance and remediation
- PCLM capabilities – Windows drop ship and macOS Bootstrap for a streamlined out-of-box management experience for Windows and macOS
- Over-the-air configuration of devices

Citrix XenMobile lacks many of these key endpoint management features and is not proven at scale.

VMware Workspace ONE has evolved beyond other EMM vendors that support “just Win10 MDM.” VMware is the established leader in the emerging UEM market.

LEADING VIRTUAL APPS AND DESKTOPS

At the foundation of every digital workspace are the PCs, laptops, and mobile devices your end users use to do their work. VMware Horizon is the leading platform for delivery of all types of desktops: persistent, nonpersistent, session-based, hosted, and just-in-time desktops. In addition to every type of desktop, applications are the core productivity tools that are needed by every user. The delivery, updates, and ongoing management of these applications create a support challenge for IT. VMware provides a full complement of application delivery and management technologies that reduces this burden and includes real-time application delivery, containerized apps, hosted apps, remote apps, and just-in-time applications.

App Delivery

VMware App Volumes™ eases the burden of getting the right apps to the right people throughout an application’s lifecycle. From delivery to updates and into retirement, App Volumes provides the only real-time application management and delivery solution on the market today. The Citrix/Unidesk method of creating multiple layers to deploy apps is cumbersome and slow, therefore updating layers is difficult. Unidesk also requires both the application and OS layer be managed in the Unidesk console. It does not allow for managing VDI and server images through the Citrix or VMware management consoles.

Personalized User Experience

VMware User Environment Manager™ provides a consistent and dynamic desktop experience that is independent of the operating system, device, and location, enabling true “business mobility.” Citrix refers customers to AppSense for more complete user personalization. Even with the capabilities acquired with the small startup company Norskale, Citrix is not able to offer the full enterprise-class, scalable user environment management solution that VMware offers.

Policy Management and Smart Policies

Policy management and smart policies offer time-saving capabilities such as streamlined SSO that bypasses secondary login requests for users who have already authenticated via VMware Workspace ONE. Smart policies include security-enhancing capabilities such as contextually aware, fine-grained control of client-side features. The VMware Unified Access Gateway™ provides a more complete security solution that supports RADIUS, SecurID, and SmartCard, and is built upon a hardened Linux appliance that is optimized for a customer’s DMZ. For federal and public-sector agencies, Horizon is FIPS 140-2 compliant.

App Isolation

VMware ThinApp® provides packaged apps that customers can run from almost anywhere because they do not need to install software or device drivers. ThinApp takes an agentless, package-centric approach to app virtualization, increasing portability and deployment flexibility. Citrix XenApp only provides published applications and requires a dedicated infrastructure and database to run. ThinApp does not have these requirements, resulting in reduced administrative overhead. Further, Citrix no longer offers an app streaming capability and instead defers to Microsoft App-V.

Monitoring and Automation

VMware app monitoring and automation capabilities provide end-to-end visibility from the data center to the end user. VMware vRealize® Operations Manager™ for Horizon employs a heatmap enabling administrators to visually monitor the health, performance, and configuration of large-scale deployments, including visibility into infrastructure, apps, users, and sessions. vRealize Operations Manager provides individualized monitoring for business-critical apps and correlates the monitoring with underlying storage. The solution also connects performance data with change events. Unlike vRealize Operations Manager, Citrix Director’s monitoring capabilities are limited to Citrix components and cannot provide the context of the backend operational system.

IDC MarketScape
Names VMware
Horizon a Leader

[VMware Horizon is named a Leader in the 2016 IDC MarketScape for Virtual Client Computing.](#)

“The benefits of using VMware Horizon are in hardware cost and time savings. It equals out to be about \$3.2 million savings per year for the organization. That’s money that we can put back into services for the citizens of Mecklenburg County.”

CLIFF DUPUY,
DIRECTOR OF
TECHNICAL SERVICES,
MECKLENBURG COUNTY,
NORTH CAROLINA

VMware Horizon provides end-to-end application and workspace management that encompasses app delivery and installation, user persona and dynamic IT policies, and data-center-to-desktop monitoring.

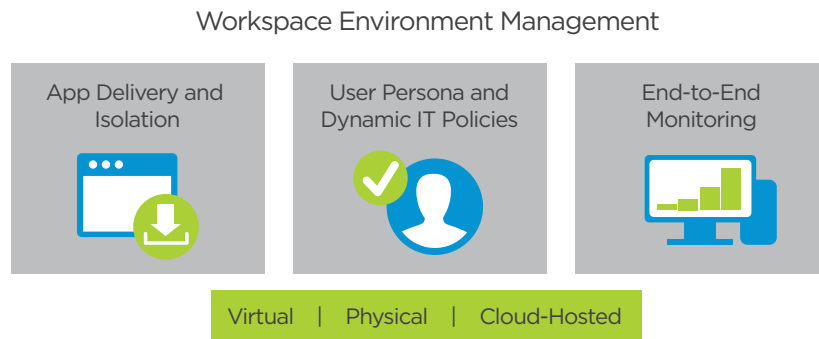


Figure 2: VMware Horizon Provides Complete Workspace Environment Management

Supportability

The Horizon Help Desk tool provides an easy-to-use troubleshooting interface for non-Horizon-savvy users. Level 1 and 2 support teams remediate user issues with quick lookup, session information, and user/session details to facilitate case escalation. Citrix doesn’t provide this type of help desk.

VMware desktop and application virtualization solutions provide IT with a new streamlined approach to deliver, protect, and manage Windows or Linux desktops and applications on premises or in the cloud, while containing costs and ensuring end users can work anytime, anywhere, across any device.

SECURITY AND IDENTITY-DEFINED WORKSPACE

Virtually every organization is concerned about data leakage from both intentional break-ins and unintentional mistakes. Workspace ONE helps prevent user data loss and keeps corporate data secure. Workspace ONE enables the federation of existing Identity Management point solutions, providing great investment protection and simplifying the path to Digital Workspace transformation.

Single Sign-On - A Necessity

Managing multiple passwords is a risky proposition, both for end users and administrators. End users need to track several passwords. Consequently, many users create passwords that are simple and hackable. Administrators worry about enforcing password policy, which resets periodically via Microsoft Active Directory (AD), while simultaneously ensuring those credentials stay safe within company walls.

With Workspace ONE single sign-on (SSO), a user logs in once with a single set of credentials and gains access to the various systems they need without having to re-enter passwords at every turn. SSO gives users the ability to navigate through their applications, workspaces, and data freely, which, in turn, boosts their productivity. Workspace ONE enables a single identity-based application catalog to be established across all categories of applications.

Workspace ONE SSO provides the following capabilities and benefits in an easy-to-manage platform:

- Remove the need for complex logins by establishing trust between user, device, and the enterprise for one-touch authentication.
- Step up to seamless biometric or other multifactor authentication methods for more sensitive applications.
- Enable users to sign on to published apps and mobile devices without the need to make changes to the applications or meet SDK or wrapper requirements.
- Reduce the amount of time IT spends ensuring password security as well as addressing help-desk calls about access privileges.

Establish Trust

Workspace ONE and Horizon 7 establish trust between the end user and their devices by providing convenient one-touch access, advanced admin controls that secure and protect data, and an identity-defined app catalog that delivers the right apps to the right people.



Figure 3: Establish Trust Between the End User and Device

With Workspace ONE and VMware Horizon, you can

1. Remove the friction of access security with one-touch convenience.
 - Eliminate the need for users to remember multiple usernames and passwords.
 - Integrate with existing identity providers or use the included identity provider or token generator (IdP).
 - Enable two-factor authentication (2FA) for an additional layer of security.
 - Support web apps, virtual desktops, published apps, packaged apps, and native mobile apps.
2. Secure and protect corporate data with advanced administrative controls.
 - Enforce conditional access policies based on authentication strength, data sensitivity, user location, device compliance, and more.
 - Leverage easy-to-use analytics to understand usage trends and assist with capacity planning, licensing management, and new service development.
 - Enable advanced data loss prevention (DLP) policies to protect against rooted or jailbroken devices, whitelist and blacklist apps, set open-in and cut/copy/paste restrictions, and more.

3. Deliver the right apps to the right people with an identity-defined app catalog.
 - Provide a single app catalog with a consistent user experience across any device, including Android, iOS, macOS, and Windows devices.
 - Enable self-service by allowing employees to subscribe to the apps they need across all their devices.
 - Deliver the widest variety of legacy and modern Windows apps; web-based, SaaS, and native mobile apps; and virtualized desktops and apps to any device.
 - Brand the app catalog experience with personalization options including company logo, colors, backgrounds, textures, and design elements.

Integrates with VMware Horizon and Citrix Products

Workspace ONE provides secure access to Citrix XenApp and XenDesktop, Microsoft RDSH, and Horizon Apps and Desktops, whereas Citrix StoreFront is limited to Citrix products.

Network Security

VMware NSX provides a software firewall that is easy to deploy and manage. Its advantages over other products in the market include providing security within the hypervisor, no additional hardware requirement, and integration with VMware vSphere. NSX paired with VMware vRealize Automation Desktop™ automates configuration and enforces governance and control.

Micro Segmentation

VMware NSX for Horizon effectively secures east-west traffic within the data center, while ensuring IT can quickly and easily administer networking and security policies that dynamically follows end users' virtual desktops and apps across infrastructure, devices, and locations—bringing speed and simplicity to VDI and networking. This joint solution delivers multi-layered defense from the data center to the desktop, built on an extensible platform that integrates with industry-leading, third-party security solutions.



Figure 4: VMware NSX for Horizon Offers Fast, Easy, and Extensible VDI Networking and Security

VMware NSX for Horizon provides

- **Fast and Simple VDI Networking** – NSX with Horizon lets you create, change, and manage security policies across all virtual desktops with a few clicks. Map these policies to user groups to accelerate virtual desktop onboarding.
- **Automated Policy That Dynamically Follows End Users and Desktops** – Set policies that dynamically adapt to the end user's computing environment, with network security services that map to the user based on role, logical grouping, desktop operating system, and more—independent of the underlying network infrastructure.
- **Platform for Advanced Security** – NSX offers an extensible platform that can be integrated with best-in-class capabilities from an established ecosystem of security partners. By dynamically adding services, virtual desktop security can be easily extended to take advantage of malware protection, antivirus production, and advanced threat detection.

Citrix lacks these robust networking security features and relies on a third-party product (such as VMware NSX) to provide them. VMware provides serious security across all product areas from the data center and network to the endpoint, including mobile devices.

COMPREHENSIVE CLOUD SERVICE

Organizations adopt desktop-as-a-service to obtain the benefits of a cloud deployment: the ability to quickly scale their desktop environment, reduced start-up infrastructure costs, decreased management overhead, and improved end-user mobility. VMware Horizon Cloud Service™ enables the delivery of cloud-hosted or on-premises virtual desktops and apps to any device, anywhere, from a single cloud control plane.

Horizon Cloud

Horizon Cloud delivers

- Multi-tenant, cloud-scale architecture
- Choice of where virtual desktops and apps reside: on premises, in the cloud, or both
- Ability to transition virtual desktops and apps to the cloud and maximize current investments
- Flexibility – Available on Microsoft Azure, SoftLayer (IBM Cloud), and vCloud

Horizon Cloud makes it easy for end users to securely access their digital workspace on any device, anytime, anywhere. It radically transforms traditional desktop and application virtualization with a predictable subscription model that lets you pay as you grow.

For desktop-as-a-service, VMware Horizon Cloud provides any kind of workspace as a service from the cloud. Citrix does not have a comparable desktop-as-a-service offering.

Horizon Cloud customers take advantage of just-in-time management technologies, such as VMware Instant-Clone Technology, VMware App Volumes and VMware User Environment Manager, as part of this service. The JMP platform allows customers to easily scale and deliver feature-rich, secure desktops to their end users on demand.

Horizon Cloud leverages BEAT (Blast Extreme Adaptive Transport), the Horizon UDP-based transport. BEAT provides a great user experience across various network conditions—especially those with low-bandwidth, high-latency, and high-packet loss. In addition to supporting Windows, macOS, iOS, Android, and Chrome, BEAT supports over 125 Windows and Linux thin clients. Horizon Cloud with Hosted Infrastructure supports developers and end users looking for 3D desktops with NVIDIA GRID vGPU. Citrix is not able to leverage any of these important cost-saving technologies.

“Modernizing the desktop infrastructure gives our technology teams greater mobility and access to solutions that serve students and student-facing advisors.”

CLAUDIU BUDURLEAN,
DIRECTOR OF IT,
CLIENT-COMPUTING
ARCHITECTURE,
APOLLO EDUCATION
GROUP, INC.

Transform Your
Workspace with
Workspace ONE
Today

<https://www.vmware.com/company/why-choose-vmware/workspace-transformation.html>

FOR MORE INFORMATION OR TO PURCHASE VMWARE PRODUCTS CALL 877-4-VMWARE (outside North America, +1-650-427-5000), VISIT <http://www.vmware.com/products>, or search online for an authorized reseller. For detailed product specifications and system requirements, refer to the product documentation.

VMware Cloud Foundation

To respond to the ever-increasing demand for faster innovation, organizations are adapting technology trends and moving workloads to the public cloud. Although public cloud services can be a good fit for many applications, the company-owned data center continues to play a critical role. Most workloads live on premises, especially mission-critical applications that require greater control and security. As a result, organizations are looking to shift to a more agile, service-oriented IT model that leverages both private and public cloud.

VMware Cloud Foundation™ is the industry’s most advanced hybrid cloud platform. It provides a complete set of software-defined services for compute, storage, networking, security, and cloud management to run enterprise applications—traditional or containerized—in private or public environments. VMware Cloud Foundation drastically simplifies the path to the hybrid cloud by delivering a single integrated solution that is easy to deploy and operate, providing the following benefits:

- Supports diverse infrastructure
- Reduces risks against cybersecurity threats
- Delivers enterprise-level service-level agreements to mission-critical apps
- Controls costs
- Manages public cloud sprawl driven by shadow IT
- Avoids vendor or cloud lock-in

VMware Horizon and VMware Cloud Foundation uniquely deliver a secure and comprehensive solution that reduces deployment time up to eight times with hyper-convergence. It is simple, secure, and agile cloud infrastructure that can be deployed on premises and consumed as a service from a public cloud.

Conclusion

Digital workspace transformation is upon us. Organizations everywhere are looking for ways to adopt new technology that will make them more competitive in the marketplace. VMware Workspace ONE is the most comprehensive solution from a trusted provider. Based on the leading SDDC platform, Workspace ONE offers innovative technologies and capabilities that benefit virtually all organizations. Switch to VMware Workspace ONE today.



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