



The Citrix and Microsoft Alliance Azure Windows Desktop + Citrix



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Citrix and Microsoft Partner to Accelerate the Future of Work

Companies join forces to simplify cloud transformation and speed adoption of digital workspaces and virtual desktops to enable greater agility, productivity, and security



Partnership Announcement

“Citrix and Microsoft partner to simplify cloud transformation and simplify digital workspaces”

Fort Lauderdale, FL

July 14, 2020 | Citrix News Center | [LINK](#)

Redmond WASH

July 14, 2020 | Microsoft News Center | [LINK](#)

- Multi-year **Partnership Agreement**
- Simplify Digital Transformation and speed adoption of digital workspaces and virtual desktops to enable hybrid work models
- Citrix will select **Microsoft Azure** as a **preferred** cloud platform
- Microsoft will select **Citrix® Workspace** as a **preferred** digital workspace solution
- **Joint tools** and services to simplify and speed the transition from on-premises Citrix workloads to Microsoft Azure
- **Connected Roadmap** – to enable a consistent optimal flexible work experience

A man with a beard is sitting at a desk in a dimly lit room, working on a computer. He is wearing a dark long-sleeved shirt and a watch. His hands are on a white keyboard. The monitor is large and displays a Windows desktop environment with several open windows, including a file explorer and a task manager. The lighting is focused on the desk and the man's hands, creating a professional and focused atmosphere.

Windows Virtual Desktop is restarting the conversation around virtualization – and Citrix

Only Citrix has a solution for **centralized hybrid management** of virtual apps and desktop workloads in Azure + your on-prem datacenter today

Citrix + WVD – Value (lets us recap)

Simplified & Flexible Management – less time managing, more time selling



Hybrid Cloud Deployments

- CVAD service can centrally manage and deliver existing, on-premises virtual app and desktop workloads side-by-side WVD workloads
- Makes it easy to transfer new workloads to Azure while supporting existing applications located in the datacenter



Machine Creation Services

- Rapidly provision WVD workloads across various Azure resources locations on-demand from a master image
- Intelligently manage the availability of those resources based on a predefined schedule or the level of user demand

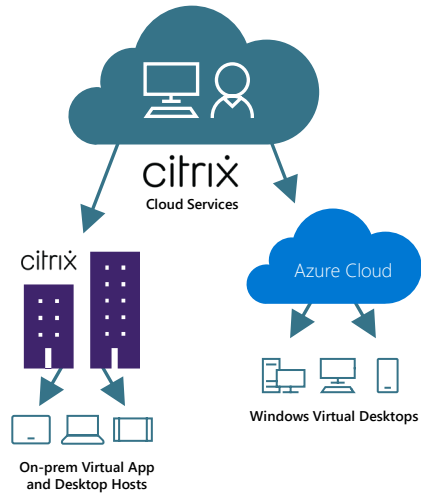


Citrix App Layering

- Included in CVAD service
- Simplifies image management of WVD workloads – Windows 10 multisession, Windows 10 Enterprise, and Windows 7 hosted on Azure
- Separates the workloads into flexible containers, or layers, so CSPs can package and deploy operating system updates, applications, and user data as individual components and then dynamically reassemble them for deployment at scale

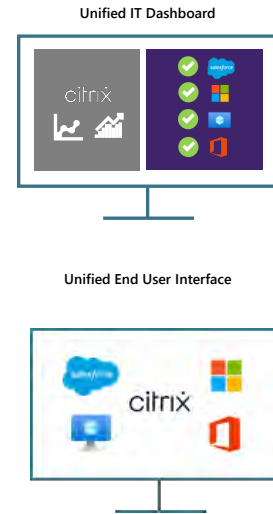
Simplify and accelerate your journey to Azure

Citrix delivers more with Windows Virtual Desktop



Enable Hybrid Multi-Cloud

Only Citrix manages any on-prem virtualization deployment alongside WVD for the fastest and most cost-effective transition to Azure.



Optimize Operations

Citrix accelerates WVD deployment and lifecycle maintenance, enabling faster rollouts and time to value.



Deliver Secure Experiences

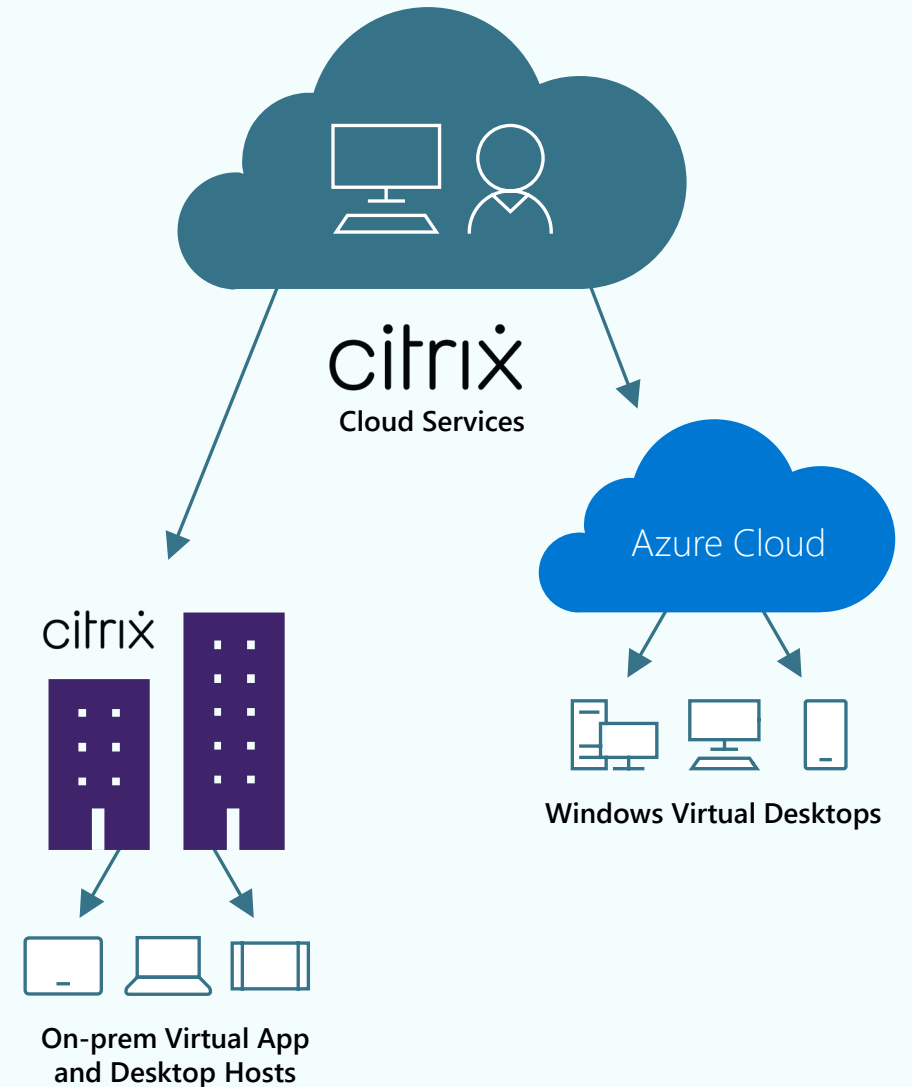
Citrix delivers an optimized user experience on any device, with advanced policy and data protection controls.

Enable hybrid multi-cloud

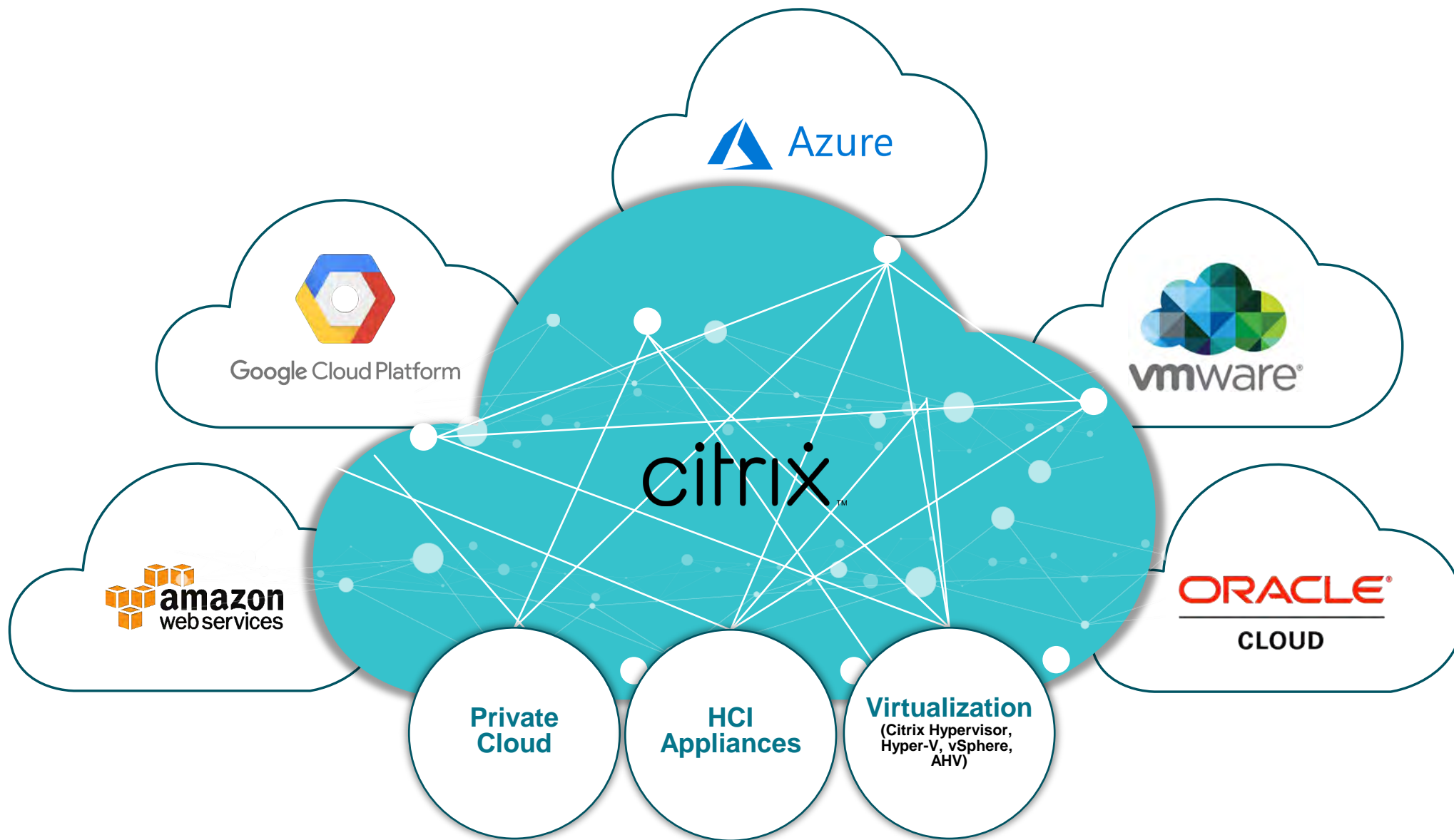
Only Citrix manages any on-prem virtualization deployment alongside WVD for the fastest and most cost-effective transition to Azure.

- With the Citrix Virtual Apps and Desktops service, migrate or scale workloads to Azure, from any on-prem hypervisor or cloud platform.
- Citrix admin tools offer seamless, familiar management across WVD and on-prem workloads.
- Make the most of existing datacenter investments while modernizing your deployment with Azure WVD.

Organizations that run Citrix-on-Azure VDI workloads achieve a **55% lower workload** cost per-user, per-year vs a legacy on-premises environment.



Citrix Workspace: Hybrid-Cloud, Multi-Cloud Strategy





Optimize operations

Citrix streamlines WVD deployment and lifecycle maintenance, saving you time and money

- Unified management tools for rapid image provisioning, simplified lifecycle maintenance, and end-to-end monitoring of workloads.
- Dedicated helpdesk tools actively monitor deployment health to accelerate diagnosis and resolution of end user issues.
- Increased scalability and performance optimizations from Citrix maximize user density, improve session performance, and reduce deployment costs.
- Desktops-as-a-Service capabilities for fast, easy deployment of WVD resources on Azure in minutes.

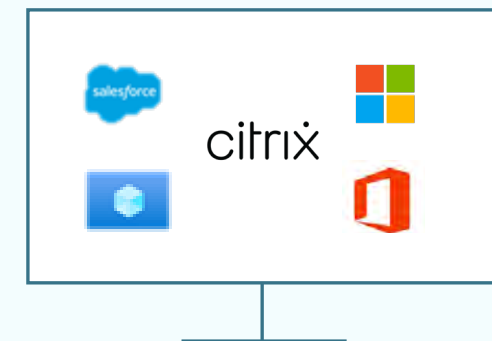
Savings up to \$25 per-user, per-month vs standalone management add-ons.

Five clicks to deploy Citrix-managed WVD workloads.

Unified IT Dashboard



Unified End User Interface

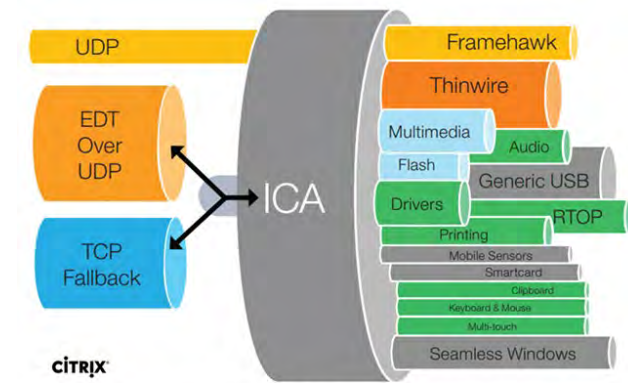


Citrix + WVD – things we take for granted

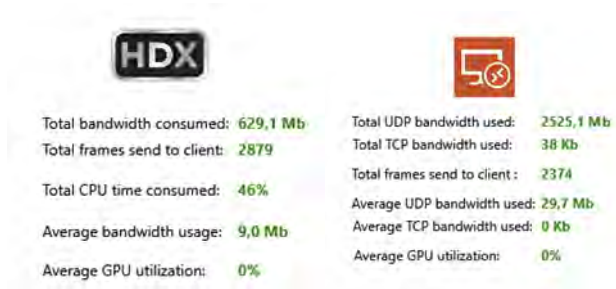
Improved User Experience – Happy customers, continued business & upsell/expand opportunities

Citrix HDX Technology

- Provides a superior virtual app and desktop experience from any device over any network, including low-bandwidth, high-latency networks
- Includes:
 - Peripheral plug-n-play technology – USB, printers, scanners, headsets
 - Adaptive Transport to automatically adjust to changing network conditions
 - HDX 3D Pro deliver High-Def 3D graphics
 - Voice, video and multimedia redirection for improved performance and scalability
 - Optimized unified communications performance, including Microsoft Teams and Skype for Business
 - Universal printing across any printer/print server



Citrix Bandwith



Workload type	Recommended bandwidth
Light	1.5 Mbps
Medium	3 Mbps
Heavy	5 Mbps
Power	15 Mbps

Release	Knowledge Worker User Experience	Knowledge Worker WAN Experience	Task Worker User Experience	Task Worker WAN Experience
7.11	196 kbps	108 kbps	273 kbps	97 kbps
7.12	214 kbps	113 kbps	268 kbps	100 kbps
7.13	202 kbps	116 kbps	273 kbps	77 kbps
7.14	203 kbps	128 kbps	277 kbps	81 kbps
7.15	204 kbps	99 kbps	270 kbps	78 kbps
7.16	202 kbps	126 kbps	288 kbps	86 kbps
7.17	205 kbps	95 kbps	98 kbps	29 kbps
7.18	174 kbps	82 kbps	100 kbps	25 kbps
1808	177 kbps	91 kbps	103 kbps	28 kbps
1811	183 kbps	87 kbps	103 kbps	27 kbps
1903	171 kbps	79 kbps	102 kbps	27 kbps
1906	172 kbps	100 kbps	99 kbps	25 kbps
1909	176 kbps	105 kbps	99 kbps	25 kbps

<https://docs.microsoft.com/en-us/windows-server/remote/remote-desktop-services/network-guidance>

<https://virtualfeller.com/2020/02/19/citrix-virtual-apps-and-desktops-bandwidth/>



40%

Save 40% on bandwidth usage by using Citrix HDX/EDT for WVD.



Deliver secure experiences

With Citrix, an optimized user experience on any device, with advanced policy and data security controls

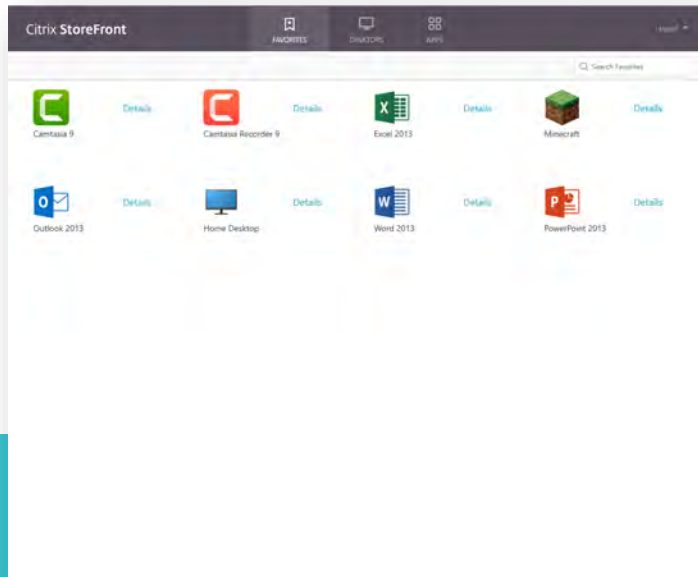
- Citrix HDX technology delivers the best user experience and session performance on any device or connection.
- Performance optimizations for tools like Microsoft Teams, Skype, and other solutions.
- Citrix advanced security controls protect against compromised endpoints.
- Analytics services learn user behavior and automatically adjust controls to optimize performance and security.

Citrix has over **400,000 customers** that rely on its security capabilities every day to protect sensitive data.



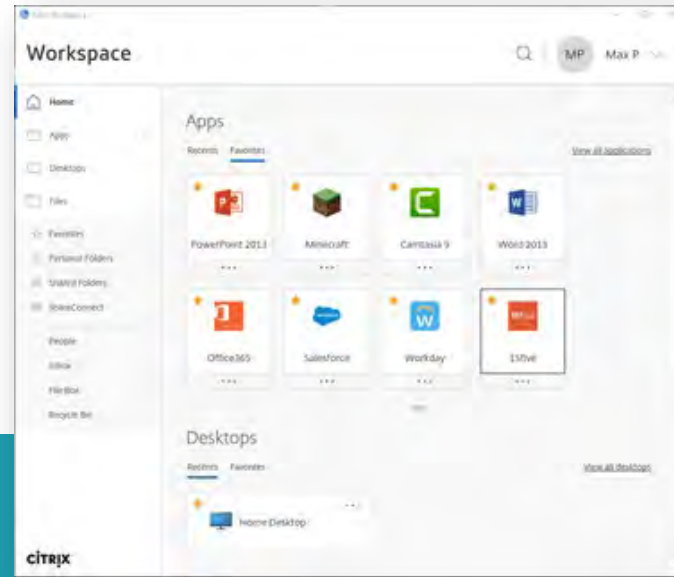
Journey to the intelligent Workspace experience

Citrix StoreFront



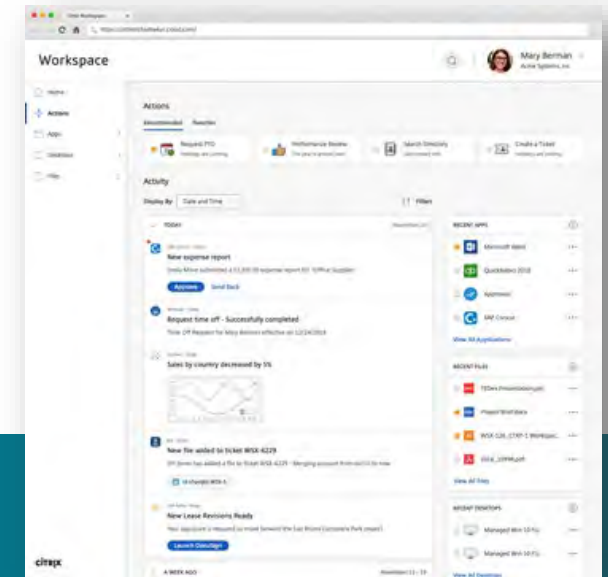
- Secure browsing
- Control over SaaS/Web apps
- Analytics for security
- Analytics for user performance
- Virtual apps and desktops

Citrix Workspace



- Search across apps and files
- Mobile app integration
- SSO to all apps
- Simple 2FA
- Files integration
- Favorites
- Recent Files
- more...

Citrix Intelligent Workspace Experience



- Virtual assistant
- Micro apps
- Actions
- Activity feed
- Teams integration
- more....

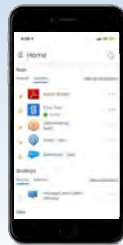


Citrix Workspace app

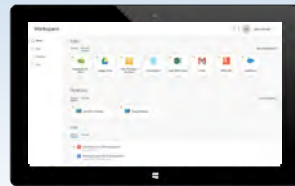
One touch access to your virtual apps and desktops



Smartphones



Tablets



Laptops



Desktops



Mac



iOS



Windows



Chrome



Android



Linux

Citrix browser content redirection

Using Citrix Browser Content Redirection (BCR), 70% CPU usage is saved and handled by the endpoint.

70% CPU usage freed up for a great user experience and higher scalability, lower costs.



70%

Citrix internal Login VSI testing

Citrix + WVD

Optimize Performance

Workspace Environment Management

- Included in CVAD service
- Actively monitors WVD resource utilization and dynamically adjusts based on user profiles, system policies, and resource consumption
- Improves the scalability of the infrastructure hosting your virtual apps and desktops by optimizing resource utilization — saving CSPs time and money
- Simplifies the administration of Windows 10 policies — which improves both user experience and application security



Auto Scale (previously Smart Scale)

- Enables proactive scaling and power management of registered machines in a Virtual Apps and Desktops Site based on a schedule CSPs define or the level of demand for user sessions
- Enables CSPs to ensure that WVD workloads are available when needed, yet restrict overprovisioning of resources that could result in cost cloud infrastructure costs during idle times



Citrix Director

- Gives insights into a year's worth of performance data
- Provides a view of capacity trends, OS usage reporting, proactive notification and alerting, and reboot warnings
- Track the customer log-on times and see which parts of the logon process are causing slowness – from brokering to interactive session
- CSPs can control a user's session from the Director console, taking helpdesk actions like logging off a session, disconnecting it, sending a message to a user, or shadowing a session



WEM battles hungry apps

Citrix Workspace Environment Manager (WEM) will save up to 43% on CPU usage by managing CPU hungry applications.

43% CPU usage freed up to serve user experience and provide higher scalability and thus lower costs

A woman with dark hair tied back, wearing glasses and a dark top, is smiling and looking out a window. The background is bright and out of focus.

43%

Citrix internal Login VSI testing



Autoscale

Cloud only feature replacing SmartScale to help customers reduce public cloud consumption



Edit Delivery Group

Studio

- Users
- Desktops
- Application Prelaunch
- Application Linger
- User Settings
- StoreFront
- Scopes
- Access Policy
- Restart Schedule
- Auto-Scaling**

Auto-Scaling

Select the auto-scaling schedule below, then set the options you'd like for that schedule. To change the days applied, click Edit.

Auto-scaling schedule: Weekdays

Days applied: Monday Tuesday Wednesday Thursday Friday Saturday Sunday

Adjust how many machines are powered on, and when.

Peak hours: [04:00 - 08:00] [13:00 - 17:00]

During peak hours
Capacity buffer: 10%

During non-peak hours
Capacity buffer: 10%

Power-off delay: 15 minutes

Machine instance cost per hour: 0.00

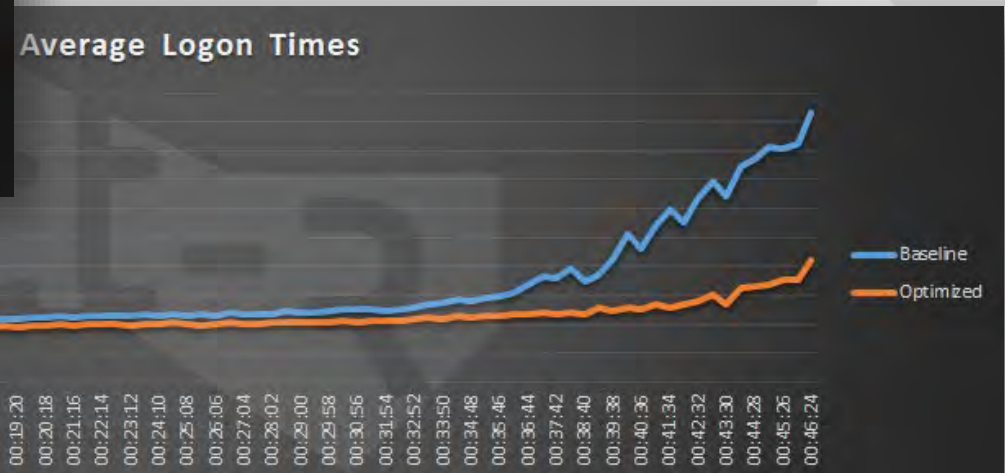
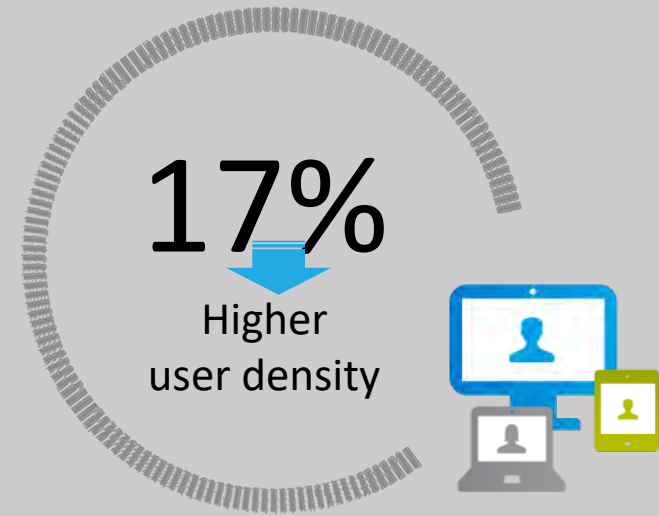
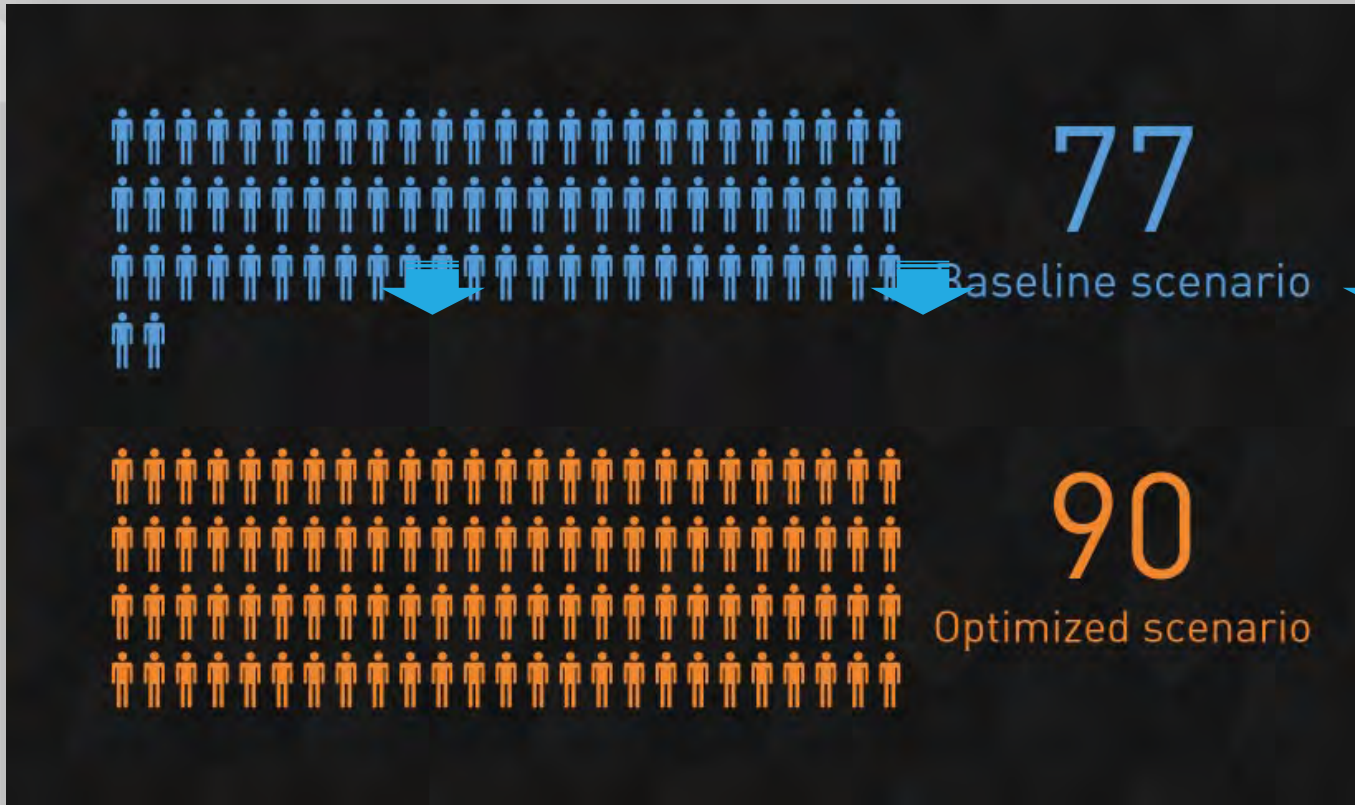
OK Cancel Apply

Autoscale Configuration built into Studio

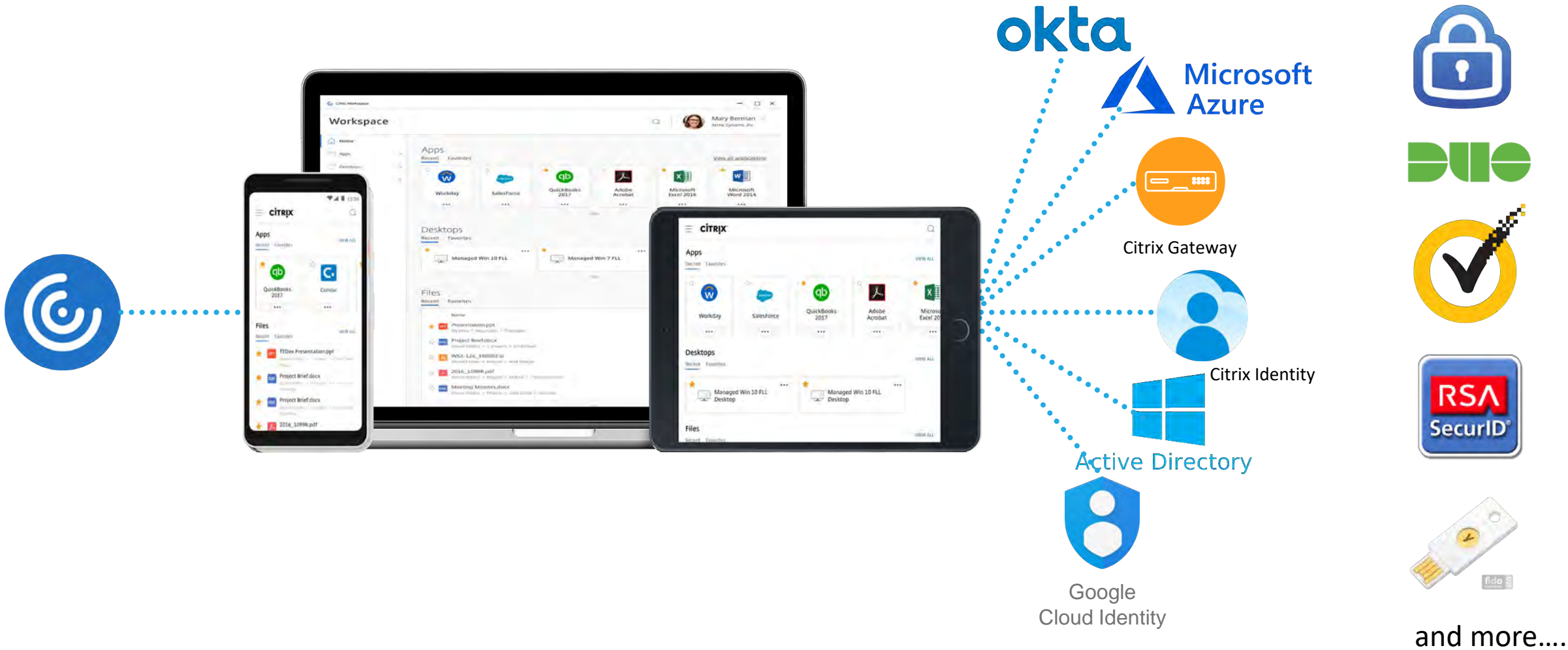


Autoscale Logs built into Director

Citrix Optimizer – independent recognition



Citrix Workspace extends your existing contextual MFA policies

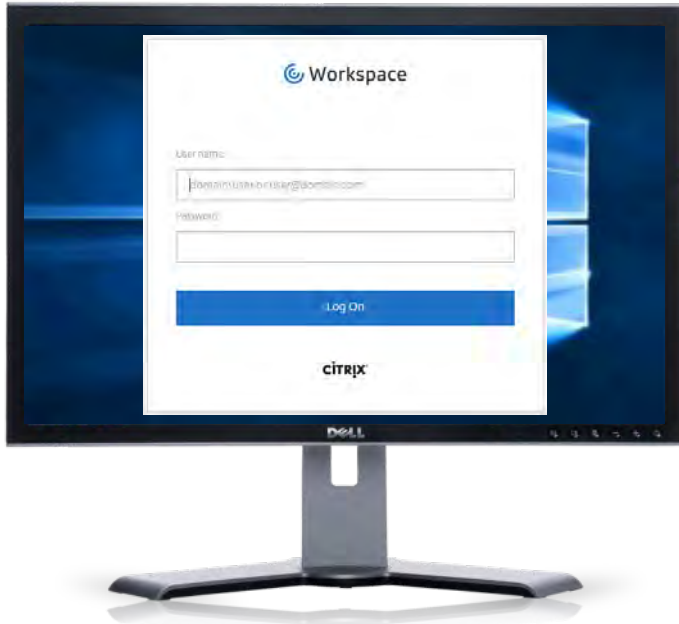


Unifying them!

Workspace Experience with Simple 2FA

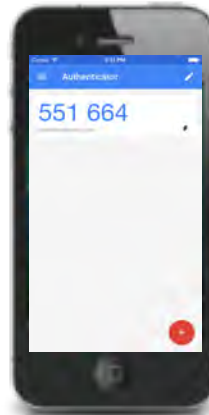
More secure user experience on Workspace Experience with Simple 2 Factor Authentication

1



User logs into the Citrix Workspace with their primary username and password

2



User receives token and enters the token for access.
User registered their authenticator app (OTP mechanism) with Citrix Workspace.

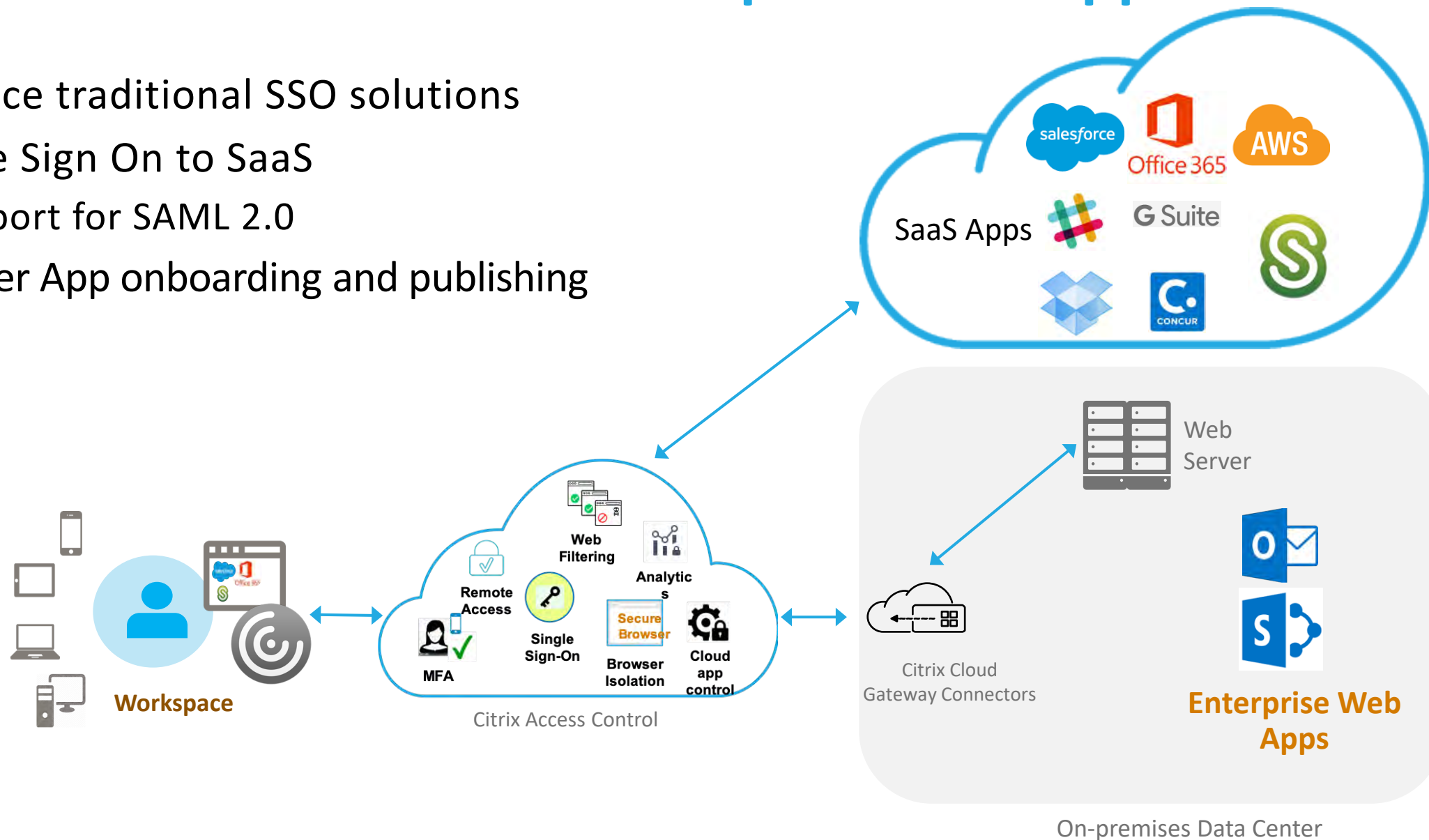
3

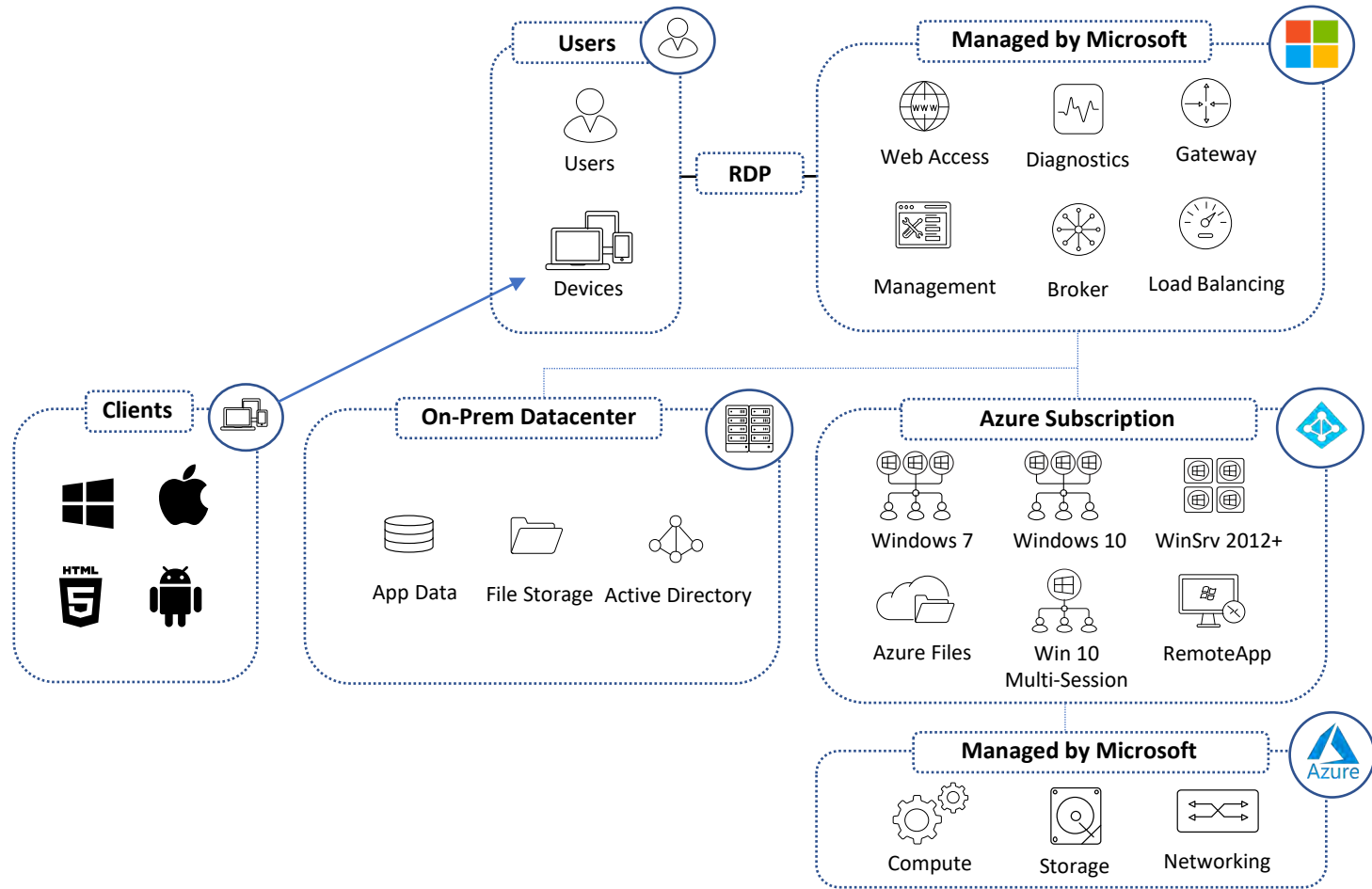


User has secured access to digital workspace resources within Citrix Workspace

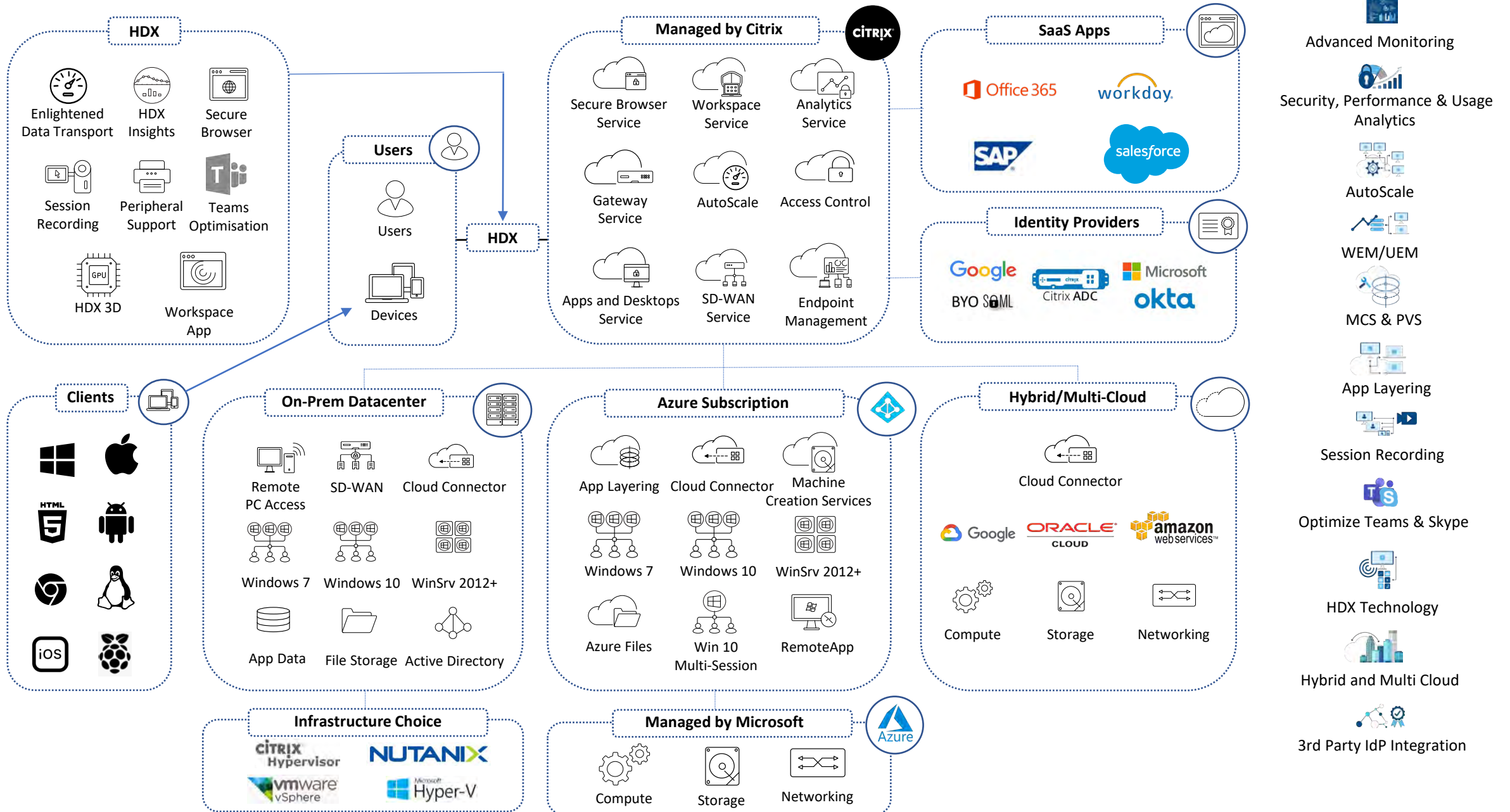
VPN-less Secure Access to Enterprise Web Apps

- Replace traditional SSO solutions
- Single Sign On to SaaS
 - Support for SAML 2.0
- Simpler App onboarding and publishing





Microsoft WVD + Citrix Cloud





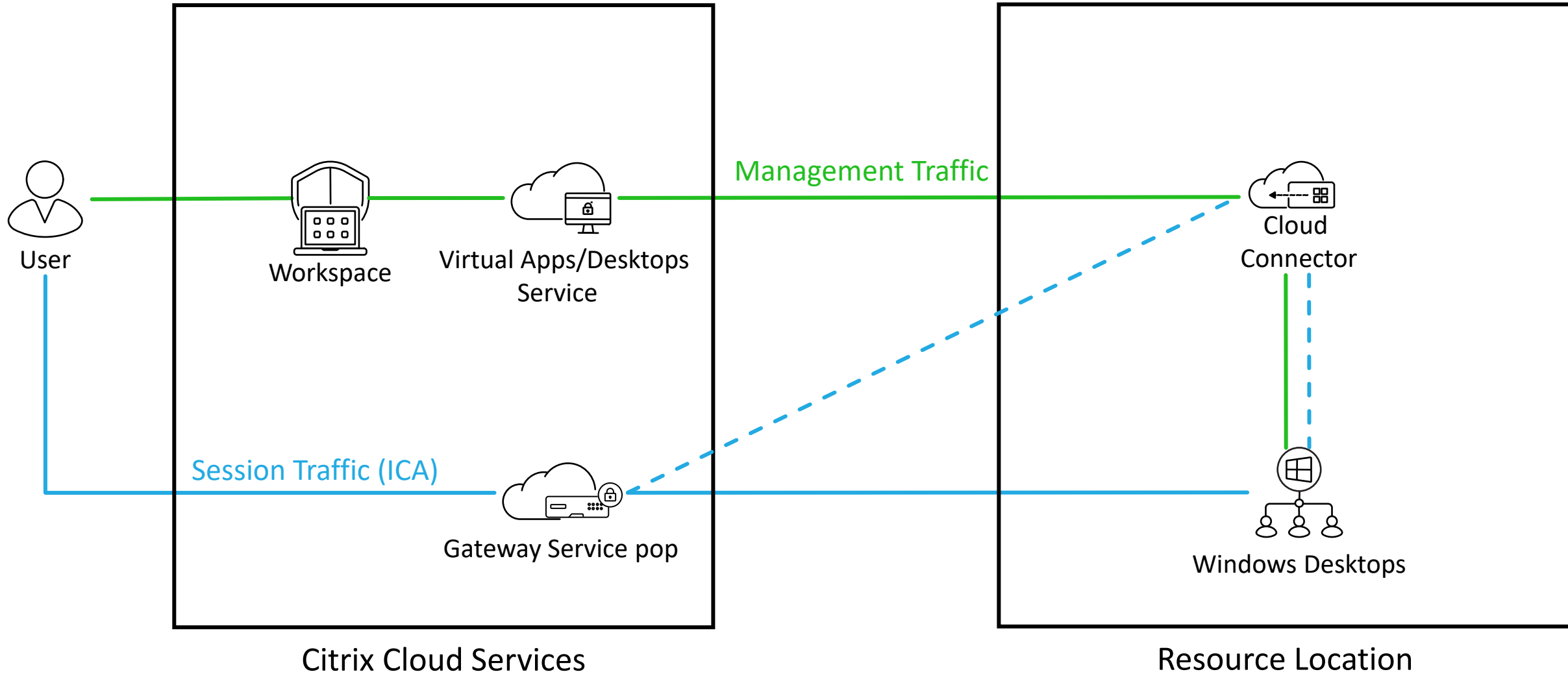
Gateway as a Service (NetScaler / ADC included)



<https://www.citrix.com/da-dk/about/trust-center/cloud-assurance.html>

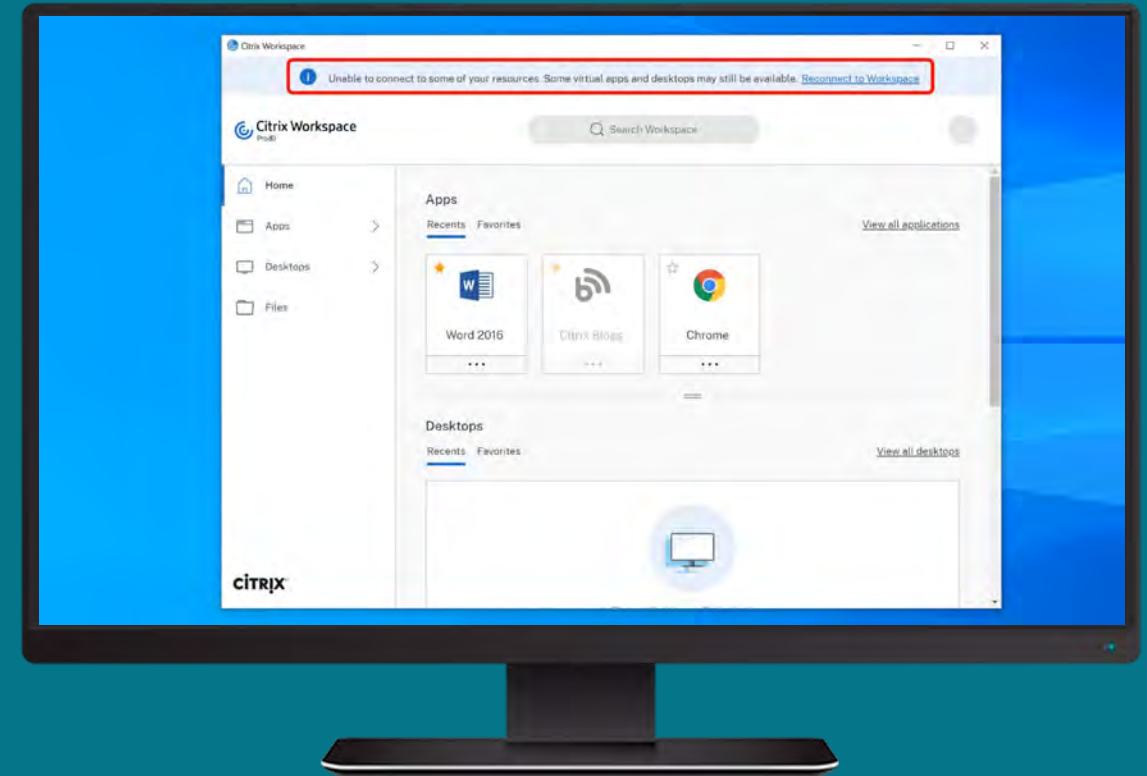
Cloud Connector (Gateway Services)

Overview



Service Continuity

- Optimal resiliency for the Citrix Virtual Apps and Desktops service when used with Citrix Workspace
- Allows users to connect to virtual app and desktop resources during outages of multiple components
- Currently works with Citrix Workspace app 2012 for Windows



A few things to Remember *Henrik Notes

- Need Windows Domain Server in Azure
- No SSO between Azure AD and Windows OS
- Network to backend resources
- Not turn key , building blocs
- "stand alone solution" * single Azure site
- 0,1% packet loss?, 1,5 Mbps for a Task Worker
- How are your PowerShell skills ?



Publish an application

- # First you need to import and install the Remote Desktop PowerShell-module:
 - Import-module Microsoft.Rdinfra.RdPowershell
 - Install-module Microsoft.Rdinfra.RdPowershell
- # Log in to your tenant:
 - Add-RdsAccount -DeploymentURL https://rdbroker.wvd.microsoft.com
- # Log in with an account that has the "Tenant Creator"-role:
 - Get-RDSTenant -Name <Tenant Name>
- # Attach to your Host Pool:
 - Get-RDSHostpool -TenantName <Tenant Name>
- # Check existing apps so your app is not already published:
 - Get-RdsAppGroup -TenantName <Tenant Name> -HostPoolName <Host Pool Name>
- # Create a new App Group:
 - New-RdsAppGroup -TenantName <Tenant Name> -HostPoolName <Host Pool Name> -Name "Basic app group" -ResourceType RemoteApp
- # List apps from the start menu in your image:
 - Get-RdsStartMenuApp -TenantName <Tenant Name> -HostPoolName <Host Pool Name> -AppGroupName "Remote Apps"
- # Find the AppAlias value for the app you want to publish (not the same thing as the name of the app) and assign the app to your new App Group. You will be asked what the name of your published app should be ("Word")
 - New-RdsRemoteApp -TenantName <Tenant Name> -HostPoolName <Host Pool Name> -Name "Basic app group" -AppAlias word
- # Users can only exist in one app group, remove intended users from the default group "Desktop Application Group":
 - Remove-RdsAppGroupUser -TenantName <Tenant Name> -HostPoolName <Host Pool Name> -AppGroupName "Desktop Application Group" -UserPrincipalName <UPNemail>
- # Add your users to the new group:
 - Add-RdsAppGroupUser -TenantName <Tenant Name> -HostPoolName <Host Pool Name> -AppGroupName "Basic app group" -UserPrincipalName <UPNemail>

Demo – Recorded Video – how to

<https://attendee.gotowebinar.com/recording/284888270489744897>

Har du styr på Citrix Cloud og
Microsoft Virtual Desktop



Henrik Poulsen – Citrix Nordics



citrix



Citrix HDX
Technology

Optimize
Teams

Optimize
Skype

Citrix SD-WAN
to optimize Office 365

Workspace
Environment
Management

AutoScale

Hybrid
Cloud

Machine
Creation
Services

Advanced
Monitoring

Citrix App
Layering

Office 365

Citrix armored
client

Session
Recording

Citrix Analytics:
User Behavior

Citrix Analytics:
Security Analytics

3rd Party IdP
integration

Citrix Workspace solutions value-add for Windows Virtual Desktop



Value-Add of Citrix VAD to Microsoft RDS/WVD - Highlights

User Experience

- Simple and consistent (first) user experience on any device
- Industry-leading support for peripheral devices & gestures, across endpoint platforms
- Extensive partner eco system (Citrix Ready)
- Linux-based app and desktop virtualization
- Windows Continuum experience on any device
- Virtual Display Layout for advanced use cases
- Superior user experience on any network connection and device with HDX
- Local Text Echo for immediate user feedback in high-latency network conditions
- Support for SAML-based auth (e.g. Google ID) & options for anonymous / kiosk access
- Built-in WAN optimization (SDWAN)
- Driver-less and hassle-free printing from any device and with minimal bandwidth consumption
- Automatic configuration of Workspace app by means of Email based discovery
- Seamless access to local applications
- Industry-leading Unified Communications optimization for Microsoft, Cisco, Avaya, and Zoom
- Optimization for Microsoft Teams
- Support for multi-touch and gestures on with HTML5 based client
- Support for file up-/download and printing with HTML5 based client
- Seamless apps on HTML5 based clients
- instant application start with Session Pre-Launch and Session Lingering
- Support for Intel IRIS Pro for graphics acceleration at an affordable price
- Proximity-based auth with Citrix Ready Workspace Hub as a Thin Client
- Industry-leading support for multi-monitor setups (incl. 4k)
- Improved web browsing experience for users due to Browser Content Redirection

Security

- Protection against screenshots and keylogging
- Built-in Watermarking for virtual apps and desktops
- Hardened appliance for secure remote access
- Filtering applications based on user location, device or other characteristics
- Role-based administration and configuration logging for admins
- Granting/Prohibiting access to local client resources or devices (e.g. local client drives) by means of a flexible and context-aware policy engine
- Build-in policy engine for lower dependence on Active Directory
- Policy comparison & Modeling right from within Citrix Studio
- Built-in policy templates for simplified administration
- Enterprise-ready remote access solution, which is available as a service as well
- Session Recording for compliance and advanced troubleshooting
- Granular controls for clipboard mapping
- iOS jailbreak detection without EMM/MDM

Management

- CVAD can be consumed as a service, for reduced management efforts
- Enterprise-ready centralized management of hybrid and multi-site environments
- Support for large variety of virtualization platforms, incl. Hyper-V, Citrix Hypervisor, vSphere, Amazon AWS, Google Cloud, Oracle Cloud, Microsoft Azure and Nutanix
- Extensive partner eco system with 1,000ths of verified devices, peripherals and software solutions (Citrix Ready)
- Built-in fast and flexible image management for desktops and servers (physical and virtual)
- Reduction of the I/O footprint of virtual desktops / servers by over 90% with PVS & MCS
- Centralized license usage insights, for better compliance and solution cost
- Industry-leading end user support console for efficient incident handling (incl. historical application usage and performance statistics and trending)
- Industry-leading application layering with better app compatibility, higher performance and lower infrastructure footprint
- Innovative RAM, CPU, and I/O optimization
- Integrated real-time network level monitoring and trending with HDX Insight
- Ability to host and publish any application (16, 32 and 64 bit / incompatible with server OS) by means of VM-Hosted Apps
- Detailed client auto-update configuration options
- Sophisticated VM Power Management for increased power efficiency (desktops / servers)
- Integration of Microsoft App-V for centralized application delivery management
- Integration with Microsoft System Center Configuration Manager for application management and publishing
- Flexible and non-disruptive infrastructure upgrades
- Support for applications that use a loopback address for inter-process communication (Virtual IP Loopback)
- Secure remote access to physical desktop PCs (RemotePC) with Wake on LAN support
- Integration with Microsoft System Center Operations Manager to reduce time-to-resolution
- Application limits for license compliance and better user load balancing
- Built-in multi-site management for improved admin efficiency and simplification
- Repurpose of legacy PCs with Receiver Desktop Lock and Desktop transformer
- IT Service Management Adapter for ServiceNow
- 5-year Long Term Service Release (LTSR)
- Linux-based multi-user and VDI app virtualization
- Ability to automate every admin task and built-in PoSH help
- Detailed image rollout scheduling, simple rollback of images and built-in testing of machine catalogs
- Superior scalability for very large-scale customers
- Built-in Workspace Environment Management solution
- Predictive service monitoring with Session Probing