How to Effectively Scale and Secure a Citrix Endpoint Network with NoTouch Desktop and the Citrix Ready Workspace Hub

Stratodesk Whitepaper

Scaling your Citrix VDI can be a challenge regardless of industry, size, or budget. The top financial concerns for enterprises looking to scale their network of devices includes not only the high cost of individual Thin Clients, laptops and PCs but also the massive investment companies and organizations must make into Windows licenses, malware and antivirus contracts, as well as demands made on IT staff resources. In fact, it is estimated that organizations spend upwards of 1,000 hours a week on detecting and containing insecure endpoints[1]. In order to effectively scale their VDI, organizations must educate themselves on the many options, challenges, and benefits they are likely to face before diving in.

Stratodesk's NoTouch Desktop software is the endpoint OS, management and PC repurposing software that runs on both x86 and ARM/Raspberry Pi based devices, including the Citrix Ready Workspace Hub. Thanks to its ability to repurpose existing hardware coupled with the integration of the low cost, high performance Workspace Hub, NoTouch provides an all-in-one solution for organizations to effectively scale their network of endpoint devices in their Citrix VDI.

[1] "The Cost of Insecure Endpoints," a study commissioned by Absolute and conducted by the Ponemon Institute.

Organizations who already know the benefit of VDI may also see the advantages of scaling the number of devices in their environment, but are hesitant to begin the process because of the high costs involved. Investing in a large number of new, high performing endpoints can cost a fortune, and managing a rapidly growing and complex or mixed environment of endpoints is a nightmare. In fact, management is one of the top concerns for system admins, given the fact that their organization's productivity depends greatly on how well they are able to effectively manage their entire network of mixed endpoint devices, and deliver their Citrix Virtual Apps and Desktops and necessary information to their end users in a convenient and expedient way. Endpoint management can, for better or for worse, have a disproportionate impact on the overall well being of day-to-day operations for the organization as a whole.

Amidst the horizon of rapidly growing demands on time and budget, organizations must find better ways to manage and scale their environments, while at the same time cut back strain on staff who are left with more work than they could hope to achieve alone.

For this reason, Stratodesk partners with Citrix, ViewSonic and NComputing to bring a greater level of efficiency, convenience and security to Citrix VDI endpoints and organizations. With the Citrix Ready Workspace Hub, Stratodesk is able to offer an all-in-one solution for your Citrix environment that combines PC repurposing for existing hardware with the option to grow your device pool with a fully integrated, low cost endpoint. Citrix customers now have access to a top performing endpoint that enables them to scale beyond existing hardware: one that is available for a fraction of the cost of traditional Thin Clients.

This paper seeks to explore effective strategies for organizations looking to expand their Citrix VDI while cutting costs and increasing security and performance. Also discussed is how the NoTouch Desktop product suite can proactively help organizations achieve their goals and better manage their complicated mixed environments of x86 devices and Workspace Hubs.

Summary of Challenges Scaling a Citrix VDI

Organizations across many industries face significant challenges scaling their Citrix VDI. IT systems admins in particular feel these pains as they struggle to find a balanced approach to endpoint management while also growing the number of seats in their network. Their first obstacle is overcoming the Windows issue. In order to allow for VDI, organizations must house Windows on each of their endpoint devices. In addition to installing Windows, they must also maintain and manage them. Not to mention they must provide antivirus and malware protection for each and every device. To make things worse, different devices house different versions of Windows, which creates even more complexity. The cost and effort associated with all of the above is high and poses a significant obstacle for enterprises to overcome.

Another challenge facing IT administrators is that of security. A key concern for most, system admins must not only increase and maintain a high security standard but must also find ways to enable flexibility in their environments to allow for Bring Your Own Device (BYOD), workers at home or on the go, or those accessing virtual desktops from the cloud. This causes great concern for IT administrators who now have an equally high demand put not only on budget and security, but also on convenience.

Increased strain on staff resources is the third great challenge and cannot be stressed enough. Without an endpoint solution in place that is convenient and one that offers a seamless user experience, workers cannot function at peak performance. If there is any hassle at all on the end user, the benefits of VDI can quickly be lost as IT resources are redirected towards aiding and assisting workers. Technology that saves time not only for the worker but also for the IT system admin is of paramount importance.

Lastly, organizations face a hardware problem. If devices are antiquated to the point that they are no longer operational, or if more seats are required than are currently available, organizations are required to make large investments in hardware. However, even if the organization has the budget to do a complete overhaul of their endpoint devices, they still face the difficult challenge of standardizing those devices, managing and updating different versions of Windows –the list goes on.

For these reasons, it is clear that an all-in-one solution that encompasses endpoint management and security as well as one that cost effectively allows additional endpoints and devices to be added to the ecosystem is needed in order to get the full benefit of their Citrix Virtual Apps and Desktops (formerly XenApp/XenDesktop) and scale to fit the needs of a growing enterprise.

NoTouch Desktop Product Suite Overview

NoTouch Desktop helps boost security with its low footprint NoTouch OS, and saves your system administrators' time by automating the processes involved in endpoint management. By cutting costs, eliminating hassle, standardizing endpoints, and maximizing security, it is the solution of choice for businesses looking to scale their VDI. By powering the Workspace Hub, and managing both x86 and Workspace Hub devices in the same environment, NoTouch unlocks new possibilities for organizations to effectively scale their Citrix Virtual Apps and Desktops.

NoTouch revolutionizes endpoint computing, elevates the workspace, automates management processes, and allows tens of thousands of devices to be managed from one central location. Additionally, NoTouch is the only endpoint management software that can be run on premises or from the cloud, which makes it the perfect solution for both VDI and DaaS.

The key benefits of NoTouch Desktop and how NoTouch solves major concerns facing enterprises looking to scale are as follows:

NoTouch Desktop Saves On Costs

NoTouch comes with significant savings benefits. NoTouch Desktop provides a solution that easily repurposes PCs, Laptops and Thin Clients in your VDI into NoTouch clients, operating on NoTouch OS. Not only does NoTouch OS save money by eliminating the need for capital purchases of hardware while eliminating common security threats, our integrated management suite, NoTouch Center, gives complete control over all VDI endpoints. Reduce IT staff hours and hassle with one single endpoint management solution for your entire VDI.

Remove Windows and Increase Security

NoTouch repurposes existing devices into thin clients that require zero maintenance. This removes the Windows licensing obstacle, the need for anti-virus/malware contracts, updating individual devices, and beyond. Because NoTouch OS is Linux based, it is impervious to common malware or security exploits. Instantly deploy NoTouch onto thousands of devices via our various install methods (MSI installer, PXE boot) and enjoy hassle free endpoint computing.

NoTouch Desktop Enables BYOD

Another common concern facing IT is the growing trend of employees bringing personal devices into the workplace, or using their personal devices to work from home. Employees want and expect to perform integral work tasks on personal devices, either at home, in the office, or on the go. Stratodesk's software supports BYOD to meet these needs without opening up the network to security threats. Workers can simply boot NoTouch OS in Live Mode from any USB stick in order to access important work files wherever they are at. When they are done, they can exit their session and remove the USB stick. Native operating systems won't be affected.

Stratodesk has the Citrix Workspace app (formerly Citrix Receiver) Included

NoTouch OS also has the clients for the major environments included. This means that NoTouch is ready and able to make the connection to your Cirtrix Virtual Apps and Desktops from the box without any extra effort needed from your IT staff or end users.

On–Premises or Cloud-Based Administration

NoTouch is the only endpoint management software that can run both on premises or from the Cloud. With NoTouch Cloud, management updates are applied automatically, appliances are actively managed, and home machines and BYOD are enabled without opening your network up to unnecessary security risks.

The Citrix Ready Workspace Hub Overview

Thanks to our partnerships with ViewSonic, NComputing, and Citrix, Stratodesk customers now have a cost effective way to grow the number of devices in their Citrix environment. This is possible through the Citrix Ready Workspace Hub. Built on Stratodesk software and the Raspberry Pi3, it is the first Raspberry Pi based endpoint to be market ready for the enterprise and works seamlessly with existing PCs and Thin Clients in a NoTouch ecosystem.

For many companies, making sure workers have what they need to stay productive means managing a mixed environment of not only PCs, Thin Clients, and ARM based devices, but also smartphones and tablets for workers on the go. What if one endpoint device could deliver the benefits of of all these devices, and work equally well with them, without costing a fortune? This would effectively solve the difficulty facing organizations who wish to add additional endpoints to their NoTouch ecosystem.

The Citrix Ready Workspace Hub is such a device. Its low cost and high performance allows you to harness the full benefit of your Citrix Virtual Apps and Desktops environment and effectively scale it. By working cohesively with your existing hardware, the Workspace Hub elevates your workspace and supplies a powerful and scalable endpoint, complete with Dual View for streaming 2 HD displays, Skype for Business, and more.

Stratodesk is the creator of the operating system for the Workspace Hub, has made it enterprise grade, and is the mastermind behind the central management software that enables you to manage both x86 and Workspace Hub devices from one location in the same environment. Its advanced capabilities and low price point make the Citrix Ready Workspace Hub a next generation endpoint device.

Innovative Use Cases for the Workspace Hub

- **Authentication:** Access your VDI session using advanced authentication methods like your smartphone, Face-ID or QR code to the Workspace Hub to instantly log-in. No outdated manual password entry required.

- **Multi-monitoring:** Use a combination of the Workspace Hub and a second display adapter to provide 2 HD displays.

- **Smart Meeting Rooms:** Cast your smartphone or tablet to the Workspace Hub to display a presentation. Interact with your presentation from your mobile device. Cast your laptop screen to your Workspace Hub connected to a projector or TV. The Workspace Hub eliminates the need for multiple dongles/adapters or even Apple TVs.

- **Desk phone and online meetings:** Replace your outdated desk phones with Skype for Business. Take it with you on the go on your smartphone or mobile device.

Workspace Hub Benefits for Stratodesk Customers

No Need For Windows

The Workspace Hub also eliminates the need to house Windows on the local device. It is powered by NoTouch OS, meaning it comes with NoTouch OS preconfigured right from the box. System admins must simply connect their devices to the same NoTouch Center that they already have installed and configured. This can be done manually or automatically, and endpoints are ready to use from the box in a matter of minutes.

Manage Workspace Hub and x86 Devices in the Same Environment

Stratodesk's technology makes it possible to manage a mixed environment of both x86 and Workspace Hub devices. Businesses no longer need to replace their entire network of devices, thanks to NoTouch Desktop's PC repurposing capabilities, and they now have an affordable and high performing endpoint that can be purchased at a fraction of the cost of competing Thin Clients. The Workspace Hub is a proven solution for businesses with a NoTouch ecosystem already in place looking to add additional low cost endpoints without introducing any added complexity to their environment.

Security Benefits

The Pi3, which the Workspace Hub is built on, has notable security advantages over basic Thin Client hardware, and because it is powered by NoTouch OS, it does not require any visits from IT staff, Windows licenses, or antivirus/malware contracts. Additionally, the no-attack surface, Linux OS that powers it is equally impervious to common security threats that pose significant challenges to Windows.

The Workspace Hub is Built with the Future in Mind

With its many advanced capabilities, the Workspace Hub does not only solve problems facing organizations looking to expand or grow their VDI, but also innovative use cases that face the future of work. It is as much an IoT solution as a VDI solution. The Workspace Hub is the endpoint of choice for small businesses and big corporations alike. With its low cost and high performance, the Workspace Hub allows businesses to transform, scale and leverage the full power of their Citrix environment.

To learn more about the Citrix Ready Workspace Hub, including how to set yours up and take advantage of its advanced capabilities, visit the Citrix White Paper **https://docs.citrix. com/en-us/xenapp-and-xendesktop/current- release/devices/workspace-hub.html**

About Stratodesk

Stratodesk is the world's leading endpoint OS and management solution. It is used by government and healthcare organizations, banks, SMBs and large enterprises to eliminate cost and scalability obstacles facing their complex network of devices. By delivering the only management software for mixed environments of x86, ARM and Raspberry Pi devices, Stratodesk is reinventing endpoint computing for enterprise IoT and VDI. Our cutting edge, linux-based solution, NoTouch, is hardware-agnostic and runs on the Raspberry Pi.

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