How 10ZiG Thin and Zero Clients Improve Citrix VDI Performance

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Financial organizations across the globe are facing an unprecedented array of security threats. These threats directly endanger the most precious assets that any financial company holds: data and people.

In this environment of elevated risk, many financial institutions are turning to data centralization as a primary defense. Citrix VDI facilitates data centralization, helping financial organizations to mitigate risk, boost security and maintain compliance. However, distributed endpoints may suffer from performance issues that can impact user productivity and diminish user satisfaction.

This paper discusses how thin/zero clients by 10ZiG can work in symbiosis with Citrix VDI in providing a secure, centralized solution that optimizes productivity and ensures a positive user experience.

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Business Challenge Summary

Financial institutions are targeted more than any other industry for easily monetized data. Serving as a primary target of the world's cybercriminals would certainly put any company in an uncomfortable position. But for financial enterprises, perhaps, there is an extra element of discomfort. After all, it could be argued that data is the most precious asset than any financial company owns.

That is precisely the asset that cybercriminals are targeting. A list published in the SecurityScorecard illustrates the success cybercriminals are enjoying in their attempts to breach the defenses of financial institutions — and how badly those defenses are failing. In surveying the top 20 U.S. commercial banks, SecurityScorecard found that:

- Generic malware infections thrived in 15 of the 20 banks
- All 20 had experienced malware events during the previous year
- More than 400 malware events had occurred in just one of the banks during the past year
- The bank with the weakest security posture was ranked as one of the 10 largest U.S. financial institutions[1]

Most financial institutions are aware of the risks they face, and the potential devastation that just a single data breach can wreak. Financial institutions around the world are working to counter those threats. One of the ways is the centralization of data. It is far more effective to secure data within a central repository than attempting to secure data distributed across hundreds or thousands of endpoints. Centralization also helps to simplify management and reduce IT costs.

But while data centralization improves security it can sometimes impact performance, particularly when accessing distributed applications. With many financial institutions moving to a Citrix VDI environment as part of centralization, an endpoint solution is needed that unifies the user experience across virtualized applications and desktops.

[1] https://cdn2.hubspot.net/hubfs/533449/SecurityScorecard_2016_Financial_Report.pdf

Overview of 10ZiG

10ZiG provides thin and zero clients for VDI environments. While the focus of many companies is scattered across a range of products and services, 10ZiG remains laser-focused on only one objective: leadership in endpoint devices.

10ZiG is dedicated to exceling in only one market segment, and this has paid dividends for customers. 10ZiG provides a unique blend of technical superiority, personal service and customization.

Features of 10ZiG thin and zero clients include:

- **Easy Setup:** Initial setup and configuration of 10ZiG thin and zero clients is fast and easy, especially compared to the setup and configuration process for fat PCs.

- **Enhanced Security:** Unlike PC endpoints, data cannot be stored locally on 10ZiG thin and zero clients. This supports the security-enhancing centralization of data. Additionally, thin and zero clients can be configured to prevent users from utilizing data-storage devices such as thumb drives and other USB peripherals, further supporting the integrity of data centralization.

- **Centralized Management:** The 10ZiG Manager client management software provides a centralized tool for configuring, maintaining and controlling thin and zero client devices. The 10ZiG Manager makes the task of endpoint management a simple and intuitive process. The Manager supports unlimited user licenses and is provided free with each purchase; no initial or ongoing license fees are charged for purchased endpoint devices, no matter the quantity.

- **Web-Based Technology:** 10ZiG uses a cloud-based connection to endpoints rather than connecting through VPN. 10ZiG clients may be managed from all major internet browsers, providing global companies the ability to manage endpoints over the internet as well as through traditional LAN and WAN environments. Internet-based management provides real-time status of all endpoints from a single web page and eliminates the need to install any additional software or components.

10ZiG thin and zero clients fulfill many of the key objectives of the Citrix Ready Financial Solutions Program, including:

- **Security:** 10ZiG thin and zero clients provide scalability and ease of management without compromising security. Indeed, thin and zero client computing can substantially enhance security, providing powerful protection against cyberthreats such as Trojans and viruses. A thin client network also offers substantial protection against physical threats, such as power failures. And since company data is stored on a central server, proprietary and sensitive organizational data is safer from all forms of threats. Data security can be further enhanced, if desired, by disabling the copying of data from thin/zero clients to external storage devices.

- **Compliance:** The security enhancements enabled by 10ZiG thin and zero clients serve to protect organizational systems and data. And in so doing, 10ZiG clients also help companies to stay compliant with financial regulations.

- **Flexibility:** Thin and zero client deployment makes IT management easier. IT teams are able to accomplish much more with fewer resources. From the perspectives of both IT administrators and end users, workplace flexibility is substantially enhanced.

(See the end of this paper for a detailed description of the Citrix Ready Financial Solutions Program.)

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10ZiG client devices are designed to seamlessly interface with and support Citrix solutions, leveraging the mobility and flexibility benefits of applications and desktop virtualization offered by Citrix XenDesktop and XenApp.

As a long-standing partner in the Citrix Ready program, 10ZiG constantly strives to maintain its outstanding reputation for Citrix support. 10ZiG maintains a dedicated Citrix Ready team, which constantly monitors for new Citrix product releases and product upgrades. Each Citrix release and upgrade is evaluated for any impact to 10ZiG products, and any necessary supporting changes are made quickly, assuring that 10ZiG customers continue to enjoy flawless service from their Citrix solutions.

10ZiG products are uniquely positioned to smoothly accommodate and incorporate any Citrix changes. 10ZiG thin and zero clients use a "vanilla" Citrix receiver rather than a proprietary solution. This assures that new Citrix features and advancements are easily and seamlessly leveraged for 10ZiG customers — a crucial capability for consistently providing a superior user experience in a distributed environment.

The 10ZiG Citrix Ready team also regularly meets with Citrix representatives, constantly seeking opportunities to improve integration with Citrix solutions, and working to enhance the support of 10ZiG customers operating in Citrix virtual environments.

With its recent Skype for Business offering, 10ZiG provides an excellent example of the close working relationship with Citrix. In partnership with Microsoft, Citrix offers the only available Skype for Business solution designed for VDI environments in its HDX Real Time Optimization Pack (HDX RTOP).

10ZiG recognized the value that the HDX RTOP offers to thin and zero client customers, so the 10ZiG team worked closely with the Citrix Ready team in making Skype for Business available to 10ZiG customers. As a result, 10ZiG was one of the first Citrix partners to integrate the HDX RTOP into their Linux and Windows endpoints. HDX RTOP provides 10ZiG customers with the ability to offload media streams, including voice and video, to thin and zero client endpoints thus improving the user density per server in backend.

The HDX RTOP Plugin provides 10ZiG customers with the benefits of improved performance, peer-to-peer voice and video calls capability, and a seamless user experience for Citrix XenDesktop and XenApp environments.

10ZiG thin and zero client solutions offer several innovative and unique features that aren't available with any competing product. Features unique to 10ZiG clients include:

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- **HDX Premium Verified:** Citrix certification for HDX Ready provides assurance that a device has met the stringent testing criteria specified by Citrix in demonstrating compliance with certification standards. HDX technologies extend the ICA protocol to satisfy modern demands for rich media apps. HDX also leverages innovations in endpoint computing power to deliver a high-definition experience for users. The umbrella of HDX features supported by 10ZiG includes Skype for Business and multimedia support, including video playback, both server and client rendered. The 10ZiG 5848qc is also HDX 3D Pro Verified.

- **Advanced Customization Capabilities:** 10ZiG offers the best advanced customization support in the industry. The 10ZiG team provides customization for both whole sectors and individual companies. Available customization services include:

  - Windows customization: adding/removing programs, installing drivers, device lock-down to single apps, user account setups, etc.
  - Making changes to the embedded OS to support applications designed for PCs
  - Image preloading at production level, ensuring minimal configuration requirements during customer deployment

  - Applying Linux templates for image preloading
  - Custom development: Installing new clients, management tools such as ScreenConnect, web browsers, PDF readers, etc.

- **Local Customer Support:** Customers that need help are not forced to speak with someone located halfway around the world. Customer service for US customers is based in Phoenix. Support for European customers is based in the UK. Additionally, customers wait on hold for an average of less than thirty seconds when calling the 10ZiG support team.

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10ZiG Solution Detail

10ZiG has been selected to participate in the Citrix Ready Financial Solutions Program because 10ZiG thin and zero client solutions provide value that is particularly relevant to financial services companies. 10ZiG clients work in perfect symbiosis with Citrix applications, providing financial institutions all the flexibility and capability necessary for enabling secure, centralized, server-based computing and desktop virtualization.

10ZiG thin and zero clients facilitate the **centralizing, streamlining and securing of IT for financial institutions.** Operational and management costs are reduced, while the performance, availability and security of apps

and data delivered to users/endpoints are increased.

The partnership of 10ZiG and Citrix provides valuable guidance for assuring the success of VDI for companies in the finance industry. The 10ZiG-Citrix partnership can help customers accurately profile their user base — a critical step that many overlook when progressing toward a virtual environment. The 10ZiG team helps customers evaluate their applications, data and processes, providing information that helps in designing and implementing a perfectly customized solution for each customer.

And ultimately, the 10ZiG-Citrix partnership helps customers achieve the most important goals of implementing a virtual environment in a financial institution:

- Improving the user experience
- Improving compliance and security

The recent experience one of the world's leading financial services companies serves to illustrate the effectiveness with which the 10ZiG-Citrix team can fulfill customers' needs.

4448c Zero Client for Citrix

→ 1.33 GHz Dual Core Processor

→ 4 x USB Ports (1x USB 3.0)

→ Dual DVI Monitor Support (Standard)

→ Citrix Ready HDX Premium Verified

→ Only 4-4.5 Watt Power Consumption

→ Optional Wireless & VESA Mounting

5848qc/qdc Zero Client for Citrix

→ Intel 2.0 GHz Quad Core Processor

→ 7 x USB Ports (2x USB 3.0)

→ Dual DP or DVI Monitor Support (Standard)

→ Citrix Ready HDX Premium + HDX 3D Pro Verified

→ Only 5.8-6.2 Watt Power Consumption

→ Optional Wireless & VESA Mounting

10ZiG Technical Features:

Features	HDX Ready	HDX Premium	HDX 3D Pro
HDX Plug n Play - USB	√	√	√
HDX 2D Graphics — Server rendered	√	√	√
HDX Voice — Generic Chat & Softphone	√	√	√
HDX Video Playback — Server rendered Flash	√	√	√
HDX Video Playback — Server rendered Media	√	√	√
Print using Citrix Universal Printer Driver	√	√	√
HDX Plug n Play — Multi Monitor		√	
HDX Realtime Audio - VoIP		√	
HDX Media Stream — Flash redirection		√	
HDX Media Stream — Windows Media redirection		√	
HDX Realtime Webcam Compression		√	
HDX Realtime Optimization Pack Support (SFB)		√	
HDX Smartcard support		√	
HDX Rich Graphics — 3D Pro			√
HDX Pixel Perfect Lossless Support			√
HDX Plug-n-Play - Multi-Monitor Support (Multi 3D apps)			√
Space Mouse Support			√

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Customer Success Story

10ZiG recently worked to improve the VDI experience of a major financial services organization. This company designs and delivers solutions that manage risk, optimize benefits, cultivate talent and expand the power of capital to protect and strengthen institutions and individuals. Its 40,000 employees serve in more than 140 countries.

The organization had recently undergone a merger that incorporated two companies, each with 20,000 employees distributed across 500 offices. The new entity represented many different focuses within the financial sector, including benefits, pensions, human capital, insurance, investment, etc.

The acquired organizations were proponents of VDI. For many years — even predating the concept of VDI — both companies had recognized the importance of centralization in protecting data. Centralizing the user experience through the implementation of a thin client / VDI solution was a logical progression for the organization.

But initial attempts did not go well. The organization experienced a scenario that occurs frequently with many thin client vendors: lots of promises were made, but few of them were kept. In particular, the selected vendor apparently lacked familiarity with Citrix VDI, and they were slow to incorporate Citrix upgrades and changes.

The experience with 10ZiG has been night-

and-day different. 10ZiG zero clients, combined with the company's Citrix VDI, now provide the agility and flexibility needed to support the differing development needs of the company's partners. Aggressive "refresh"/ update cadences continuously assure that the latest Citrix upgrades and changes are seamlessly integrated into the virtual environment. Citrix updates are instantly reflected in corresponding 10ZiG updates.

Key benefits the organization now enjoys include:

- The enabling of a media-centric culture (Centralization can sometimes work counter to that goal; 10ZiG prevents that from happening.)
- The development of an accurate user base profile, providing a detailed understanding of the processes, data and applications that employees use
- Global endpoint management via the cloud
- Skype for Business support
- Better-than-ever flexibility and agility

Additionally, 10ZiG integrated easily with Citrix. Upon initial deployment, the 10ZiG installer will automatically evaluate the Citrix environment and perform internal tests to ensure an optimum integration. Once managers have set up and provisioned new clients, their work is done. They can sit back and watch 10ZiG self-manage. Since 10ZiG management is automated, hands-on effort from IT administrators is not necessary. There is no need to physically visit endpoint locations even during the deployment of new terminals.

Since endpoints remain in a locked, secure state, maintaining sustained security may also be accomplished without direct monitoring. Overall, very little interaction is required between IT administration and each individual endpoint. The result is a seamless experience for both IT department administrators and end users.

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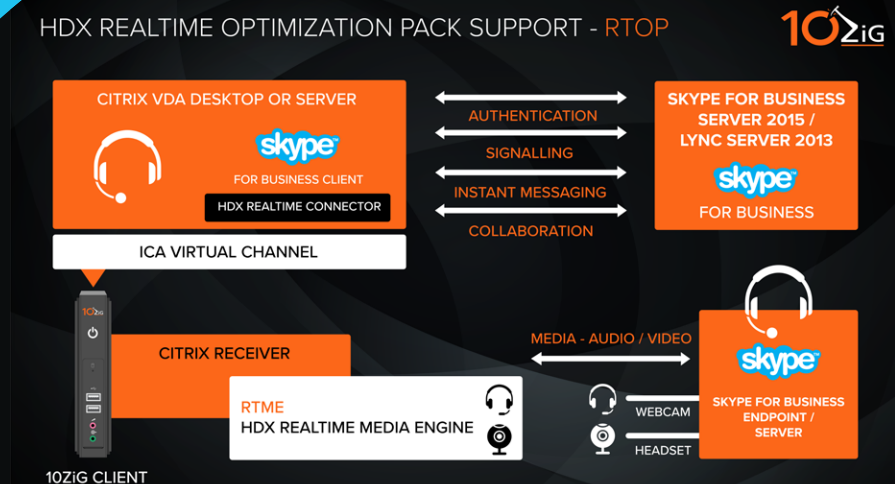
A Proven Partnership that Enables the Full Range of VDI Benefits

Many financial institutions continue to rely on a model that has become decidedly anachronistic: using PCs for workstation endpoints.

Every single workstation PC in a financial institution's network might be thought of as an open wound, inviting infection from the nasty array of cyberthreats that seek to exploit every financial institution on the planet. Replacing PCs with thin clients eliminates these points of vulnerability, safely entrenching proprietary data and systems in a central repository.

10ZiG thin and zero client solutions help enable all the potential benefits of virtualization and centralization. But 10ZiG offers another benefit that has become quite rare in today's world: an obsessive dedication to customer service. The goal is to provide products that fit each customer's environment. 10ZiG enables astounding customization support by their laser-focused concentration on thin and zero clients.

Importantly, 10ZiG thin client solutions have been proven to integrate seamlessly and easily with the Citrix environments commonly deployed by financial organizations.

Its selection to the Citrix Ready Financial Solutions program provides financial organizations with a proven, reliable solution for enabling the many benefits of thin client solutions.

To learn more about 10ZiG thin client and zero client solutions, please visit: https://www.10zig.com/

For more information about Citrix application and desktop virtualization, please visit: https://www.citrix.com/virtualization/

Appendix

Learn more about the Citrix Ready Marketplace for Financial Institutions at: https://citrixready.citrix.com/info/financial-services.html

To learn more about the Citrix Ready program partnership with 10ZiG thin and zero clients, please visit: https://citrixready.citrix.com/10zig-technology.html

To learn more about security and performance solutions for financial enterprises, contact Citrix and 10ZiG.

Citrix Ready Financial Solutions Program Overview

The Citrix Ready Financial Solutions program has been launched with the sole objective of building and sharing a library of white papers and case studies that portray the best integrated joint solutions for financial services and related industries. Each of these documents illustrates the teaming of a Citrix partner and Citrix solution in helping financial institutions to secure instant access to apps, data and communications on any device, over any network and cloud.

Through this program, we identify and showcase partner technologies such as applications, peripherals and endpoints that

are essential needs for financial institutions. Our joint white papers illustrate how Citrix and partners work in symbiosis to address one or many of these use cases to customers' satisfaction:

- **Workplace Flexibility**
- **Virtualizing and securing Business critical apps**
- **Centralizing, streamlining and securing IT**
- **FSI security and compliance**

About Citrix Ready

Citrix Ready identifies recommended solutions that are trusted to enhance the Citrix Delivery Center infrastructure. All products featured in Citrix Ready have completed verification testing, thereby providing confidence in joint solution compatibility. Leveraging its industry-leading alliances and partner ecosystem, Citrix Ready showcases select trusted solutions designed to meet a variety of business needs. Through the online catalog and Citrix Ready branding program, you can easily find and build a trusted infrastructure. Citrix Ready not only demonstrates current mutual product compatibility, but through continued industry relationships also ensures future interoperability. Learn more at citrixready.citrix.com.

About 10ZiG

10ZiG Technology is a world market leader in the development of Thin and Zero Client endpoint devices that support a virtualized desktop environment. 10ZiG provides a wide range of devices suitable for all user types — from those requiring low-level application support such as Microsoft Office through to power users requiring advanced multimedia, video conferencing, 3D, CAD and 4K resolution. 10ZiG devices are Certified Citrix Ready and HDX, HDX Premium and HDX 3D Pro Verified. https://www.10zig.com/