Deliver Windows apps to Google Chromebooks for a seamless, app-centric experience from anywhere

Citrix XenApp® powers Chromebooks with business-critical enterprise apps to simplify your adoption of the Google Chrome™ computing platform
Google Chromebooks are gaining widespread adoption in the enterprise as users embrace their sleek form factors and simple access to application services, and IT seizes the opportunity to escape the high cost of traditional endpoint refresh cycles. The use of Chromebooks for business can pose a key challenge, however. While the Google Chrome computing platform is ideal for accessing Google Apps™, SaaS and other cloud-based services, Microsoft® Windows® applications continue to play an essential role in most organizations. IT needs to give people a way to access these applications within the Chrome environment—without sacrificing the seamless simplicity of the Chrome platform.

Citrix and Google have partnered to eliminate the separation between cloud-based apps and business-critical Windows applications on Chromebooks. With Citrix XenApp®, the market-leading Windows virtual application delivery solution, people can launch centrally hosted enterprise applications alongside Google Apps, SaaS and other cloud services within the same Chrome environment, without the need to launch one or more virtual Windows desktops. In this way, they can enjoy all the benefits of a fast, lightweight, web-based notebook computer for personal use, and still have easy, secure access to their Windows-based work applications, desktops and data at any time. IT can leverage the cost and manageability benefits of Chromebooks without having to migrate legacy applications to the cloud, while modernizing app delivery to enable people to be productive from anywhere, on any device.

The rise of a new enterprise computing platform
Chromebook™ adoption has surged among organizations of all kinds, accounting for 21 percent of all notebook sales through the first eleven months of 2013.¹ This shift away from traditional Windows-powered computers has been driven by both IT and user considerations.

For IT, the traditional endpoint refresh cycle can be a constant source of pain. Replacing full-featured desktops and laptops every 3 – 5 years is a costly and labor-intensive proposition, diverting resources from more strategic work without delivering any real innovation to the user. In many organizations, end-of-life for Windows XP has raised the prospect of a forced OS migration, often combined with the need for more powerful endpoints to run a more recent Windows version. By moving to the browser-based Chrome platform, organizations can modernize their approach to user computing while reducing costs by eliminating the need for frequent hardware refresh or operating system migrations. More broadly, the popularity of Chromebooks reflects a new way of thinking for IT, in which organizations

look beyond traditional models and sources for service delivery, and support productivity however best fits peoples’ needs. This can include choosing best-of-breed solutions of any type, whether on-premise, web or SaaS, as well as empowering people on a broader range of device types.

The needs and expectations of employees are evolving as well. People now want to be able to work from anywhere, using any device that suits their needs—especially more convenient lightweight devices like Chromebooks and tablets. Mobility is often more important than access to a complete Windows desktop; what matters most to people is the ability to access the applications they need quickly, wherever they work, so they can become fully productive. To accommodate this desire for choice and flexibility, many organizations have introduced bring-your-own-device (BYOD) initiatives, allowing people to bring a variety of new platforms into the enterprise. This further underscores the need for a new approach to providing users with the resources and services they need.

The move from a monolithic Windows-based computing environment to the Chrome platform offers transformative benefits for both IT and users—but it can also present a new challenge. While the applications in a typical enterprise come in more forms than ever, with mobile, HTML5, web and SaaS apps now in common use, the vast majority of existing enterprise applications continue to run on Windows. IT needs a way to provide people with continued access to these applications from their new Chromebooks—without sacrificing the seamless simplicity and productivity of the Chrome platform.

Chrome and XenApp redefine Windows computing
Citrix and Google have been working together since the introduction of Chromebooks to deliver business apps to the Chrome platform. Now XenApp and Citrix Receiver™ for HTML5 enable customers to deliver all types of Windows apps to Chromebooks for Business without having to first migrate them to the cloud, and without the need to launch a full Windows desktop. Windows applications launched in the environment appear in the same type of Chrome tab as any cloud-based service, such as Google Apps, SaaS or web apps. People gain seamless, one-step access to their Windows applications on Chromebooks, combined with the high-definition user experience of Citrix HDX™ technology. With millions of Windows applications hosted on XenApp already, this helps pave the way for Chromebooks in the enterprise.

Each component of the Chrome with Citrix solution is designed explicitly to provide a convenient, app-centric experience wherever people work.

Citrix Ready Chromebooks for Business
Chromebooks are fast, secure and affordable devices optimized to run today’s business apps. Chromebooks from trusted enterprise hardware vendors including Samsung, HP, Acer, Pixel and Dell are already certified as Citrix Ready®, demonstrating their compatibility with XenApp, and are listed in the Citrix Ready marketplace.

The Chromebook support model is highly appealing for IT. Compared with complex, full-featured desktop and laptop computers, the Chromebook is a simple device optimized to run the Google Chrome OS and access services remotely in a browser-like experience. With
apps executed in the datacenter rather than locally. Chromebooks have fewer moving parts, fewer points of failure and much lower maintenance needs. IT can also choose to have the entire device lifecycle managed by Google as a service. Devices can be switched among users easily without the need to re-image desktops or transfer user preferences. The long life, obsolescence-proof architecture and low cost of Chromebooks fundamentally changes the economics of the endpoint environment; IT can provision, maintain and refresh a fleet of Chromebooks at a fraction of the cost of traditional computers.

XenApp virtual Windows application delivery
XenApp, the industry-leading solution for virtual application delivery, empowers new levels of enterprise mobility and productivity by providing a streamlined way to deliver Windows applications and data securely on any device, anywhere people choose to work. A single, centrally managed image supports users in any location, increasing IT efficiency. XenApp also provides powerful performance benefits; because applications run in the datacenter, next to their database, rather than on a client on a distant device, the solution cuts transaction times of client/server applications by as much as 300 percent. At the same time, XenApp aids security and compliance by making it possible to keep sensitive information protected within the datacenter rather than on endpoint devices.

To enable convenient and secure mobile productivity, Citrix Receiver lets people access their applications and data easily and securely from any device, including laptops, tablets, smartphones and thin clients. Citrix HDX technology uses intelligent redirection, adaptive compression and data de-duplication to help XenApp deliver an optimized user experience wherever people work, on any device they use.

To accommodate the Chromebook environment, Citrix Receiver for HTML5 eliminates the need to install the client locally and runs as part of the Chrome browser. Built-in HDX technology ensures a rich, high-definition experience by intelligently analyzing the capabilities of the servers, networks, and Chromebooks to determine the optimal method for rendering and delivery of apps and content. For organizations seeking to implement VDI on Chromebooks, Citrix XenDesktop™ offers the option of delivering a full, hosted desktop to a Chromebook tab, or to deliver both independent apps and desktops, through the same solution.

The app-centric design of the Citrix solution helps you provide the best experience for people accessing Windows apps on Chromebooks.

• One-step app access – The Windows desktop no longer defines user computing. As the types of apps in the enterprise continue to diversify—Windows, web, mobile, and SaaS—along with the devices people use for work, what matters most to people is fast, simple access to the tools their work requires. Virtual application delivery with XenApp eliminates the need for people to launch a virtual desktop wrapper, then navigate within it to their applications; instead, they can just click the app itself in Citrix Receiver and get to work.

• Seamless usability – Files linked within a document in a XenApp tab will launch a session for the relevant app in a new Chrome tab. Users don’t have to first save the file to a directory, launch the app separately, and then navigate to its location.
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• **Device optimization** – People can leverage the full capabilities of the devices they use, going beyond the native functionality of their Windows apps. The solution automatically detects the type of device being used, and touch-enables Windows apps accessed on touch-screen Chromebooks for a fully mobilized experience.

**A foundation for secure enterprise mobility**

The benefits of using XenApp to deliver Windows apps to Chromebooks extend beyond this initial use case. While addressing an immediate user need for access to Windows apps on the Chrome platform, IT is also implementing a critical element of enterprise mobility. Chromebooks aren’t the only fast-growing device in the environment; people and organizations are also making broader use of a variety of tablets, smartphones, thin clients, PCs and Macs. As a user-centric solution designed to deliver any app to any device, anywhere, centralized app delivery with XenApp meets key requirements for your next-generation computing environment.

• **Simple BYOD** – With Citrix Receiver clients available for virtually any device, IT can use the same XenApp implementation to deliver Windows apps as a service that can be accessed even when people are away from their Chromebooks, on any laptop, tablet or other mobile device they choose.

• **A future-proofed architecture** – Citrix application and desktop virtualization solutions provide an architecture that’s ready for any new applications and services people may need to be more productive and efficient. You can consolidate and deliver Windows apps and desktops, web apps, SaaS solutions and other cloud services through a single solution, and make them easy for people to consume on Chromebooks or any other devices they may wish to use.

• **Security** – The secure-by-design nature of the Chrome with Citrix solution encompasses both the stateless Chromebook device and the centralization provided by XenApp. The same benefits can apply for any other device used to access apps and data remotely. All enterprise data remains in the corporate datacenter, where it can be audited, controlled and secured more easily; granular access control policies let you determine exactly how and where it can be used. Citrix Receiver supports all popular security standards, providing an additional layer of data protection.

• **Low TCO** – The low initial cost and lower maintenance and replacement costs of Chromebooks compared to standard PCs offer immediate cost advantages. IT can provision and secure, low-cost ChromeOS desktop and laptop devices whose lifecycle is managed by Google as a service, yet still deliver Windows apps to users with XenApp. It also enables organizations to break the expensive, traditional PC upgrade cycle and minimize device management and user frustration with an always updated, web-based device experience that allows users to access business critical apps and services from anywhere. The centralized app delivery infrastructure of XenApp further reduces management costs by allowing IT to support a relatively small number of servers rather than thousands or tens of thousands of traditional endpoint devices.

**Chrome and XenApp at work in leading enterprises**

Major organizations are already using XenApp to facilitate their adoption of Chromebooks. In Australia, Woolworths has undertaken a 12-month transition to Google Apps and Chrome. Google Chrome OS devices will account for 85 percent of the company’s business devices. “Overall the program will

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Damon Rees
CIO, Woolworths
replace a legacy Microsoft Email platform with Google mail, introduce richer collaboration features using the broader Google Apps suite, and replace a legacy Windows XP desktop with a far superior Web-based desktop delivery method using Citrix. This will provide our users with greater options in device choices including ‘bring your own device’ and Chromebooks,” Damon Rees, acting CIO of Woolworths, reported to Computerworld Australia. “Our focus is on providing the tools for our team members to become more engaged with greater flexibility and productivity in the workplace, not to mention increased opportunities to collaborate and connect with team members around the world. Google, Citrix and Chrome together meet these aims, as well as simplifying our support and administrative processes, whilst simultaneously reducing our IT infrastructure costs.”

Budd Van Lines, a provider of executive relocation services for American corporations, uses Citrix solutions across its complex network of workers and work sites, including its headquarters, warehouses, remote sales offices and on-site personnel at key customer locations. “With the unpredictable weather conditions this winter, Google Chromebooks became the primary tool in our disaster recovery readiness arsenal to ensure we can keep trucks moving nationwide. Employees were given a Chromebook for use inside or outside of the office and virtual access to their productivity, CRM and ERP apps. Combined with Citrix virtual desktop and app delivery technology, Chromebooks are an economical, maintenance-free computing device that provides critical mobile access to our employees.”

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Conclusion
Pressing business needs are driving many organizations to adopt a new strategy for delivering access to business-critical apps and data. Businesses need to escape the high costs of the traditional desktop refresh cycles and endpoint operating system migrations, while gaining greater flexibility to adapt to new services and solutions. People want to be able to work from anywhere, and increase their mobility and productivity by using a broad range of devices such as Chromebooks as well as their own personal tablets, laptops and smartphones. Chrome with Citrix solutions provide a flexible, cost-effective environment to let people access any kind of app—including legacy Windows apps as well as cloud services—with a seamless, high-definition user experience on Chromebooks and any other device they choose. The virtual Windows app delivery enabled by Citrix XenApp and Citrix Receiver also provides a foundation for enterprise mobility with access to any app on any device, and provides a simple way to adopt new best-of-breed solutions and services of any type, whether they originate in the datacenter, cloud or web.

2 Computerworld Australia, “Chrome replaces Windows at Woolworths” by Adam Bender. February 18, 2014
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Additional Resources:
Secure App Delivery for a Mobile Workforce

Secure by Design

For more information, visit citrix.com/go/chromebook