CITRIX®

# Mobilizing your enterprise applications?

Using Oracle applications, Citrix Receiver, and a smart phone, you can mobilize any type of enterprise application affordably, overcoming security, usability, and platform incompatibility concerns.

Until recently, mobile employees who needed remote access to enterprise applications behind their corporate firewalls relied on computers with high-speed Internet connectivity. This combination enabled them to access their company's network and use applications. This approach still works well most of the time but, in today's on-the-go business world, it leaves an access gap when the employee is away from the laptop or WiFi.

Citrix faced this gap itself when its executives and representatives wanted to use the Apple® iPhone® to access two complex Oracle enterprise applications that run in a Microsoft® IE environment:

- Siebel® CRM, used to create and manage customer service requests and contracts, plus other interconnected functionality
- Oracle® Business Intelligence Enterprise Edition (OBIEE), an analytical application to report upon and display metrics in highly graphical formats such as bar charts, pie charts, and tables.

Citrix bridged this access gap using smart phones, the 3G network, and Citrix Receiver™ for Mobile to communicate with the Oracle applications in the datacenter. This solution can be replicated by other organizations that have Oracle or any other enterprise applications published on Citrix® XenApp™ server farms.

# About Citrix Receiver for Mobile

Citrix Receiver for Mobile is a free application that lets a mobile device user access an application regardless of the operating system of the application. The access pathway created through Citrix Receiver avoids the operating system of the application, thus bypassing potential incompatibilities between the mobile device and the application.

Citrix Receiver for Mobile is available for download in different versions optimized to match the mobile device. Citrix Receiver has been optimized for the Apple iPhone and Windows®-based devices. An Android® version is also available for technical review, soon to be released. Development is underway to optimize for BlackBerry® devices.

# The challenges

Any organization with the goal of smart phone access to its enterprise applications would likely face the challenges of data security over 3G, performance, potential platform incompatibilities between the mobile device and the target enterprise application, usability of the user interface when accessed on a small phone device, and, of course, development costs.

# The solution

The Citrix solution solves the challenges by treating the corporate datacenter as a CPU and the smart phone as a monitor. The solution establishes a secure pathway between Citrix Receiver on the smart phone to an alternate mobile version of the enterprise application published and running on the XenApp server farm. The solution, known informally as Citrix Receiver for Enterprise Applications, uses a combination of Citrix products to provide that secure pathway.

# How to enable the solution

## Technical preparation

There is a minor amount of development and technical work involved to enable this solution.

1. Create an alternate mobile version of the existing enterprise application. This is light customization, mostly so that the information fits and navigates smoothly within the small mobile screen size. For the two Oracle applications that Citrix personnel wanted, the customization centered on creating alternate user interface views (actually, applets) to display selected information. The solution does not require code changes to the back-end, as the mobile application uses the existing business workflows and environment already in place for the original enterprise application.

2. Publish the alternate mobile version to the XenApp server farm.

3. Establish the secure pathway between the iPhone and mobile applications using existing Citrix products.

**Note:** Citrix Receiver can run any of the listed applications on the XenApp server farm as the application platform is irrelevant to Citrix Receiver. However, not all enterprise applications are well suited to the small-screen display and navigation, which is why light customization was made to the Oracle applications to enable a usable iPhone experience.

## Set up the smart phone user

Mobile users need to download the free Citrix Receiver application and enter their organization's server address and some other data as part of the one-time setup process. For the Citrix situation, this involved downloading Citrix Receiver from the Apple® App Store℠ and tapping in a few required setup elements.

## Establish the secure pathway

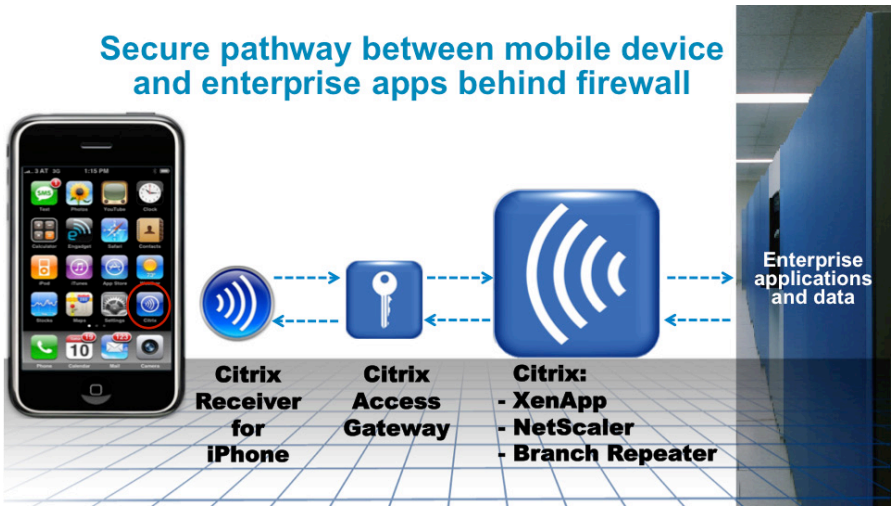
Once setup is complete, the mobile user opens Citrix Receiver, logs in, and navigates to the mobile version of the enterprise application.

As the smart phone user navigates through the mobile application views, the enterprise application creates partial screen paints within the secure datacenter and sends them to the smart phone. The solution does not transmit actual data elements over the 3G network—customer and corporate data remains secure behind the corporate firewall.

## What the iPhone user sees


## Components of the secure pathway

The information flow follows the secure pathway shown in the diagram below.




- Citrix Receiver incorporates Citrix® Access Gateway™ and Citrix XenApp client technology to provide a secure login and pathway to the list of enterprise applications hosted on the XenApp server farm.
- When the user selects an application, the pathway involves the XenApp server farm, Citrix® NetScaler®, and Citrix® Branch Repeater™ to interact with the selected application and return the screen paints.

# Solution benefits

### 100 percent secure and 100 percent data retention with world class performance

Data is protected in two ways: The smart phone user must provide valid login credentials to enter the corporate network and data elements are not exposed over 3G due to the screen paint approach. In addition, the screen paint protocol delivers world class performance for rapid information retrieval.

### Avoids incompatibility issues between the mobile phone platform and the target application's platform

This is possible because all processing occurs within the enterprise datacenter, with the smart phone simply displaying screen paints. In the Citrix situation, the server farm handled the Active X controls and all other technical elements that may otherwise conflict with an Apple environment.

### Minimizes development time and cost

As explained earlier, customization focused on creating new front-end views (applets) to enable the UI to fit and navigate within the confines of the small mobile display.

### Minimizes user training

The application's mobile version can retain much of the look and feel of the original intranet application, minimizing the amount of training for users of the original application. In the Citrix situation, the Oracle applications retained familiar features such as applets, hyperlink drilling, column sorting, and Siebel search.

# Conclusion

Feature-rich enterprise applications such as those from Oracle will continue to be accessed from a laptop or desktop computer when time and access are not limited because of the more comfortable screen size. Extending access to mobile devices is a great idea for organizations with mobile associates who prefer to stay in touch with enterprise applications no matter where they are, and where immediate response can mean a competitive edge.

# For more detail

For more details about Citrix Receiver for Enterprise Apps, please refer to the Citrix technical paper, "Citrix Receiver for Enterprise Applications – The Technical Detail" at www.citrix.com/CR_TechWP.

For information on Citrix Receiver and other Citrix products, please visit the Citrix web site at www.citrix.com.

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**About Citrix**
Citrix Systems, Inc. (NASDAQ:CTXS) is the leading provider of virtualization, networking and software as a service technologies for more than 230,000 organizations worldwide. Its Citrix Delivery Center, Citrix Cloud Center (C3) and Citrix Online Services product families radically simplify computing for millions of users, delivering applications as an on-demand service to any user, in any location on any device. Citrix customers include the world's largest Internet companies, 99 percent of Fortune Global 500 enterprises, and hundreds of thousands of small businesses and prosumers worldwide. Citrix partners with over 10,000 companies worldwide in more than 100 countries. Founded in 1989, annual revenue in 2009 was $1.61 billion.



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