

SafeNet Authentication Client Integration Guide

Using SAC CBA for Citrix XenApp 7.6

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Third-Party Software Acknowledgement

This document is intended to help users of Gemalto products when working with third-party software, such as Citrix XenApp 7.6.

Material from third-party software is being used solely for the purpose of making instructions clear. Screen images and content obtained from third-party software will be acknowledged as such.

Description

Customers today are looking to desktop virtualization to transform static desktops into dynamic mobile workspaces that can be centrally and securely managed from the datacenter, and accessed across a wide range of devices and locations. Deploying desktop virtualization without strong authentication is like putting your sensitive data in a vault (the datacenter), and leaving the key (user password) under the door mat. A robust user authentication solution is required to screen access and provide proof-positive assurance that only authorized users are allowed access.

SafeNet Authentication Client (SAC) is a Public Key Infrastructure (PKI) middleware that provides a secure method for exchanging information based on public key cryptography, enabling trusted third-party verification of user identities. SafeNet's certificate-based tokens provide secure remote access, as well as other advanced functions, in a single token, including digital signing, password management, network logon, and combined physical/logical access.

The tokens come in different form factors, including USB tokens, smart cards, and software tokens. All of these form factors are interfaced using a single middleware client, SafeNet Authentication Client (SAC). The SAC generic integration with CAPI, CNG, and PKCS#11 security interfaces enables out-of-the-box interoperability with a variety of security applications offering secure web access, secure network logon, PC and data security, and secure email. PKI keys and certificates can be created, stored, and used securely with the hardware or software tokens.

SafeNet Authentication Manager (SAM) provides your organization with a comprehensive platform to manage all of your authentication requirements, across the enterprise and the cloud, in a single, integrated system. SAM enables management of the complete user authentication life cycle. SAM links tokens with users, organizational rules, and security applications to allow streamlined handling of your organization's authentication infrastructure with a flexible, extensible, and scalable management platform.

SAM is a comprehensive token management system. It is an out-of-the-box solution for Public Certificate Authorities (CA) and enterprises to ease the administration of SafeNet's hardware or software tokens devices. SAM is designed and developed based on the best practices of managing PKI devices in common PKI implementations. It offers robust yet easy to customize frameworks that meets different organizations' PKI devices management workflows and policies. Using SAM to manage tokens is not mandatory, but it is recommended for enterprise organizations.

For more information, refer to the *SafeNet Authentication Manager Administrator Guide*.

XenApp is the industry-leading solution for virtual application delivery, providing Windows applications to workers on any device, anywhere. By centralizing control with XenApp, you can provide your team the freedom of mobility, while increasing security and reducing IT costs.

This document provides guidelines for deploying certificate-based authentication (CBA) for user authentication to Citrix XenApp 7.6 using SafeNet tokens.

It is assumed that the Citrix XenApp 7.6 environment is already configured and working with static passwords prior to implementing SafeNet multi-factor authentication.

Citrix XenApp 7.6 can be configured to support multi-factor authentication in several modes. CBA will be used for the purpose of working with SafeNet products.

Applicability

The information in this document applies to:

- **SafeNet Authentication Client (SAC)**—SafeNet Authentication Client is the middleware that manages SafeNet's tokens.
- **Citrix XenApp**
- **Citrix StoreFront**

Environment

The integration environment that was used in this document is based on the following software versions:

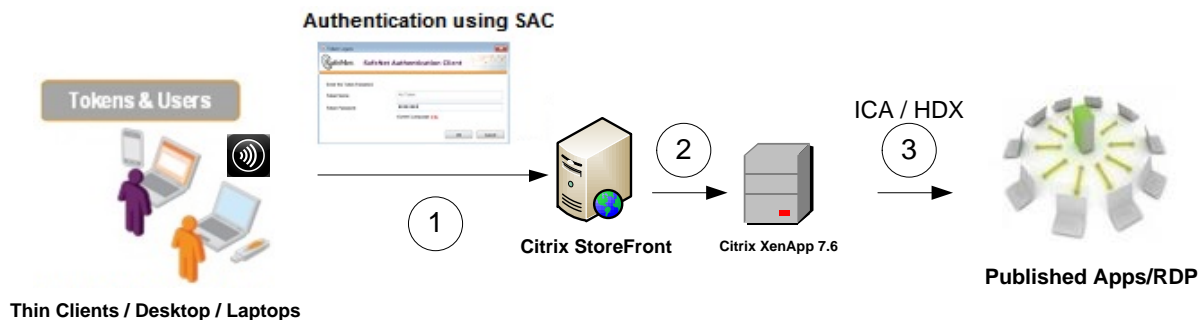
- **SafeNet Authentication Client (SAC)**—Version 9.0
- **Citrix XenApp**—Version 7.6
- **Citrix StoreFront**—Version 2.6

Audience

This document is targeted to system administrators who are familiar with Citrix XenApp 7.6, and are interested in adding certificate-based authentication capabilities using SafeNet tokens.

CBA Flow using SAC

The diagram below illustrates the flow of certificate-based authentication.



1. A user attempts to connect to the Citrix XenApp 7.6 server using the Citrix Receiver or using the StoreFront web portal. The user inserts the SafeNet token on which his certificate resides, and when prompted, enters the token password.
2. After successful authentication, the user is allowed access to the published apps/desktops.
3. The user selects the app/desktop to use.

Prerequisites

This section describes the prerequisites that must be installed and configured before implementing certificate-based authentication for Citrix XenApp 7.6 using SafeNet tokens.

- To use CBA, the Microsoft Enterprise Certificate Authority must be installed and configured. Note that any CA can be used. However, in this guide, integration is demonstrated using Microsoft CA.
- If SAM is used to manage the tokens, TPO (token policy object) should be configured with a Microsoft CA connector. For additional details, refer to the “Connector for Microsoft CA” section in the *SafeNet Authentication Manager Administrator's Guide*.
- Users must have a SafeNet token with an appropriate certificate enrolled.
- SafeNet Authentication Client (9.0) should be installed on all client machines.

Supported Tokens in SAC

SAC supports a number of tokens that can be used as second authentication factor for users who authenticate to Citrix XenApp 7.6 .

SafeNet Authentication Client 9.0 (GA) supports the following tokens:

Certificate-based USB Tokens

- SafeNet eToken PRO Java 72K
- SafeNet eToken PRO Anywhere
- SafeNet eToken 5100/5105
- SafeNet eToken 5200/5205
- SafeNet eToken 5200/5205 HID and VSR

Smart Cards

- SafeNet eToken PRO Smartcard 72K
- SafeNet eToken 4100

Certificate-based Hybrid USB Tokens

- SafeNet eToken 7300
- SafeNet eToken 7300-HID
- SafeNet eToken 7000 (SafeNet eToken NG-OTP)

Software Tokens

- SafeNet eToken Virtual
- SafeNet eToken Rescue

Configuring Citrix XenApp 7.6



NOTE: XenApp 7.6 and StoreFront 2.6 were installed on the same server in the lab that was prepared to create this guide.

It is assumed that before using the guide, you have Citrix XenApp 7.6 and Citrix StoreFront 2.6 installed and configured with username and password authentication.

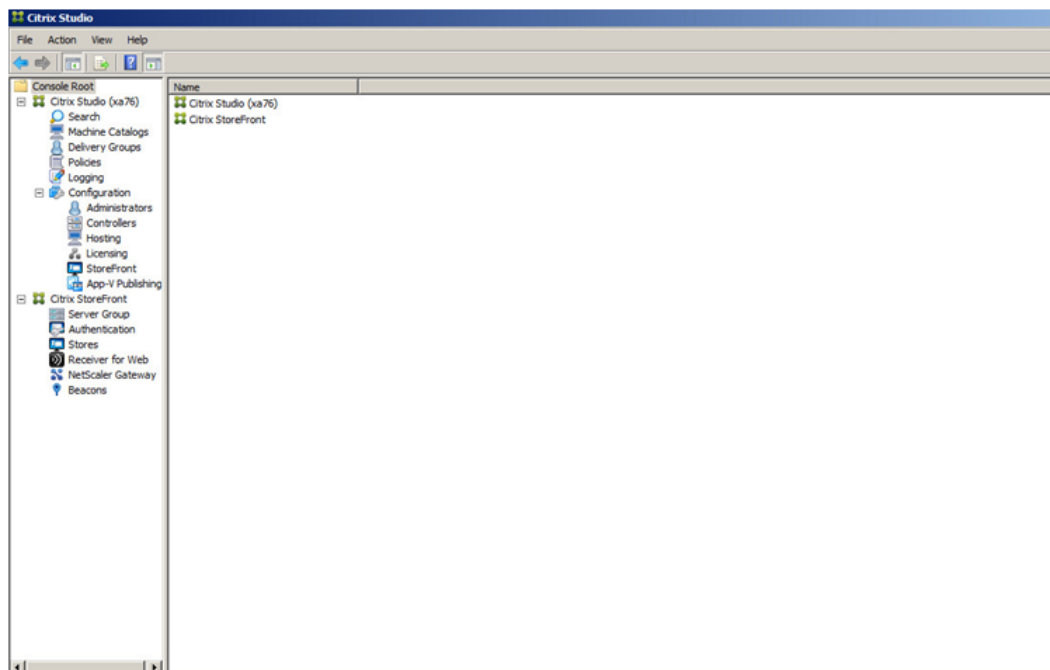
To configure CBA with Citrix XenApp 7.6 requires:

- Configuring Citrix Smart Card Authentication for Citrix Receiver, page 7
- Configuring Smart Card Authentication for Web Access, page 9

Configuring Citrix Smart Card Authentication for Citrix Receiver

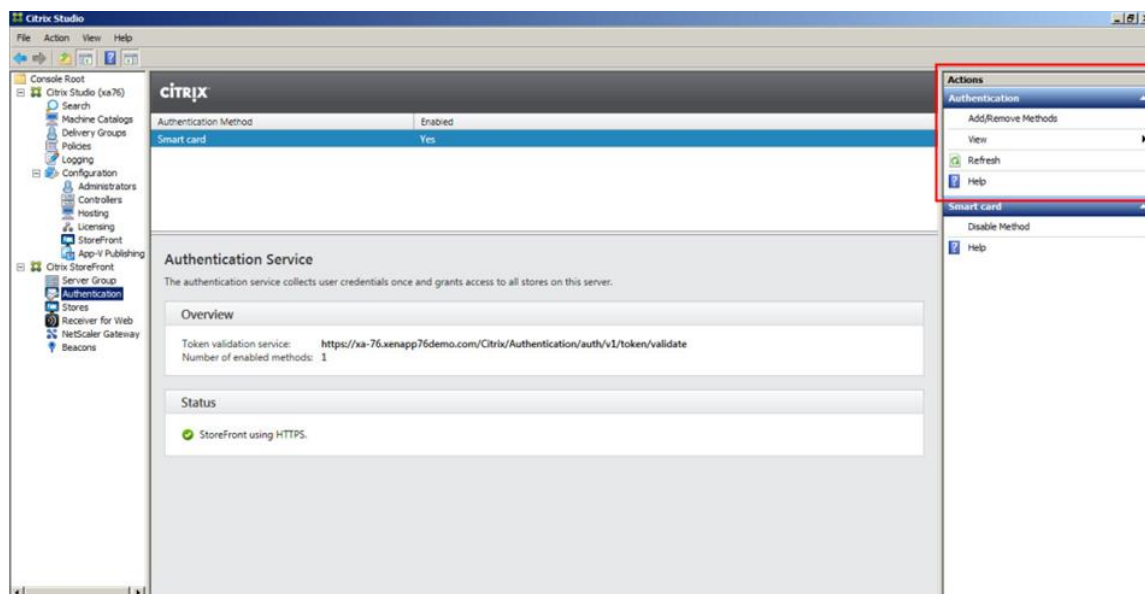
Citrix StoreFront authentication will be used when connecting to XenApp using Citrix Receiver.

1. Open Citrix Studio.
2. In the left pane, select **Citrix StoreFront > Authentication**.



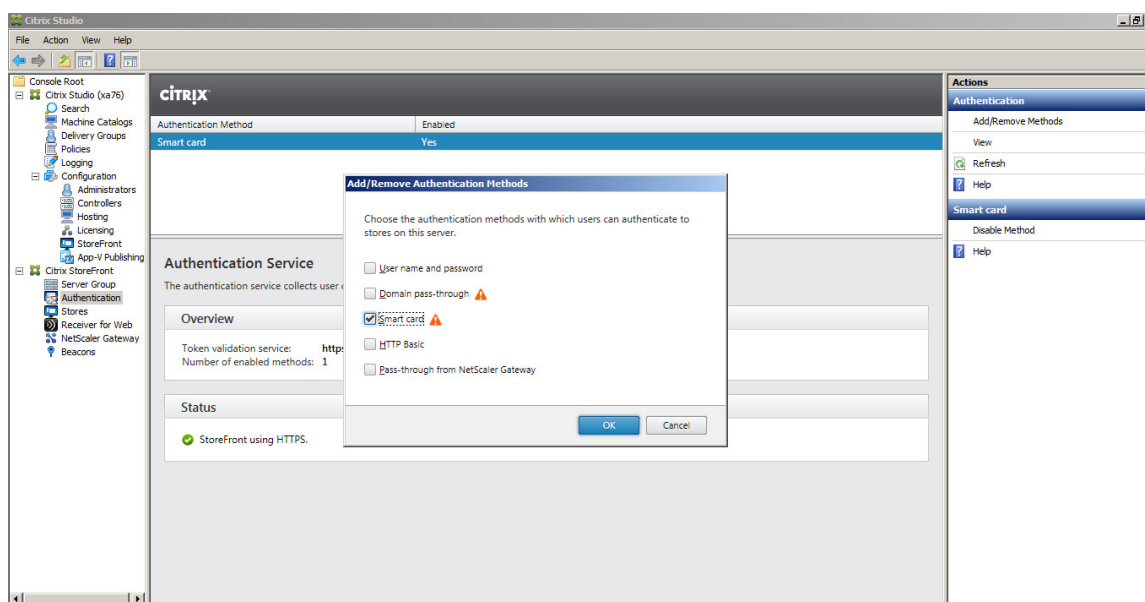
(The screen image above is from Citrix®. Trademarks are the property of their respective owners).

3. In the **Actions** pane, select **Add/Remove Methods**.



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4. In the **Add/Remove Authentication Methods** window, select **Smart card**, and then click **OK**.

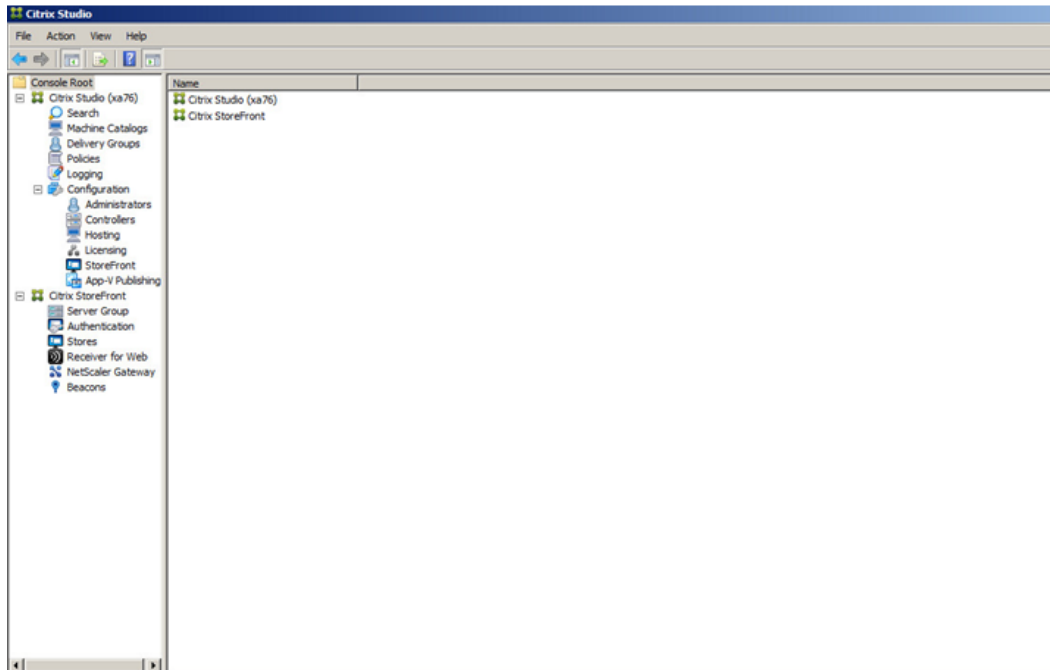


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Configuring Smart Card Authentication for Web Access

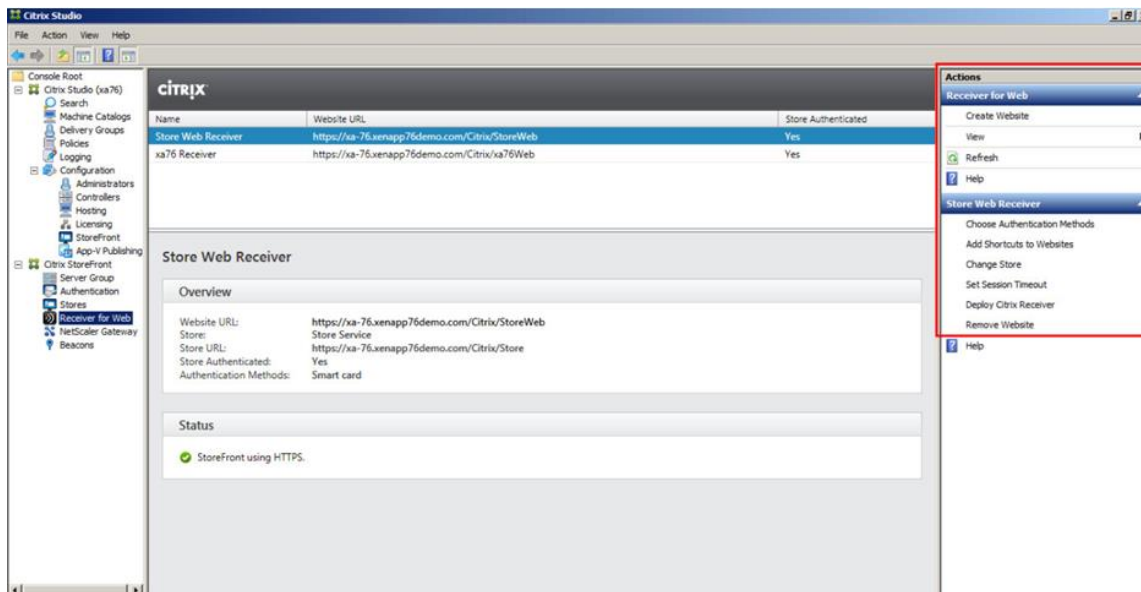
Configure the Receiver to use CBA for web access.

1. Open Citrix Studio.
2. In the left pane, select **Citrix StoreFront > Receiver for Web**.



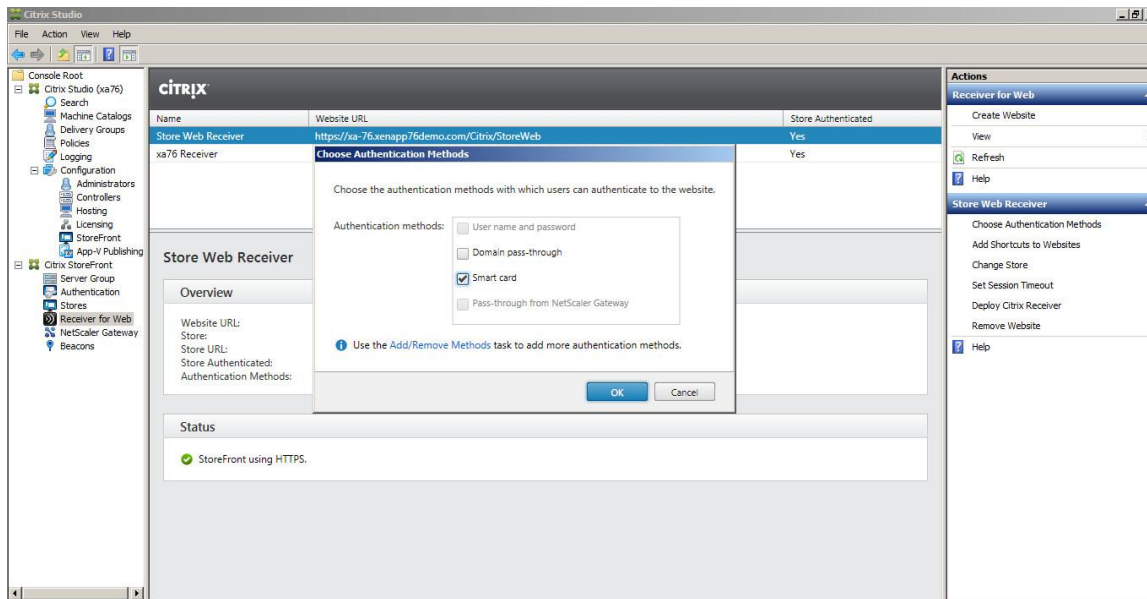
(The screen image above is from Citrix®. Trademarks are the property of their respective owners).

3. In the **Actions** pane, select **Store Web Receiver > Choose Authentication Methods**.



(The screen image above is from Citrix®. Trademarks are the property of their respective owners).

4. In the **Choose Authentication Methods** window, select **Smart card**, and then click **OK**.



(The screen image above is from Citrix®. Trademarks are the property of their respective owners).

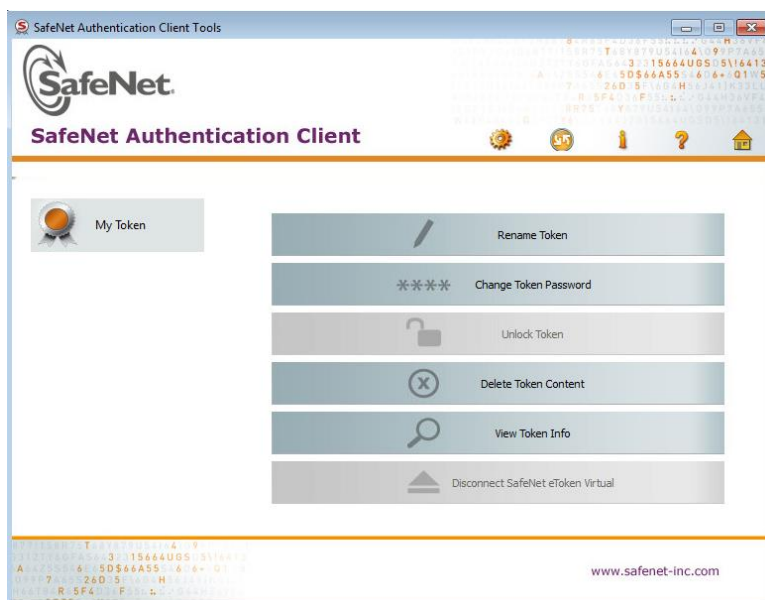
Configuring Citrix StoreFront 2.6 to Use Smart Card Pass-through Authentication

Complete the procedures in this section to configure Citrix StoreFront to use smart card pass-through authentication.

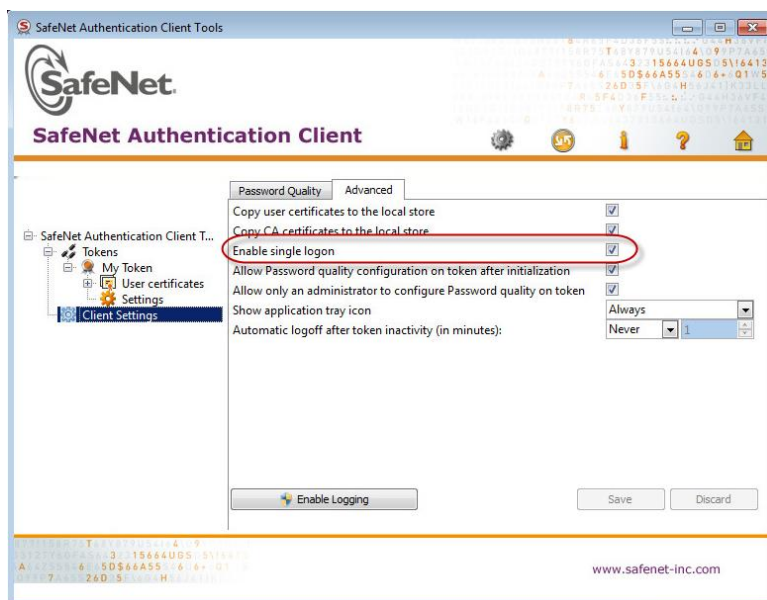
Configuring SafeNet Authentication Client

Enable single log on in SafeNet Authentication Client.

1. Open the **SafeNet Authentication Client** console.



- Click the **Advanced View** icon , click **Client Settings**, and then click the **Advanced** tab.
- Select **Enable single logon**, and then click **Save**.



- From the Windows **Start** menu, select **Run**, and then type **regedit.exe**, to open the Windows Registry Editor.
- Complete the following steps:
 - Go to **HKEY_LOCAL_MACHINE\SOFTWARE\SafeNet\Authentication\SAC**, create a new key, and name it **General**.
 - In the new key, create a new DWORD (32-bit), name it **SingleLogon**, and specify a value of **1**.
 - Exit the Windows Registry.

Configuring the StoreFront 2.6 Server

Configure the **default.ica** file on the IIS.

- Open the **default.ica** file with a text editor. (This file is typically located in **C:\inetpub\wwwroot\Citrix\<Store_Name>\App_Data**.)
- In the **[Application]** section, add the following setting: **DisableCtrlAltDel=Off**
- Save the file.

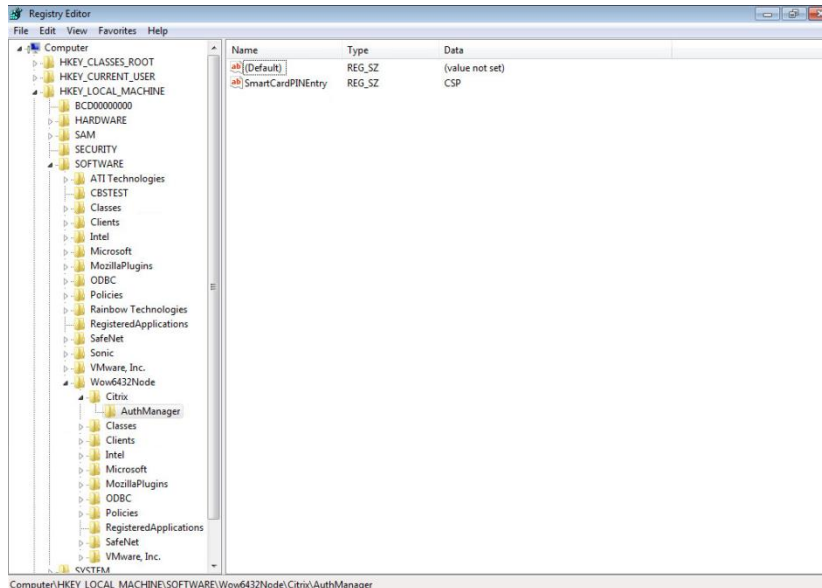
For more information, go to:

<http://support.citrix.com/proddocs/topic/dws-storefront-25/dws-configure-conf-smartcard.html>

Changing the CSP PIN Prompt from the Citrix Default to SafeNet Authentication Client

To change the Citrix default CBA PIN prompt to SAC, do the following:

1. On the client machine, from the Windows **Start** menu, select **Run**, and then type **regedit.exe**, to open the Windows Registry Editor.
2. Add the following key value to the registry key: **HKLM\Software\[Wow6432Node]\Citrix\AuthManager\SmartCardPINEntry=CSP**



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Configuring Citrix Receiver for Single Sign-On

We recommend reading the following document for Citrix Receiver Single Sign-On (SSO) configuration:

<http://support.citrix.com/article/CTX133982>

Running the Solution

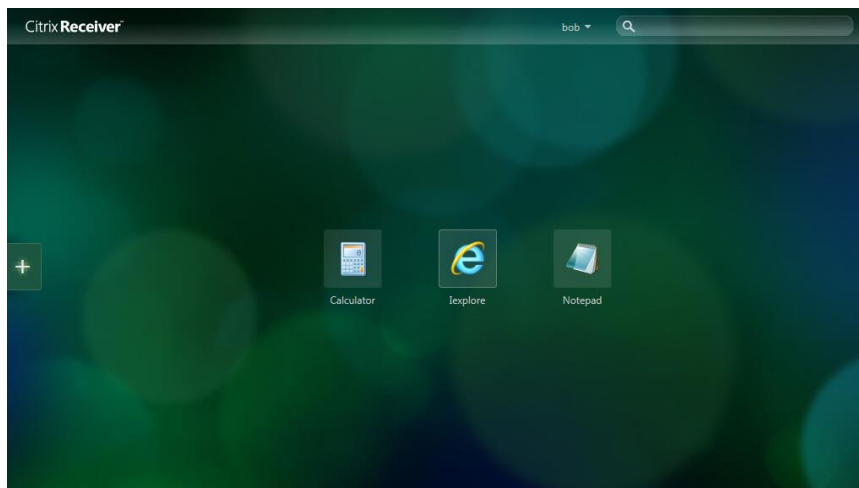
Check the final running solution of Citrix XenApp 7.6 with SafeNet Authentication Client. In this solution, SafeNet eToken 5100 is used.

Smart Card Authentication using Citrix Receiver for Web Access

1. Open a web browser and type the **Citrix Receiver for Web** URL.
2. The **SafeNet Authentication Client** opens. Enter the **Token Password**, and then click **OK**.

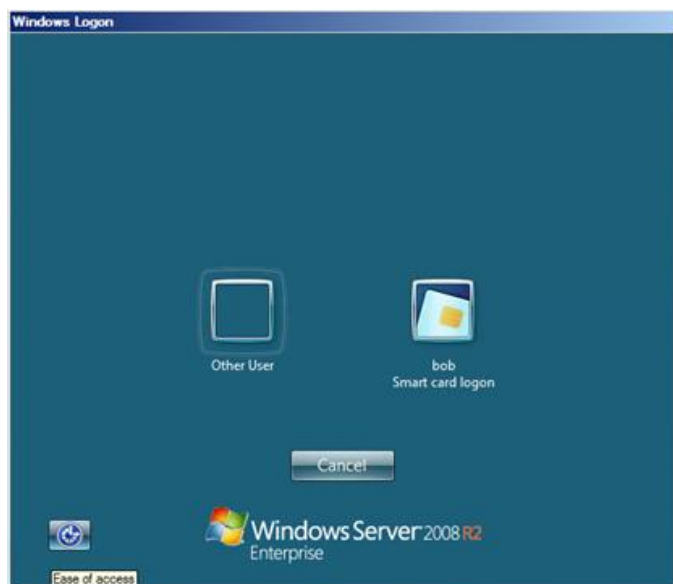


After a successful authentication, you are granted access to the Citrix StoreFront web portal, and can now access the applications.



(The screen image above is from Citrix®. Trademarks are the property of their respective owners).

3. Select an application. The **Windows Login** window is displayed.



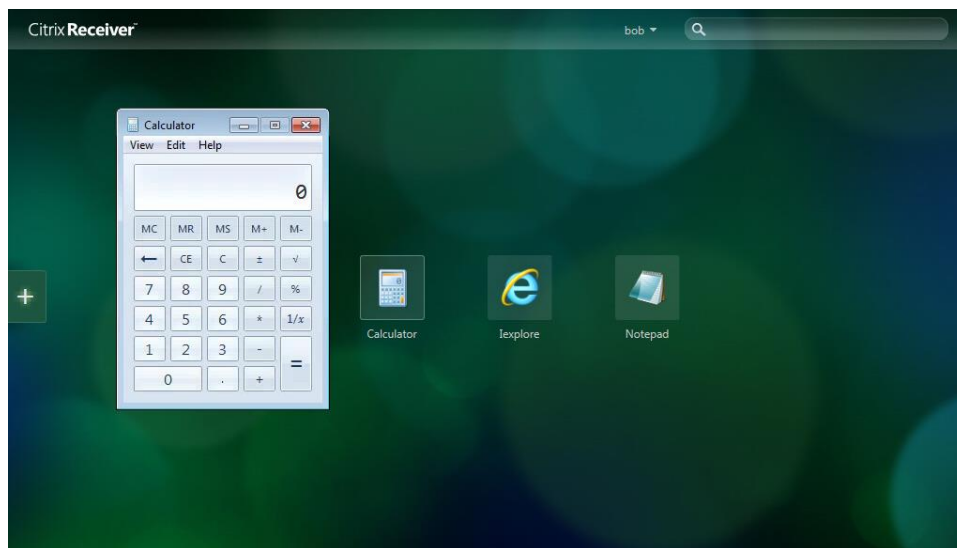
(The screen image above is from Microsoft®. Trademarks are the property of their respective owners).

4. Click **Smart card logon**, and then enter your smart card PIN.



(The screen image above is from Microsoft®. Trademarks are the property of their respective owners).

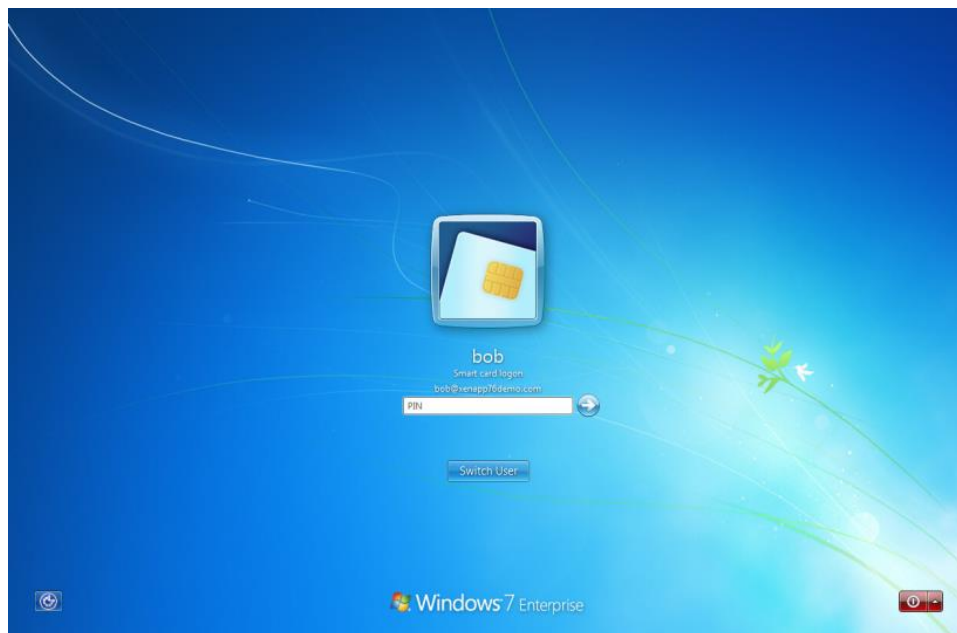
After a successful authentication, the application will open.



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Smart Card Pass-through Authentication using Citrix Receiver for Web Access

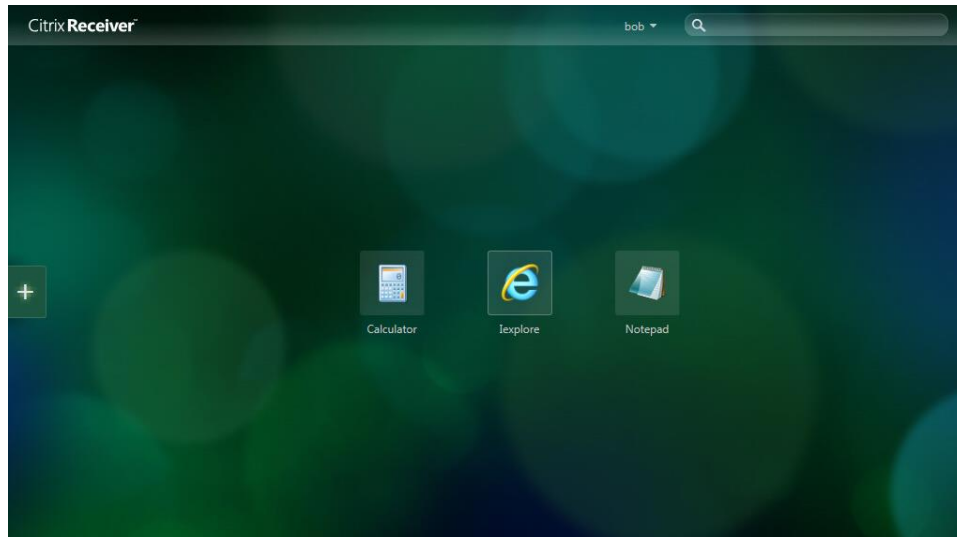
1. Login to the client machine using **Smart card logon**.



(The screen image above is from Microsoft®. Trademarks are the property of their respective owners.)

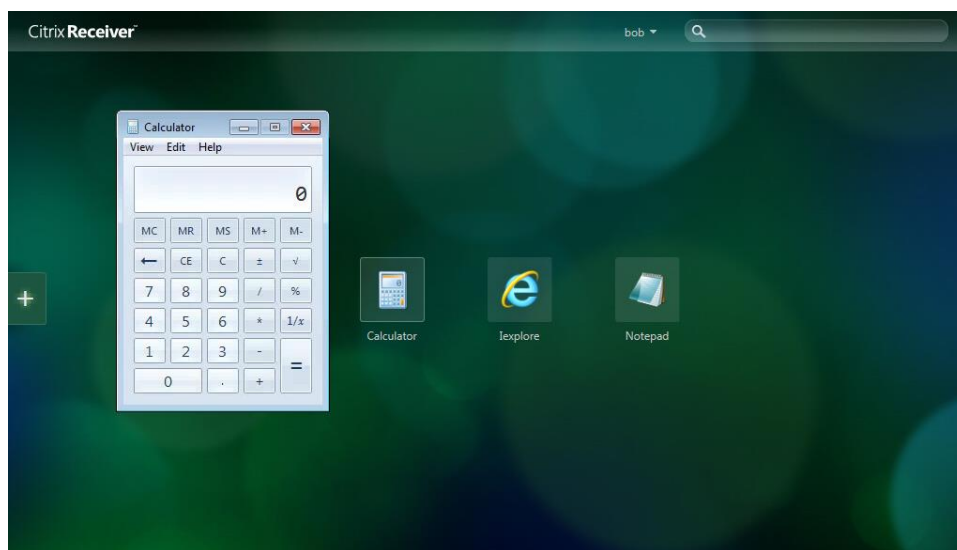
2. Open a web browser and type the **Citrix Receiver for Web** URL.

Since Citrix is configured for pass-through authentication, the user is not required to enter the smart card PIN code, and is automatically logged in to the Citrix StoreFront web portal.



(The screen image above is from Citrix®. Trademarks are the property of their respective owners).

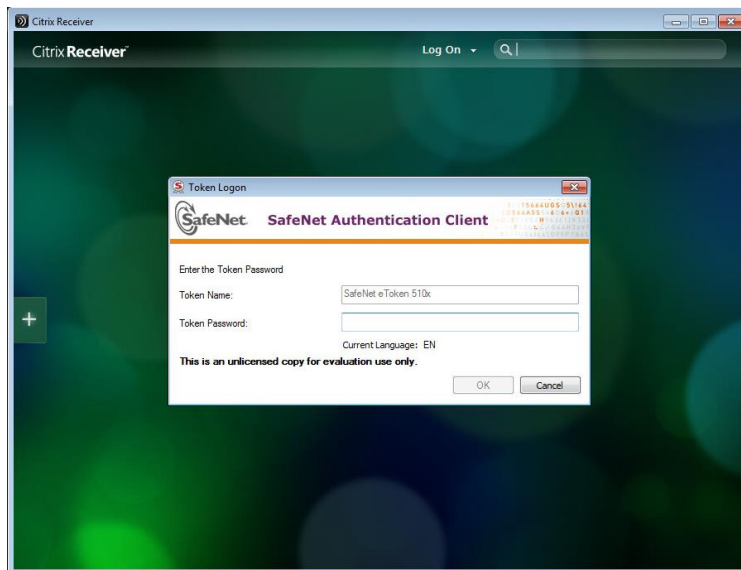
3. Select an application to use. Since Citrix is configured for pass-through authentication, the application will open without requiring the user to authenticate again.



(The screen image above is from Citrix®. Trademarks are the property of their respective owners).

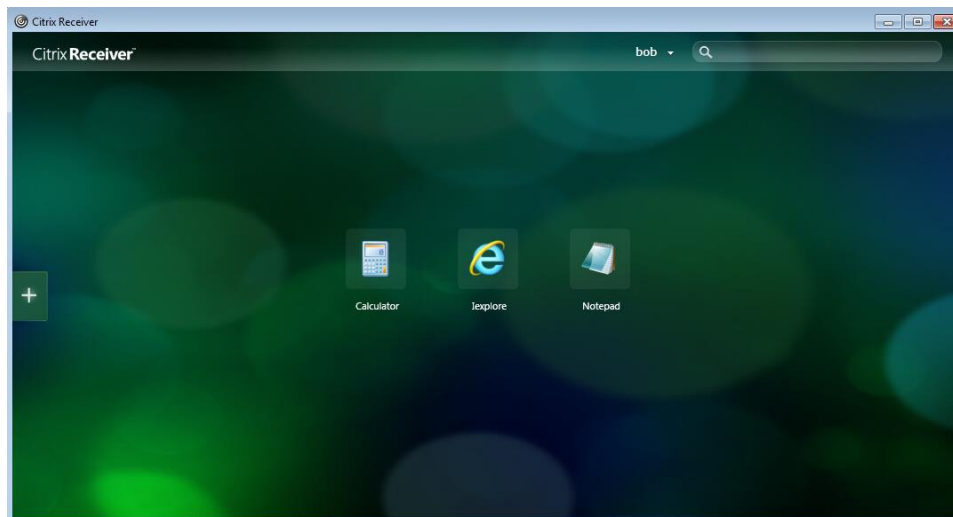
Smart Card Authentication using Citrix Receiver

1. Insert the selected SafeNet eToken or smart card.
2. Launch Citrix Receiver. The **SafeNet Authentication Client** opens. Enter the **Token Password**, and then click **OK**.



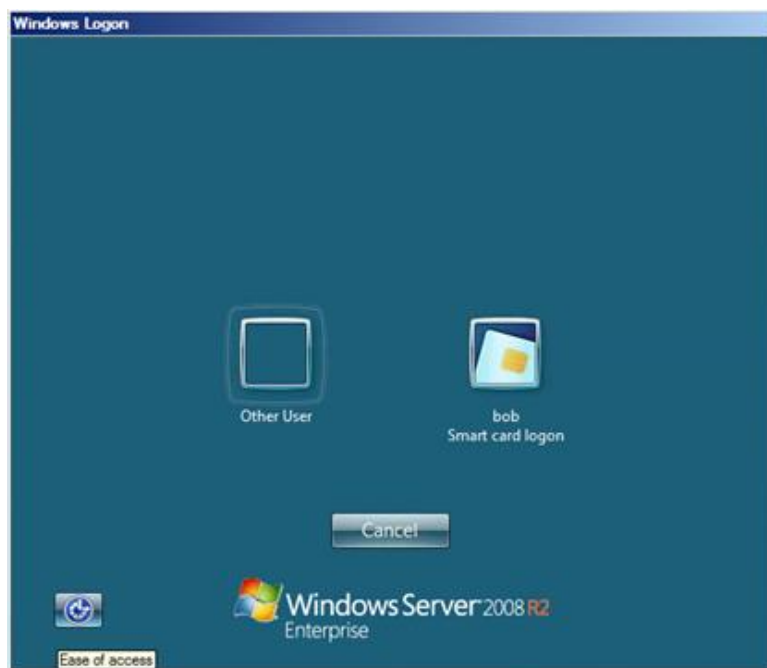
(The screen image above is from Citrix®. Trademarks are the property of their respective owners.)

After a successful authentication, the Citrix Receiver application window is displayed.



(The screen image above is from Citrix®. Trademarks are the property of their respective owners.)

3. Select an application. The **Windows Login** window is displayed.



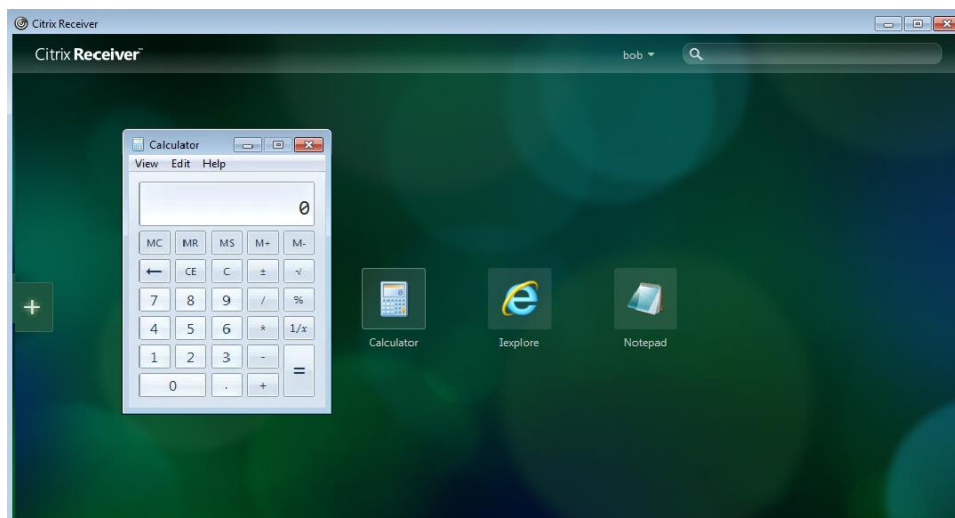
(The screen image above is from Microsoft®. Trademarks are the property of their respective owners.)

4. Click **Smart card logon**, and then enter your smart card PIN.



(The screen image above is from Microsoft®. Trademarks are the property of their respective owners.)

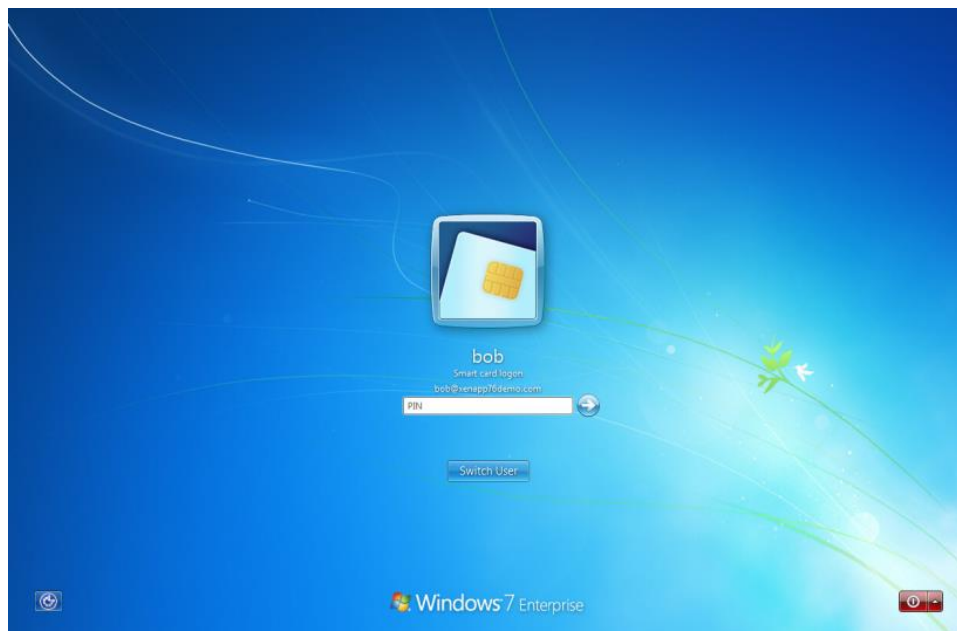
After a successful authentication, the application will open.



(The screen image above is from Citrix®. Trademarks are the property of their respective owners.)

Smart Card Pass-through Authentication using Citrix Receiver

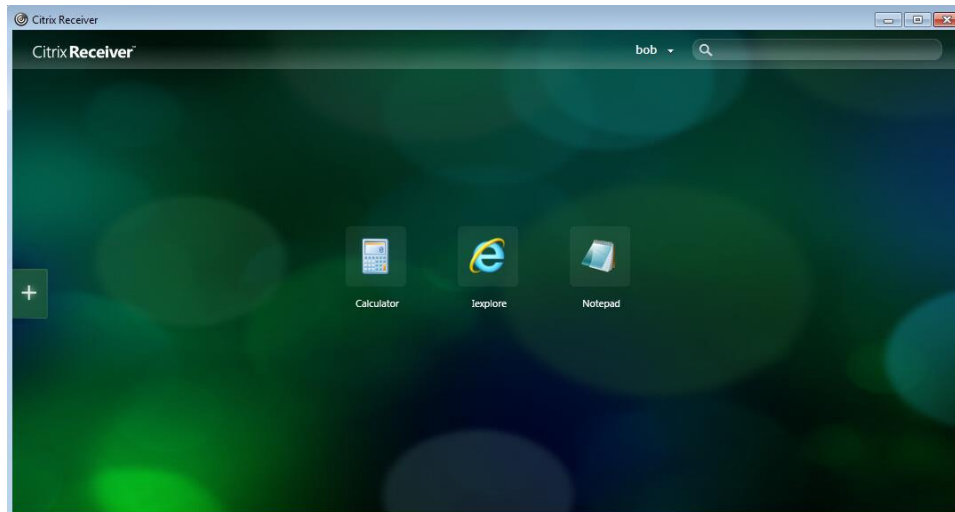
1. Log in to the Windows client workstation using **Smart card login**.



(The screen image above is from Microsoft®. Trademarks are the property of their respective owners.)

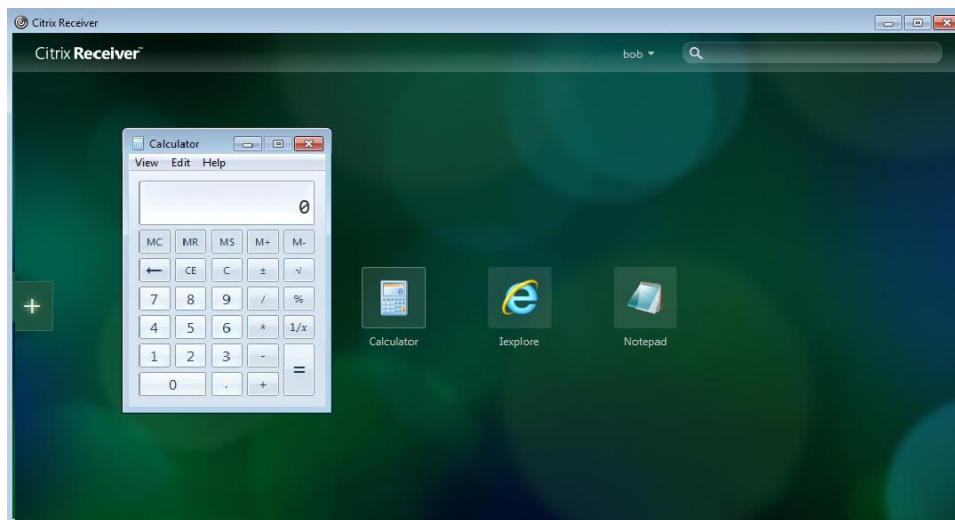
2. After successful authentication, launch Citrix Receiver.

Since Citrix is configured for pass-through authentication, you are not required to enter the smart card PIN code, and are automatically logged in to Citrix Receiver.



(The screen image above is from Citrix®. Trademarks are the property of their respective owners.)

3. Select an application. Since Citrix is configured for pass-through authentication, the application will open without requiring you to authenticate again.



(The screen image above is from Citrix®. Trademarks are the property of their respective owners.)

Support Contacts

If you encounter a problem while installing, registering, or operating this product, please make sure that you have read the documentation. If you cannot resolve the issue, contact your supplier or Gemalto Customer Support. Gemalto Customer Support operates 24 hours a day, 7 days a week. Your level of access to this service is governed by the support plan arrangements made between Gemalto and your organization. Please consult this support plan for further information about your entitlements, including the hours when telephone support is available to you.

Contact Method	Contact Information	
Address	Gemalto, Inc. 4690 Millennium Drive Belcamp, Maryland 21017 USA	
Phone	United States	1-800-545-6608
	International	1-410-931-7520
Technical Support Customer Portal	https://serviceportal.safenet-inc.com Existing customers with a Technical Support Customer Portal account can log in to manage incidents, get the latest software upgrades, and access the Gemalto Knowledge Base.	