SafeNet Authentication Client
Integration Guide

Using SafeNet Authentication Client CBA for Citrix NetScaler Access Gateway 12
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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 NetScaler Access Gateway 12.

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.

Citrix NetScaler Access Gateway is a secure application and data access solution that gives IT administrators a single point to manage access control and limit actions within sessions based on both user identity and the endpoint device. New threats, risks, and vulnerabilities as well as evolving business requirements underscore the need for a strong authentication approach based on multi-factor authentication.

This document provides guidelines for deploying certificate-based authentication (CBA) for user authentication to Citrix NetScaler Access Gateway 12 using SafeNet tokens.

It is assumed that the Citrix NetScaler Access Gateway 12 environment is already configured and working with static passwords prior to implementing SafeNet multi-factor authentication.

Citrix NetScaler Access Gateway 12 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) Typical installation mode**— SafeNet Authentication Client is public key infrastructure (PKI) middleware that manages Gemalto’s tokens and smart cards.

- **SafeNet Authentication Client (SAC) IDGo800 Compatible mode**— IDGo800 Minidriver based package, uses Microsoft Smart Card Base Cryptographic Provider to manage Gemalto IDPrime MD smart cards.

For more details about different SAC installation modes, refer to the Customization section in SafeNet Authentication Client Administrator Guide.

- **Citrix NetScaler Access Gateway 12**

Environment

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

- **SafeNet Authentication Client (SAC)**— Version 10.4

- **Citrix NetScaler Access Gateway 12**— Version 12

Audience

This document is intended for system administrators who are familiar with Citrix NetScaler Access Gateway 12, and are interested in adding certificate-based authentication capabilities using Gemalto tokens and smart cards. See Supported Tokens and Smart Cards in SafeNet Authentication Client, on page 7.
CBA Flow using SafeNet Authentication Client

The following diagram illustrates the flow of certificate-based authentication:

1. A user attempts to connect to the Citrix NetScaler Access Gateway 12 server using the Citrix NetScaler Access Gateway 12 client application. The user inserts the Gemalto token or smart card on which the certificate resides and when prompted, the token or smart card password is entered.

2. After successful authentication, a user is granted access to a virtual desktop machine.
Prerequisites

The following prerequisites must be installed and configured before implementing certificate-based authentication for Citrix NetScaler Access Gateway 12 using Gemalto tokens and smart cards:

- To use CBA, the Microsoft Enterprise Certificate Authority must be installed and configured. Any CA can be used. However, in this guide, integration is demonstrated using Microsoft CA.
- If SAM is used to manage the tokens, Token Policy Object (TPO) must be configured with MS CA Connector. For further details, refer to the section “Connector for Microsoft CA” in the SafeNet Authentication Manager Administrator’s Guide.
- Users must have a Gemalto token or smart card with an appropriate certificate enrolled on it.
- SafeNet Authentication Client (Version 10.4) must be installed on all client machines.

Supported Tokens and Smart Cards in SafeNet Authentication Client

SafeNet Authentication Client (version 10.4) supports the following tokens and smart cards:

Certificate-based USB tokens
- SafeNet eToken 5110 GA
- SafeNet eToken 5110 FIPS
- SafeNet eToken 5110 CC

Smart Cards
- Gemalto IDPrime MD 830
- Gemalto IDPrime MD 840

For all supported devices please refer to SafeNet Authentication Client Customer Release Notes.
Configuring Citrix NetScaler Access Gateway 12

In the following section we will describe how to configure Citrix Netscaler Access Gateway version 12 to support PKI authentication using Safenet Authentication Client and Gemalto's tokens and smart cards.

1. Log in to the Citrix NetScaler administrator console.

2. On the Configuration tab, in the left pane, select NetScaler Gateway > Policies > Authentication > CERT.

3. In the top pane, click Add.

4. In the Create Authentication CERT Policy window, perform the following steps:
   a. In the Name field, enter a name for the policy (for example, CBA_Profile).
   
   b. In the Server field, click the icon.
c. On the **Create Authentication CERT Profile** window, complete the following fields, and then click **Create**.

<table>
<thead>
<tr>
<th>Name</th>
<th>Enter a name for the profile (for example, <strong>cert_ca</strong>).</th>
</tr>
</thead>
<tbody>
<tr>
<td>True Factor</td>
<td>Select <strong>OFF</strong>.</td>
</tr>
<tr>
<td>User Name Field</td>
<td>Select <strong>SubjectAltName:PrincipalName</strong>.</td>
</tr>
</tbody>
</table>

d. In the **Create Authentication CERT Policy** window, under **Expression**, click **Saved Policy Expressions**, and then select **ns_true**.

e. Click **Create**.

Now you need to bind the CBA authentication to the virtual server.
5. On the **Configuration** tab, in the left pane, click **NetScaler Gateway > Virtual Servers**.

![NetScaler Gateway Virtual Servers](image1)

6. In the right pane, select the gateway you created (for example, **cag**), and then click **Edit**.

7. On the **VPN Virtual Server** window, under **Basic Authentication**, click the **+** icon.

![VPN Virtual Server Configuration](image2)
8. On the Choose Type window, under Policies, complete the following fields, and then click Continue.

<table>
<thead>
<tr>
<th>Choose Policy</th>
<th>Select CERTIFICATE.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choose Type</td>
<td>Select Primary.</td>
</tr>
</tbody>
</table>

9. Under Policy Binding, in the Select Policy field, select the CERT policy (for example, CBA_Profile) that you created earlier in step 4, and then click Bind.

Now you need to configure the virtual server SSL Parameters for certificate-based authentication.
10. On the VPN Virtual Server window, under SSL Parameters, click the icon, and then perform the following steps:
   a. Clear the Enable Ephemeral RSA and Enable Session Reuse options.
   b. Select the Client Authentication option.
   c. In the Client Certificate field, select Optional.
   d. Click OK, then Click Done.

**Configuring Citrix StoreFront**

Configure Citrix StoreFront to allow NetScaler pass-through authentication in order to use Citrix NetScaler Gateway as the certificate-based authentication.

1. Open the Citrix Studio console.
2. In the left pane, select Citrix StoreFront > NetScaler Gateway.
3. In the middle pane, select the gateway you created (for example, cag), and then in the right pane, under cag, click Change General Settings.

4. On the Change General Settings window, in the Logon type field, select Smart card, and then click OK.
Configuring Smart Card Pass-Through

NOTE: It is assumed that all the appropriate configurations for smartcard single sign-on (SSO) are done. For more information, refer to http://docs.citrix.com/en-us/storefront/3/configure-authentication-and-delegation/sf-configure-smartcard.html.

1. Open the SafeNet Authentication Client Tools console.

2. In the top right corner, click the icon to open the Advanced view.

3. In the left pane, select SafeNet Authentication Client Tools > Tokens > Client Settings.

4. In the right pane, click the Advanced tab, and then select Enable single logon.

5. Click Save.
Running the Solution

Using SAC CBA for Citrix Web Access

1. In a web browser, open the Citrix NetScaler Access Gateway URL.
2. On the **SafeNet Authentication Client** login window, enter the token password, and then click **OK**.

![SafeNet Authentication Client login window](image)

3. After successful authentication, you are redirected to the **Citrix StoreFront** console. Click on the icon of any of the published applications to launch it.

![Citrix StoreFront](image)

4. On the **Windows Logon** window, enter your smart card PIN, and then click the **` icon**

![Windows Logon](image)
After successful authentication, you will be able to access the application.

Using SAC CBA for Citrix Receiver Application Access

1. Open the Citrix Receiver application.
2. On the **SafeNet Authentication Client** login window, enter the token password, and then click **OK**.
3. After successful authentication, you are redirected to the Citrix StoreFront console. Click on the icon of any of the published applications to launch it.

4. On the **Windows Logon** window, enter your smart card PIN, and then click the icon.

After successful authentication, you will be able to access the application.
Using SAC CBA with SSO for Citrix Web Access

1. Log in to the client machine using the smart card for SSO.
   After successful authentication, you will be logged in to the client machine.

2. Open the Citrix NetScaler Access Gateway URL in a web browser. You are redirected to access Citrix StoreFront as the SSO authentication is configured.

3. Click on the icon of any of the published applications to launch it. The application will open.
Using SAC CBA with SSO for Citrix Receiver Application Access

1. Log in to the client machine using the smart card for SSO.
   After successful authentication, you will be logged in to the client machine.

2. Open the Citrix Receiver application. You are redirected to access the Citrix StoreFront console as the SSO authentication is configured.

3. Click on the icon of any of the published applications to launch it. The application will open.
Appendix: Modifying the CSP PIN Prompt from Citrix Default to SafeNet Authentication Client

1. Log in to the client machine as an administrator.
2. Open Registry Editor and then in the registry key, add the following key value:

   HKLM\Software\[Wow6432Node]\Citrix\AuthManager: SmartCardPINEntry=CSP
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.

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<thead>
<tr>
<th>Contact Method</th>
<th>Contact Information</th>
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<tbody>
<tr>
<td></td>
<td>Existing customers with a Technical Support Customer Portal account can log in to</td>
</tr>
<tr>
<td></td>
<td>manage incidents, get the latest software upgrades, and access the Gemalto Knowledge</td>
</tr>
<tr>
<td></td>
<td>Base.</td>
</tr>
<tr>
<td>Technical Support contact email</td>
<td><a href="mailto:technical.support@gemalto.com">technical.support@gemalto.com</a></td>
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