

Sentry SSO with CitrixNetscaler

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Introduction

This article explains how to integrate a Citrix Netscaler with Sentry via SAML.

It assumes knowledge of how to configure the Netscaler and that a Virtual Server has been already created, missing just the SAML authentication configuration.

Setup AuthControl Sentry Keys

Before you are able to create a Single Sign On configuration on your Netscaler Citrix account, you will need to setup some Keys. Please see a separate article: [HowToCreateKeysOnCmi](#). You will need the certificate you generate in a later section of this article. This can be retrieved from the View Keys menu option of Swivel AuthControl Sentry.

Setup SAML SSO on Citrix Netscaler

To configure SAML SSO setting on your Citrix Netscaler account you have to access your Admin console. You should see an Admin console with an option "Authentication > Dashboard" similar to the one below:

The screenshot displays the NetScaler VPX (10) Admin Console interface. The top navigation bar includes "Dashboard", "Configuration", and "Reporting". The "Configuration" tab is active, and the left sidebar shows a tree view with "Authentication" expanded to "Dashboard". The main content area is titled "Authentication Servers" and includes a breadcrumb "NetScaler > Authentication > Authentication Servers". Below the title, there is a description "Manage your authentication server configurations here." and a row of buttons: "Add", "Edit", "Delete", "Details", and "Test". A table with the following columns is visible: "Name", "Type", and "Server Name/Server IP". At the bottom of the sidebar, there is a section "Integrate with Citrix Products" with options for "XenMobile", "XenApp and XenDesktop", and "Unified Gateway".

On the Authentication Servers screen when you click on the Add button you will be shown a create authentication server screen with Choose Server Type options where you have to click on "SAML".

The screenshot shows a web application interface with a dark header containing 'Dashboard', 'Configuration', and 'Reporting' tabs. Below the header is a navigation bar with a 'Back' button. The main content area is titled 'Configure Authentication SAML Server' and contains the following fields:

- Name: SAML_test
- Authentication Type: SAML
- IDP Certificate Name*: sentry-rsa-cert (with a '+' button to the right)
- Redirect URL*: http://192.168.11.115:8084/sentry/sai
- Single Logout URL: http://192.168.11.115:8084/sentry/sir
- User Field: (empty)
- Signing Certificate Name: (empty)
- Issuer Name: citrix.swivelsecure.com
- Reject Unsigned Assertion*: OFF
- SAML Binding*: POST (with a '?' icon to the right)
- Default Authentication Group: local
- Two Factor: ON OFF
- Assertion Consumer Service Index: 255
- Attribute Consuming Service Index: 255
- Requested Authentication Context*: Exact

You will have to enter a name for the Authentication SAML Server and fill in the details for your AuthControl Sentry such as:

IDP Certificate Name - Click on + and a screen like the one displayed below should be displayed. Browse to the RSA PEM files created earlier to upload the certificate and select PEM as a Certificate Format:

Install Certificate

Install Certificate

Certificate-Key Pair Name*

Certificate and Key files are stored in the folder /nsconfig/ssl/ on appliance.

Certificate File Name*

 Browse ▼ +

Key File Name

 Browse ▼ +
Install
Close

After you have entered all the certificate details click Install

Set the Redirect and Single Logout below, where <FQDN_OF_SENTRY_SERVER> is the public DNS entry of your Swivel AuthControl Sentry server, e.g. swivel.mycompany.com or if you do not have a redirect from port 443 to 8443 in place, you may need to include a port number e.g. swivel.mycompany.com:8443

Redirect URL - *https://<FQDN_OF_SENTRY_SERVER>/sentry/saml20endpoint*

Single Logout URL - *https://<FQDN_OF_SENTRY_SERVER>/sentry/singlelogout*

Issuer Name - *E.g. citrix.companyname.com*

(The value set in here will be used to configure the Citrix Netscaler application on AuthControl Sentry)

Signature Algorithm - RSA-SHA1

Digest Method - SHA1

After you have entered all the details click Create

Now the SAML authentication server has been created. To configure the Virtual Server used to log in to use SAML authentication, select Netscaler Gateway > Virtual Servers and click Edit. You should see a screen like the below:

[← Back](#)

VPN Virtual Server

Basic Settings

Name	Demo	Maximum Users	0
IPAddress	10.40.242.185	Max Login Attempts	-
Port	443	Failed Login Timeout	-
State	● Up	ICA Only	true
RDP Server Profile	-	Enable Authentication	true
Login Once	false	Windows EPA Plugin Upgrade	-
Double Hop	false	Linux EPA Plugin Upgrade	-
Down State Flush	true	Mac EPA Plugin Upgrade	-
DTLS	false	ICA Proxy Session Migration	false
AppFlow Logging	false	Enable Device Certificate	false

Certificates

1 Server Certificate

1 CA Certificate

Authentication

Primary Authentication

1 SAML Policy

Profiles

Net Profile -
 TCP Profile -
 HTTP Profile nshttp_default_strict_validation

Published Applications

No Next HOP Server

1 STA Server

No Url

To add the SAML authentication server click + on the Authentication section. Select as Policy SAML and type Primary. Click the Continue button.

Choose Type

Choose Type

Policies

Choose Policy*

SAML

Choose Type*

Primary

Continue Cancel

The below screen will be displayed. Click + to add Add Binding:

Choose Type

Choose Type

Policies

Choose Policy SAML	Choose Type Primary
-----------------------	------------------------

Add Binding Unbind Edit

Priority	Policy Name	Expression
----------	-------------	------------

Click + add to add a new Policy Binding:

Choose Type > Policy Binding

Policy Binding

Select Policy*

Click to select > + /

Binding Details

Priority*

110

Bind Close

Set a name for the SAML policy, select the SAML server configured before and add on Expression ns_true.

Choose Type > Policy Binding > Configure Authentication SAML Policy

Configure Authentication SAML Policy

Name
SAML_policy

Authentication Type
SAML

Server*
SAML_test

Expression*
Operators Saved Policy Expressions Frequently Used Expressions
ns_true

OK Close

After those parameters has been set click the Create button. Then the policy bind screen will be displayed again with the new policy selected.

Choose Type > Policy Binding

Policy Binding

Select Policy*
SAML_policy

More

Binding Details

Priority*
110

Bind Close

Click Bind. The below screen will be displayed.

Choose Type

Choose Type

Policies

Choose Policy SAML	Choose Type Primary
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Priority	Policy Name	Expression
110	SAML_policy	ns_true

Click the Close button. The virtual server will have now the SAML authentication set. Click the back button and save the current configuration.

Configure Check Password with Repository on the Swivel Core

In order to check the user's Active Directory password, ensure that the local Agent is configured as explained [here](#)

Importing your users into the Swivel Core

Before we are able to proceed with testing SSO authentication to Citrix Netscaler via Swivel AuthControl Sentry we need to ensure that there are users imported that we can test with.

Ensure that you have setup and configured a repository under the Repository -> Server and Repository -> Name of your repository menus on the Swivel Core.

Select the Repository on the User Administration screen, and click the User Sync button. For the user you are going to test with, ensure that you have set their PIN using the Reset PIN button.

Setup AuthControl Sentry Application definition

Please note: you must have setup a Citrix Netscaler SAML SSO prior to defining this Application entry within AuthControl Sentry. This is so that you are able to populate the Endpoint URL field. Login to the AuthControl Sentry Administration Console. Click Applications in the left hand menu. To add a new Application definition for Google, click the Add Provider button.

Rules

Applications

Authentication Methods

View IdP Metadata

Keys

Users Active Sessions

User History

Log Viewer

General Configuration

Application Images

SAML Application



Note: The Endpoint URL is used only if the ACS (Assertion Consumer Service) sends a SAML (Security Assertion Markup Language) request.

Name

CitrixNetscaler

Image

CitrixNetscaler.png

Points

0

Portal URL

https://citrix.yourdomain

Endpoint URL

Entity ID

citrix.yourdomain

Federated Id

email

Save

Name: Citrix Netscaler(Type an Arbitrary name for this Application)

Service Provider: CitrixNetscaler(select from dropdown list)

Points: 100 (the number of points the user needs to score from their Authentication Method in order to successfully authenticate to this Application)

Endpoint URL: (this Endpoint URL is your companies Citrix Netscaler URL which you can usually access on: <https://citrix.mycompanyname.com>)

Entity ID: citrix.mycompanyname.com (This is the Issuer Name configured on Citrix Netscaler SAML server)

Setup AuthControl Sentry Authentication definition

As an example here we will be using Turing authentication as the Primary method required for Citrix Netscaler SAML authentication.

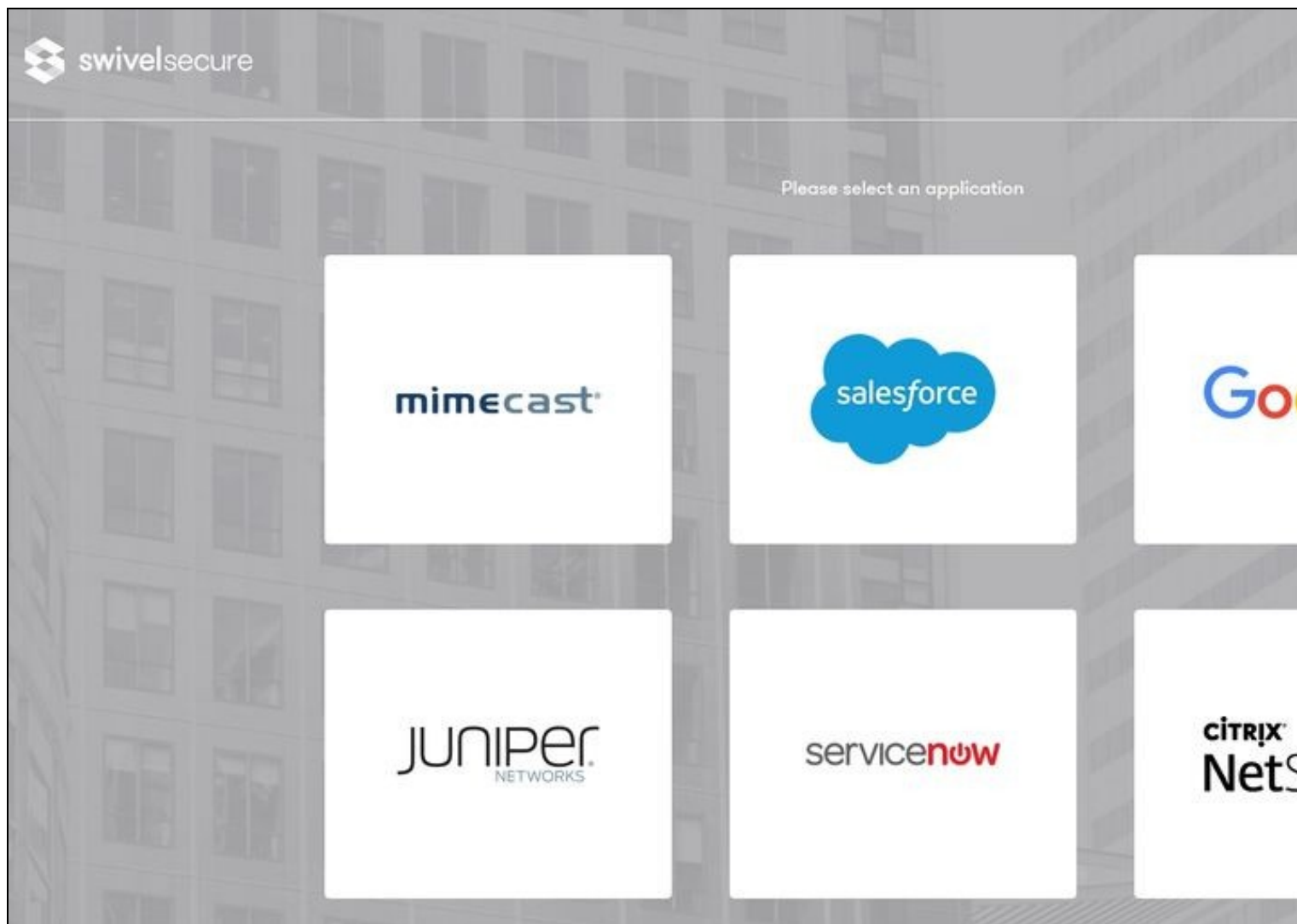
Login to the AuthControl Sentry Administration Console. Click Authentication Methods in the left hand menu. Click the Edit button against the Turing option in the list of Authentication Methods. Give this Authentication Method 100 points. This will mean that when a login attempt is made to the Google Application, this Authentication Method will be offered during login. (Please read about AuthControl Sentry Rules and familiarize your self with AuthControl Sentry [here](#))

Testing authentication to Google via Swivel AuthControl Sentry

This should be the final step after all previous elements have been configured.

In a web browser, visit the the URL that you setup on AuthControl Sentry as Endpoint URL e.g. <https://citrix.mycompanyname.com>

Alternatively you can visit your AuthControl Sentry Page with your public DNS entry of your Swivel AuthControl Sentry server, e.g. <https://mycompanysentrydomain/sentry/startPage> On a Start Page you will be able to see a new Google Icon on which you can click and proceed with authentication (as you would by going straight to the Citrix Netscaler page)



When you visit this URL you will notice that the domain should redirect to the identity provider login URL that you setup, once you have submitted your username. You should be presented with the page of the Authentication Method which can score enough points to match the points required by the Citrix Netscaler Application definition.



CITRIX
NetScaler

Submit

Reset

After we enter the username we are prompted with another authentication method (in this example we use turing)

CITRIX
NetScaler

Imorales

Password

OTC

TURing



1 2 3 4 5 6 7 8 9 0

9 0 4 8 3 1 7 2 6 5

Login

Refresh Image

After we enter our authentication credentials we successfully will see the web app that we tried to access.

Troubleshooting

There are various logging components available for this particular integration which can aid in diagnosis at different points during authentication.

- The Swivel Core has a Log Viewer menu item which can reveal information concerning user status e.g. is the user locked, has a session been started for the image request;
- The Swivel AuthControl Sentry has a View Log menu item which provides details about the SAML assertion and response received from Citrix Netscaler and can be useful for comparison with the Netscaler Citrix SAML Assertion Validator output;

It is crucial when troubleshooting, to pinpoint where the authentication is failing. For example, you may find that the Swivel Core logs show a successful authentication (which would indicate that the user has entered their Password and OTC correctly), but the AuthControl Sentry logging shows that there is a problem with the SAML assertion.

Two common issues which can be diagnosed with the validator are:

- Certificate or decryption issues;
 - ◆ Can AuthControl Sentry find the Certificate locally, is it the correct one?
 - ◆ Has the correct Certificate been uploaded to Citrix Netscaler?
 - ◆ Does the Repository -> Attribute name being used actually map to a Repository attribute? Has a User Sync occurred in the Swivel Core since modifying this?