



Parallels Remote Application Server

SAML SSO Authentication Examples

20.0

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Contents

Introduction	4
Prerequisites.....	5
Azure Integration via SAML 2.0.....	6
Create a Generic SAML Application.....	6
Configure the Azure Application for Parallels RAS.....	8
Test Connectivity.....	13
Okta Identity Cloud Integration via SAML 2.0	16
Requirements.....	16
Configure Parallels RAS as a Service Provider.....	16
Configure Okta Identity as IdP	19
Create an Application	19
Configure SAML Settings	22
Complete the Parallels RAS Configuration.....	27
Test Connectivity.....	29
Ping Identity Integration via SAML 2.0	31
Create a Generic SAML Application.....	31
Configure Parallels RAS as a Service Provider.....	34
Complete the SAML Application Configuration.....	38
Testing Connectivity	41
Gemalto SafeNet Trusted Access Integration via SAML 2.0	43
Create a Generic SAML Application.....	43
Configure Parallels RAS as a Service Provider.....	50
Test Connectivity.....	53

CHAPTER 1

Introduction

This document describes how to configure SAML 2.0 Single Sign-On (SSO) authentication in Parallels® RAS and gives step-by-step instructions on how to integrate Parallels RAS, as a SAML Service Provider (SP), with third-party identity management solutions configured as SAML Identity Providers (IdPs). IdPs covered in this document include Microsoft Azure, Okta Identity, Ping Identity, and Gemalto's Safenet. Other identity management solutions supporting SAML 2.0 SSO can also be used as IdPs with Parallels RAS.

SAML is an XML-based authentication mechanism that provides single sign-on (SSO) capability between different organizations by allowing the user authentication without sharing the local identity database. As part of the SAML SSO authentication process, the new Parallels RAS Enrollment Server communicates with Microsoft Certificate Authority (CA) to request, enroll, and manage digital certificates on behalf of the user to complete authentication without requiring the users to put in their Active Directory credentials.

Service providers and enterprises with multiple subsidiaries don't have to maintain their own internal Identity Management solutions or complex domains/forest trusts. Integrating with third-party SAML identity providers allows customers and partners to provide end users with a true SSO experience.

CHAPTER 2

Prerequisites

Prerequisites for using SAML SSO authentication in Parallels RAS are common to all SAML identity providers described in this guide. For complete information about system requirements and how to install and configure the necessary RAS components, please read the **SAML SSO Authentication** chapter in the **Parallels RAS Administrator's Guide**. The guide is available on the Parallels website at the following location: <https://www.parallels.com/products/ras/resources/>

Azure Integration via SAML 2.0

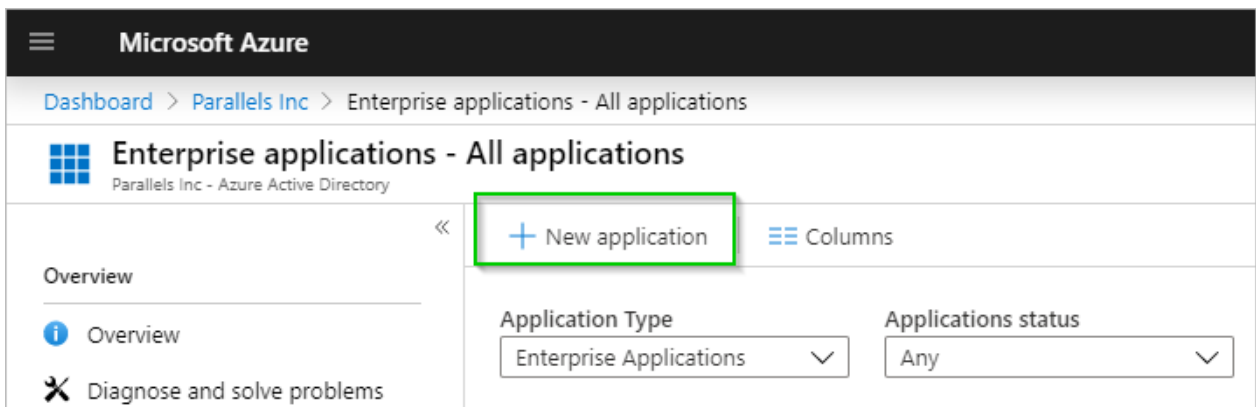
In This Chapter

Create a Generic SAML Application	6
Configure the Azure Application for Parallels RAS.....	8
Test Connectivity.....	13

Create a Generic SAML Application

First you need to create a generic SAML application in Microsoft Azure as follows:

- 1 Sign in to Azure Portal.
- 2 Open the portal menu and select **Azure Active Directory**.
- 3 In the left pane, click **Enterprise applications**.
- 4 Click the **New application** button.

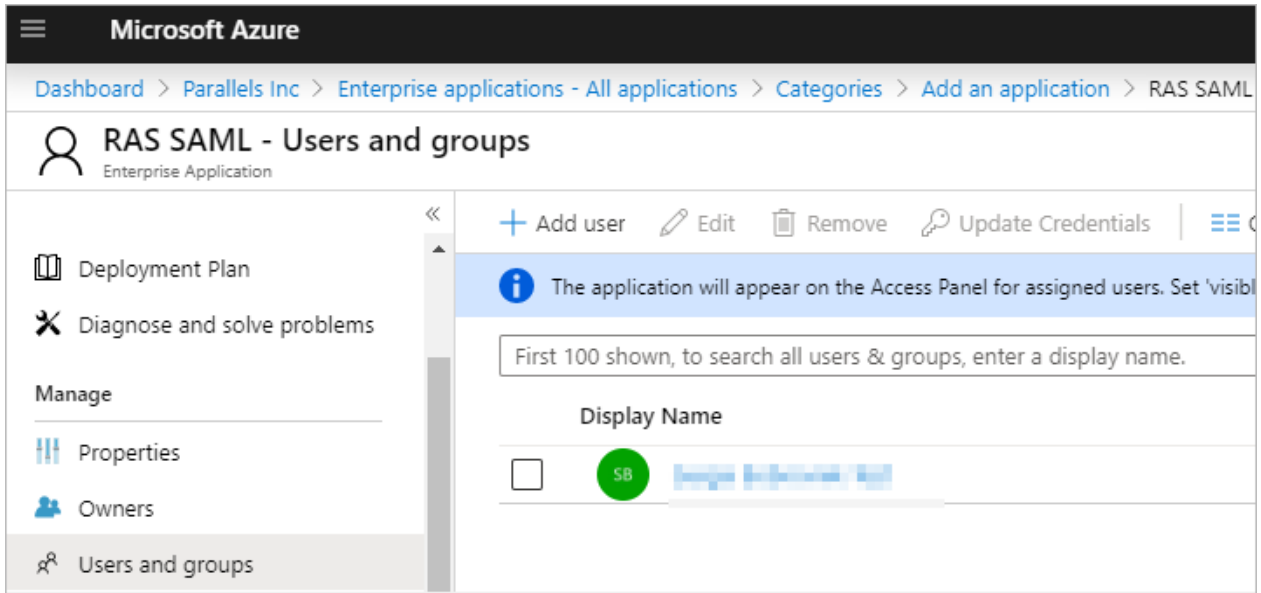


- 5 Select the **Non-gallery application** option, specify a name and click **Add** to create the application.

The screenshot shows the 'Add an application' dialog with two main panels. The left panel, titled 'Add an application', has a sub-section 'Add your own app' with three options: 'Application you're developing', 'On-premises application', and 'Non-gallery application'. The 'Non-gallery application' option is highlighted with a green border. Below this is the 'Add from the gallery' section with a search bar and a grid of featured applications including Box, Concur, Cornerstone O..., Docusign, Dropbox for Bu..., G Suite, GitHub, and Jira.

The right panel, titled 'Add your own application', contains a 'Name' field with the text 'RAS SAML app' and a green checkmark. Below the field is instructional text: 'Once you decide on a name for your new application, click the "Add" button below and we'll walk you through some simple configuration steps to get the application working.' Underneath, there are 'Supports' options: 'SAML-based single sign-on' (with a 'Learn more' link), 'Automatic User Provisioning with SCIM' (with a 'Learn more' link), and 'Password-based single sign-on' (with a 'Learn more' link'). At the bottom right of this panel is a blue 'Add' button.

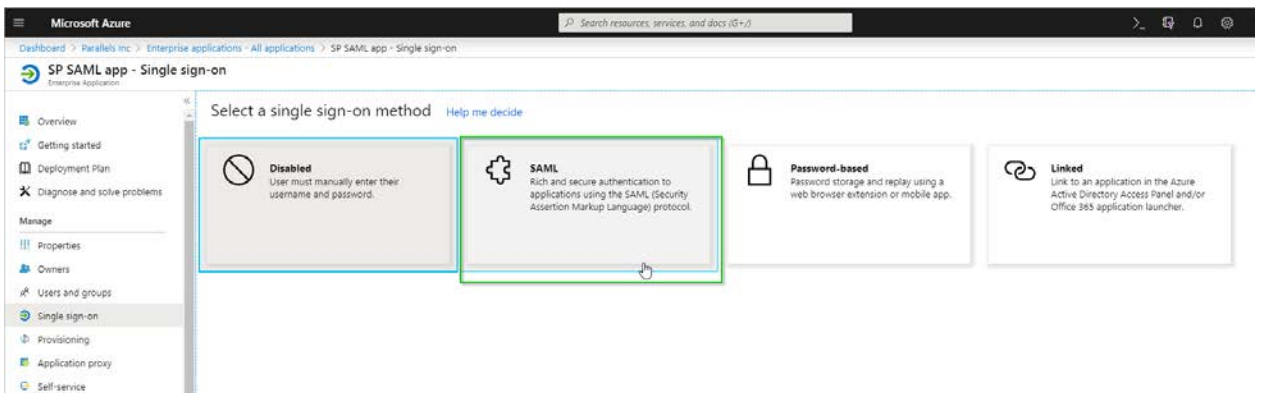
- 6 In the application blade, add users required to use SAML SSO. This can be done inside the **Users and groups** blade.



Configure the Azure Application for Parallels RAS

To configure the Azure application to work with Parallels RAS, do the following:


- 1 In Azure Portal, click on the **SAML** application tile and switch to the **Single Sign-on** pane > **SAML**.



- 2 In section (3) **SAML Signing Certificate**, copy the **App Federation Metadata Url** value.

Note: For manual configuration, you can download **Certificate (Base64)** and **Federation Metadata XML** by clicking the corresponding **Download** links.

3

SAML Signing Certificate	
Status	Active
Thumbprint	138[redacted]
Expiration	11/11/2022, 4:18:07 PM
Notification Email	SBF[redacted]
App Federation Metadata Url	https://login.microsoftonline.com/[redacted] 
Certificate (Base64)	Download
Certificate (Raw)	Download
Federation Metadata XML	Download

- 3 Open the Parallels RAS Console, navigate to **Connection > SAML** and click **Tasks > Add**.
- 4 In the **Add Identity Provider** wizard, import metadata from a file or specify its URL and choose an HTML5 Theme to associate the IdP with.

- 5 Click **Next**.

- 6 On the next page of the wizard, the **IdP certificate** and **Logon/Logout URL** fields will be automatically populated. Verify that everything is correct and click **Finish**.

Important: The **Allow unencrypted assertion** option must be cleared in case you did not configure assertion encryption in Azure.

The screenshot shows a dialog box titled "Add Identity Provider" with a red header bar containing the Parallels logo. The dialog contains the following fields and controls:

- IdP entity ID:** A text box containing the URL `https://sts.windows.net/91111111-1111-1111-1111-111111111111/`.
- IdP certificate:** A text area containing the certificate string `MIIC8DCCAdigAwIBAgIQeHYINGBf9KFKM1MuV2VoFTANBgkqhkiG9w0BAQ`.
- Logon URL:** A text box containing the URL `https://login.microsoftonline.com/91111111-1111-1111-1111-111111111111/`.
- Logout URL:** A text box containing the URL `https://login.microsoftonline.com/91111111-1111-1111-1111-111111111111/`.
- Allow unencrypted assertion:** An unchecked checkbox.
- Buttons:** At the bottom, there are four buttons: "< Back", "Finish" (highlighted with a blue border), "Cancel", and "Help".

- 7 Back in the RAS Console, right-click on the IdP provider you just created and choose **Properties**.
- 8 In the dialog that opens, select the **SP** tab.

- Enter the host address. The IdP will redirect to this address, which should be accessible from the end user browser. Take note of other information displayed on this tab.

The screenshot shows the 'Add Identity Provider' dialog box with the 'SP' tab selected. The fields are as follows:

- Host: [Redacted]
- SP entity ID: `https://[Redacted]/RASHTML5Gateway/sso/idp_1/metadata.xml`
- Reply URL: `https://[Redacted]/RASHTML5Gateway/sso/idp_1/assert`
- Logon URL: `https://[Redacted]/RASHTML5Gateway/sso/idp_1/login`
- Logout URL: `https://[Redacted]/RASHTML5Gateway/sso/idp_1/logout`
- SP certificate: A text area containing a certificate with '-----BEGIN CERTIFICATE-----' at the top and '-----END CERTIFICATE-----' at the bottom.

Buttons at the bottom include 'Copy to clipboard', 'Regenerate', 'Export SP metadata to file', 'OK', 'Cancel', and 'Help'.

- Switch back to the SAML application in Azure Portal. Specify the values in section **(1) Basic SAML Configuration** according to the values in the **SP** tab in the RAS Console (see above).

Set up Single Sign-On with SAML

Read the [configuration guide](#) for help integrating Parallels RAS SAML.

- Basic SAML Configuration**

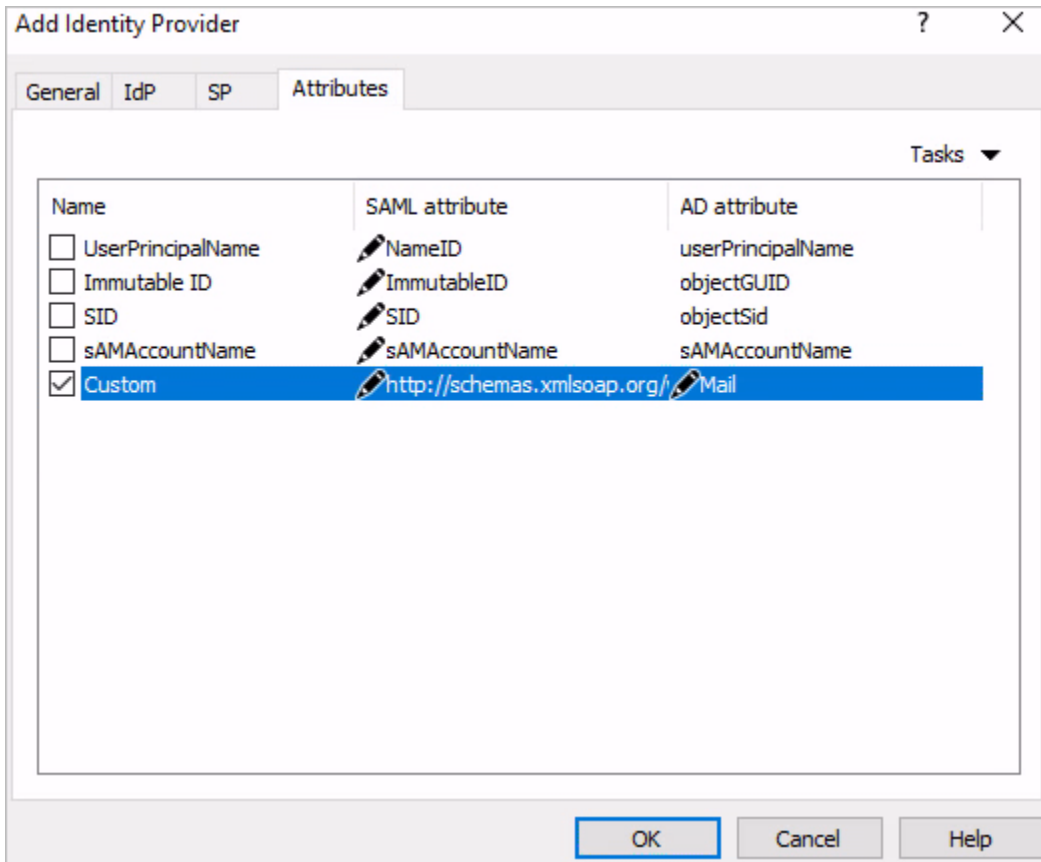
Identifier (Entity ID)	<code>https://[Redacted]/RASHTML5Gateway/sso/idp_1/metadata.xml</code>
Reply URL (Assertion Consumer Service URL)	<code>https://[Redacted]/RASHTML5Gateway/sso/idp_1/assert</code>
Sign on URL	<code>https://[Redacted]/RASHTML5Gateway/sso/idp_1/login</code>
Relay State	<i>Optional</i>
Logout Url	<code>https://[Redacted]/RASHTML5Gateway/sso/idp_1/logout</code>

11 Next required step is to configure attributes to match IdP users with AD users. In this example, the custom attribute is used with the following setup:

- In Azure Portal > **SAML** app > **Single Sign-On**, open section **(2) User Attributes & Claims**.
- From the **Claim name** list, copy the name of the **user.userprincipalname** value. Note that other custom claims can be added as required.

Additional claims	
Claim name	Value
email	user.mail
http://schemas.xmlsoap.org/ws/2005/05/identity/claims/emailaddress	user.mail
http://schemas.xmlsoap.org/ws/2005/05/identity/claims/givenname	user.givenname
http://schemas.xmlsoap.org/ws/2005/05/identity/claims/name	user.userprincipalname
http://schemas.xmlsoap.org/ws/2005/05/identity/claims/surname	user.surname

- 12** Back in the RAS Console, in the **Add Identity Provider** dialog, select the **Attributes** tab, enable the **Custom** attribute and set its value to be the claim name you copied in the previous step. Please note that this is only an example as any attribute can be used. In this particular case, we are matching the Azure login username/email (used to login to Azure) to the email address of the user configured in Active Directory.



You may also use Azure AD Connect to match users via "Immutable ID". To do so, in Active Directory, create an attribute using the following values:

- **Name:** ImmutableID
- **Source:** attribute
- **Source attribute:** user.onpremisesecurityidentifier

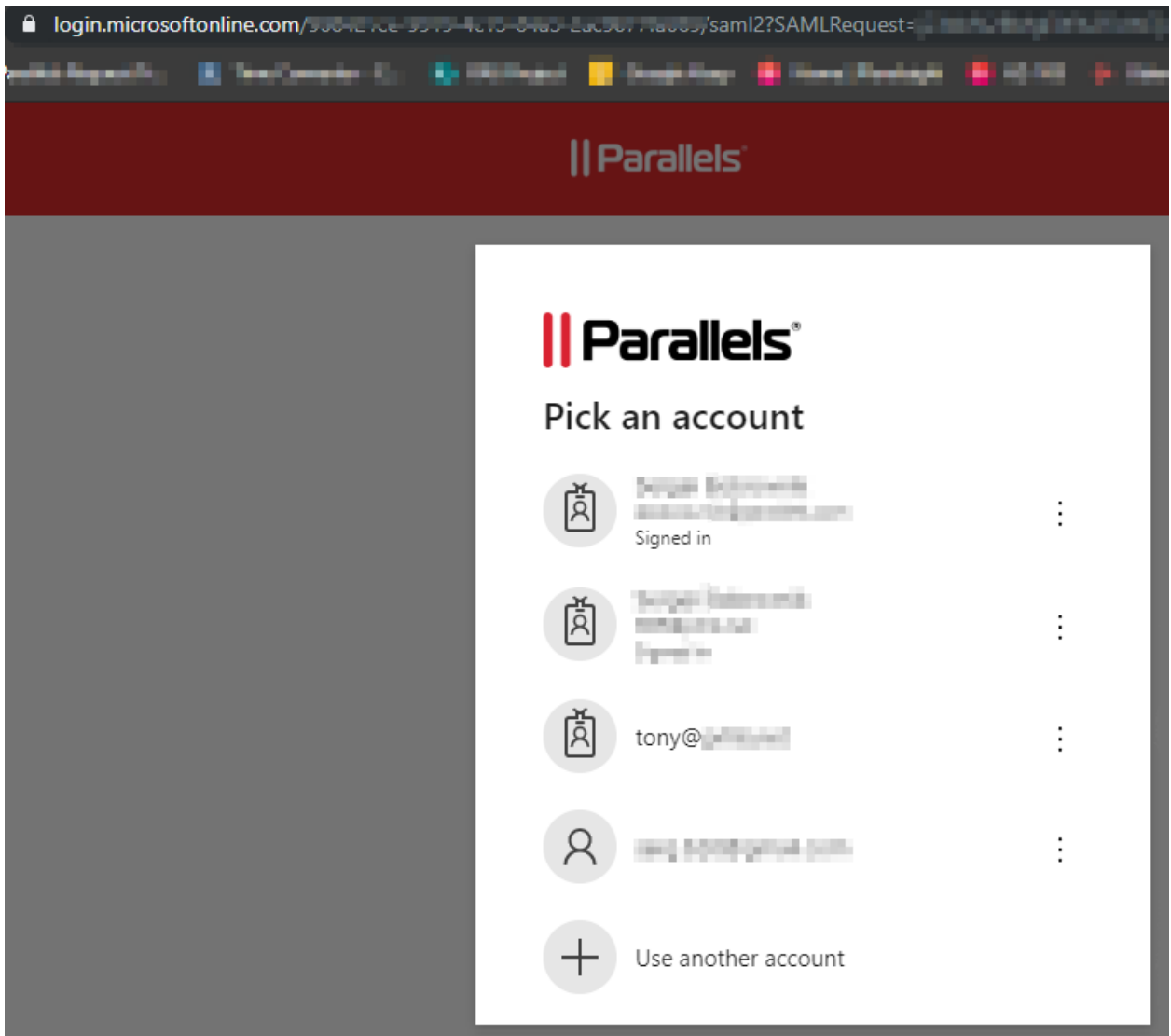
Further information available at docs.microsoft.com

Test Connectivity

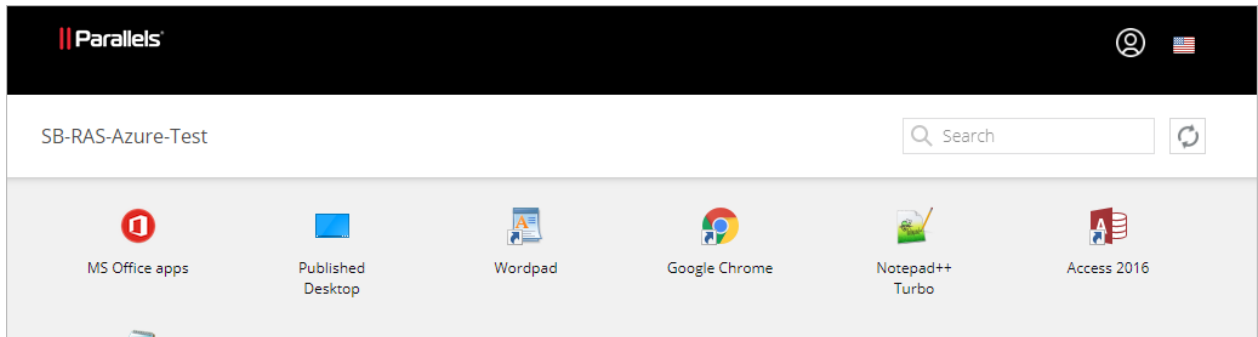
SP initiated

To test the connectivity between Parallels RAS and Microsoft Azure, do the following:

- 1 Open the User Portal page in your web browser. Use the Theme you associated with the SAML app.
- 2 If everything is correct, you will be redirected to login.microsoftonline where you can proceed signing in.



- 3 On successful authentication, the user is presented with the application list:



IdP initiated

- 1 Log in to Microsoft Azure portal and launch the assigned application.
- 2 The user is redirected to the User Portal using the assigned Theme and is presented with the application list.

Okta Identity Cloud Integration via SAML 2.0

In This Chapter

Requirements.....	16
Configure Parallels RAS as a Service Provider	16
Configure Okta Identity as IdP	19
Complete the Parallels RAS Configuration.....	27
Test Connectivity.....	29

Requirements

To configure an application in Okta Identity, you need the following settings from your SP application:

- The Assertion Consumer Service (ACS) URL
- Audience URI
- Any required SAML attributes

Therefore, you should start with RAS configuration.

Configure Parallels RAS as a Service Provider

In this step, you need to configure Parallels RAS as a service provider (SP) by adding an identity provider (IdP). You will later complete this step by configuring Okta as your IdP.

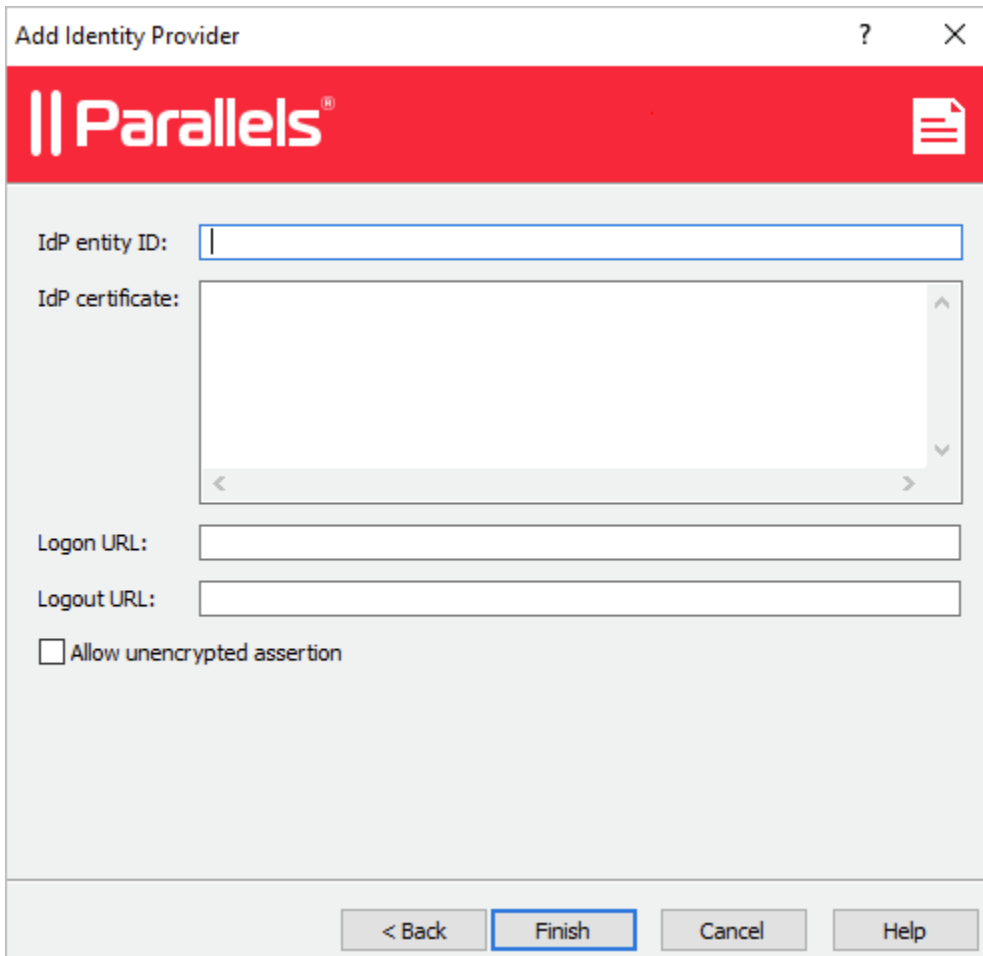
First you need to add an identity provider (IdP) in the RAS Console as follows:

- 1** Select the **Connection** category, select the **SAML** tab and click **Tasks > Add**.
- 2** Specify a provider name (e.g. Okta).
- 3** In the **Use with Theme** field, keep the default "<not used>" option.

- 4 Select the **Manually enter the IdP information** option and click **Next**.

The screenshot shows a window titled "Add Identity Provider" with the Parallels logo at the top. The "Name" field contains "OKTA" and "Use with Theme" is set to "<not used>". Below this, the instruction "Select a method that the wizard will use to obtain the identity provider information." is followed by three radio button options: "Import published IdP metadata" (with a text input field and example URL), "Import IdP metadata from file" (with a file selection button and example path), and "Manually enter the IdP information" (which is selected). At the bottom, there are four buttons: "< Back", "Next >" (highlighted with a blue border), "Cancel", and "Help".

- 5 On the next page, enter any information to satisfy the requirements to not leave the fields blank (we will import Okta settings using metadata file later) and click **Finish**.



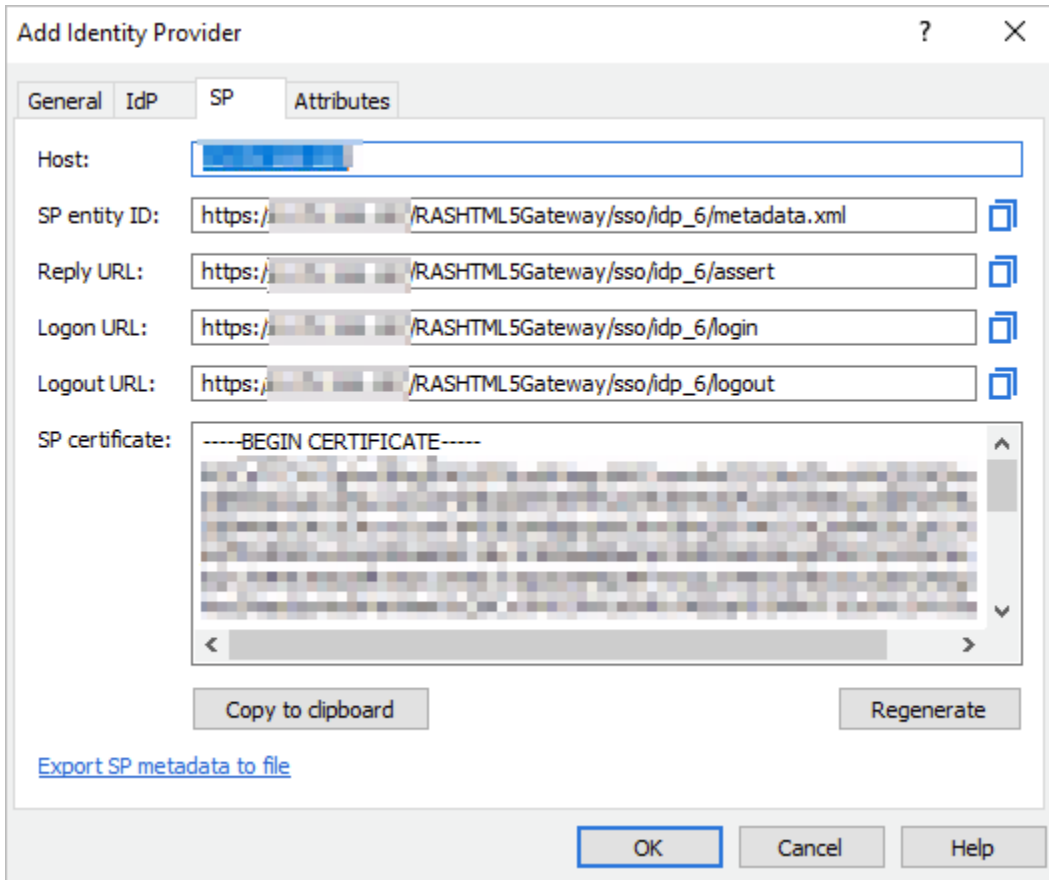
- 6 Apply the configuration by clicking the **Apply** button at the bottom of the RAS Console.

Export SP settings (metadata)

To export the Service Provider settings, do the following:

- 1 In the RAS Console, right-click the "Okta" IdP provider that you created in the previous step and click **Properties**.
- 2 In the dialog that opens, select the **SP** tab.
- 3 Specify the external FQDN or IP address in the **Host** field.
- 4 Copy and save values from the **SP entity ID** and **Reply URL** fields.

- 5 If you are going to use the single logout option, copy and save the value from the **Logout URL** field. Also copy the value from the **SP certificate** field and save it as a text file with the ".cer" extension.



The screenshot shows the 'Add Identity Provider' dialog box with the 'SP' tab selected. The fields are as follows:

- Host: [Redacted]
- SP entity ID: [https://\[Redacted\]/RASHTML5Gateway/sso/idp_6/metadata.xml](https://[Redacted]/RASHTML5Gateway/sso/idp_6/metadata.xml)
- Reply URL: [https://\[Redacted\]/RASHTML5Gateway/sso/idp_6/assert](https://[Redacted]/RASHTML5Gateway/sso/idp_6/assert)
- Logon URL: [https://\[Redacted\]/RASHTML5Gateway/sso/idp_6/login](https://[Redacted]/RASHTML5Gateway/sso/idp_6/login)
- Logout URL: [https://\[Redacted\]/RASHTML5Gateway/sso/idp_6/logout](https://[Redacted]/RASHTML5Gateway/sso/idp_6/logout)
- SP certificate: A text area containing a certificate block starting with '-----BEGIN CERTIFICATE-----' and ending with '-----END CERTIFICATE-----'. Below the text area are 'Copy to clipboard' and 'Regenerate' buttons.

At the bottom left, there is a link: [Export SP metadata to file](#). At the bottom right, there are 'OK', 'Cancel', and 'Help' buttons.

You are now ready to proceed to the Okta configuration.

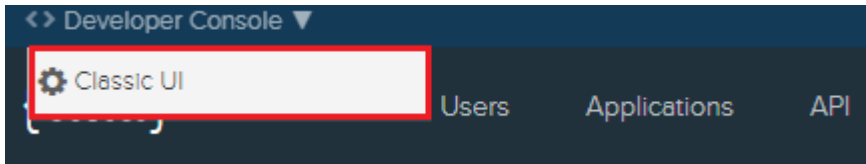
Configure Okta Identity as IdP

Given the fact that there is a DNS alias defined for EPC Server (e.g. `epc.company.com`, as used in the following examples), we will need to create an application in Okta.

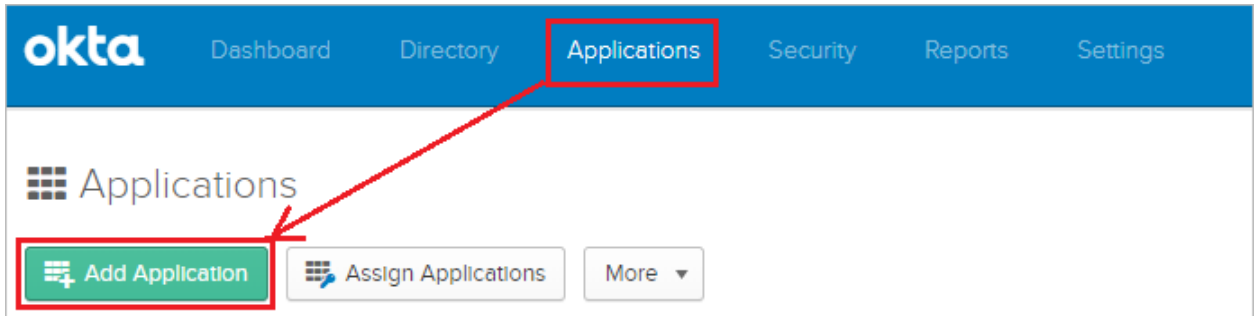
Create an Application

To create an application:

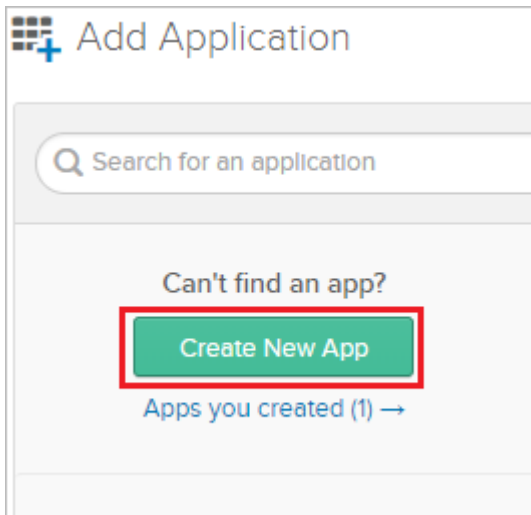
- 1 Open the Okta Admin Management console and switch to Classic UI.



- 2 Click on the **Applications** link and then click the **Add Application** button.



- 3 Click the **Create New App** button.



- 4 In the **Platform** field, select "Web" and then select the "SAML 2.0" protocol in the **Sign on method** section.

5 Click **Create**.

The screenshot shows a dialog box titled "Create a New Application Integration" with a close button (X) in the top right corner. The dialog is divided into two main sections: "Platform" and "Sign on method".

- Platform:** A dropdown menu is set to "Web".
- Sign on method:** Three radio button options are listed:
 - Secure Web Authentication (SWA)
Uses credentials to sign in. This integration works with most apps.
 - SAML 2.0
Uses the SAML protocol to log users into the app. This is a better option than SWA, if the app supports it.
 - OpenID Connect
Uses the OpenID Connect protocol to log users into an app you've built.

At the bottom right of the dialog, there are two buttons: a green "Create" button and a white "Cancel" button.

- 6 In the **App name** field, enter the name for the configuration (for example, "RAS") and click **Next**.

The screenshot shows the 'Create SAML Integration' wizard. At the top, there are two steps: '1 General Settings' and '2 Configure SAML'. The 'General Settings' section is active. It contains the following fields and options:

- App name:** A text input field containing 'RAS', highlighted with a red border.
- App logo (optional):** A field with a gear icon, a text input, and a 'Browse..' button. Below it is an 'Upload Logo' button.
- App visibility:** Two checkboxes:
 - Do not display application icon to users
 - Do not display application icon in the Okta Mobile app

At the bottom of the form, there are 'Cancel' and 'Next' buttons.

Configure SAML Settings

General Settings

In the **Configure SAML** view, specify the following:

- **Single sign on URL:** Paste the **Reply URL** value taken from RAS Server, e.g. https://40.85.122.19/userportal/sso/idp_6/assert.
Keep the **Use this for Recipient URL and Destination URL option** selected.
- **Audience URI (SP Entity ID):** Paste the **SP entity ID** value taken from RAS Server, e.g. https://40.85.122.19/userportal/sso/idp_6/metadata.xml.
- **Default RelayState:** Leave it blank.

- **Name ID format:** Keep the “Unspecified” value.
- **Application username:** Keep the “Okta username” value.

1 General Settings **2** Configure SAML **3** Feedback

A SAML Settings

GENERAL

Single sign on URL [?] ^A

Use this for Recipient URL and Destination URL

Allow this app to request other SSO URLs

Audience URI (SP Entity ID) [?]

Default RelayState [?]

If no value is set, a blank RelayState is sent.

Name ID format [?]

Application username [?]

[Show Advanced Settings](#)

ATTRIBUTE STATEMENTS (OPTIONAL) [LEARN MORE](#)

Name	Name format (optional)	Value
<input type="text" value="Email"/>	<input type="text" value="Unspecified"/>	<input type="text" value="user.email"/>

GROUP ATTRIBUTE STATEMENTS (OPTIONAL)

Name	Name format (optional)	Filter
<input type="text"/>	<input type="text" value="Unspecified"/>	<input type="text" value="Starts with"/>

What does this form do?
This form generates the XML needed for the app's SAML request.

Where do I find the info this form needs?
The app you're trying to integrate with should have its own documentation on using SAML. You'll need to find that doc, and it should outline what information you need to specify in this form.

Okta Certificate
Import the Okta certificate to your Identity Provider if required.

Advanced settings — enable single logout

If you click the **Show Advanced Settings** link, you are presented with additional options. To enable single logout in this dialog:

- 1 Select the **Allow application to initiate Single Logout** option.
- 2 Copy and paste the saved value for **Logout URL**.

- 3 Select and upload the SP certificate that you saved to a ".cer" file earlier.

Assertion Encryption ? Unencrypted

Enable Single Logout ? Allow application to initiate Single Logout

Single Logout URL ?

SP Issuer ?

Signature Certificate ?

Authentication context class ? PasswordProtectedTransport

Honor Force Authentication ? Yes

SAML Issuer ID ?

- 4 When done, close the dialog.

Attribute Statements

Back in the **Configure SAML** view, in the **Attribute Statements (Optional)** section, add the following attribute mapping:

- **Name:** Email
- **Name format:** Unspecified
- **Value:** user.email

Note that other custom statements can be added as required.

Download Okta certificate and continue

Click the button on the right side of the SAML configuration to download the Okta certificate (this will be required during the IdP configuration in the RAS Console) and click the **Next** button at the bottom.

Select the type of Okta relationship that you have and click **Finish**.

Create SAML Integration

1 General Settings 2 Configure SAML 3 Feedback

3 Help Okta Support understand how you configured this application

Are you a customer or partner?

I'm an Okta customer adding an internal app

I'm a software vendor. I'd like to integrate my app with Okta

App type

This is an internal app that we have created

Why are you asking me this?

This form provides Okta Support with useful background information about your app. Thank you for your help—we appreciate it.

[Previous](#) [Finish](#)

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Download Okta IdP provider metadata

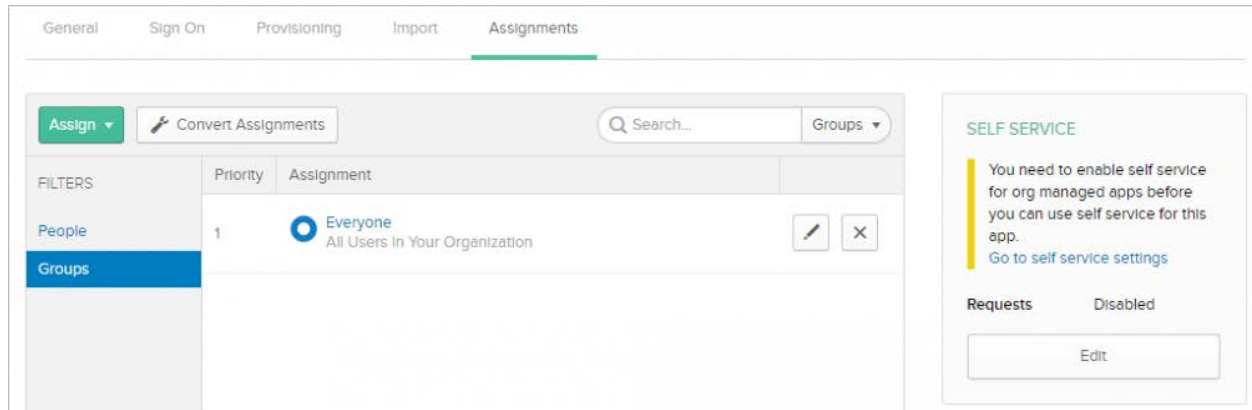
Export the identity provider metadata by clicking on the **Identity Provider metadata** link and save the XML file to a known location, e.g. “My Documents”.

The screenshot displays the 'Sign On' settings page in the Okta Admin Console. The page is divided into several sections:

- General**: Includes tabs for 'General', 'Sign On', 'Mobile', 'Import', and 'Assignments'. The 'Sign On' tab is active.
- Settings**: A header section with an 'Edit' button.
- SIGN ON METHODS**: A section with a sub-header 'SAML 2.0'. It contains a 'Default Relay State' field and a 'View Setup Instructions' button. A red box highlights the 'Identity Provider metadata' link in the SAML 2.0 configuration section.
- CREDENTIALS DETAILS**: A section with two rows of configuration options:
 - Application username format**: Set to 'Okta username'.
 - Password reveal**: A checkbox labeled 'Allow users to securely see their password (Recommended)' is checked.
- About**: A section on the right side of the page that provides information about SAML 2.0 and the 'Application Username' format.

Assign people or groups to the application

Switch to the **Assignments** tab for your application and assign to the application all users in your organization that will have rights to use the RAS application.



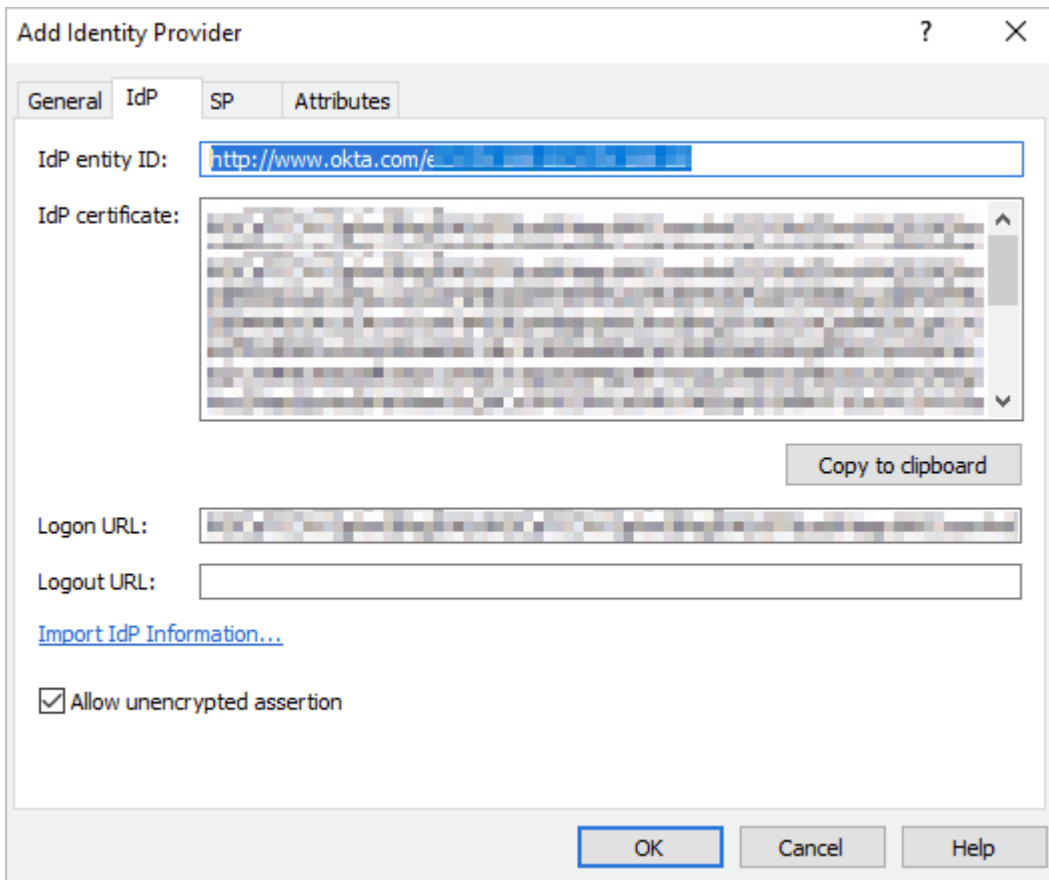
Complete the Parallels RAS Configuration

Now that we have the IdP metadata, we can finish configuring Parallels RAS as a service provider.

To import the identity provider metadata:

- 1 In the RAS Console, select the **Connection** category.
- 2 Select the **SAML** tab.
- 3 Right-click the "Okta" IdP provider and choose **Properties**.
- 4 In the dialog that opens, select the **IdP** tab.

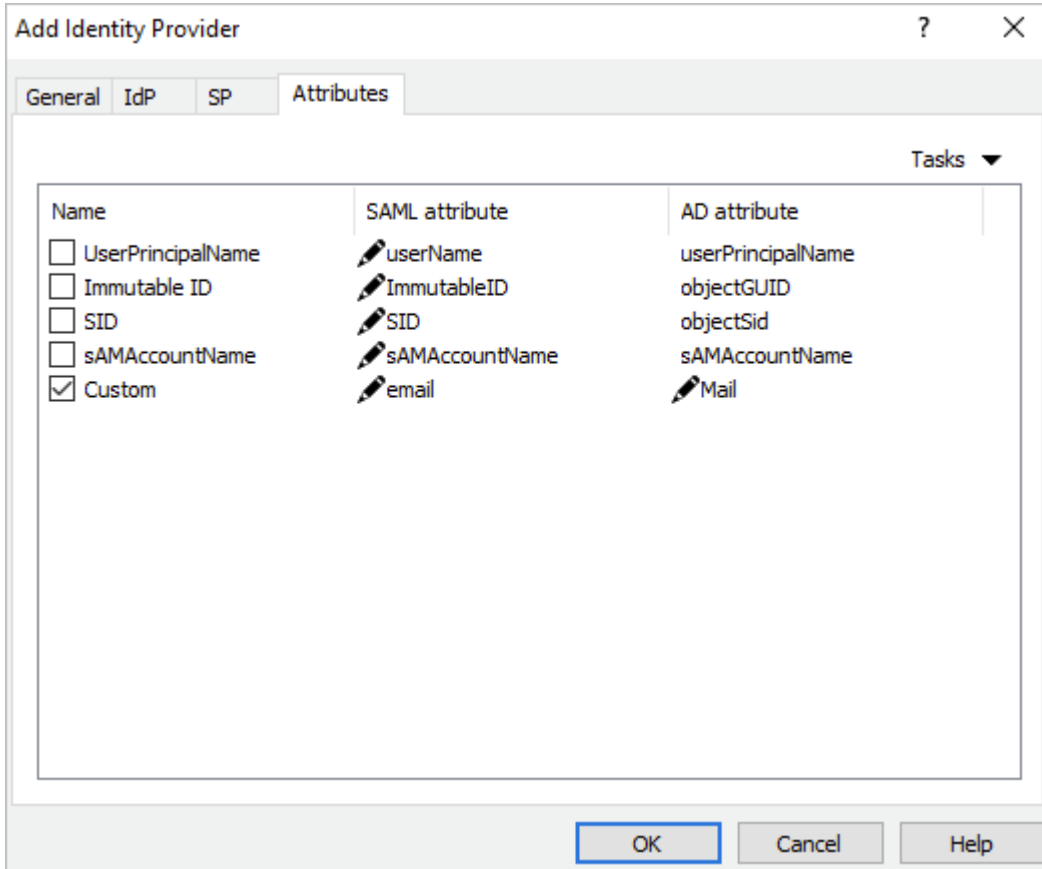
- 5 Click on the **Import IdP information** link and confirm settings replacement.



The screenshot shows a dialog box titled "Add Identity Provider" with a close button (X) and a help button (?). The dialog has four tabs: "General", "IdP", "SP", and "Attributes". The "IdP" tab is selected. The "IdP entity ID" field contains the URL "http://www.okta.com/ε...". The "IdP certificate" field contains a large block of base64-encoded text. A "Copy to clipboard" button is located to the right of the certificate field. The "Logon URL" field contains a URL, and the "Logout URL" field is empty. A link labeled "Import IdP Information..." is visible below the URL fields. A checkbox labeled "Allow unencrypted assertion" is checked. At the bottom of the dialog are three buttons: "OK", "Cancel", and "Help".

- 6 Switch to **Attributes** tab.

- 7 Select the **Custom** attribute and set the **SAML attribute** value to "email" and **AD attribute** value to "Mail". Please note that this is only an example as any attribute can be used. In this particular case, we are matching the Okta login username/email (used to login to Okta) to the email address of the user configured in Active Directory.



- 8 Switch to the **General** tab and select a Theme to be used with the IdP.
 9 Click **OK** and **Apply**.

Test Connectivity

SP initiated

- 1 Open the User Portal in a web browser. Use the Theme that you associated with the SAML application.
- 2 The user is redirected to the Okta portal for authentication.
- 3 On successful authentication, the application list is presented to the user.

IdP initiated

- 1 Log in to the Okta portal and launch the assigned application.

-
- 2** The user is redirected to the User Portal using the assigned Theme and is presented with the application list.

Ping Identity Integration via SAML 2.0

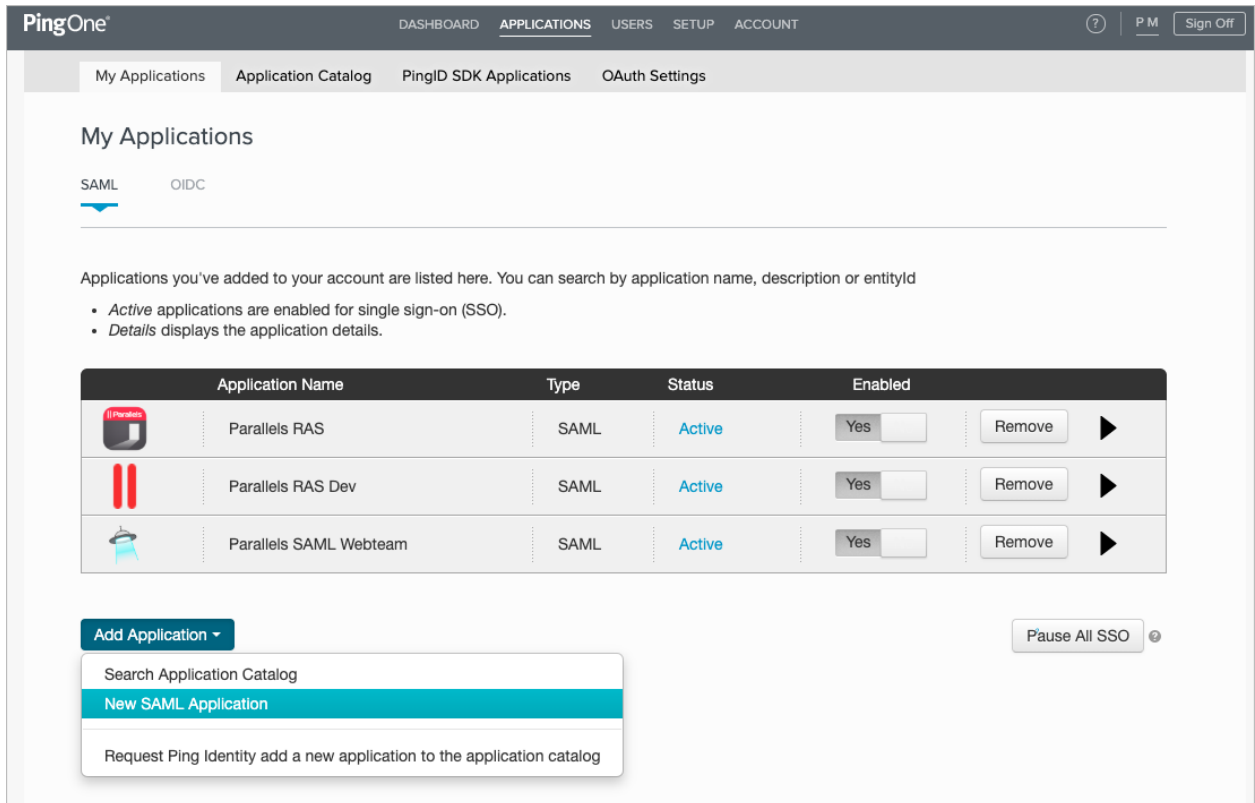
In This Chapter

Create a Generic SAML Application 31
 Configure Parallels RAS as a Service Provider 34
 Complete the SAML Application Configuration 38
 Testing Connectivity 41

Create a Generic SAML Application

First you need to create a generic SAML application in PingOne as follows:

- 1 Log in to PingOne at <https://admin.pingone.com/web-portal/login>
- 2 Select the **My Applications** tab as shown on the screenshot below.



- 3 Click **Add Application** and then choose **New SAML Application**. The new application wizard opens.
- 4 On the **1. Application Details** page, add the following data:
 - **Application Name:** Parallels RAS (or choose your own name).
 - **Application Detail:** Remote Application Server (or type your own description).
 - **Category:** Other
 - **Graphics:** Upload an icon 256x256 pixels in png format if needed.

The screenshot displays the '1. Application Details' configuration page. At the top, there are tabs for 'New Application', 'SAML', and 'Incomplete', along with a 'No' button. The main content area includes:

- Application Name:** A text input field containing 'My Application'.
- Application Description:** A text area containing 'A short description of your application.' with a 'Max 500 characters' limit.
- Category:** A dropdown menu set to 'Choose One'.
- Graphics:** A section titled 'Application Icon' with the instruction 'For use on the dock'. It features a placeholder box with 'No Image Available' and a 'Change' button. Below this, it specifies 'Max Size: 256px x 256px'.

At the bottom of the form, there is a 'NEXT: Application Configuration' label, a 'Cancel' button, and a 'Continue to Next Step' button. A footer bar contains an 'Add Application' button and a 'Pause All SSO' button.

- 5 Click **Continue to Next Step**.

6 The **2. Application configuration** page opens.

	Parallels SAML Webteam	SAML	Active	Yes <input type="checkbox"/>	Remove	▶
	New Application	SAML	Incomplete	<input type="checkbox"/> No		

2. Application Configuration

I have the SAML configuration
 I have the SSO URL

You will need to download this SAML metadata to configure the application:

Signing Certificate

SAML Metadata [Download](#)

Provide SAML details about the application you are connecting to:

Protocol Version SAML v 2.0 SAML v 1.1

Upload Metadata [Or use URL](#)

Assertion Consumer Service (ACS) *

Entity ID *

Application URL

Single Logout Endpoint

Single Logout Response Endpoint

Single Logout Binding Type Redirect Post

Primary Verification Certificate No file chosen

Secondary Verification Certificate No file chosen

Encrypt Assertion

Signing Sign Assertion Sign Response

Signing Algorithm

Force Re-authentication

7 On this page, you need to download the SAML Metadata from Ping Identity. Click the **Download** link next to the **SAML Metadata** label.

SAML Metadata [Download](#)

- 8 Save the metadata file (.xml) on the local drive.
- 9 Switch to the Parallels RAS Console. Read on.

Configure Parallels RAS as a Service Provider

In this step, you need to configure Parallels RAS as a service provider (SP) by adding PingOne as the identity provider.

In the RAS Console, add an identity provider as follows:

- 1 Select the **Connection** category.
- 2 Select the **SAML** tab.
- 3 Click **Tasks > Add**.
- 4 In the **Add Identity Provider** wizard, type a provider name and select an HTML5 Theme to associate with the provider.

Add Identity Provider ? X

Parallels

Name:

Use with Theme:

Select a method that the wizard will use to obtain the identity provider information.

Import published IdP metadata

Example: https://www.contoso.com/metadata.xml

Import IdP metadata from file

Example: c:\mydocuments\metadata.xml

Manually enter the IdP information

< Back **Next >** Cancel Help

- 5 Select the **Import IdP metadata from file** option and specify the SAML Metadata file that you've downloaded from PingOne earlier.

The screenshot shows the 'Add Identity Provider' wizard window. The title bar includes the Parallels logo and window controls. The main area contains the following fields and options:

- Name:** Ping2
- Use with Theme:** Tenant2
- Select a method that the wizard will use to obtain the identity provider information.**
- Import published IdP metadata
- Import IdP metadata from file
- Manually enter the IdP information

The file path for the selected option is: C:\Users\...saml2-metadata-idp.xml

At the bottom, there are four buttons: < Back, Next >, Cancel, and Help. The 'Next >' button is highlighted in blue.

- 6 Click **Next**.

- 7 On the next page, the **IdP entity ID**, **IdP certificate**, **Logon URL**, and **Logout URL** fields will be populated automatically using the imported metadata.

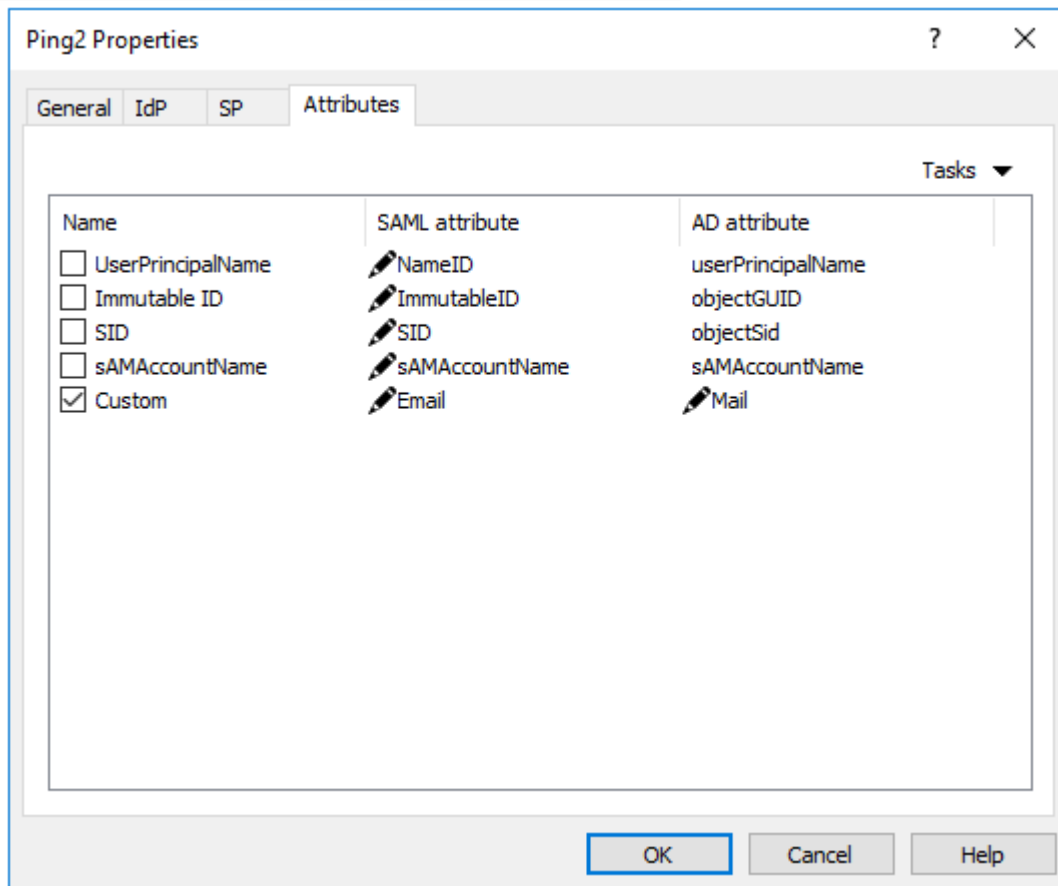
The screenshot shows a dialog box titled "Add Identity Provider" with the Parallels logo at the top. The fields are populated as follows:

- IdP entity ID: `https://pingone.com/idp`
- IdP certificate: A large text area containing a base64-encoded certificate.
- Logon URL: `https://sso.connect.pingidentity.com/sso/idp/sso`
- Logout URL: `https://sso.connect.pingidentity.com/sso/`

Below the fields is an "Import Certificate..." button and a checked checkbox labeled "Allow unencrypted assertion". At the bottom, there are four buttons: "< Back", "Finish", "Cancel", and "Help".

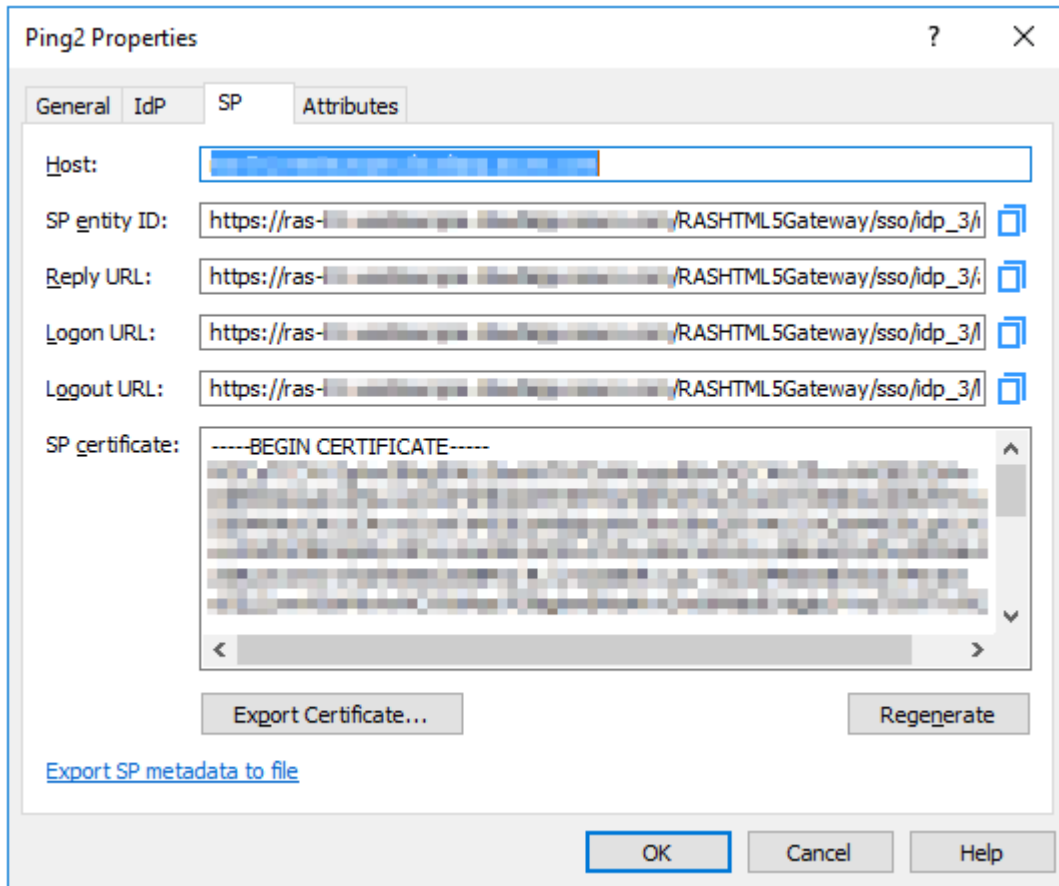
- 8 Click **Finish** and then click **Apply** in the RAS Console.
- 9 Right-click the IdP provider that you just created and click **Properties**.
- 10 Select the **Attributes** tab.

- 11 Select the **Custom** attribute name and change the **SAML attribute** to **Email**. Clear the **UserPrincipalName** attribute.



- 12 Click **OK** and then click **Apply** in the RAS Console.
- 13 Open IdP provider **Properties** dialog again and switch to the **SP** tab.
- 14 Export the SP configuration to an XML file and save it on local drive.

- 15 Copy the **Logon URL** to the clipboard or save it to a file. You will need to specify it in the PingOne administrator console as described in the section that follows this one.



- 16 Go back to the PingOne administration console to complete the new SAML application configuration. Read on.

Complete the SAML Application Configuration

After you exported the SP metadata to a file, you need to upload it PingOne and complete the SAML application configuration.

In the PingOne administration console:

- 1 Go back to the **2. Application Configuration** page.
- 2 Set the **Protocol Version** property to **SAML v2.0** (see the screenshot below).

- To upload the SP metadata that you saved in RAS Console earlier, click the **Select File** button to select the XML file.

2. Application Configuration

I have the SAML configuration I have the SSO URL

You will need to download this SAML metadata to configure the application:

Signing Certificate

SAML Metadata [Download](#)

Provide SAML details about the application you are connecting to:

Protocol Version SAML v 2.0 SAML v 1.1

Upload Metadata [Or use URL](#) Uploaded file: Ping.xml

Assertion Consumer Service (ACS)

Entity ID

Application URL

Single Logout Endpoint

Single Logout Response Endpoint

Single Logout Binding Type Redirect Post

Primary Verification Certificate No file chosen
[saml20metadata.cer](#)

Secondary Verification Certificate No file chosen

Encrypt Assertion

Signing Sign Assertion Sign Response

Signing Algorithm

Force Re-authentication

Keep the following in mind when creating your connection:

- Both SP- and IdP-Initiated SSO are allowed
- Map SAML_SUBJECT in your attribute contract, plus any attributes (configure them in PingOne later)

- Set the rest of the application properties as follows:
 - Application URL:** Paste the **Logon URL** link found on the **SP** tab of the IdP properties dialog in the RAS Console (that's the link we asked you to copy or save in the previous section).

- **Single Logout Response Endpoint:** Copy the link from the **Single Logout Endpoint** field and paste it here.
 - **Single Logout Binding Type:** Select the **Post** option.
 - **Encrypt Assertion:** Clear the checkbox.
 - **Signing:** Select the **Sign Assertion** option.
 - **Signing Algorithm:** Set to **RSA_SHA256**.
 - **Force Re-authentication:** Clear the checkbox.
- 5 Click **Continue to Next Step**.
- 6 On the **3. SSO Attributes Mapping** page, click the **Add new attribute** button.

3. SSO Attribute Mapping

Map the necessary application provider (AP) attributes to attributes used by your identity provider (IdP).

	Application Attribute	Identity Bridge Attribute or Literal Value	Required
1	email	Email <input type="checkbox"/> As Literal <input type="button" value="Advanced"/>	<input type="checkbox"/>

NEXT: Group Access

	Parallels	SAML	Active	<input type="checkbox"/> Yes	<input type="button" value="Remove"/>
	Parallels SAML	SAML	Active	<input type="checkbox"/> Yes	<input type="button" value="Remove"/>

- 7 In the **Application Attribute** field, type "email" and then select **Email** in the **Identity Bridge Attribute** field.
- 8 Click **Continue to Next Step**.

- 9 On the **4. Group Access** page, assign users or groups for the new application as needed.

4. Group Access

Select all user groups that should have access to this application. Users that are members of the added groups will be able to SSO to this application and will see this application on their personal dock.

Group1, Group2, etc Search

Group Name	
Users@directory	Remove
Domain Administrators@directory	Add

NEXT: Review Setup Continue to Next Step

- 10 Click **Continue to Next Step**.

- 11 On the last page of the wizard, review your settings and click **Finish**.

Testing Connectivity

SP initiated

- 1 Open User Portal page in your web browser, e.g. <https://ras-01.westeurope.cloudapp.azure.com/userportal>. Use the Theme you associated with the SAML application.
- 2 If everything is correct, you will be redirected to the PingOne identity portal where you can proceed with signing in.

IdP initiated

To check the IdP initiated SAML authentication directly from PingOne, click on the application under the **Applications** menu.

Application Name	Type	Status	Enabled
New	SAML	Active	Yes <input type="checkbox"/> Remove <input type="button" value="Remove"/>

Icon

Name

Description

Category

Connection ID

(Optional) Click the link below to invite this SaaS Application's Administrator to register their SaaS Application with PingOne.

[Invite SAAS Admin](#)

These parameters may be needed to configure your connection

saasid

Issuer

idpid

Protocol Version

ACS URL

entityId

Initiate Single Sign-On (SSO) URL

Single Sign-On (SSO) Relay State

Signing Certificate [Download](#)

SAML Metadata [Download](#)

Single Logout Endpoint

Single Logout Response Endpoint

Signing

Signing Algorithm

Encrypt Assertion

Force Re-authentication

Click the link below to open the Single Sign-On page:

[Single Sign-On](#)

Click the link below to open the **Single Sign-On** page and you will be redirected to the authentication page on the RAS User Portal.

CHAPTER 6

Gemalto SafeNet Trusted Access Integration via SAML 2.0

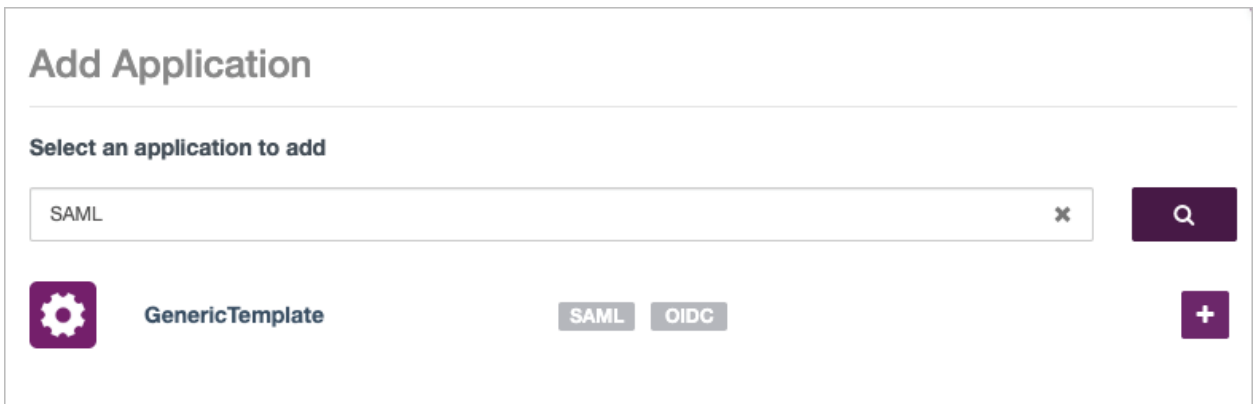
In This Chapter

Create a Generic SAML Application	43
Configure Parallels RAS as a Service Provider	50
Test Connectivity.....	53

Create a Generic SAML Application

To create a generic SAML application:


- 1 Login to SafeNet Trusted Access portal with administrator credentials.
- 2 Switch to **Applications** and click the **+** icon to add a new application.
- 3 On the **Add Application** page, type "SAML".
- 4 Click the magnifying glass icon and search for "GenericTemplate". When found, click the plus-sign icon.



- 5 In the **Display Name** field, type a name for the application, then select **SAML** and click **Add**.

Add Application

Application Details



Display Name

Integration Protocol

Specify which integration protocol you would like to use:

SAML ⁱ

OIDC ⁱ

See [Help Documentation](#) ⁱ for details.

- 6 On the **Step 01: GenericTemplate Setup** page, click the **Download metadata file** button and save the file on your local drive (e.g. mydocs\Safanet.xml).

7 Click **Next**.

The screenshot shows a web interface for SAML configuration. At the top, there is a 'SAML' tab with a gear icon and a 'new' button with a pencil icon. Below this, there are two tabs: 'Configure' (selected) and 'Assign'. The main content area is titled 'Step 01: GenericTemplate Setup'. It features a diagram on the left showing a purple circle labeled 'STA' connected by a dashed arrow to a document icon labeled 'STA Metadata', which is then connected by another dashed arrow to a gear icon representing configuration. To the right of the diagram, there is a text block: 'Download the STA metadata file. Import the file into GenericTemplate. See [Help Documentation](#) for details.' Below this text are three buttons: 'Download metadata file' with a download icon, 'Switch to Manual Configuration', and 'Next Step'. At the bottom of the main content area, there is a section titled 'Step 02: STA Setup'.

8 When you reach the **Step 02: STA Setup** page, you need to go to the RAS Console and create a new IdP Provider. This step is described in detail in the **Configure SP Configuration in the RAS Console** section (p. 50). Please perform the steps described in that section and then return here.

- Back on the SafeNet portal, click the **Upload GenericTemplate Metadata** button and select the XML file that you exported in the RAS Console in the previous step.

The screenshot shows the configuration interface for SAML integration. At the top, there is a header with a gear icon, the text 'SAML', and a 'new' button with a pencil icon. Below this is a navigation bar with 'Configure' (selected) and 'Assign' buttons. The main content area is divided into two steps: 'Step 01: GenericTemplate Setup' and 'Step 02: STA Setup'. Under 'Step 02: STA Setup', there is a diagram on the left showing a circular 'STA' icon, a gear icon, and a document icon labeled 'Application Metadata'. A dashed arrow points from the gear icon to the STA icon, and another dashed arrow points from the document icon to the gear icon. To the right of the diagram, there is a text block: 'Download the GenericTemplate metadata and import it into STA. See [Help Documentation](#) for details.' Below this text is a button labeled 'Upload GenericTemplate Metadata' with a download icon. At the bottom right, there is a link that says 'Switch to Manual Configuration'.

- After the upload, the page is refreshed and you can continue configuring STA settings.

- 11** In the **Account Details** section, copy and paste the complete Logout URL found on the **SP** tab in the RAS Console.

The screenshot shows the configuration interface for a GenericTemplate account. It includes a warning banner, step indicators for 'GenericTemplate Setup' and 'STA Setup', and a form for 'Account Details'. The 'Entity ID' and 'Assertion Consumer Service URL' fields are populated with specific URLs. A 'SAML Certificates' section is also visible at the bottom.

- 12** Populate other fields as follows (see the screenshot below):

- **User Login ID Mapping > Name ID:** Select **SAS user ID**.
- **Return Attributes > Return Attribute:** type "UPN".
- **Return Attributes > User Attribute:** Select **Email address**.
- **User Portal Settings > Service Login URL:** Copy and paste the URL from the **SP** tab in RAS Console.
- **Advanced Settings > Name ID Format:** select **Email**.
- **Enforce User Name:** Select **Use username from SAML request, if available**.

- **Signature Algorithm:** Select **RSA-SHA256**.

The screenshot displays a configuration page for SAML integration. It is divided into several sections:

- User Login ID Mapping:** A dropdown menu is set to "SAS User ID".
- Return Attributes:** A table with two columns: "RETURN ATTRIBUTE" (containing "UPN") and "USER ATTRIBUTE" (containing "Email address"). There is an "Add Attribute" button below.
- User Portal Settings:** "FEDERATION MODE" is set to "SP Initiated & IDP Initiated". "SERVICE LOGIN URL" is "https://.../RASHTML5Gateway/sso/idp_2/login".
- Advanced Settings:** "NAME ID FORMAT" is set to "Email". "ENFORCE USER NAME" has "Use username from SAML request, if available" selected. "SIGNATURE ALGORITHM" is set to "RSA-SHA256".

13 Continue setting the options as follows (see the screenshot below):

- **Authentication Request Signature Validation:** Select **Skip request signature validation**.
- **Assertion Encryption:** Select **Assertion not encrypted**.
- **Response Signing:** Select **Sign Response**.
- **Binding Protocol:** Select **Enforce Post Binding**.
- **Signature Key Name:** Select **None**.
- **Idp Initiated Sso Relay State:** Leave it blank.
- **Logout Channel:** Select **Front**.

AUTHENTICATION REQUEST SIGNATURE VALIDATION ⁱ

Verify request signature

Skip request signature validation

ASSERTION ENCRYPTION ⁱ

Assertion not encrypted

Encrypt assertion

RESPONSE SIGNING ⁱ

Sign Response

BINDING PROTOCOL ⁱ

Enforce Post Binding

Unspecified

GROUP RETURN ATTRIBUTE FORMAT ⁱ

SAML attribute/value pair

Comma separated list

SIGNATURE KEY NAME ⁱ

None

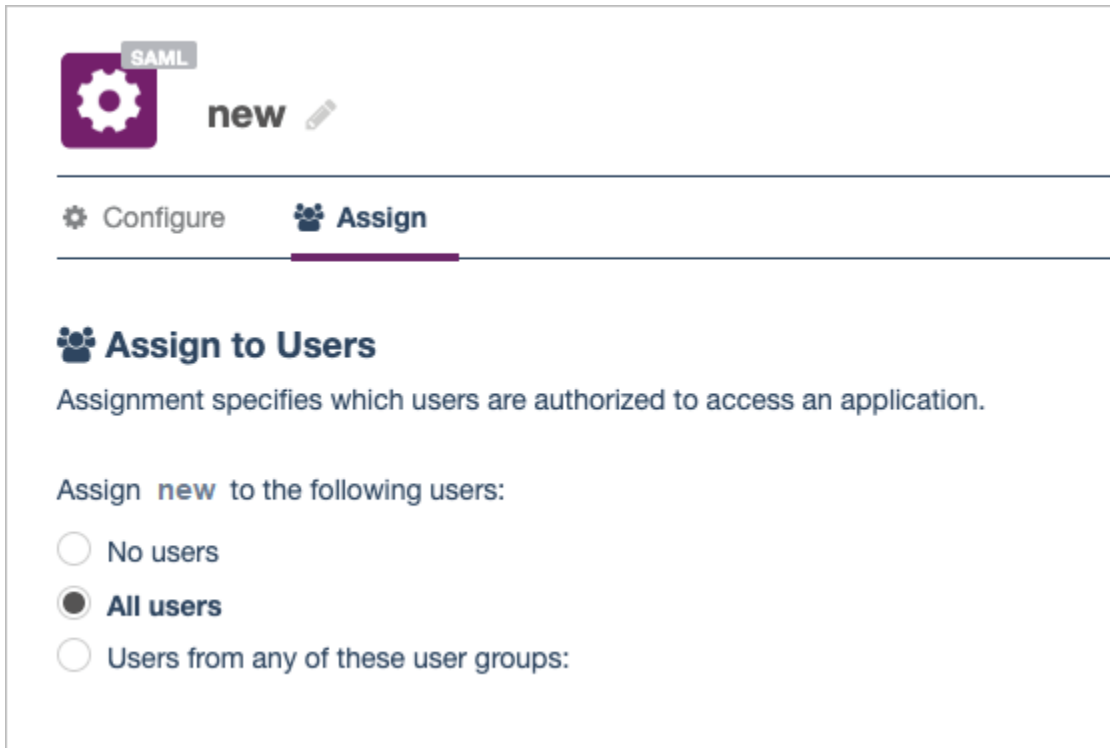
IDP INITIATED SSO RELAY STATE ⁱ

LOGOUT CHANNEL ⁱ

Front

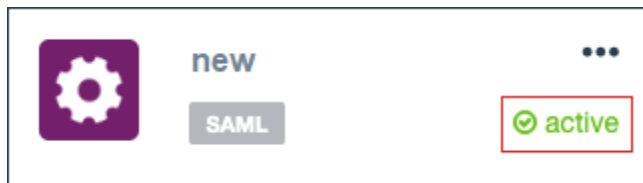
Back

14 Click **Save configuration** and switch to **Assign**.



15 Select **All users** or select a user/group and click **Save configuration**.

16 Your application should now be displayed as **active**.



Configure Parallels RAS as a Service Provider

In this step, you need to configure Parallels RAS as a service provider (SP) by adding SafeNet Trusted Access as the identity provider.

To add an identity provider:

- 1** In the RAS Console, select the **Connection** category.
- 2** Select the **SAML** tab.
- 3** Click **Tasks > Add**.

- 4 In the **Add Identity Provider** wizard, type a provider name and select an HTML5 Theme.
- 5 Select the **Import IdP metadata from file** option and specify the SAML metadata file that you've downloaded from the SafeNet Trusted Access portal earlier. See **Create a Generic SAML Application** (p. 43).

Add Identity Provider

Parallels

Name: Safenet2

Use with Theme: <Default>

Select a method that the wizard will use to obtain the identity provider information.

Import published IdP metadata

Example: https://www.contoso.com/metadata.xml

Import IdP metadata from file

C:\Users\...\Desktop\Safenet-IDP-GT.xml

Example: c:\mydocuments\metadata.xml

Manually enter the IdP information

< Back Next > Cancel Help

- 6 Click **Next**.

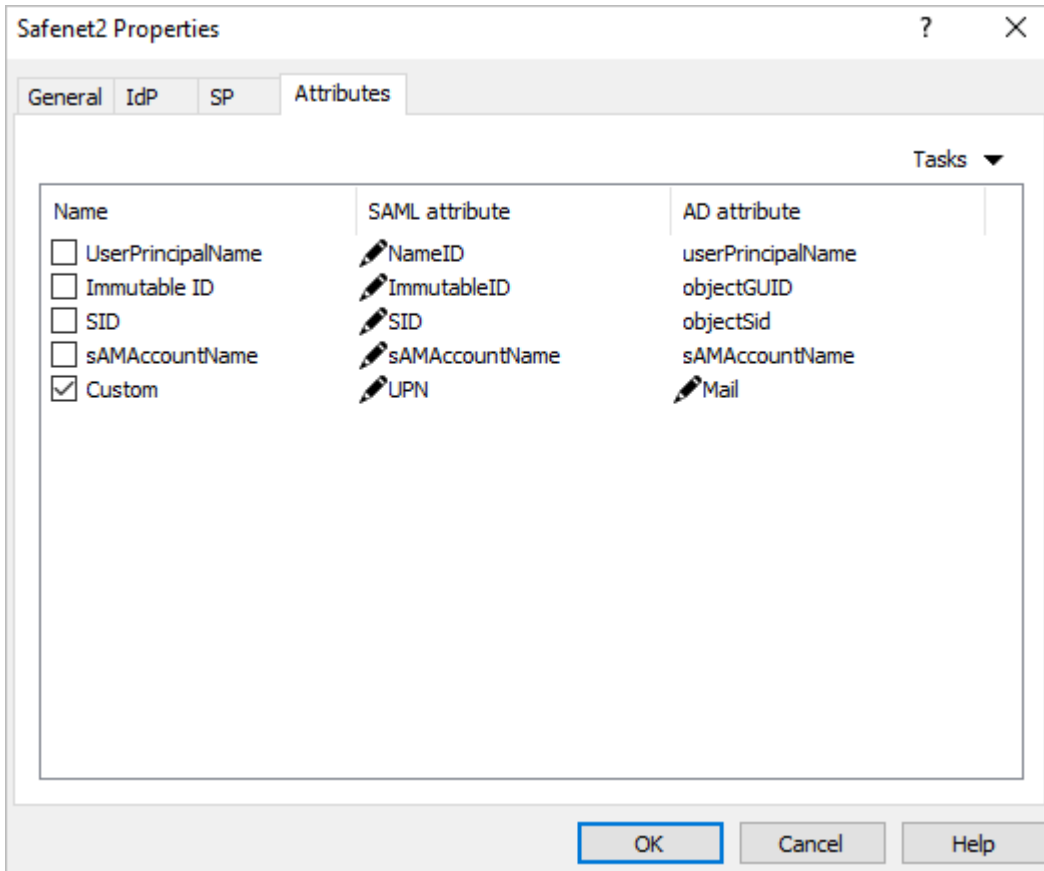
- 7 On the next page, the **IdP entity ID**, **IdP certificate**, **Logon URL**, and **Logout URL** fields will be populated automatically using the imported metadata.

The screenshot shows a window titled "Add Identity Provider" with the Parallels logo at the top. The window contains the following fields and controls:

- IdP entity ID:** A text box containing the URL `https://[redacted]/auth/realms/nfb1cuziu2-sta`.
- IdP certificate:** A large text area containing a long string of characters, including "VQQDE" at the end.
- Logon URL:** A text box containing the URL `https://[redacted]/auth/realms/nfb1cuziu2-sta/protocol/saml`.
- Logout URL:** A text box containing the URL `https://[redacted]/auth/realms/nfb1cuziu2-sta/protocol/saml`.
- Import Certificate...:** A button located below the certificate field.
- Allow unencrypted assertion:** A checkbox that is checked.
- Navigation buttons:** At the bottom, there are four buttons: "< Back", "Finish" (highlighted with a blue border), "Cancel", and "Help".

- 8 Click **Finish** and then click **Apply** in the RAS Console.
- 9 On the **SAML** tab, right-click the IdP provider that you just created and click **Properties**.
- 10 Switch to the **Attributes** tab and select the **Custom** attribute. Set the **SAML attribute** value to "UPN" and the AD attribute value to "Mail".

- 11 Clear the **UserPrincipalName** attribute if it's selected.



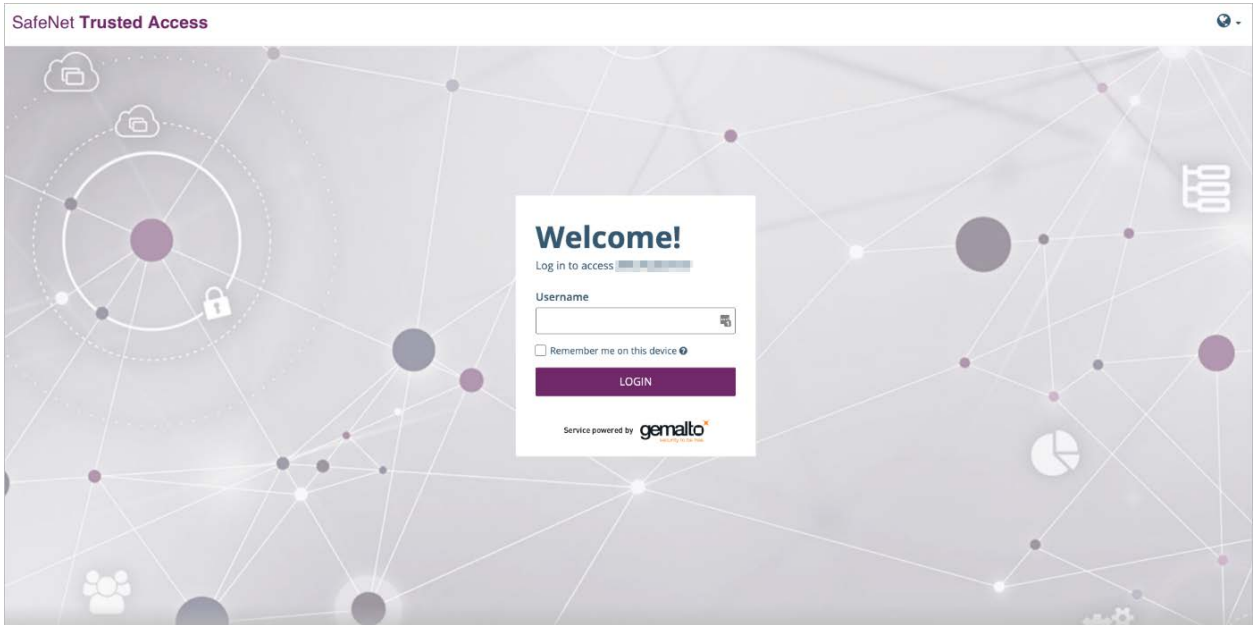
- 12 Click **OK** and then click **Apply** in the RAS Console.
- 13 Open the IdP provider **Properties** dialog again and switch to the **SP** tab.
- 14 Export the SP configuration to an XML file and save it on local drive. This is the file that you will need to import in the SafeNet Trusted Access portal as described in the **Create a Generic SAML Application** section (p. 43).

Test Connectivity

SP initiated

- 1 Open the RAS User Portal in a web browser. Use the Theme that you associated with the SAML application.

- 2 The user is redirected to SafeNet Trusted Access portal for authentication.



- 3 On successful authentication, the application list is presented to the user.

IdP initiated

- 1 Log in to the SafeNet Trusted Access portal and launch the assigned application.
- 2 The user is redirected to the User Portal using the assigned Theme and is presented with the application list.