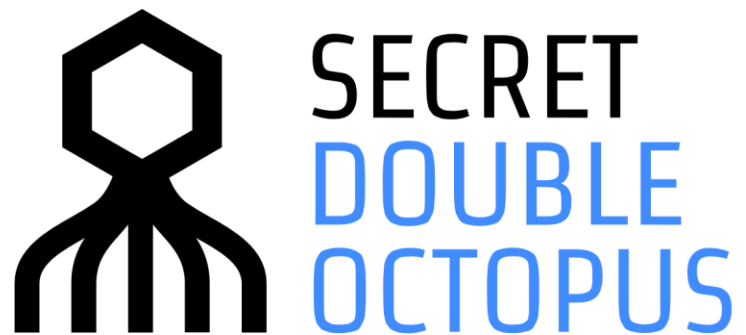


APRIL 20, 2020



How to Configure Octopus Authentication for CyberArk-11.2 and below

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Introduction

This document describes the configurations required for SAML 2.0 integration between the Octopus Authenticator and CyberArk Password Vault servers.

NOTE: This integration relevant to CyberArk version 11.2 and below.

The integration process involves the following sequential phases:

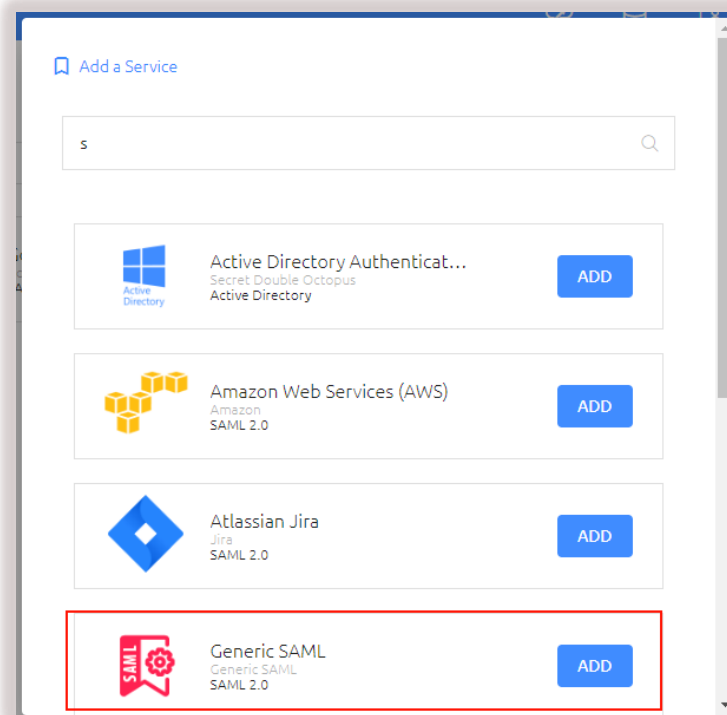
- Creating the CyberArk SAML Service
- Configuring the CyberArk Password Vault 3rd Party IdP Setup
- Completing Service Integration

Creating the CyberArk SAML Service

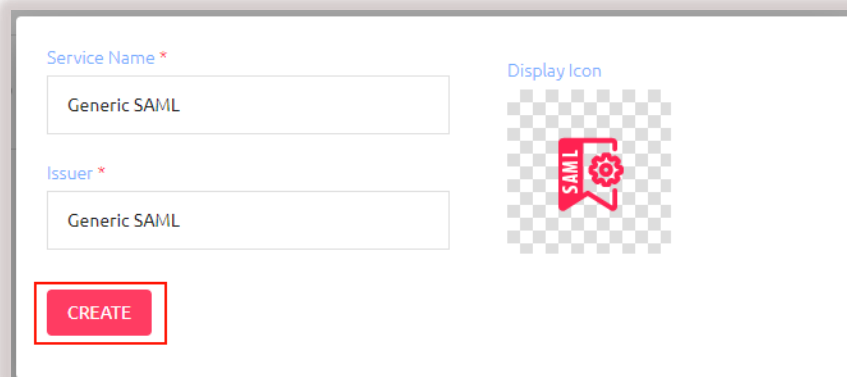
The following procedure explains how to create the required SAML service in the Octopus Management Console. The service settings will be used later in the Password Vault Identity Provider setup.

To add and configure the CyberArk SAML service:

1. From the Octopus Management Console, open the **Services** menu and click **Add Service**. In the **Generic SAML** tile, click **Add**.



Then, in the dialog that opens, click **Create**.



2. Review and configure the following settings in the **General Info** tab.

Setting	Description
Service Name	CyberArk Password Vault
Issuer	CyberArk
Description	Enter a brief note about the service
Display icon	This icon will be displayed on the Login page for the service. To change the default icon, click and upload the image of your choice.
Login Page URL	<https://<Enterprise Base URL>/generic-saml/<No.>/login>

The screenshot shows the configuration interface for CyberArk Password Vault. The page title is "CyberArk Password Vault" with a SAML icon. The navigation tabs are "GENERAL INFO", "PARAMETERS", "SIGN ON", "DIRECTORIES", and "USERS & GROUPS". The "GENERAL INFO" tab is active. The form contains the following fields:

- Service Name ***: A text input field containing "CyberArk Password Vault".
- Issuer ***: A text input field containing "CyberArk software".
- Description**: A text area containing "CyberArk Password Vault SAML Authentication".
- Display Icon**: A section with a "Display Icon" label, a placeholder image, and the CyberArk logo.
- Login Page URL**: A text input field containing "https:/ /generic-saml/3/login" with a document icon on the right.

A red "SAVE" button is located at the bottom left of the form.

Then, click **Save**.

- Open the **Parameters** tab and configure the following settings. You may create additional parameters if required.

Setting	Value / Notes
Octopus Authentication Login	Select the login method for the Octopus Authenticator Server, e.g., Email .
Name ID	Select the CyberArk login username, e.g., Alias 2 .
Method	Select GET .
ACS URL	CyberArk PasswordVault Access Restriction BaseURL: <i>https://components.cyberark.local/passwordvault/auth/saml/</i>
Audience	Password Vault
Passthrough Name ID	Select TRUE .

The screenshot shows the 'PARAMETERS' tab in the console. At the top, there are navigation tabs: GENERAL INFO, **PARAMETERS**, SIGN ON, DIRECTORIES, and USERS & GROUPS. Below these, there is a 'Parameters' section with a dropdown menu set to 'Service Parameters'. The main configuration area includes several fields:

- Octopus Authentication Login:** A dropdown menu set to 'Email'.
- Name ID:** A dropdown menu set to 'Alias 2'.
- Method:** A dropdown menu set to 'GET'.
- ACS URL *:** An empty text input field.
- Audience:** A text input field with the placeholder text 'Please Enter Valid Audience'.
- SSO URL:** A text input field with the placeholder text 'Please Enter Valid SSO URL'.
- Passthrough Name ID:** A dropdown menu set to 'TRUE'.

At the bottom of the configuration area, there is a blue button labeled '+ ADD PARAMETER'.

- At the bottom of the **Parameters** tab, click **Save**.

- Open the **Sign On** tab and configure the following settings. We recommend not to change default values.

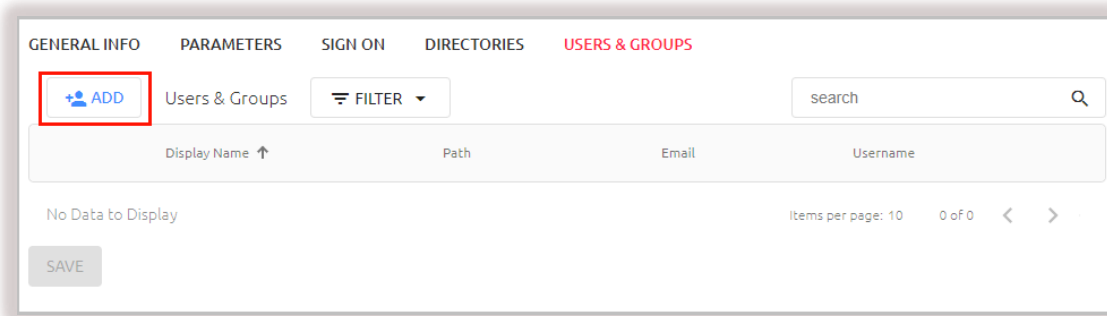
Setting	Value
Check Password	Disabled (default setting)
Single Sign-on (SSO)	Disabled (default setting)
Sign on Method	SAML 2.0
Issuer URL	https://<Enterprise base URL>/ generic-saml/<No>
SAML 2.0 Endpoint (HTTP)	https://<Enterprise base URL>/generic-saml/login
SAML Signature Algorithm	SHA-256 (default)
X.509 Certificate	X.509 certificate for the Octopus Authenticator CyberArk service
Custom Message	The message displayed to the user upon successful login

The screenshot shows the 'SIGN ON' configuration page with the following settings:

- Check Password:** Disabled (toggle)
- Single Sign-on (SSO):** Disabled (toggle)
- Sign on Method:** SAML 2.0
- Issuer URL:** https://generic-saml/3
- SAML 2.0 Endpoint (HTTP):** https://generic-saml/3/login
- SAML Logout URL:** https://generic-saml/3/logout
- SAML Metadata URL:** https://metadata/3/metadata.xml
- SAML Signature Algorithm:** SHA-256
- X.509 Certificate Fingerprint:** FF:BE:C0:C4:71:E9:FA:1E:B1:A4:CD:CA:FC:C7:51:C3:DE:4C:B
- X.509 Certificate Signature:** SHA-256
- SAML Signature Algorithm:** SHA-256
- X.509 Certificate:** 2020-03-26 16:47 | SHA-256 | 2048-bit
- Custom Message:** Generic SAML authentication using verification code

- At the bottom of the **Sign On** tab, click **Save**.

7. Open the **Directories** tab. Then, select the checkbox of the directory to be integrated with the service. (Local or LDAP).
8. Open the **Users & Groups** tab and click **Add**.



A popup opens, with a list of directories displayed on the left.

9. Expand the relevant directory and select the checkboxes of the groups and users that you want to add to the service. Then, click **Save** to close the popup.

The groups and users you selected are listed in the **Users & Groups** tab.

10. Click **Save** and then publish your changes.

Configuring the CyberArk Password Vault 3rd Party IdP Setup

The sections below explain how to configure Password Vault settings to support integration with the Octopus Authenticator.

Before you begin, make sure that you have access to the following elements. They can be copied from the **Sign On** tab of the CyberArk SAML service that you created in the Octopus Management Console.

- **Issuer URL:** Click the Copy icon to copy the URL.
- **SAML2.0 Endpoint (HTTP):** Click the Copy icon to copy the URL.
- **X.509 Certificate:** Click **View**. Then, in the popup that opens, click **Copy** to copy the string.

The screenshot shows the configuration page for a 3rd Party IdP Setup. The 'SIGN ON' tab is selected. The configuration includes the following fields:

- Check Password:** Toggle switch (off).
- Sign on Method:** SAML 2.0
- Issuer URL:** https://generic-saml/3 (highlighted with a red box)
- SAML2.0 Endpoint (HTTP):** https://generic-saml/3/login (highlighted with a red box)
- SAML Logout URL:** https://generic-saml/3/logout
- SAML Metadata URL:** https://metadata/3/metadata.xml
- Single Sign-on (SSO):** Toggle switch (off).
- X.509 Certificate Fingerprint:** FF:BE:C0:C4:71:E9:FA:1E:B1:A4:CD:CA:FC:C7:51:C3:DE:4C:B
- X.509 Certificate Signature:** SHA-256
- SAML Signature Algorithm:** SHA-256
- X.509 Certificate *:** 2020-03-26 16:47 | SHA-256 | 2048-bit (highlighted with a red box). Below this field are buttons for **VIEW**, **DOWNLOAD**, and **REGENERATE**.

Password Vault Web Configuration File Modification

The following procedure describes how to make the required edits in the **web.config** file.

To modify the web.config file:

1. Navigate to **C:\inetpub\wwwroot\PasswordVault** and open the **web.config** file for editing.
2. Insert the following key-value pairs below the *appSettings* line:

Key	Value
IdentityProviderLoginURL	SAML2.0 Endpoint (HTTP) URL
IdentityProviderCertificate	String of the X.509 Certificate
Issuer	Issuer URL

```

File Edit Tools Syntax Buffers Window Help
<remove name="X-Powered-By" />
</customHeaders>
</httpProtocol>
<staticContent>
  <remove fileExtension=".woff2" />
  <mimeMap fileExtension=".woff2" mimeType="application/x-woff2" />
  <remove fileExtension=".json" />
  <mimeMap fileExtension=".json" mimeType="application/json" />
</staticContent>
</system.webServer>
<appSettings>
  <add key="IdentityProviderLoginURL" value="https://oct.doubleoctopus.com/generic-saml/13/login"/>
  <add key="IdentityProviderCertificate" value="MIICEjCCAXugAwIBAgIJALqan2OL4li1MA0GCSqGSIb3DQEBBQUAMCIXIDAeBgNVBAMMF3MlY3JlZGRodWJsZV9jd
  c2Ujc2Ujcm00ZG91Ymx1b2N0b3B1cy5jb20ug28u0QYJKoZIhvcNAQEBBQADgY0AMIGJAoGBALAJund8PkyHqQkP05oiaVuGRIEDzzvcrg442mHShrvvUBDBudUB1vSi9VqeUUXun5Rg
  id0+q+ZsZe0YH51KQyPQewkGySxFbdPqgHBAAGJUDB0HBOGA1UDDgQVBBQVIp64LWzP234yRGJ4vH+DABsdZjAFBgNVHSMEGDAVgBQVIp64LWzP234yRGJ4vH+DABsdZjAFBgNVHRH
  ImQ7UNbH1IPx0h2FJagHkG8BtpyEXTsui gydzX+P20HayI87WCgnJgGcdSURQ6sP+yp/7byBEkzqG9bPX6xIq5U2XTLFudXTSGb0ubhdzSONOR3rvHfuePyVAcx0/k4Q1YTCk1"/>
  <add key="Issuer" value="https://oct.doubleoctopus.com/generic-saml/13"/>
  <add key="VaultFile" value="C:\CyberArk\Password Vault Web Access\VaultInfo\Vault.ini" />
  <add key="GWFile" value="C:\CyberArk\Password Vault Web Access\CredFiles\gwuser.ini" />
  <add key="HonePage" value="default.aspx" />
  <add key="CustomerLogoURL" value="../images/header_cobrand.gif" />
  <add key="ConfigurationCredentialFile" value="C:\CyberArk\Password Vault Web Access\CredFiles\appuser.ini" />
  <add key="ConfigurationSafeName" value="PUWAConfig" />
  <add key="LogFolder" value="c:\windows\temp\PUWA" />
  <!-- Valid values: "" - use temp folder -->
  <add key="ApplicationID" value="" />
  <add key="MultiLingualSupport" value="No" />
  <add key="InternalUsersPasswordChangeInterval" value="3600" />
  <add key="MobileVersionEnabled" value="yes" />
  <add key="FullVersionEnabled" value="yes" />
  <add key="RSADecodeUserName" value="yes" />
</appSettings>
</configuration>

```

3. Save your changes.

Password Vault SAML Configuration

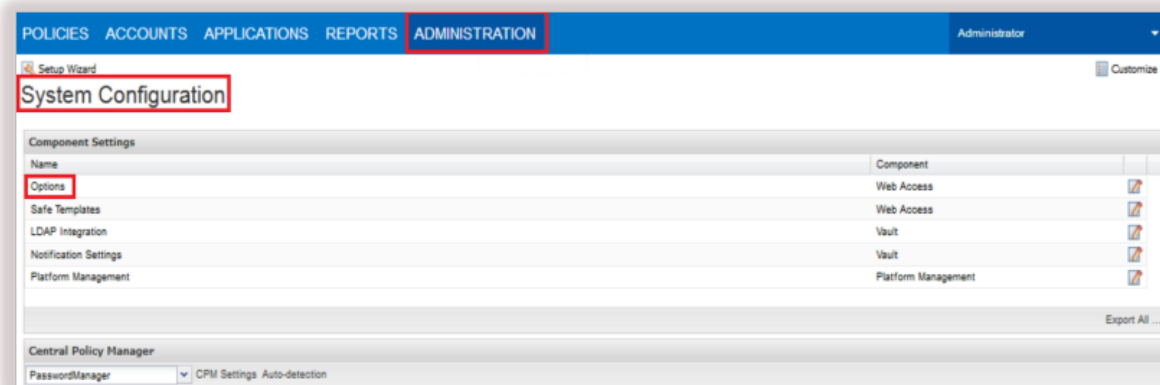
Follow the steps below to configure the required setup in your CyberArk Password Vault Administrator account.

To configure the Password Vault setup:

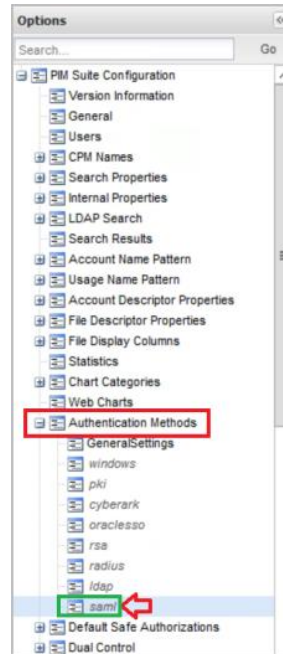
1. From your browser, log into your CyberArk Password Vault Admin account.



2. From the **Administration** menu, under **System Configuration**, select **Options**.



- Under **PIM Suite Configuration**, expand the **Authentication Methods** category and select **saml**.



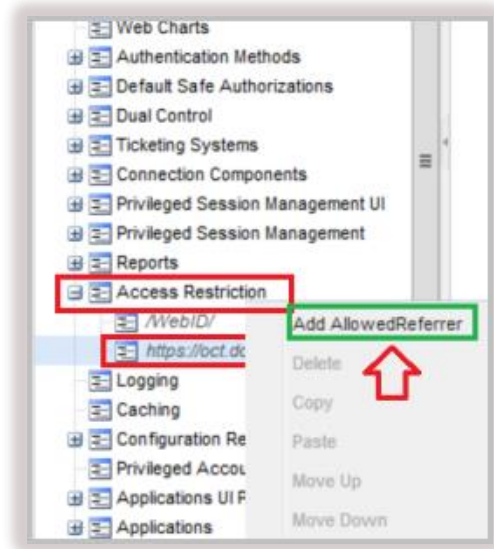
- Configure the following properties:

Name	Value
id	saml
Display Name	Octopus Authentication
Enabled	Yes
MobileEnabled	No
LogoffUrl	SAML2.0 Endpoint URL (from the SAML service in the Octopus Management Console)
UseVaultAuthentication	No

The screenshot shows the Properties dialog box for the 'saml' authentication method. The following properties are highlighted with red boxes:

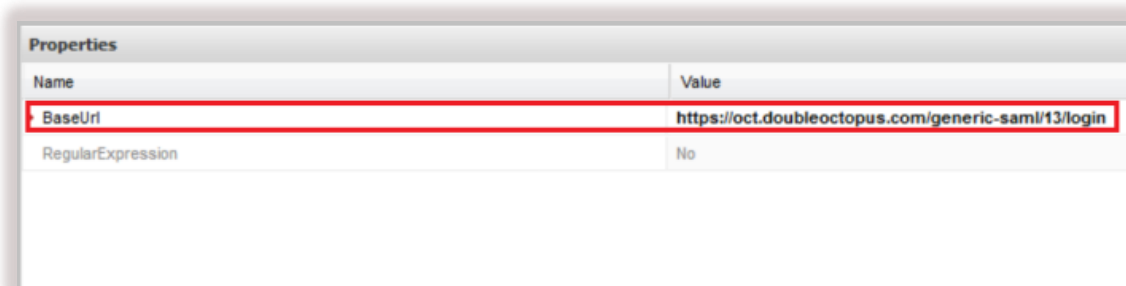
Name	Value
id	saml
DisplayName	Octopus Authentication
Enabled	Yes
LogoffUrl	https://oct.doubleoctopus.com/generic-saml/13/login
UseVaultAuthentication	No

5. In the upper left corner of the page, click **Apply**.
6. Under **PIM Suite Configuration**, expand the **Access Restriction** category. Right-click and select **Add AllowedReferrer**.



7. Configure the following properties:

Name	Value
BaseUrl	SAML2.0 Endpoint URL (from the SAML service in the Octopus Management Console)
RegularExpression	No



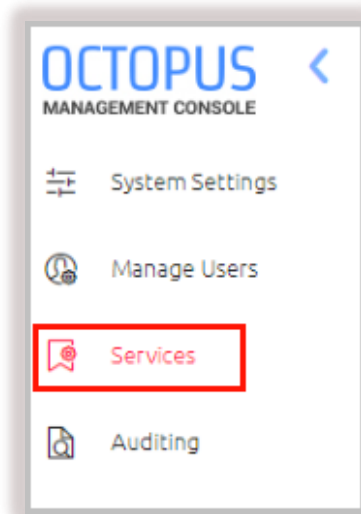
8. In the upper left corner of the page, click **Apply**.

Completing Service Integration

To complete the integration process, you need to add required service parameters to the Octopus Authenticator CyberArk service.

To complete service integration:

1. Log into the Octopus Management Console and open the **Services** menu.



2. In the tile of the CyberArk SAML service, click  to display the service settings.

3. Open the **Parameters** tab and set the following parameters:

Setting	Value
ACS URL	Password Vault SAML authentication URL (e.g., <i>https://components.cyberark.local/passwordvault/auth/saml/</i>)
Audience	Password Vault value

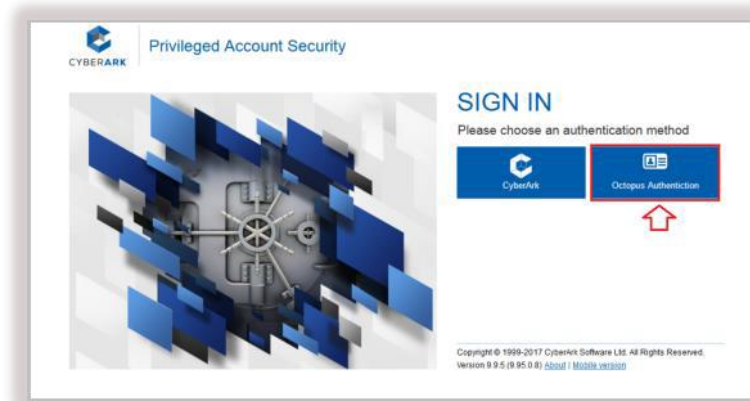
The screenshot shows the 'PARAMETERS' tab in a configuration interface. The 'ACS URL' field is set to 'https://components.cyberark.local/passwordvault/auth/sa' and the 'Audience' field is empty with the placeholder text 'Please Enter Valid Audience'. The 'SSO URL' field is also empty with the placeholder text 'Please Enter Valid SSO URL'. The 'Method' field is set to 'GET'. The 'Name ID' field is set to 'Email'. The 'Octopus Authentication Login' field is set to 'Email'. The 'Service Parameters' dropdown is set to 'Service Parameters'.

4. At the bottom of the **Parameters** tab, click **Save** and then publish your changes.

Password Vault Login with Octopus Authenticator

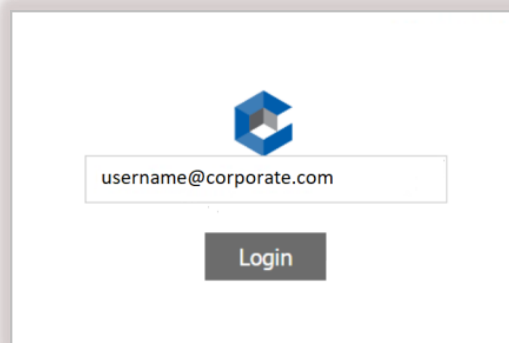
This section describes the user experience of logging into CyberArk via the Octopus Authenticator. The authentication process is as follows:

1. From a browser, the user opens the CyberArk login page and selects the **Octopus Authentication** method.

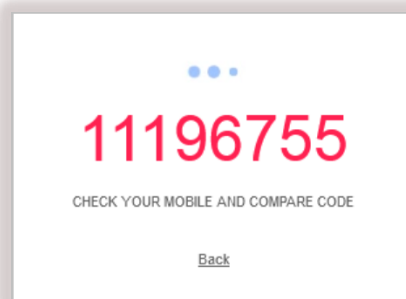


The user is then redirected to CyberArk's Octopus Authentication login page.

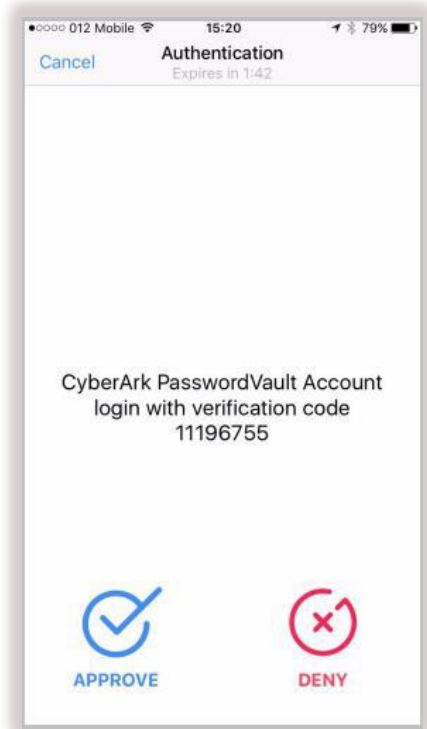
2. The user enters a username and clicks **Login**.



A challenge number is generated and displayed on the webpage.



A notification with this number then appears on the user's Octopus Mobile App, asking for authentication approval.



3. The user taps **Approve**.

After successful authentication, the user is logged into CyberArk.

