TIBCO® Enterprise Administrator

Agent for TIBCO® Security Server Guide

Version 2.4.2 | June 2024

Contents

Overview of TIBCO Security Server

The TIBCO® Security Server hosts all the services that are needed to support a wide range of security requirements regarding authentication, data integrity, data confidentiality, credentials, and single sign on.

The TIBCO Security Server currently hosts two types of services:

1. Credential Authority Service
2. Resource Manager Service

Credential Authority Service

The Credential Authority Service issues credentials needed to establish SSL connections and digitally sign and/or encrypt documents by automatically responding to authorized Certificate Signing Requests (CSR) coming from all products exposed to TIBCO® Enterprise Administrator in an enterprise.

Resource Manager Service

Use the Resource Manager Service to manage the security resource configuration objects needed across the products exposed to TIBCO Enterprise Administrator (TEA) in an enterprise. There are three types of resource configuration objects:

1. Credential configuration
2. Identity configuration
3. Authentication configuration

The Resource Manager Service supports the following activities, among others:

1. Create an SSL server socket
2. Create an SSL client connection
3. Safekeeping login credentials
4. Sign/encrypt a document
5. Authenticate a user's credentials

6. Support SSO between web applications
7. Authenticate SOAP requests

Overview of the Agent for TIBCO Security Server

TIBCO® Enterprise Administrator is shipped with an agent for the TIBCO Security Server. The TIBCO Enterprise Administrator provides a centralized administrative interface to manage and monitor multiple TIBCO products deployed in an enterprise. A product is exposed to TIBCO Enterprise Administrator with the help of an agent. TIBCO Enterprise Administrator agent for TIBCO Security Server, henceforth called the TEA agent in the rest of the document, can be used to administer, manage, and monitor TIBCO Security Server.

The TIBCO Enterprise Administrator server uses the agent to communicate with TIBCO Security Server. In some cases, you must explicitly register the agent, but this agent autoregisters itself with TIBCO Enterprise Administrator. On registration, the agent exposes the artifacts of TIBCO Security Server to TIBCO Enterprise Administrator. In case, you must re-register the agent, you can do so by going through the instructions in Registering the TEA Agent for TIBCO Security Server. In addition, you can also reconnect an agent or unregister an agent. For additional details about using TIBCO Enterprise Administrator, see *TIBCO Enterprise Administrator User Guide*.

TIBCO Enterprise Administrator Administrative Interfaces

The agent provides three distinct user interfaces to communicate with the TIBCO Enterprise Administrator server: Web UI, command Line -based Shell interface, and Python Scripting.

1. Web UI: The TIBCO Enterprise Administrator server provides a default UI to manage and monitor products. TIBCO Security Server is shown as a card in the Web UI. You can drill down the product to see the artifacts of the product. You can then administer and monitor the product from the TIBCO Enterprise Administrator Web UI.
2. Shell Interface: The TIBCO Enterprise Administrator server provides a command-line utility called the TIBCO Enterprise Administrator shell. It is a remote shell, based on the SSH protocol. The shell is accessible using any terminal program such as Putty. The scripting language is similar to bash from UNIX, but has important differences. You can use the shell to perform almost all the tasks offered by the server UI.
3. Python Scripting: You can use Python scripting to perform any activity you performed using the Web UI. Python scripting is especially useful when you must repeat a task for multiple users or use control structures to work through some conditions in your environment. Although you can use the shell utility to use the command-line UI, the shell UI does not support conditional statements and control structures. Python scripting proves to be useful in such cases.

This document discusses the Web UI interface. However, you can use the other two interfaces to achieve just about anything that you achieved using the Web UI. For more information on using these interfaces, refer to *TIBCO Enterprise Administrator User Guide*.

Starting the TIBCO Security Server Agent

Before you begin

Ensure that the TIBCO Enterprise Administrator server is running.

Procedure

1. Navigate to *TIBCO_HOME*\tea\agents\tss\<*version*>\bin.
2. Run `tss-agent.exe`

   > **Note:** If you do not start from the *TIBCO_HOME*\tea\agents\tss\<*version*>\bin folder, then run `tss-agent --propFile tss-agent.tra`

3. Verify whether or not the agent has started by logging in to TIBCO Enterprise Administrator. Follow the steps outlined in Log in to TIBCO Enterprise Administrator.

Log in to TIBCO Enterprise Administrator

You can use the Web UI to connect to the TIBCO Enterprise Administrator server.

Before you begin

You must start the TIBCO Enterprise Administrator server before logging into the Web UI. Open the command prompt and navigate to `<TIBCO_HOME>`. Run `<TIBCO_HOME>\tea\<version>\bin\tea.exe`. You must also start the TIBCO Security Server agent to monitor the product on the Web UI.

Password Policies

Following are the constraints on creating a password:

- The length of the password must be between 1 and 128 characters.
- You cannot reuse the past 5 passwords.
- Your account gets locked after 10 failed attempts. The `admin` account is the only exception to this rule, but the `admin` account experiences a lag of 1 second on every login after 10 failed attempts.
- You must reset a password after a lockout because it cannot be changed.

Procedure

1. Open a browser and navigate to the URL `http://localhost:8777/tea/`, where `localhost` is the default hostname and `8777` is the default port number.

   > **Note:** The default port number and other settings can be changed by modifying the settings in `tss.conf` file that is available under `<TIBCO_CONFIG_HOME>\tibco\cfgmgmt\tss\conf`.

2. Enter your Login credentials.

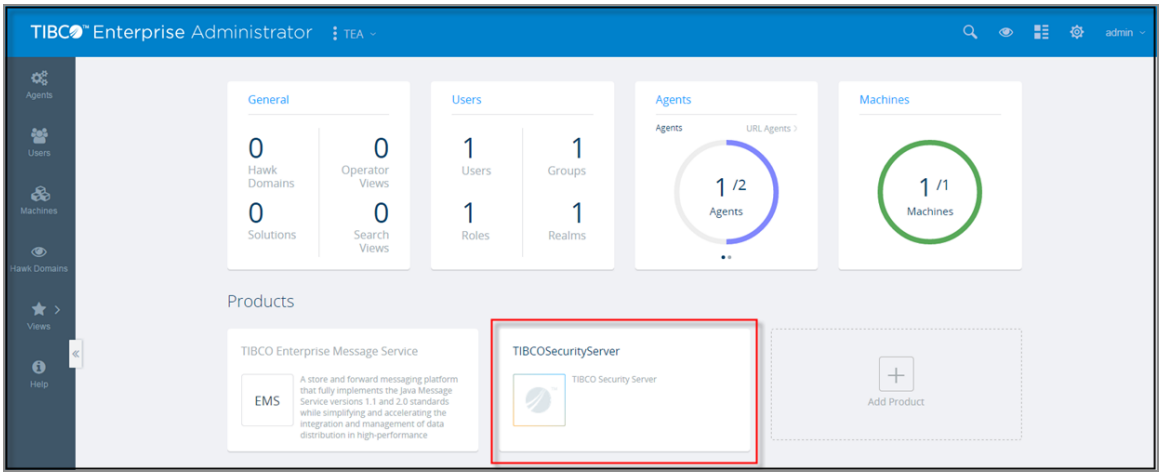
   The default username is *admin* and the default password is *admin.*

   On successful authentication, the landing page is displayed. The username with which you have logged in is shown as a menu option in the title pane. The landing

page displays cards with information on the general details, users, agents, machines, and products exposed to the TIBCO Enterprise Administrator server. The Products pane shows **TIBCOSecurityServer** as one of the products registered with TIBCO Enterprise Administrator.

Note: The default timeout for a session is 30 minutes.

Landing Page



Agent Management

You can use the Web UI to register TIBCO Enterprise Administrator agents and URL agents. The URL agents are not TIBCO Enterprise Administrator agents; however, they might be a web application that you want to port as TIBCO Enterprise Administrator agent. Every agent that is added to the TIBCO Enterprise Administrator is displayed on the landing page. You can perform basic administrative tasks collectively on these agents such as reconnecting or unregistering agents.

Registering the TEA Agent for TIBCO Security Server

The TEA agent for TIBCO Security Server auto-registers itself with the TIBCO Enterprise Administrator server using the TIBCO Enterprise Administrator server URL specified in the `tss.conf`. However, there may be circumstances, when you must explicitly register the agent. For example, if you want to register the TEA agent with any other TIBCO Enterprise Administrator server than the one in `tss.conf`, you must explicitly register agent with the URL `http://<hostname/IPAdddress>:<portno>/teagent/ssa`

Before you begin

Ensure that the TIBCO Enterprise Administrator server and the TEA agent for TIBCO Security Server are running.

Procedure

1. Log in to TIBCO Enterprise Administrator. The username is `admin` and the password is `admin`. The landing page is displayed.
2. Click the Agents card on the right.

   The Agent Management Pane is displayed.
3. Select the TEA agent and click **Register New**.
4. Provide the following details:

- Agent Name
- Agent URL :The default URL is `http://localhost:8080/teaagent/ssa` if TIBCO Enterprise Administrator server and the agent are on same machine. If you have changed the host name and port number in `tss.conf` then the URL is `http://<host_name>:<port_number>/teaagent/ssa`.
- Agent Description

> ⚠ **Caution:** When registering agents, ensure that the agent IDs do not collide.

5. Click **Register**.

   The TEA agent is visible in the Agent Management pane. The landing page also shows an icon for every registered agent. Your landing page looks different from the one displayed depending on the agents registered.

> ⚠ **Caution:** Watch out for the following:
>
> a. Ensure that you avoid registering two agents with the same ID. The TIBCO Enterprise Administrator server does not validate whether two agents have registered with the same ID.
>
> b. If there are two agents for the same object type, ensure that they have the same operation name and number. This is to ensure that when you invoke an operation, you can select the agent on which you want to execute the operation from the drop-down list.
>
> c. If the agent is not immediately visible in the pane, try refreshing the browser.
>
> d. If the URL used during registration is invalid, the "404-Page not Found" error occurs.
>
> e. Make sure that TEA agent is configured with correct hostname that is reachable from TIBCO Enterprise Administrator server.

Note: The scope of the document limits to a discussion on the TEA agent. This document does not cover the TIBCO Enterprise Administrator Web UI in detail. If you want to learn to use the three interfaces provided by TIBCO Enterprise Administrator, refer to *TIBCO Enterprise Administrator User Guide*.

Reconnecting an Agent

You can collectively reconnect agents using TIBCO Enterprise Administrator.

Before you begin

Ensure that the TEA server and the Admin agent are running.

Procedure

1. Click the **Agents** card.

   The Agent Management Pane is displayed.
2. From the **Agents** tab, select the agents you want to reconnect. Click **Reconnect**.

   A confirmation window is displayed.
3. Click **Reconnect** to confirm.

   The agents are reconnected with the server.

Unregistering an Agent

You can collectively unregister agents using the TIBCO Enterprise Administrator.

Before you begin

Ensure that the TIBCO Enterprise Administrator server and the agents are running.

Procedure

1. Click the Agents card.

The Agent Management pane is displayed.

2. From the Agents tab, select the agents you want to unregister. Click **Unregister**.
   A confirmation window is displayed.
3. Click **Unregister** to confirm.
   The agents are unregistered from the server.

TIBCO Security Server Management

The TEA agent for TIBCO Security Server provides ways of managing the security server. You can use the Credential Authority services and Resource Manager service to manage various security configurations.

The TIBCOSecurityServer pane provides you option to perform the following tasks:

Procedure

1. Register a Credential Authority service
2. Unregister a Credential Authority service
3. Configure the Credential Authority Service servers
4. Set various security configurations using Resource Manager

Credential Authority Service

The Credential Authority Services provides a credential server that acts as the certificate server providing certificates to the consumers. The consumers can use the certificate for various reasons such as signing, encrypting, SSL connection and so on.

You can request certificates by issuing a Certificate Signing Request (CSR) . A CSR contains the consumer's public certificate which needs to be digitally signed by the credential server. After validating the CSR, the server issues the signed certificate to the consumers.

Registering the Credential Authority Service

You must register the Credential Authority service with the TIBCO Enterprise Administrator server.

Before you begin

Ensure that the TIBCO Enterprise Administrator server and the agent are running. Ensure that the agent is registered with the server.

Procedure

1. Log in to TIBCO Enterprise Administrator.
2. From the landing page, click **TIBCOSecurityServer** card.
3. Click **register**.
4. Provide the following details:
    a. From the drop-down box, select operation target.
    b. url: On your local machine, the URL is `http://localhost:8080/tcs`.
5. Click **register** to register the Credential Authority service.

Unregistering the Credential Authority service

The Credential Authority service can be explicitly unregistered from the TIBCO Enterprise Administrator server.

Before you begin

Ensure that the TIBCO Enterprise Administrator server and the agent are running. Ensure that the agent is registered with the server.

Procedure

1. Log in to TIBCO Enterprise Administrator.
2. From the landing page, click **TIBCOSecurityServer** card.
3. Click **unregister**.
4. Provide the following details:
    a. From the dropdown box, select operation target.
    b. url
5. Click **unregister** to unregister the Credential Authority service.

Configuring the Credential Authority Service

Before using the services offered by the credential server, it is important that you configure the credential server.

Before you begin

Ensure that the TIBCO Enterprise Administrator server and the agent are running. Ensure that the agent is registered with the server.

Procedure

1. Log in to TIBCO Enterprise Administrator.
2. From the landing page, click **TIBCOSecurityServer** card.
3. Click **Credential Authority Service(s)**
4. Click **setConfiguration**.
5. Provide the following optional basic details:
    a. commonName: Issuer name of the credential server.
    b. orgUnit
    c. org
    d. city
    e. state
    f. country

    Additionally, provide the following details:

Property	Description
serverCertificateValidityPeriod	Required. The validity period for the Credential Authority Service server's own certificate. Validity period is in Days.
clientCertificateValidityPeriod	Required. The validity period for the certificates issued by Credential Authority Service server.

Property	Description
	Validity period is in Days.
keySize	Required field only if keyStore location is specified. The size of the generated key. The recommended size is `1024`.
keyAlgo	Required field only if keyStore location is specified. The key alogrithm. The recommended algorithm is `RSA`.
keySignAlgo	Required field only if keyStore location is specified. The Signature algorithm used to sign the request. The recommended algorithm is `SHA1WithRSA`.
keyStoreLocation	Optional. Point to the location of the keystore.
keyStorePassword	Required field only if keyStore location is specified.
keyStoreType	Required field only if keyStore location is specified. Some examples of the keystore Type are JCEKS, JKS, PKCS12.
keyStoreProvider	Optional. Some names of the keyStoreProvider are: a. SunJCE (JCEKS format) b. SUN (JKS format) c. IBMJCE (IBM JREs) d. SunJSSE (PKCS12 format)
keyAlias	Required field only if keyStore location is specified.
keyPassword	Required field only if keyStore location is specified.

Property	Description
hostname	Required. The name of the host.
portno	Required. The port number that the host listens at. Make sure that the port is available.
Enable SSL	Optional. Select this option to enable SSL.

6. Click **setConfiguration**.

> **Note:** You can create a credential authority service using the python scripts available under *TIBCO_HOME*\tea\agents\tss\<version>\samples\credentialAuthorityService.

Result

After configuring the credential server, it creates the credential store by itself if no keystore is specified in the configuration property. If not, it uses the keystore specified and stores it in the database.

> **Note:** Re-configuring the credential server changes the credential store. As a result, the previously issued certificates previously get invalidated.

Starting the Credential Authority Service

Before you begin

Ensure that the TIBCO Enterprise Administrator server and the agent are running. Ensure that the agent is registered with the server. Ensure that you have configured the credential server before starting it.

Procedure

1. Log in to TIBCO Enterprise Administrator.
2. From the landing page, click **TIBCOSecurityServer** card.

3. Click **Credential Authority Service(s)**.
4. From the servers pane, select the **Credential Authority Service**.
5. Click **start**.
6. At the confirmation window, click **start** to start the server.

Stopping the Credential Authority Service

Before you begin

Ensure that the TIBCO Enterprise Administrator server and the agent are running. Ensure that the agent is registered with the server. Ensure that the credential authority service has started.

Procedure

1. Log in to TIBCO Enterprise Administrator.
2. From the landing page, click **TIBCOSecurityServer** card.
3. Click **Credential Authority Service(s)**.
4. From the servers pane, select the **Credential Authority Service**.
5. Click **stop**.
6. At the confirmation window, click **stop** to stop the server.

Resource Manager Service

The Resource Manager Service provides a set of resources that provide access to various types of security providers: identity, credential, and authentication.

Identity, credential, and authentication providers enable clients and servers to assert and establish identity. Identity provider provides access based on credentials or token. Services such as Subject Identity Provider provides access to a username and password stored in a keystore. The Trust provider maintains the identity of a trusted resource.

The Credential Service provider provides access to private credentials and public certificates. Password Credential Resource provides a mechanism of storing username and

passwords. Keystore Credential Resource stores passwords in a keystore. The Login Credential Resource is used to generate key alias and key passwords.

The Authentication providers enable connections to authentication services such as LDAP Authentication, Kerberos Authentication, SiteMinder, and WSS Authentication.

Every resource manager service comes with create, update, and delete options.

Creating Password Credential Resources

Using Password Credential Resources, you can store passwords as secret keys in a keystore. This provider can be configured with a set of usernames and passwords, and a secret key.

Before you begin

Ensure that the TIBCO Enterprise Administrator server and the agent are running. Ensure that the agent is registered with the server.

Procedure

1. Log in to TIBCO Enterprise Administrator.
2. From the landing page, click **TIBCOSecurityServer** card.
3. Click **Resource Manager Service**.
4. From the Password Credential Resources pane, click **create**.

   Note: Alternatively, click **Password Credential Resources**, and in the following page, click **create**.

5. Provide the following details:

Property	Description
Name	Required. Specify the name.
protection	Required. Specify protection parameter to add an extra layer of

Property	Description
parameter	protection.
tokenMap	Required. Specify a token map.

6. Click **create** to create a password credential resource.

> **Note:** You can create a password credential resource using python scripts available under *TIBCO_HOME* `\tea\agents\tss\<version>\samples\resourceManagerService\password`.

Creating Login Credential Resources

To keep your username/password secure, you can mask them using a key alias and key password combination. For example, a database administrator might not want to share his credentials with another user while trying to give them access to the database. In such cases, a Login Credential Resource can come handy.

Before you begin

Ensure that the TIBCO Enterprise Administrator server and the agent are running. Ensure that the agent is registered with the server.

Procedure

1. Log in to TIBCO Enterprise Administrator.
2. From the landing page, click **TIBCOSecurityServer** card.
3. Click **Resource Manager Service**.
4. From the Login Credential Resources pane, click **create**.

> **Note:** Alternatively, click **Login Credential Resources**, and in the following page, click **create**.

5. Provide the following details:

Property	Description
keyAlias	Required. Name of the key alias.
keyPassword	Required. The key password.
username	Required. The username that you want to mask.
password	Required. The password that you want to mask.

6. Click **create** to create a Login Credential resource.

> **Note:** You can create a Login Credential resource using python scripts available under *TIBCO_HOME*\tea\agents\tss\<version>\samples\resourceManagerService\login.

Creating Keystore Credential Resources

By creating a Keystore Credential Resource, you can store encrypted passwords on a keystore. The Keystore Credential Resource provides the ability to specify a keystore (PKCS#12, JKS, JCEKS) containing public certificates, private keys, and secret keys (passwords) for use by the Identity Trust and Identity Subject service providers.

Before you begin

Ensure that the TIBCO Enterprise Administrator server and the agent are running. Ensure that the agent is registered with the server.

Procedure

1. Log in to TIBCO Enterprise Administrator.
2. From the landing page, click **TIBCOSecurityServer** card.
3. Click **Resource Manager Service**.
4. From the Keystore Credential Resources pane, click **create**.

> **Note:** Alternatively, click **Keystore Credential Resources**, and in the following page, click **create**.

5. Provide the following details:

Property	Description
Name	Required. Name of the keystore.
keyStoreFile	Required. Choose a keystore file.
keyStoreLocation	Required. Point to the location of the keystore.
keyStorePassword	Required field only if keyStore location is specified.
keyStoreType	Required field only if keyStore location is specified. Some examples of the keystore Type are JCEKS, JKS, PKCS12.
keyStoreProvider	Optional. Some names of the keyStoreProvider are: a. SunJCE (JCEKS format) b. SUN (JKS format) c. IBMJCE (IBM JREs) d. SunJSSE (PKCS12 format)
keystoreRefreshInterval	Required. Time in millisecond to refresh the keystore.
keystoreCacheLocation	Optional. Point to the location of the keystore cache.
sslIdentityProvider	Optional. Name of the SSL Identity Provider.

6. Click **create** to create a Keystore Credential resource.

> **Note:** You can create a Keystore Credential resource using python scripts available under *TIBCO_HOME*\tea\agents\tss\<version>\samples\resourceManagerService\keystore.

Creating Kerberos Authentication Resources

Before you begin

Ensure that the TIBCO Enterprise Administrator server and the agent are running. Ensure that the agent is registered with the server.

Procedure

1. Log in to TIBCO Enterprise Administrator.
2. From the landing page, click **TIBCOSecurityServer** card.
3. Click **Resource Manager Service**.
4. From the Kerberos Authentication Resources pane, click **create**.

   > **Note:** Alternatively, click **Kerberos Authentication Resources**, and in the following page, click **create**.

5. Enter the values for the fields listed in Kerberos Authentication Resources.
6. Click **create** to create a Kerberos Authentication resource.

   > **Note:** You can create a Kerberos Authentication resource using python scripts available under *TIBCO_HOME*\tea\agents\tss\<version>\samples\resourceManagerService\kerberos.

Kerberos Authentication Resources

The Kerberos Authentication resource template represents a Kerberos authentication service.

Property	Required?	Editable?	Accepts SVARs?	Description
Name				
enableSecurityTokenAttribute	N	Y	N	Controls if the security token that was authenticated must be included in the AttributeStatement of the issued SAML assertion. Default: Checked.
enableSAMLAttributesPurge				Controls if AttributeStatements of the authenticated assertion must be included in the AttributeStatements of the issued SAML assertion. Default: Checked.
enableHolderOfKeyAssertion				Controls if Holder-of-Key Subject Confirmation method must be used in the issued SAML assertion. Select one of the following security token types: • SAML 1.1

Property	Required?	Editable?	Accepts SVARs?	Description
				Token 1.1 • SAML 2.0 Token 1.1
samlValiditySeconds	N	Y	Y	The duration of the validity of the SAML tokens. Default: 600 s.
tokenSigningService	N	Y	Y	The name of an Identity Provider resource that identifies the signer of the SAML tokens.
clockskew	Y	N	Y	The maximum allowable amount of clock skew before a Kerberos message is assumed to be invalid. Default: 600.
dnsLookupKdc	Y	N	N	Indicate whether DNS SRV records must be used to locate the KDCs and other servers for a realm, if the KDC is not the default realm. Default: Checked.

Property	Required?	Editable?	Accepts SVARs?	Description
dnsLookupRealm	Y	N	N	Indicate whether DNS TXT records must be used to determine the Kerberos realm of a host if it is not the default realm. Default: Unchecked.
defaultDomain	Y	Y	Y	The default DNS domain to which the Kerberos realm belongs. Default: None.
ticketLifeTime	Y	N	Y	The lifetime for initial tickets. Default: 24.
renewLifeTime	Y	N	Y	The renewable lifetime for initial tickets. Default: None.
noAddresses	Y	N	N	Indicate that initial Kerberos ticket are addressless. Default: Checked.
forwardable	Y	N	N	Indicate that initial Kerberos

Property	Required?	Editable?	Accepts SVARs?	Description
				ticket are forwardable. Default: Unchecked.
proxiable	Y	N	N	Indicate that initial Kerberos ticket are proxiable. Default: Checked.
krb5ConfFileLocationOption	N	Y	N	The method for specifying the location of the Kerberos configuration file. One of: • System Specific Default Location - Use the system-specific default location. • Custom Configuration File - Use a custom configuration file. Enables the

Property	Required?	Editable?	Accepts SVARs?	Description
				Custom Configuration File Name field. • Generated - Use a generated configuration file. Enables the Generated Configuration File field and all other fields whose values are used in generating the configuration file. Default: System Specific Default Location.
Realm	N	Y	N	The Kerberos realm. Default: None.
kdc	N	Y	N	The Kerberos key distribution center. Default: None.

Property	Required?	Editable?	Accepts SVARs?	Description
krb5ConfFileLocation	Y	Y	Y	The fully-qualified path to the configuration file. Default: None.
autoGeneratedKrb5ConfFileLocation	Y	Y	Y	The fully-qualified path to which the generated configuration file is saved. Default: None.
storeKey	Y	N	N	Indicate that the principal's key must be stored in the subject's private credentials. Default: Checked.
doNotPrompt				
refreshKrb5Config	Y	N	N	Indicate that you want the configuration to be refreshed before the login authentication method is invoked. Default: Unchecked.

Property	Required?	Editable?	Accepts SVARs?	Description
renewTGT	Y	N	N	Indicate that you want to renew ticket granting tickets. If checked, the Use Ticket Cache checkbox is checked and the Ticket Cache Name field is enabled. Default: Unchecked.
useTicketCache	Y	N	N	Indicate that you want the ticket granting tickets to be obtained from the ticket cache. Default: Unchecked.
ticketCache	Y	When useTicketCache is checked.	Y	The name of the ticket cache that contains ticket granting tickets. Default: None.
useKeyTab	Y	N	N	Indicate that the principal's key must be obtained from the keytab. When checked, the Keytab

Property	Required?	Editable?	Accepts SVARs?	Description
				Filename field is enabled. If Keytab Filename field is not set, the keytab is obtained from the Kerberos configuration file. Default: Unchecked.
keyTab	Y	When useKeyTab is checked.	Y	The file name of the keytab. Default: None.
principal	Y	N	Y	The name of the principal. Default: None.

Creating LDAP Authentication Resources

The LDAP Authentication Resource helps you create an authentication mechanism using LDAP.

Before you begin

Ensure that the TIBCO Enterprise Administrator server and the agent are running. Ensure that the agent is registered with the server.

Procedure

1. Log in to TIBCO Enterprise Administrator.
2. From the landing page, click **TIBCOSecurityServer** card.
3. Click **Resource Manager Service**.

4. From the LDAP Authentication Resources pane, click **create**.

   Note: Alternatively, click **LDAP Authentication Resources**, and in the following page, click **create**.

5. Enter the values for the fields listed in LDAP Authentication Resources.
6. Click **create** to create a LDAP Authentication resource.

   Note: You can create a LDAP Authentication resource using python scripts available under *TIBCO_HOME*\tea\agents\tss\<version>\samples\resourceManagerService\ldap.

LDAP Authentication Resources

The LDAP Authentication resource template represents an LDAP server providing authentication services.

LDAP authentication is done in one of the following ways:

- Bind mode — The bind mode authenticates (binds) each user's Disitinguished Name (DN) and password to the LDAP server. In this case, you can use the DN Template field to so that users do not have to provide their whole DN. For example, a DN Template of uid={0},OU=Department,DC=company,DC=com allows users to type in only their uid and the RI will use the template to create the DN.
- Search mode — In the search mode, a connection binds as the administrative user. It then searches for the given users and authenticates their found DNs and passwords with the LDAP server. In this case, you must provide the credentials of such an administrative user by checking Log in as Administrator.

Property	Required?	Editable?	Accepts SVARs?	Description
Name				
	N	Y	N	Controls if the security token

Property	Required?	Editable?	Accepts SVARs?	Description
enableSecurityTokenAttribute				that was authenticated must be included in the AttributeStatement of the issued SAML assertion. Default: Checked.
enableSAMLAttributesPurge				Controls if AttributeStatements of the authenticated assertion must be included in the AttributeStatements of the issued SAML assertion. Default: Checked.
enableHolderOfKeyAssertion				Controls if Holder-of-Key Subject Confirmation method must be used in the issued SAML assertion. Select one of the following security token types: • SAML 1.1 Token 1.1 • SAML 2.0 Token 1.1
samlValiditySeconds	N	Y	Y	The duration of the validity of the SAML tokens. Default: 600 s.
tokenSigningService	N	Y	Y	The name of an Identity Provider resource that identifies the signer of the SAML tokens.
initialCtxFactory	N	Y	Y	The factory object that

Property	Required?	Editable?	Accepts SVARs?	Description
				provides the starting point for resolution of names within the LDAP server. Default: com.sun.jndi.ldap.LdapCtxFactory.
serverURL	Y	Y	Y	A space-separated list of URLs for an LDAP server. To achieve fault tolerance, you can specify URLs. For example, ldap://server1.example.com:686 ldap://server2.example.com:1686. Default: ldap://localhost:389.
searchTimeOut	N	Y	Y	The time to wait for a response from the LDAP directory server. Default: -1, which means to wait forever.
userAttributeUsersName	N	Y	Y	The name of the LDAP attribute from which the user display name can be obtained. Always specify an Attribute Name even though this field is labeled optional. You must use an attribute that is part of the LDAP schema. Otherwise, any attribute not defined by the

Property	Required?	Editable?	Accepts SVARs?	Description
				schema can result in an error. Default: None
userAttributeGroupsName	Y	Y	Y	The name of the attribute in each user object that lists the groups to which the user belongs. Default: None.
userAttributesExtra	N	Y	Y	Optional list of user attributes to retrieve from the LDAP directory during authentication. Default: None.
groupAttributeGroupsName	Y	Y	Y	The name of the attribute in the group object that contains the name of the group. For example, for OpenLDAP: cn, for ActiveDirectory:sAMAccountName. Default: None.
userSearchBaseDN	Y	Y	Y	Base distinguished name from which the search starts. Example: ou=department, dc=company, dc=com.
userSearchScopeSubtree				

Property	Required?	Editable?	Accepts SVARs?	Description
userSearchExpression	N	Y	Y	The expression used for searching a user. An example for this expression is (CN={0}). '{0}' is replaced by the username being searched for. You can define any complex filter like (&(cn={0})(objectClass=account)). Default: &(objectClass=person)(uid={0})
groupSearchBaseDN	N	Y	Y	Searches for groups beginning at this base distinguished name (DN). Default: None.
enableNestedGroupSearch				
groupSearchExpression	Y	Y	Y	Search by matching this expression against potential groups. Default: None.
groupSearchScopeSubtree	N	N	N	Search the entire subtree starting at the base DN for groups (default). Otherwise, search only the nodes one level below the base DN. Default: Checked.
groupIndication	N	Y	N	Specifies how a user's group memberships are found.

Property	Required?	Editable?	Accepts SVARs?	Description
				Group information is used by Administrator when a user, once authenticated, performs other activities in the system. Options: • Group has users A list of users that belong to the group. • User has groups A list of groups to which the user belongs. • User DN has groupsThe DN with a list of groups to which the user belongs. • No Group Info Group memberships are not handled. If the selected value is User has groups or User DN has groups, the Users Attribute with Group Names field displays. If the selected value is Group has users, the following fields display: • Group Search Base DN • Group Search Expression • Group Attribute with

Property	Required?	Editable?	Accepts SVARs?	Description
				Usernames • Group Attribute with Group Name • Group Attribute with Subgroup Names • Group Search Scope Subtree Default: No Group Info.
groupAttributeSubgroupsName	N	Y	Y	The name of the attribute in the group object that contains its subgroups. For example, for OpenLDAP: uniqueMember, for ActiveDirectory: member. Default: None.
groupAttributeUsersName	Y	Y	Y	The name of the attribute in the group object that contains its users. For example, for OpenLDAP: uniqueMember, for ActiveDirectory: member. Default: None.
userDNTemplate	Y	Y	Y	The template by which the User DN, used to bind to the LDAP server, is generated. Because the full DN is always supplied, the template must always contain {0} which gets replaced with the actual username.

Property	Required?	Editable?	Accepts SVARs?	Description
				Default: {0}
connectionPools				
securityAuthentication	N	Y	Y	Value of Simple Authentication and Security Layer (SASL) authentication protocol to use. Values are implementation-dependent. Some possible values are simple, none, md-5. Default: Blank.
followReferrals	N	Y	N	Indicate whether the client must follow referrals returned by the LDAP server. Default: Unchecked.
sslIdentityProvider				The name of the Identity Trust provider resource for establishing SSL connection to the LDAP server.
credentialProvider				The name of the Credential Keystore or Credential Password provider resource containing the LDAP login credentials. This option requires a keyAlias and keyPassword to also be specified. This option can be used in place of the adminIdentityProvider setting.

Property	Required?	Editable?	Accepts SVARs?	Description
adminIdentityProvider				The name of the Identity Subject provider resource containing the LDAP login credentials. This option can be used in place of the credentialProvider/keyAlias/keyPassword setting tuple.
keyPassword	Y	Y	Y	The password protecting the key entry. Default: None
keyAlias	Y	Y	Y	Alias of the user's key entry in the keystore managed by the keystore provider. Default: None

Creating SiteMinder Authentication Resources

Before you begin

Ensure that the TIBCO Enterprise Administrator server and the agent are running. Ensure that the agent is registered with the server.

Procedure

1. Log in to TIBCO Enterprise Administrator.
2. From the landing page, click **TIBCOSecurityServer** card.
3. Click **Resource Manager Service**.
4. From the SiteMinder Authentication Resources pane, click **create**.

> **Note:** Alternatively, click **SiteMinder Authentication Resources**, and in the following page, click **create**.

5. Enter the values for the fields listed in SiteMinder Resources.
6. Click **create** to create a SiteMinder Authentication resource.

> **Note:** You can create a SiteMinder Authentication resource using python scripts available under *TIBCO_HOME* `\tea\agents\tss\<version>\samples\resourceManagerService\siteminder`.

SiteMinder Authentication Resources

The SiteMinder Authentication resource template represents a SiteMinder authentication service.

Property	Required?	Editable?	Accepts SVARs?	Description
Name				
enableSecurityTokenAttribute	N	Y	N	Controls if the security token that was authenticated must be included in the AttributeStatement of the issued SAML assertion. Default: Checked.
enableSAMLAttributesPurge				Controls if AttributeStatements of the authenticated

Property	Required?	Editable?	Accepts SVARs?	Description
				assertion must be included in the AttributeStatements of the issued SAML assertion. Default: Checked.
enableHolderOfKeyAssertion				Controls if Holder-of-Key Subject Confirmation method must be used in the issued SAML assertion. Select one of the following security token types: • SAML 1.1 Token 1.1 • SAML 2.0 Token 1.1
samlValiditySeconds	N	Y	Y	The duration of the validity of the SAML tokens. Default: 600 s.
tokenSigningService	N	Y	Y	The name of an Identity Provider resource that identifies the signer of the SAML tokens.

Property	Required?	Editable?	Accepts SVARs?	Description
smHostConfFileLocationOption	N	Y	N	The method for specifying the location of the SiteMinder configuration file. • System Specific Default Location - Use the system-specific default location. • Custom File Location - Use a custom configuration file. Enables the Custom Configuration File Name field. • Generate - Use a generated configuration file. Enables the Generated Configuration File field

Property	Required?	Editable?	Accepts SVARs?	Description
				and all other fields whose values are used in generating the configuration file. Default: System Specific Default Location.
smHostConfFileLocation	Y	Y	Y	The path to the configuration file. Default: None.
autoGeneratedSmHostConfFileLocation	Y	Y	Y	The path to which the generated configuration file is saved. Default: None.
hostName	Y	Y	Y	The name of the host. Default: None.
sharedSecret	Y	Y	Y	The host's shared secret. Default: None.
sharedSecretTime	Y	N	Y	The validity period for the shared

Property	Required?	Editable?	Accepts SVARs?	Description
				secret. Default: None.
hostConfigObject	Y	Y	Y	The host's configuration object name. Default: None.
policyServer	Y	Y	Y	The URLs of the SiteMinder Policy Server. Default: None.
requestTimeout	Y	N	Y	The request timeout. Default: 60 s.
cryptoProvider	Y	N	Y	The name of the crypo provider. Default: None.
fipsMode	Y	N	N	The FIPS mode for the crypto provider. • FIPS-Compatibility Mode - the environment uses existing SiteMinder algorithms to encrypt sensitive

Property	Required?	Editable?	Accepts SVARs?	Description
				data. • FIPS-Migration Mode - the SiteMinder Policy Server continues to use existing SiteMinder encryption algorithms as you migrate the environment to use only FIPS-compliant algorithms. • FIPS-only Mode - the environment only uses FIPS-compliant algorithms to encrypt sensitive data. Default: None.
agentName	Y	Y	Y	The name of the SiteMinder agent that enforces

Property	Required?	Editable?	Accepts SVARs?	Description
				access control policies provided by the Policy Server. Default: None.
resource	Y	N	Y	The name must match the corresponding value specified in the policy set or it must be left blank. Default: None.
clientIPAddress	Y	N	Y	The IP address of the machine on which the SiteMinder agent is installed. Default: None.

Creating WSS Authentication Resources

Before you begin

Ensure that the TIBCO Enterprise Administrator server and the agent are running. Ensure that the agent is registered with the server.

Procedure

1. Log in to TIBCO Enterprise Administrator.
2. From the landing page, click **TIBCOSecurityServer** card.
3. Click **Resource Manager Service**.

4. From the WSS Authentication Resources pane, click **create**.

> **Note:** Alternatively, click **WSS Authentication Resources**, and in the following page, click **create**.

5. Enter the values for the fields listed in WSS Authentication Resources.
6. Click **create** to create a WSS Authentication resource.

> **Note:** You can create a WSS Authentication resource using python scripts available under *TIBCO_HOME*\tea\agents\tss\<version>\samples\resourceManagerService\wss.

WSS Authentication Resources

A WS-Security ASP resource template enables a connection to Web Services Security authentication services.

Property	Required?	Editable?	Accepts SVARs?	Description
Name				
enableSecurityTokenAttribute	N	Y	N	Controls if the security token that was authenticated must be included in the AttributeStatement of the issued SAML assertion. Default: Checked.
enableSAMLAttributesPurge				Controls if AttributeStatements

Property	Required?	Editable?	Accepts SVARs?	Description
				of the authenticated assertion must be included in the AttributeStatements of the issued SAML assertion. Default: Checked.
enableHolderOfKeyAssertion				Controls if Holder-of-Key Subject Confirmation method must be used in the issued SAML assertion. Select one of the following security token types: • SAML 1.1 Token 1.1 • SAML 2.0 Token 1.1
samlValiditySeconds	N	Y	Y	The duration of the validity of the SAML tokens. Default: 600 s.
tokenSigningService	N	Y	Y	The name of an Identity Provider resource that identifies the signer of the SAML tokens.

Property	Required?	Editable?	Accepts SVARs?	Description
signatureValidationService	N	Y	N	Indicate whether to verify the signatures. If checked, activates the Trust Provider field. Default: Unchecked.
kerberosTokenValidationService	N	N	N	Kerberos is a secure method for authenticating a request for a service in a computer network.
usernameTokenValidationService	N	N	N	Indicate whether to verify the username. If checked, activates the Authentication Provider field. Default: Unchecked.
groupSelectorExpression				
wssBspCompliant				

Creating Subject Identity Resources

The Subject Identity Provider is used for obtaining and using private credentials obtained from a credential store.

The Subject Identity Provider needs the following:

- Requires a trust store for SSL client connections and signature verification.

- Requires a credential store for SSL server and SSL mutual authentication and for creating digital signature.
- Requires a private keystore for creating digital signature.

Before you begin

Ensure that the TIBCO Enterprise Administrator server and the agent are running. Ensure that the agent is registered with the server. Ensure that the Keystore Credential Resource and Login Credential resource is configured.

Procedure

1. Log in to TIBCO Enterprise Administrator.
2. From the landing page, click **TIBCOSecurityServer** card.
3. Click **Resource Manager Service**.
4. From the Subject Identity Resources pane, click **create**.

   Note: Alternatively, click **Subject Identity Resources**, and in the following page, click **create**.

5. Provide the following details:

Property	Description
name	Required. Name of the Subject Identity Provider.
sslProtocol	Optional. The name of the SSL Protocol such as `TLSv1`.
sslProvider	Optional. The name of the SSL Provider.
sslCipherStrength	Optional. The cipher strength is the number of bits in the key used to encrypt data. The greater the number of bits in the key (cipher strength), the more possible key combinations and the longer it would take

Property	Description
	to break the encryption. The cipher strength must be at least 128 bits.
sslExplicitCiphers	Optional. Explicit Ciphers are enabled when SSL Cipher Class is set to Explicit Ciphers.
sslHostName	Optional. Name of the SSL Host.
sslVerifyHost	Optional. Select this option to verify SSL Host.
sslVendor	Optional. Name of the SSL vendor.
kerberosServiceProvider	Optional. Name of the Kerberos Service Provider.
kerberosServicePrincipalName	Optional. The name of a Kerberos client principal. Specify this information to gain access to the private key of the client principal.
wssEncryptionAlgorithm	Optional. The WSS encryption algorithm. By default, it is `AES_128`.
wsskeyEncryptionAlgorithm	Optional. The WSS key encryption algorithm. By default, it is `RSAOEP`.
wssBspCompliant	Optional. Select this option to make the resource wssbsp compliant.
wssStrictTimestamp	Optional. Select this option to enable WSS strict timestamp.
wssTimeStampTimeToLive	Optional. The time to live in seconds.

Property	Description
wssTimeStampFutureTimeToLive	Optional. The future time to live in seconds.
wssCertificateRevocationURL	Optional. The WSS Certificate revocation URL.
trustStoreServiceProvider	Required. The name of the keystore credential resource.
enableTrustStoreAccess	Required. By default, this option is enabled.
sslExplicitlyTrustAllCAs	Optional. By default, this option is enabled.
sslCertificateRevocationURL	Optional. The SSL Certificate revocation URL.
sslCertificateRevocationReloadInterval	Optional the reload interval for revoking the SSL certificate.
IdentityServiceProvider	Required. The name of the keystore credential resource.
keyAlias	Required. Name of the key alias. You can use the information captured by the Login Credential Resource.
keyPassword	Required. The Key password. You can use the information captured by the Login Credential Resource.
enableCredentialStoreAccess	Optional. Select this option to enable credential store access.
sslClientAuth	Optional. The SSL client authentication.

Property	Description
wssEnableProtectToken	Optional. This option enables protected tokens. By default, this option is selected.
kerberosPrincipal	Optional. The name of a Kerberos client principal. Specify this information to gain access to the private key of the client principal.
kerberosPrincipalPassword	Optional. The principal password for Kerberos.
wssSignatureAlgorithm	Optional. The WSS signature algorithm. By default, it is `RSA_SHA256`.
wssDigestAlgorithm	Optional. The WSS digest algorithm. By default, it is `SHA256`.
wssCanonAlgorithm	Optional. The WSS canon algorithm. By default, it is `XML_EXC_C14N`.
wssTimetoLive	Optional. The time to live in seconds.

6. Click **create** to create a Subject Identity resource.

> **Note:** You can create a Subject Identity resource using python scripts available under *TIBCO_HOME*\tea\agents\tss\<version>\samples\resourceManagerService\subject.

Creating Trust Identity Resources

The Trust Identity Provider is used for obtaining certificates needed for performing trust operations from a credential store. This resource requires a trust store for SSL client and signature verification.

Before you begin

Ensure that the TIBCO Enterprise Administrator server and the agent are running. Ensure that the agent is registered with the server.

Procedure

1. Log in to TIBCO Enterprise Administrator.
2. From the landing page, click **TIBCOSecurityServer** card.
3. Click **Resource Manager Service**.
4. From the Trust Identity Resources pane, click **create**.

   Note: Alternatively, click **Trust Identity Resources**, and in the following page, click **create**.

5. Provide the following details:

Property	Description
name	Required. Name of the Trust Identity Provider.
sslProtocol	Optional. The name of the SSL Protocol such as `TLSv1`.
sslProvider	Optional. The name of the SSL Provider.
sslCipherStrength	Optional. The cipher strength is the number of bits in the key used to encrypt data. The greater the number of bits in the key (cipher strength), the more possible key combinations and the longer it would take to break the encryption. The cipher strength must be at least 128 bits.
sslExplicitCiphers	Optional. Explicit Ciphers are enabled when SSL Cipher Class is set to Explicit Ciphers.

Property	Description
sslHostName	Optional. Name of the SSL Host.
sslVerifyHost	Optional. Select this option to verify SSL Host.
sslVendor	Optional. Name of the SSL vendor.
kerberosServiceProvider	Optional. Name of the Kerberos Service Provider.
kerberosServicePrincipalName	Optional. The name of a Kerberos client principal. Specify this information to gain access to the private key of the client principal.
wssEncryptionAlgorithm	Optional. The WSS encryption algorithm. By default, it is `AES_128`.
wsskeyEncryptionAlgorithm	Optional. The WSS key encryption algorithm. By default, it is `RSAOEP`.
wssBspCompliant	Optional. Select this option to make the resource wssbsp compliant.
wssStrictTimestamp	Optional. Select this option to enable WSS strict timestamp.
wssTimeStampTimeToLive	Optional. The time to live in seconds.
wssTimeStampFutureTimeToLive	Optional. The future time to live in seconds.
wssEnableSignatureConfirmation	Optional. Select this option to enable signature confirmation.

Property	Description
wssKeyType	Optional. The WSS key type. By default, the value is set to`SKI_KEY_IDENTIFIER`.
wssCertificateRevocationURL	Optional. The WSS Certificate revocation URL.
wssCertificateRevocationReloadInterval	Optional the reload interval for revoking the WSS certificate.
trustStoreServiceProvider	Required. The name of the keystore credential resource.
enableTrustStoreAccess	Required. By default, this option is enabled.
sslExplicitlyTrustAllCAs	Optional. By default, this option is enabled.
sslCertificateRevocationURL	Optional. The SSL Certificate revocation URL.
sslCertificateRevocationReloadInterval	Optional. The reload interval for revoking the SSL certificate.

6. Click **create** to create a Trust Identity resource.

> **Note:** You can create a Trust Identity resource using python scripts available under *TIBCO_HOME*`\tea\agents\tss\<version>\samples\resourceManagerService\trust`.

Creating Credential Server Resource

The Credential Server Resource contains configuration details of Credential Authority Server.

Before you begin

Ensure that the TEA server and the TEA agent for TIBCO Security Server are running. Ensure that you have started the Credential Authority Server.

Procedure

1. Log in to TIBCO Enterprise Administrator.
2. From the landing page, click **TIBCOSecurityServer** card.
3. Click **Resource Manager Service**.
4. From the Credential Server Resources pane, click **create**.

   Note: Alternatively, click **Credential Server Resources**, and in the following page, click **create**.

5. Provide the following details:

Property	Description
Name	Required. Name of the keystore.
credentialServerHost	Required. Hostname of the credential server.
credentialServerPort	Required. The port on which the credential server listens. Ensure it is available.
credentialServerURLs	Required. URLs of the credential server.
credentialProvider	Optional. Name of the credential provider.
keyAlias	Optional. The key alias name.
keysPassword	Optional. The key password.
credentialServerThumprint	Optional. The thumb print of the credential server.
enableSSL	Optional. Select this option to enable SSL.

Property	Description
commonName	Optional. Common Name of the credential server.

6. Click **create** to create a Credential Server resource.

> **Note:** You can create a Credential Server resource using python scripts available under *TIBCO_HOME* `\tea\agents\tss\<version>\samples\resourceManagerService\credentialServer`.

Updating a Resource

The procedure to update a resource is the same. The instructions here are for updating any resource under Resource Manager Service.

Before you begin

Ensure that the TIBCO Enterprise Administrator server and the agent are running. Ensure that the agent is registered with the server.

Procedure

1. Log in to TIBCO Enterprise Administrator.
2. From the landing page, click **TIBCOSecurityServer** card.
3. Click **Resource Manager Service**.
4. Select a resource of your choice.
5. From the members list, select a resource that you created.
6. Click **update** to modify the resource.
7. Make the necessary changes and click **update** to save the changes.

Deleting a Resource

The procedure to delete a resource is the same. The instructions here are for deleting any resource under Resource Manager Service.

Before you begin

Ensure that the TIBCO Enterprise Administrator server and the agent are running. Ensure that the agent is registered with the server.

Procedure

1. Log in to TIBCO Enterprise Administrator.
2. From the landing page, click **TIBCOSecurityServer** card.
3. Click **Resource Manager Service**.
4. Select a resource of your choice.
5. From the members list, select a resource that you created.
6. Click **delete** to modify the resource.
7. At the confirmation window, click **delete** to delete the resource.

TIBCO Documentation and Support Services

For information about this product, you can read the documentation, contact TIBCO Support, and join TIBCO Community.

How to Access TIBCO Documentation

Documentation for TIBCO products is available on the Product Documentation website, mainly in HTML and PDF formats.

The Product Documentation website is updated frequently and is more current than any other documentation included with the product.

Product-Specific Documentation

The documentation for this product is available on the TIBCO® Enterprise Administrator Product Documentation page.

To directly access documentation for this product, double-click the following file:

TIBCO_HOME`/release_notes/TIB_tea_2.4.2_docinfo.html` where *TIBCO_HOME* is the top-level directory in which TIBCO products are installed. On Windows, the default *TIBCO_HOME* is `C:\tibco`. On UNIX systems, the default *TIBCO_HOME* is `/opt/tibco`.

How to Contact Support for TIBCO Products

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- To access the Support Knowledge Base and getting personalized content about products you are interested in, visit our product Support website.
- To create a Support case, you must have a valid maintenance or support contract with a Cloud Software Group entity. You also need a username and password to log in to the product Support website. If you do not have a username, you can request one by clicking **Register** on the website.

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