Ping Identity™

PingFederate®

SAP C4C Provisioner v1.0.0

User Guide



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PingFederate SAP C4C Provisioner User Guide Version 1.0.0 November 2017

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Note that Ping Identity may not provide support for any sample configurations provided in this document. The variability inherent among security environments prevents full testing and support for all possible platform configurations. If you need special assistance or would like to inquire about implementation or support programs, please contact Ping Identity Global Client Services (http://support.pingidentity.com).

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Purpose

This user guide is intended for use by clients who would like to leverage a PingFederate outbound provisioner to manage the identity life cycles of users from a source system to the SAP C4C target system.

Prerequisites

This document assumes that you already have the following installed and configured:

- A functional PingFederate environment, version 7.X+
- JDK version 7+
- A source data repository (e.g., Active Directory)
- A SQL Database (e.g., MySQL, MS SQL)
- SAP C4C configuration information:
 - o SOAP Query User URL
 - SOAP Process User URL
 - SOAP Query Territory URL
 - SOAP Assign Territory URL
 - SOAP Create Territory URL
 - SOAP Header ID
 - SOAP Header Sender Business System ID
 - SOAP Header Recipient Business System ID
 - SOAP Header Business Scope Type Code
 - SOAP Header Business Scope ID
 - o Authentication Method
 - Basic administrator ID and password
 - Mutual SSL client key and certificate
- Email configuration information:
 - o Mail SMTP Host
 - Mail SMTP Port
 - Email Security Method
 - SSL
 - TLS
 - Authentication via Mail SMTP Credentials (if enabled)
 - Mail SMTP Admin Username
 - Mail SMTP Admin Password
 - Sender Email Address
 - Receiver Email Address
 - Territory Error Email Subject

Installation

- 1. From the /dist folder in *pf-c4c-provisioner-1.0.0.zip*, copy the following files to <PingFederateInstall>/pingfederate/server/default/deploy/:
 - pf-c4c-provisioner-1.0.0.jar
 - javax.mail-1.6.0.jar

- 2. Go to <PingFederateInstall>/pingfederate/bin/
 - a. Make a copy of run.properties
 - b. Open up run.properties and make the following change:
 - i. For single node: pf.provisioner.mode=STANDALONE
 - ii. For each clustered node: pf.provisioner.mode=FAILOVER provisioner.node.id=1 [has to be unique on each clustered node] provisioner.failover.grace.period=600 [in seconds, must be bigger than the provisioning-frequency cycle]
 - c. Save and close the file
- 3. Start or restart PingFederate.

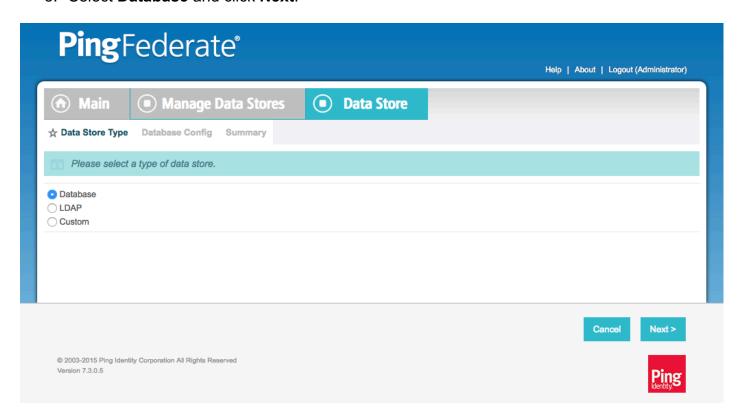
Configuration

Executing the Provisioner Database Script

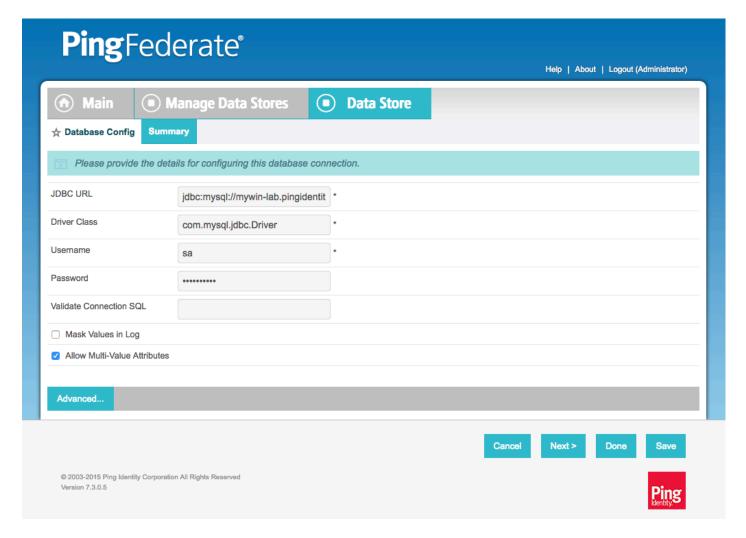
- **1.** Go to <PingFederateInstall>/pingfederate/server/default/conf/provisioner/sql-scripts/.
- 2. Choose the *provisioner-[your database].sql* script that fits the type of database chosen.
- 3. Execute the SQL script in the database to create the provisioner tables.

Configuring the Provisioner Data Store

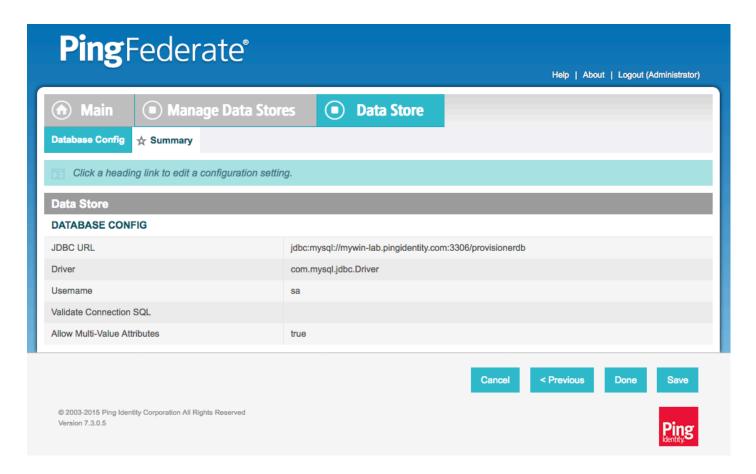
- 1. Log into the PingFederate admin console and click **Data Stores** under **System Settings**.
- 2. Click Add New Data Store...
- Select Database and click Next.



4. Enter the **JDBC URL**, **Driver Class**, **Username**, and **Password**. If needed, apply appropriate settings to the fields under the **Advanced**... tab. Click **Next**.



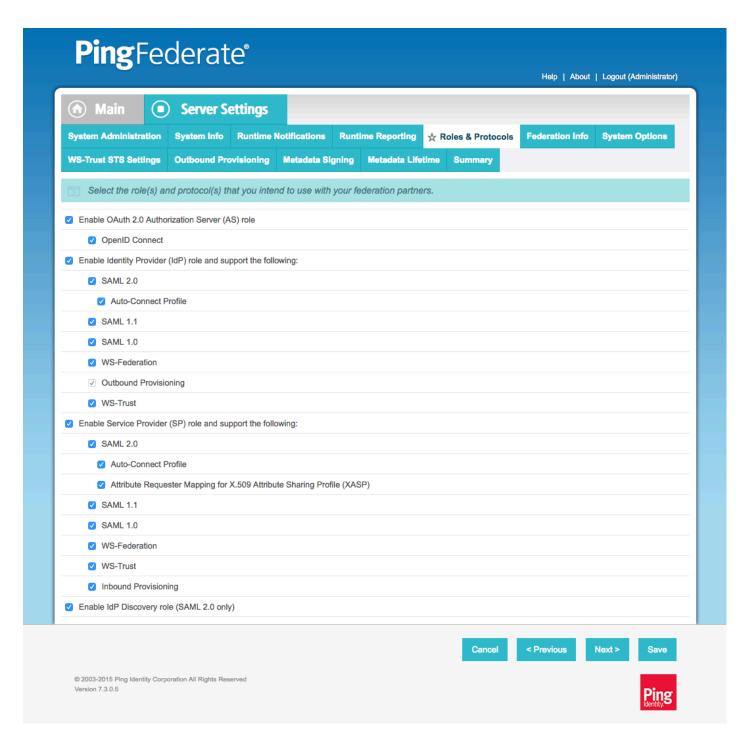
5. Review the **Data Store Summary**, and click **Done**.



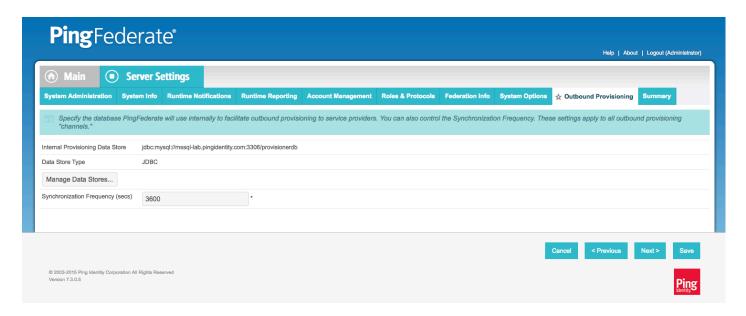
6. Click Save.

Configuring Outbound Provisioning Settings

- 1. Log into the PingFederate admin console and click on **Server Settings** under **System Settings**.
- 2. Click on Roles & Protocols, and ensure that Outbound Provisioning is checked.



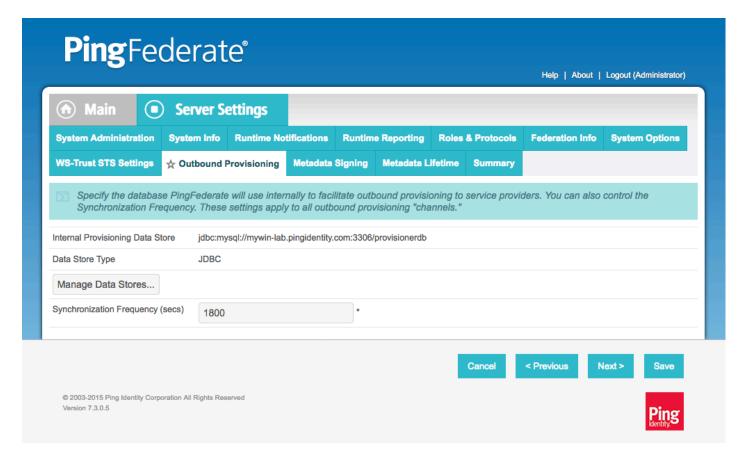
3. Click on the **Outbound Provisioning** tab under **Server Settings**.



Ensure that the Internal Provisioning Data Store is the correct provisioner data store that
was just created. Modify the Synchronization Frequency (secs) to the appropriate setting
for your environment.

<u>Note</u>: if the **Internal Provisioning Data Store** is not selectable, you will need to do the following:

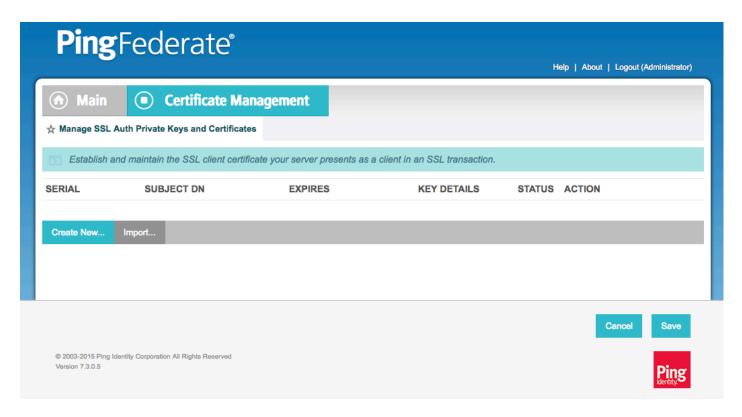
- a. Stop PingFederate
- b. Go to <PingFederateInstall>/pingfederate/server/default/data/pingfederate-jdbcds.xml
- c. Find the currently selected Internal Provisioning Data Store and comment it out, for example:
 - <!-- local-tx-datasource maskAttributeValues="false">
- - <indi-name>ProvisionerDS</indi-name>
 - <connection-
- url>jdbc:hsqldb:\${pf.server.data.dir}\${/}ProvisionerDefaultDB;hsqldb.lock_file=false</connection-url> <driver-class>org.hsqldb.jdbcDriver</driver-class>
 - <user-name>sa</user-name>
- <password>eyJhbGciOiJkaXliLCJlbmMiOiJBMTI4Q0JDLUhTMjU2liwia2lkljoiZ2FCQkR5UzdlZClsInZlcnNpb24iOi
 I3LjMuMC41In0..1uptNRm1RonqxNatRhFJoQ.3OunG6vuluUQ1OZnqOTSgw.BXR7AmwEkYZez5UNU2HUaw</password>
 - <ping-db-type>Custom</ping-db-type>
 - <allow-multi-value-attributes>false</allow-multi-value-attributes>
 - </local-tx-datasource -->
- d. Start PingFederate
- e. Redo Steps 3 and 4 above
- f. Stop PingFederate
- g. Go to <PingFederateInstall>/pingfederate/server/default/data/pingfederate-jdbcds.xml
- h. Uncomment the previously commented out data store
- i. Start PingFederate



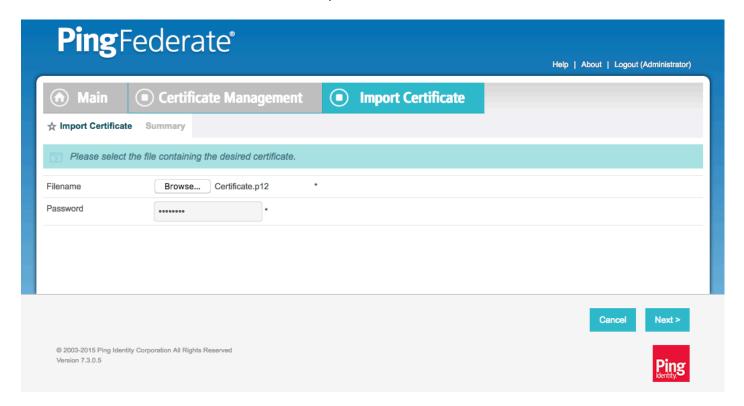
5. Click Save.

Configuring the SSL Client Keys & Certificates (Optional – only if mutual auth is chosen)

- 1. Have the SAP C4C SSL Client Key and Certificate ready (must be a PKCS12 file).
- 2. Log into the PingFederate admin console and click on **SSL Client Keys & Certificates** under **Certificate Management**.
- 3. Click on the **Import** button.



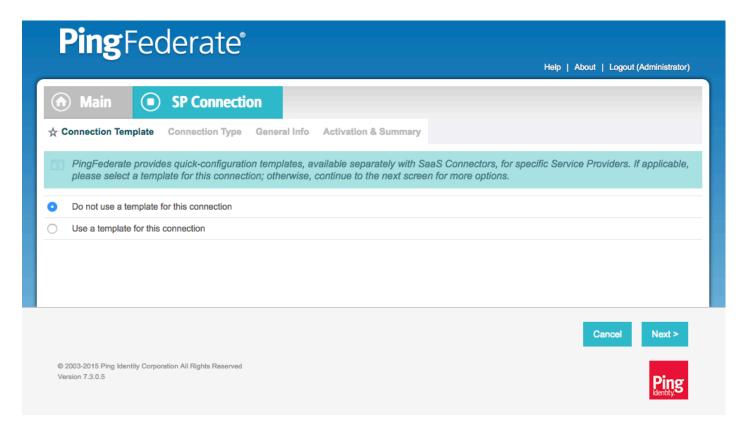
4. Click the Browse button, select the .p12 file, enter the Password, and click Next.



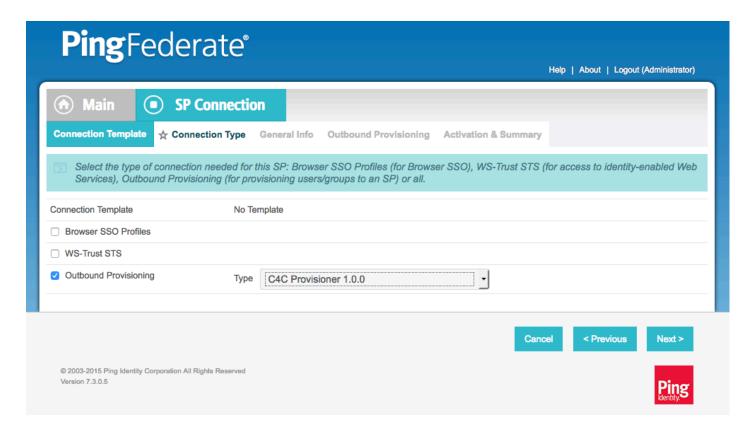
- 5. Click Done.
- 6. Click Save.

Configuring the SAP C4C Provisioner

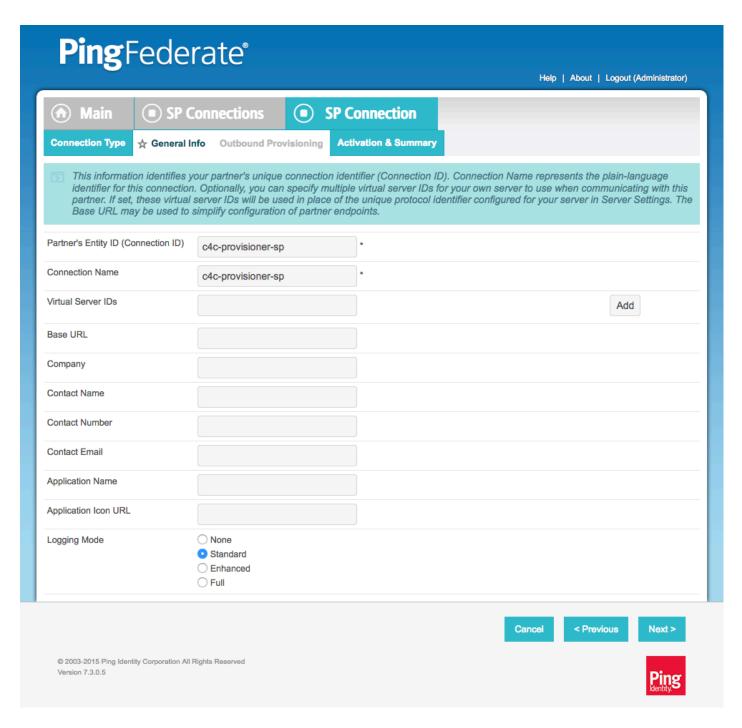
1. Log into the PingFederate admin console and click **Create New** under **SP Connections**, and click **Next**.



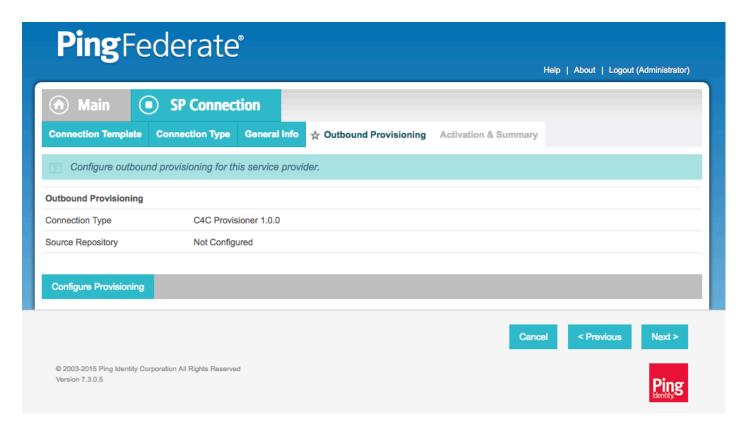
2. Select Outbound Provisioning, select C4C Provisioner 1.0.0 for Type, and click Next.



3. Enter the Partner's Entity ID (Connection ID) and Connection Name, and click Next.



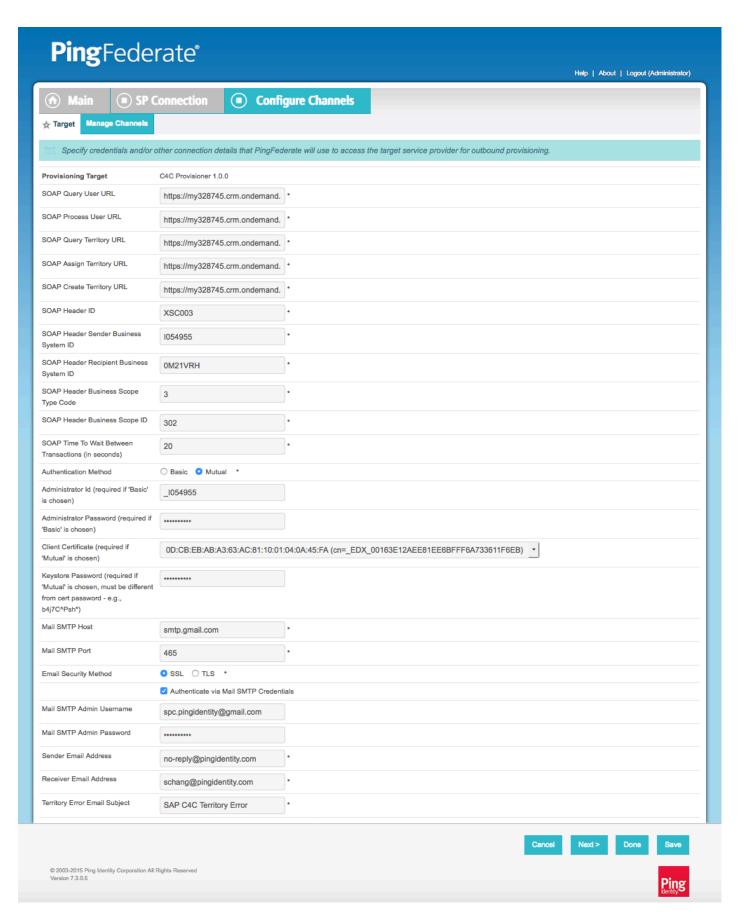
4. Click the **Configure Provisioning** button.



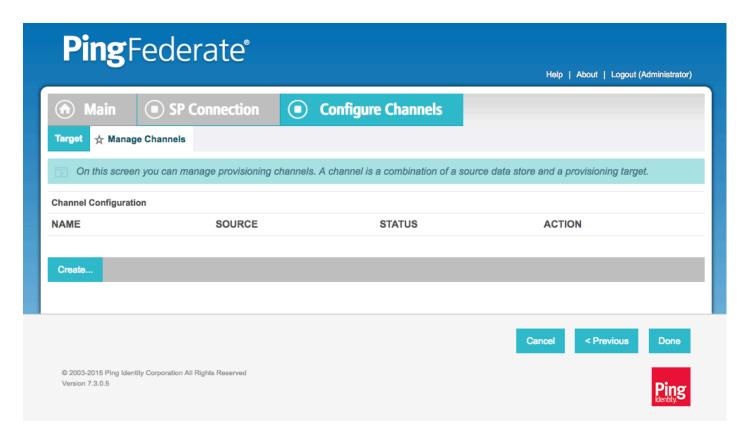
5. Click the **Target** tab at the top. Review and adjust the settings accordingly, and click **Next**.

Note: If **Mutual** is chosen for **Authentication Method**, an SSL Client Key & Certificate must be uploaded first. If none have been uploaded, save the connection as a draft and see **Configuring the SSL Client Keys & Certificates (Optional – only if mutual auth is chosen)**. Then come back to this step.

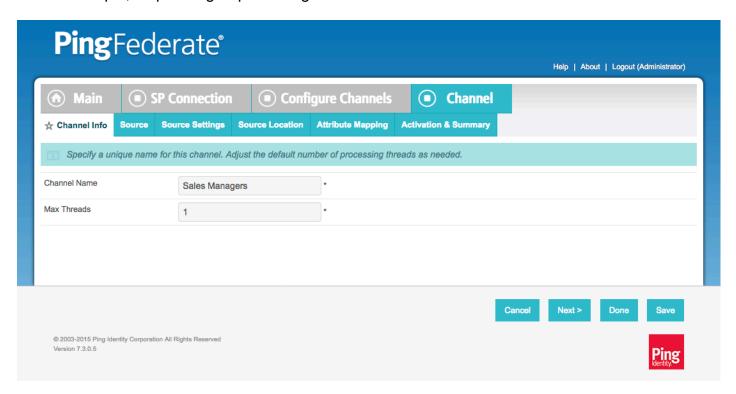
Please also note that the **Keystore Password** must be different from the certificate password.



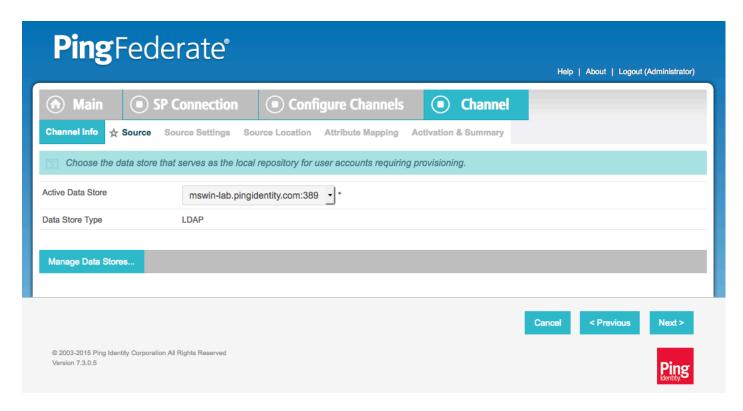
6. Click the Create... button.



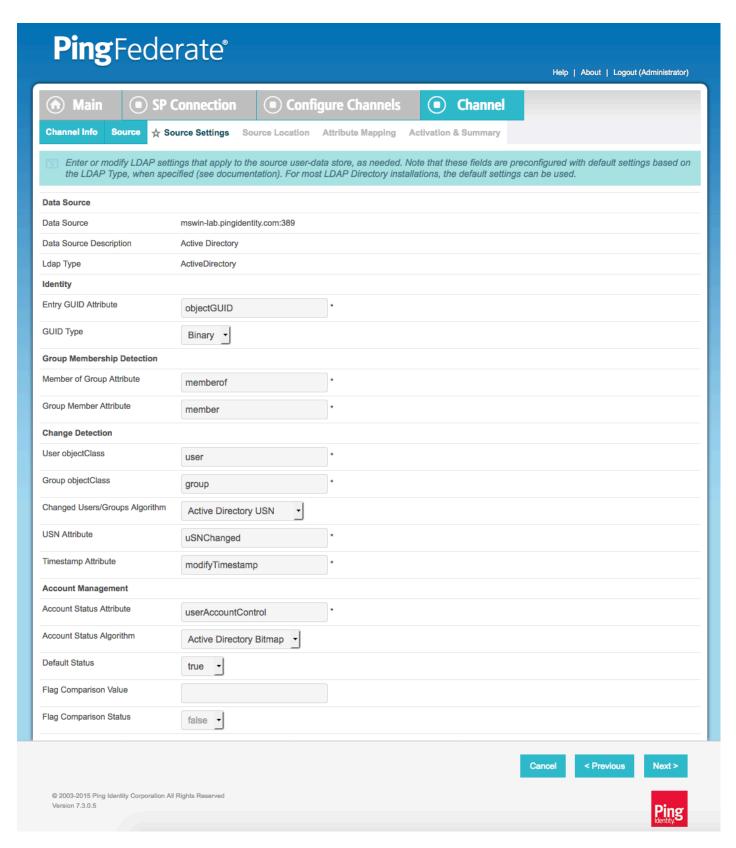
7. Enter the **Channel Name**, adjust the **Max Threads** if needed, and click **Next**. In the below example, a specific group is configured.



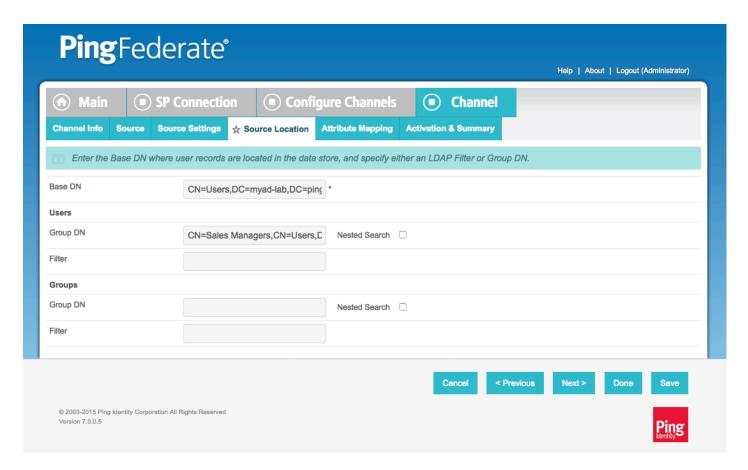
8. Select the **Active Data Store** (in this example, an Active Directory data store will be chosen), and click **Next**.



9. Review and adjust the Source Settings as needed, and click Next.

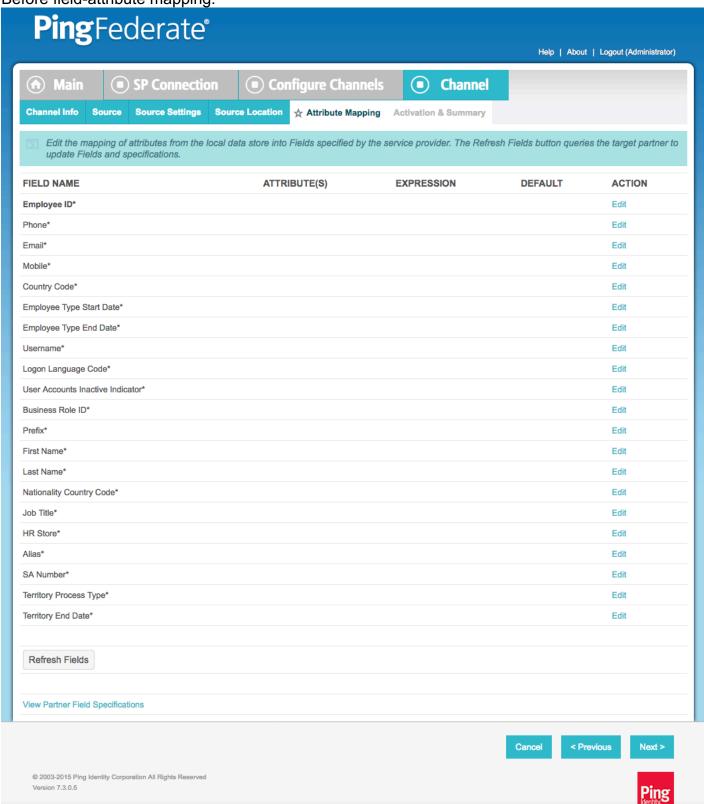


10. Enter the appropriate **Base DN**, and **Users Group DN** or **Filter**, and/or **Groups Group DN** or **Filter**, and click **Next**.

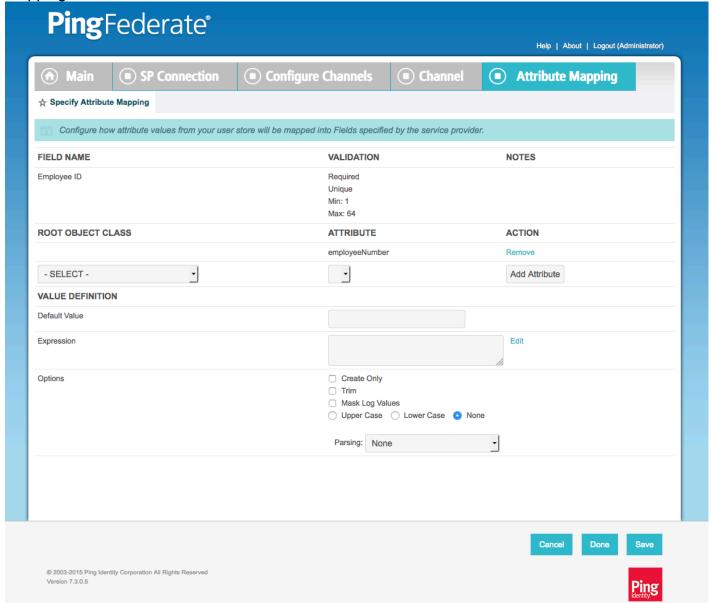


11. Associate the data store attribute with the provisioner field by clicking **Edit** for each attribute. Define by selecting the appropriate data store attribute and clicking the **Add Attribute** button. For static attributes, enter the static value in the **Default Value** field. Click **Done**. Repeat this process for each attribute. When the field-attribute definitions have been completely mapped, click the **Next** button.

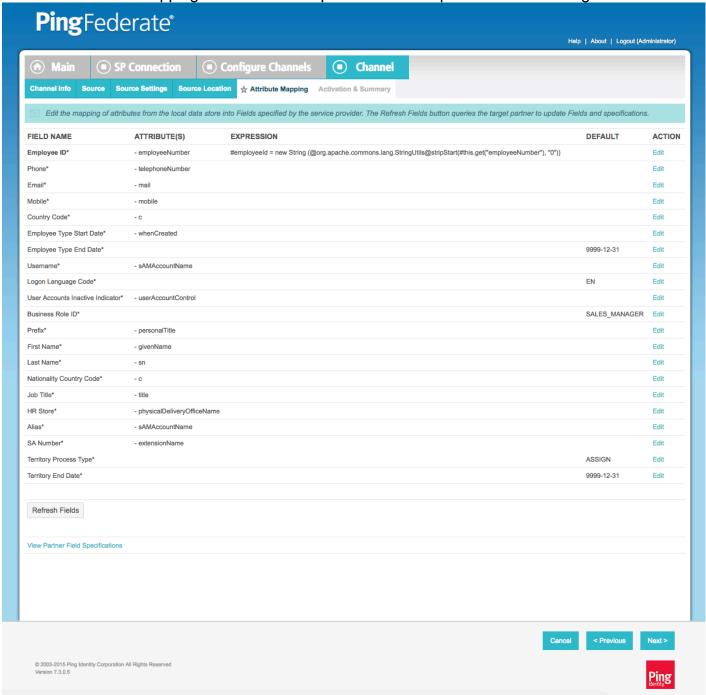
Before field-attribute mapping:



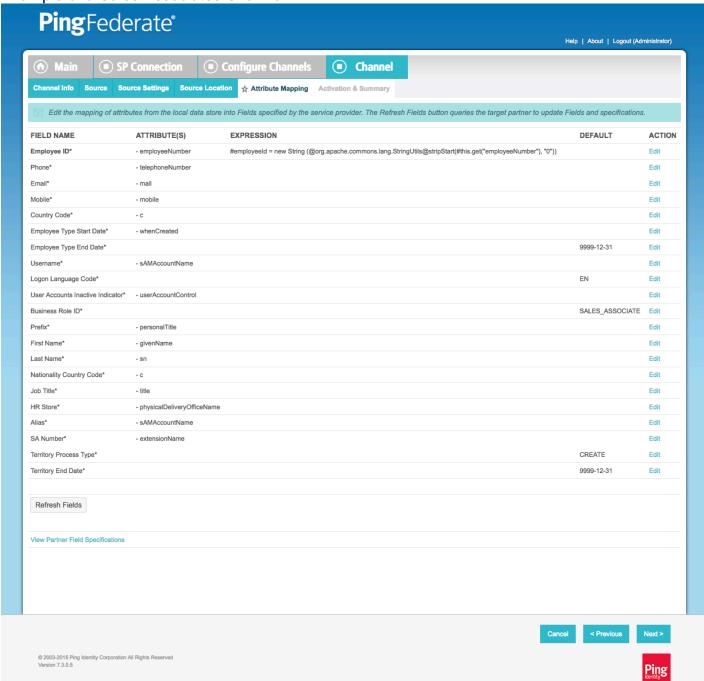
Mapping a field-attribute definition:



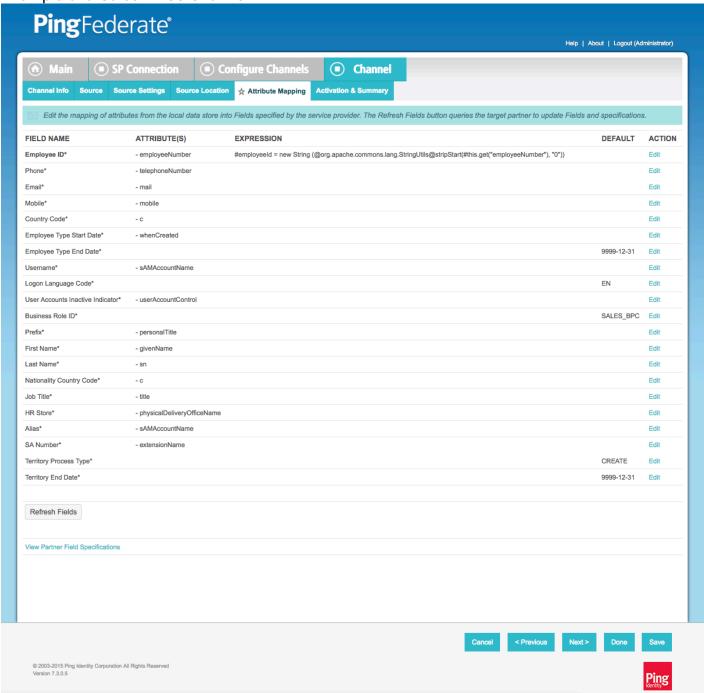
After field-attribute mappings have been completed - an example of a Sales Managers Channel:



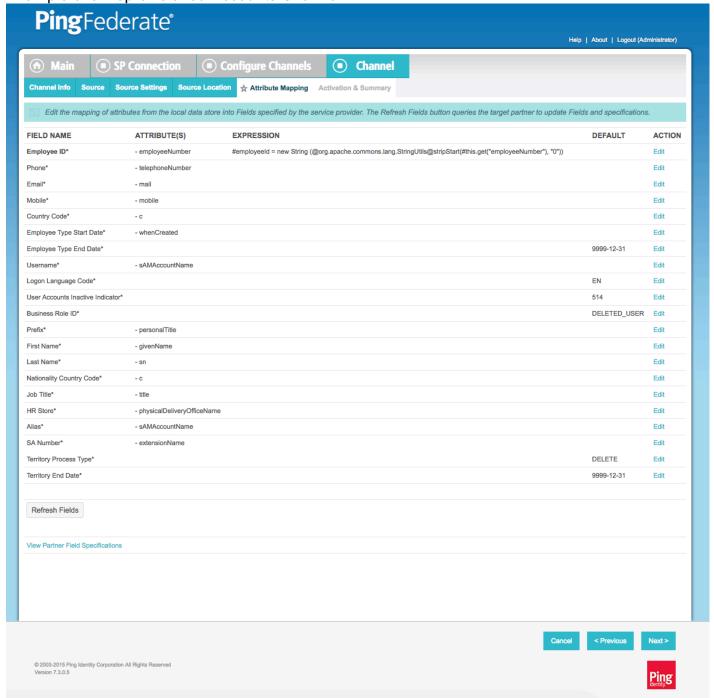
Example of a Sales Associates Channel:



Example of a Sales BPCs Channel:

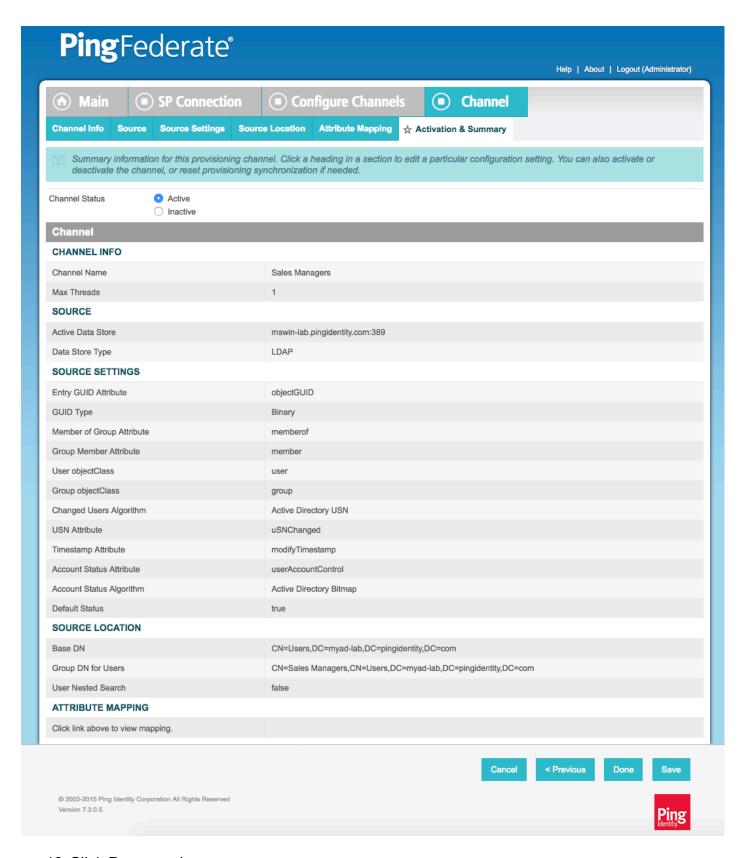


Example of a Deprovisioned Accounts Channel:

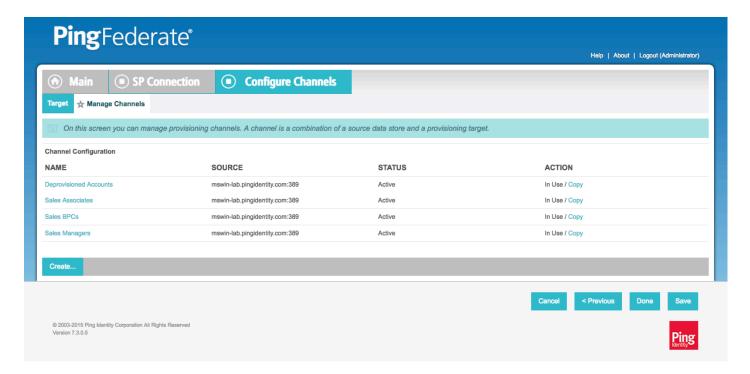


12. Enable the Channel Status by selecting Active, and click Done.

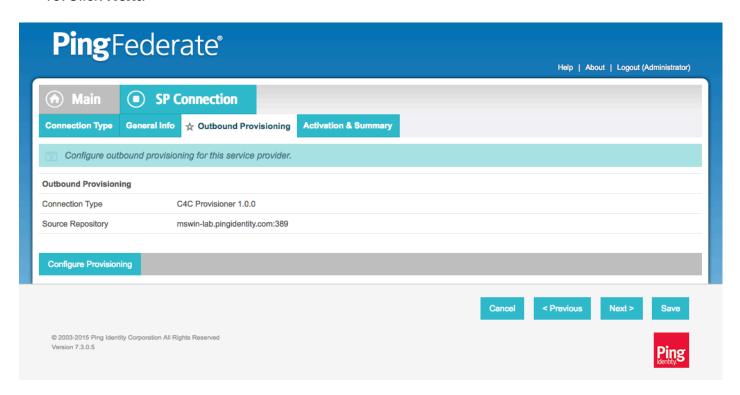
<u>Note</u>: if **Active** is selected, this will start the provisioning process for ALL users in the filter configured in Step 10. Keep it **Inactive** if you do not wish to begin the provisioning process just yet.



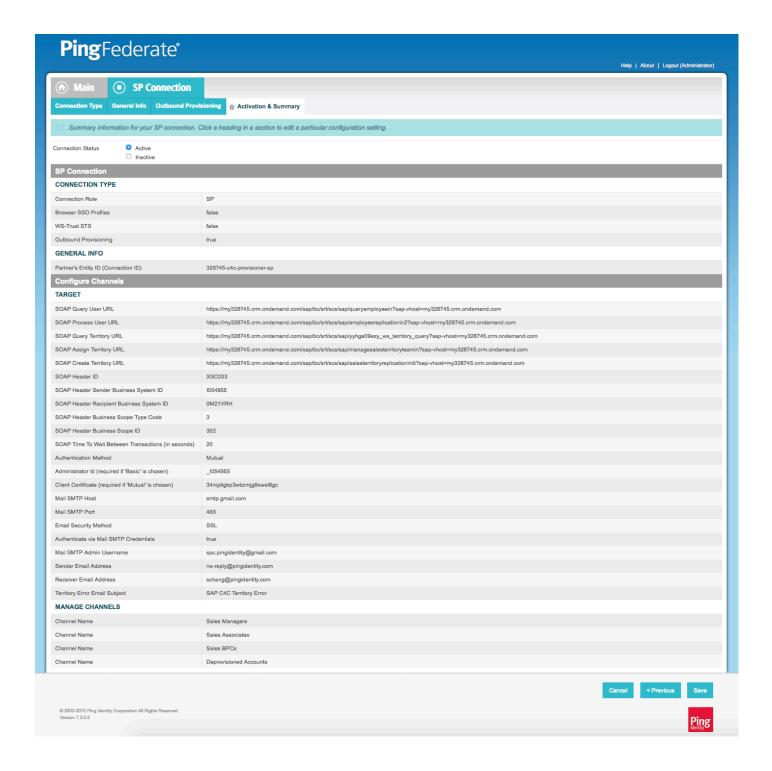
- 13. Click **Done** again.
- 14. Repeat Steps 6 through 13 to create additional channels. In this example, these channels have been created.



15. Click Next.



16. Enable the **Connection Status** by selecting **Active**, review the **Activation & Summary**, and click **Save**.



Testing

Note: Test these test cases using Basic Authentication as well as Mutual Authentication.

1. Provision a new user in the source data store.

<u>Results</u>: the new user's data should be posted via the SOAP web service, and a new account should be created along with a territory creation or assignment depending on the user type (for managers, a territory should be assigned; for regular users, a territory should be created) in the target SAP C4C system.

2. Make a change to one or more of the mapped fields of an existing user in the source data store.

Results: the new changes should be posted via the SOAP web service, and the existing user's account should be updated in the target SAP C4C system.

3. Deprovision an existing user in the source data store.

<u>Results</u>: the existing user's disabled status should be posted via the SOAP web service, and the existing user should be deprovisioned in the target SAP C4C system.

4. Re-provision a deprovisioned user in the source data store.

<u>Results</u>: the deprovisioned user's enabled status should be posted via the SOAP web service, and the user's account should be re-enabled in the target SAP C4C system.

Logging

Configuring for PingFederate 7.X

To enable various logging modes for the SAP C4C provisioner, add the following in the logger section (near the bottom) to <PingFederateInstall>/pingfederate/server/default/conf/log4j.xml:

If you copy and paste the above block, make sure special characters like the quotes (") are valid in the log4j.xml

Detailed training on using Log4j in PingFederate can be found at: https://ping.force.com/Support/PingIdentityKnbSearchHome?searchText=log4j

Configuring for PingFederate 8.X

To enable various logging modes for SAP C4C Provisioner, add the following in the logger section (<Loggers>...</Loggers>) to <PingFederateInstall>/pingfederate/server/default/conf/log4j2.xml:

<Logger name="com.pingidentity.clientservices.product.provisioner.c4c" level="[DEBUG |
INFO | WARN | ERROR]" />

To enable logging for the SAP C4C Provisioner in a separate file, add the following in the relevant sections in <PingFederateInstall>/pingfederate/server/default/conf/log4j2.xml.

<RollingFile name="C4CProvisioner" fileName="\${sys:pf.log.dir}/c4cprovisioner.log" filePattern="\${sys:pf.log.dir}/c4cprovisioner.%d{yyyy-MM-dd}.log" ignoreExceptions="false">

If you copy and paste the above block, make sure special characters like the quotes (") are valid in the log4j.xml

Detailed training on using Log4j in PingFederate can be found at: https://ping.force.com/Support/PingIdentityKnbSearchHome?searchText=log4j