|  |
| --- |
| ONESOURCE™ Certificate Manager |

Installation Guide

Oracle Database and JBoss

2.2.x.x

Document Version 1

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DOCUMENT HISTORY

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Introduction

Certificate Manager controls all aspects of the exemption certificate lifecycle and is tightly integrated with ONESOURCE Determination to reduce operating costs, mitigate risks, and increase tax accuracy.

This guide explains how to install Certificate Manager version 2.2.x.x at your business. For information about cloud installations of Certificate Manager, contact your sales representative.

Who Should Read This Guide?

The installation requires the coordination of people in various roles. If you are responsible for overseeing the installation, make this guide available to the following contributors:

* Database administrator
* Application server administrator
* IT administrator
* Tax professional

Upgrade from Tax Certificate Manager 1.x

Certificate Manager 2.x is a new product offering that does not support a seamless, out-of-the-box upgrade path for existing Tax Certificate Manager 1.x implementations.

For more information about upgrading from Tax Certificate Manager 1.x to Certificate Manager 2.x, please contact ONESOURCE Professional Services or your account representative.

Architecture

Before starting the installation, review selected architectural considerations and the system layout:

Workflow: Data flows only from Certificate Manager to Determination. Users change customer, contact, and certificate information in Certificate Manager—not directly in the Determination user interface.

User Accounts: Certificate Manager uses Determination users and roles.

Installation Environment:

Certificate Manager cannot be installed without access to an instance of Determination.

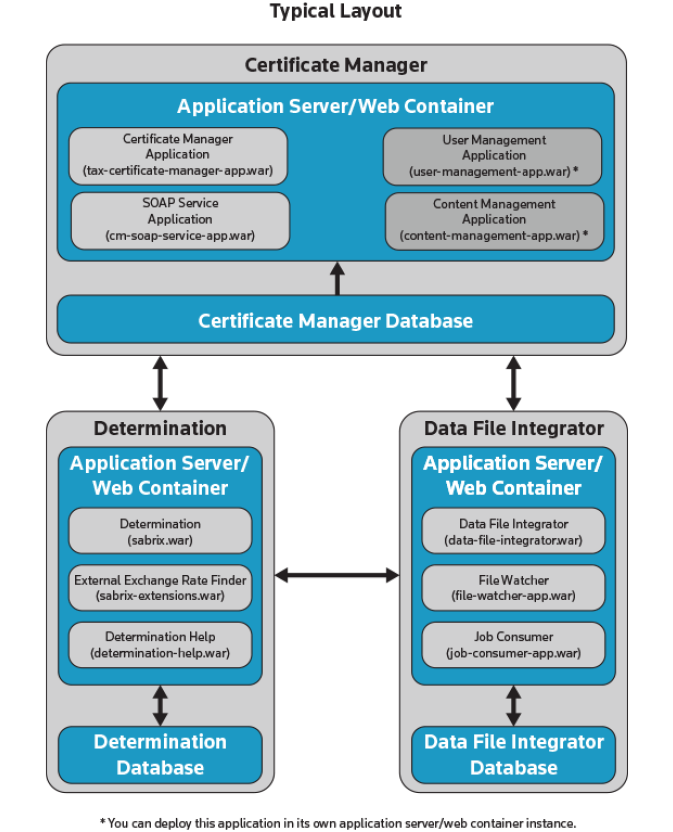
Certificate Manager cannot be installed in the same application server instance as Determination.

A best practice is to install Certificate Manager and Data File Integrator in separate application server instances.

If you have multiple ONESOURCE products on the same server, change ports to avoid conflicts.

Certificate Manager is composed of several applications (see below). The typical layout is to deploy all the applications in a single application server/web container instance. However, you can deploy the User Management Application or the Content Management Application in separate instances.

* Certificate Manager Application (tax-certificate-manager-app.war)
* SOAP Service Application (cm-soap-service-app.war)
* User Management Application (user-management-app.war)
* Content Management Application (content-management-app.war)



Resources

Several resources help you become familiar with ONESOURCE Indirect Tax Certificate Manager and master its features. Help is installed with the application. All documents are posted on the [ONESOURCE Customer Center](https://tax.thomsonreuters.com/support/onesource/customer-center/). To locate documents specific to your application, enter the search term "Certificate Manager documentation."

| Certificate Manager Resources | |
| --- | --- |
| Resource | Description |
| Help | This Help system gives assistance within Certificate Manager. Use Help after Certificate Manager is installed and configured. |
| Installation Guide | This guide is intended for technical users and contains complete details about how to install and configure Certificate Manager. |
| Platform Support | This describes the combinations of operating systems, databases, and application servers on which Certificate Manager operates. |
| Product Support Lifecycle | This lists the end-of-life dates for products in the ONESOURCE Indirect Tax Suite. |

Still can't find what you're looking for? Try these additional resources:

| ONESOURCE Resources | |
| --- | --- |
| Resource | Description |
| ONESOURCE Customer Center  <https://tax.thomsonreuters.com/support/onesource/customer-center/> | Search for answers in the Knowledge Base, enter product support tickets, and track support ticket history for you and your organization. |
| Indirect Tax Customer Center  <https://customercenter.sabrix.com/> | Download ONESOURCE Indirect Tax software. |
| Other ONESOURCE Indirect Tax Products and Services  <https://tax.thomsonreuters.com/products/brands/onesource/indirect-tax/> | Browse descriptions of other ONESOURCE Indirect Tax products and services. |
| Documentation Feedback  [onesource.indirect.tax.fb@thomsonreuters.com](http://onesource.indirect.tax.fb@thomsonreuters.com/) | Send feedback about ONESOURCE Indirect Tax documentation. |

Style Conventions

Thomson Reuters uses the following special formatting throughout this guide:

Bold text indicates most user interface elements, such as:

* Data you are expected to enter, such as in a text field
* Pages, buttons, tabs, and field names
* Dialog boxes, drop-down lists, selections within lists, and check box titles
* Windows
* Menu items

Italic text indicates the following:

* File and folder names
* Java classes, PL/SQL objects and executable files
* Document titles

CAPITAL text indicates keyboard commands, such as ENTER, or database components.

Courier text indicates command-line input/output.

<brackets> indicate user entry. For example, <host> indicates you should replace the text and angle brackets with your server name.

Book titles are shown in italics and sections within a book are in quotation marks, such as “Starting the Installation” in the ONESOURCE Indirect Tax Certificate Manager Installation Guide.

|  |
| --- |
| This pencil symbol indicates suggestions or additional information. |

|  |
| --- |
| This warning symbol indicates important text that you should review before proceeding. |

 This carriage return symbol indicates that a single line of code is divided into multiple lines so you can read it. If you copy and paste code with these symbols, be sure to keep the code before and after the carriage return on the same line.

1. /\* Code snippets have numbered lines with a gray background. \*/
   1. /\* Be cautious if you copy lines from the code snippets‑the line numbers are included! \*/

JBoss Checklists

Use the checklists below to track your progress through the installation.

Prerequisites

| Prerequisites | |
| --- | --- |
| Task | Complete? |
| Review System Requirements |  |
| Gather Administrative Information |  |
| Download the Software |  |

Installation

| JBoss Configuration | |
| --- | --- |
| Task | Complete? |
| Set Database Initialization Parameters (page 18) |  |
| Set Database Character Set (page 18) |  |
| Get JDBC Driver (page 18) |  |
| Create Tablespace and User (page 19) |  |
| Set Environment Variables (page 22) |  |
| Configure JBoss (page 22) |  |
| Configure Memory (page 23) |  |
| Set SERVER\_OPTS Parameters (page 26) |  |
| Set Log Level (page 28) |  |
| Set Logging Provider (page 28) |  |
| Change JBoss Ports (page 32) |  |
| Create Data Sources (page 33) |  |
| Remove Subsystem Heading (page 39) |  |
| Insert Module (page 41) |  |
| Add Dependencies (page 41) |  |
| Insert Logback File (page 42) |  |
| Deploy Certificate Manager Under JBoss (page 42) |  |

Post-Installation Tasks

| Prerequisites | |
| --- | --- |
| Task | Complete? |
| General Configuration (page 44) |  |
| Email Configuration (page 46) |  |
| Remove the Installer (page 47) |  |
| Determination Roles (page 48) |  |
| Determination Configuration Parameter (page 54) |  |
| Additional Configurations (page 55) |  |
| Data File Integrator (page 56) |  |

Prerequisites

Complete the following tasks before you install and configure Certificate Manager.

|  |
| --- |
| Certificate Manager requires a working installation of Determination 5.6.2.4 or higher. |

|  |
| --- |
| [Review System Requirements](#_Ref-1644101640)  [Gather Administrative Information](#_Ref1998944573)  [Download the Software](#_Ref-2075350855) |

Review System Requirements

ONESOURCE Certificate Manager has detailed requirements for the following:

* Computer hardware
* Operating system
* Database
* Application server/web container

To confirm you are using supported components, review platform support and product support lifecycle information listed in the [ONESOURCE Customer Center](https://tax.thomsonreuters.com/support/onesource/customer-center/).

Gather Administrative Information

Before installing Certificate Manager, record your administrative information below:

| Type | Where to Find | Your Values |
| --- | --- | --- |
| Customer Center credentials | Thomson Reuters Customer Support |  |
| Server name and port for your Certificate Manager database | Your Database Administrator (DBA) |  |
| Service or instance name for your Certificate Manager database | Your DBA |  |
| Administrative credentials for your Certificate Manager database | Your DBA |  |
| Server name and port for your Determination database | Your DBA |  |
| Service or instance name for your Determination database | Your DBA |  |
| Tax user credentials for your Determination database (for example, SBXTAX) | Your DBA |  |
| Server name and port for your Certificate Manager application server or web container | Your application server administrator |  |
| Determination URL | Your Determination administrator |  |

Download the Software

Download Certificate Manager from the [ONESOURCE Customer Center](https://tax.thomsonreuters.com/support/onesource/customer-center/). If you plan to do bulk uploads of customers and certificates, also download Data File Integrator.

|  |
| --- |
| To install Certificate Manager, you must use a version of Oracle Java that is appropriate to your application server. See the [ONESOURCE Customer Center](https://tax.thomsonreuters.com/support/onesource/customer-center/) for additional information. |

Certificate Manager

Download Certificate Manager and a ONESOURCE forms file.

1. Log on to Customer Center by entering the user name and password assigned by Customer Support.
2. Under Available Products, locate ONESOURCE Indirect Tax Certificate Manager.
3. For Current Installed Version, select None.
4. Click Download, and then save this file to a directory on the system hosting Certificate Manager or to a networked folder that can be accessed by that system.
5. Unzip the ONESOURCEIDTCertificateManager\_22xx.zip file.
6. Back in the Customer Center, locate Certificate Manager Forms Content under Available Products.
7. For Current Installed Version, select None.
8. Click Download, and then save the forms .zip file to the same location as the Certificate Manager software.

|  |
| --- |
| Do not unzip the forms content file. |

Data File Integrator

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| --- |
| You can install Data File Integrator on the same computer as Certificate Manager, but it is best to keep them in separate application server instances. See the ONESOURCE Indirect Tax Data File Integrator Installation Guide for instructions about getting started. |

1. Continue in the Customer Center and locate Data File Integrator under Available Products.
2. For Current Installed Version, select None.
3. Click Download, and then save this file to a directory on the system hosting Data File Integrator or to a networked folder that can be accessed by that system.
4. Unzip Data File Integrator in a separate directory from Certificate Manager.

Configure the Database

This guide covers the installation of Certificate Manager in the Oracle RDBMS. After you confirm that you are using the correct database version, review the following sections.

Set Database Initialization Parameters

Ensure that your database has appropriate initialization parameters before you start the Certificate Manager installation. Contact Oracle if you need assistance setting these parameters in your environment.

Set Database Character Set

Configure the database to use a UTF8-compatible database character set. Optimize the handling of multi-byte characters by using the national character set AL16UTF16 (default). You need to either install or upgrade the database to meet these requirements.

Get JDBC Driver

Locate a Java 1.6 or 1.7 compliant Oracle JDBC driver appropriate for your database:

* ojdbc8.jar (Oracle Database 19c)
* ojdbc6.jar (Oracle Database 11g )

Make a note of the directory path and file name because you need it later in the installation.

|  |
| --- |
| JDBC drivers are usually packaged with the database or database client software. See [Oracle](https://docs.oracle.com/cd/E11882_01/java.112/e16548/getsta.htm#JJDBC20000) for information about compatibility.  **Note: ojdbc11.jar is recommended for Certificate Manager 2.2.6.0 version.** |

Create Tablespace and User

Certificate Manager requires an Oracle tablespace and user before you install the software. Use the .sql scripts in Docs/database-creation-scripts/oracle where you unzipped the Certificate Manager software.

|  |
| --- |
| These directions assume that you can connect to the database with SQL\*Plus from where you unzipped the software. If you cannot, then move the following three files to a location where you can run them: OracleSetup.sql, CreateOracleTablespaces.sql, and CreateOracleUsers.sql. |

1. Log on to SQL\*Plus as a database user with administrative privileges.
2. Execute the following script in Docs/database-creation-scripts/oracle:  
   @OracleSetup.sql
3. To accept the default values in square brackets [ ], press ENTER, or type your own values:

| Script Prompt | Description |
| --- | --- |
| Enter CM Datafile Directory without trailing separator | Enter the location of the database datafile. |
| Enter CM Path Separator for this platform, either / or \ | Enter the operating system path separator: " / " for UNIX or " \ " for Microsoft Windows (without the quotation marks). |
| Enter CM Tablespace Name. Enter "none" or "NONE" to skip | Enter a tablespace name.   |  | | --- | | Only enter NONE or none to use an existing tablespace instead of a new tablespace. | |
| Enter CM Tablespace Size. Enter M for megabytes or G for gigabytes | Adjust this medium-sized default value up or down depending on your installation requirements. |
| Enter CM user tablespace name | Enter a tablespace name.   |  | | --- | | If you do not want the default, choose a tablespace from the list above. | |
| Enter CM user temporary tablespace name | Enter a temporary tablespace name. |
| Enter CM user to create | Enter a user name. |
| Enter CM user password | Enter a password. |

1. When the script is complete, continue to the next section.

Configure JBoss

**From Certificate Manager version 2.2.6.0 onwards we need to use JBOSS 8.**

When JBoss is installed and ready for Certificate Manager configuration, complete the following:

|  |
| --- |
| Set Environment Variables (page 22)  Configure JDBC in JBoss (page 23)  Configure Memory (page 23)  Set SERVER\_OPTS Parameters (page 26)  Edit standalone.xml (page 28)  Install Logback Module (page 41)  Deploy Certificate Manager Under JBoss (page 42) |

Set Environment Variables

Create the following environment variables.

JBoss

Create these JBoss environment variables and point them to the top level of your JBoss Enterprise directory structure (for example, /jboss-eap-6.3):

* JBOSS\_HOME
* EAP\_HOME

|  |
| --- |
| Do not include a trailing slash. |

Java

Ensure that you have a JAVA\_HOME variable pointing to the Java installation directory.

Configure JDBC in JBoss

Copy the JDBC driver file you located in Get JDBC Driver (page 18), and then paste it into the following directory:

JBOSS\_HOME/standalone/deployments

Configure Memory

Set memory for Certificate Manager by editing the following JBoss file:

* Microsoft Windows: JBOSS\_HOME/bin/standalone.conf.bat
* Unix/Linux: JBOSS\_HOME/bin/standalone.conf

Use the values in the table as a guide, and see the example below for Unix/Linux and Microsoft Windows.

| JAVA Option | Value | Description |
| --- | --- | --- |
| -Xms | 512m | This is the recommended starting memory allocation in megabytes.  Increase this value if your loads require more memory. |
| -Xmx | 1024m | This is the recommended maximum memory allocation in megabytes.  Increase this value if your loads require more memory. |

Unix/Linux

|  |
| --- |
| The example below spans multiple lines to fit on the page. Ensure your updated entries remain on a single line. |

In standalone.conf, find the original line containing JAVA\_OPTS=, and then update the line with the values from the table above:

Original

JAVA\_OPTS="-Xms1303m -Xmx1303m -XX:MaxPermSize=256m -Djava.net.preferIPv4Stack=true"

Updated

JAVA\_OPTS="-Xms512m -Xmx1024m -Djava.net.preferIPv4Stack=true"

Microsoft Windows

|  |
| --- |
| The example below spans multiple lines to fit on the page. Ensure your updated entries remain on a single line. |

In standalone.conf.bat, find the original line containing JAVA\_OPTS=, and then update the line with the values from the table above:

Original

set "JAVA\_OPTS=-Xms1G -Xmx1G -XX:MaxPermSize=256M"

Updated

set "JAVA\_OPTS=-Xms512m -Xmx1024m"

Set SERVER\_OPTS Parameters

Set SERVER\_OPTS parameters for Certificate Manager by editing the JBoss file for your operating system:

* Microsoft Windows: JBOSS\_HOME/bin/standalone.conf.bat
* Unix/Linux: JBOSS\_HOME/bin/standalone.conf

Use the values in the table as a guide, and see the examples for Unix/Linux and Microsoft Windows below.

| Parameter | Value |
| --- | --- |
| SERVER\_OPTS= | -Dlogback.configurationFile=../standalone/configuration/logback.xml |

Unix/Linux

The example below spans multiples lines to fit on the page. Keep your entry on a single line.

In standalone.sh, find the original line containing SERVER\_OPTS=, and then update the line with the values in bold. The example below uses certmgr and sbxtax:

Original

SERVER\_OPTS=""

Updated

SERVER\_OPTS="-Dlogback.configurationFile=../standalone/configuration/logback.xml"

*For Java17*

JBOSS 8 doesn’t support Logback.

SERVER\_OPTS=””

Microsoft Windows

The example below spans multiples lines to fit on the page. Keep your entry on a single line.

In standalone.bat, find the original line containing SERVER\_OPTS=, and then update the line with the values in bold. The example below uses certmgr and sbxtax:

Original

set "SERVER\_OPTS=%\*"

Updated (include double quotes as shown below)

set "SERVER\_OPTS=%\* -Dlogback.configurationFile=../standalone/configuration/logback.xml"

*For Java17*

JBOSS 8 doesn’t support Logback.

Set “SERVER\_OPTS=%\*”

Edit standalone.xml

|  |
| --- |
| Set Log Level (page 28)  Set Logging Provider (page 28)  Change JBoss Ports (page 32)  Create Data Sources (page 33)  Remove Subsystem Heading (page 39) |

Set Log Level

Change the default log level:

1. Go to the following directory:

BOSS\_HOME/standalone/configuration

1. Open standalone.xml in a text editor.
2. Find the section that starts with <root-logger>.
3. Change the level to the following: <level name="ERROR"/>.
4. Remain in the file, and then continue to the next section.

Set Logging Provider

Set slf4j as the logging provider:

1. Locate the final </extensions> tag.
2. Insert the following snippet following </extensions>:

|  |
| --- |
| Keep the following content on the same line:  <system-properties> <property name="org.jboss.logging.provider" value=" slf4j" /> </system-properties> |

|  |
| --- |
| For Oracle 19c support, use the following lines:  <system-properties> <property name="org.jboss.logging.provider" value="slf4j"/> <property name="jboss.as.management.blocking.timeout" value="600"/> </system-properties> |

1. Remain in the file, and then continue to the next section.

Change JBoss Ports

|  |
| --- |
| Skip this step if you are not running other ONESOURCE products in JBoss on this server. |

If you are running other ONESOURCE products in a separate JBoss instance on the same server, change your ports for Certificate Manager to avoid conflicts. The ports to change are all in standalone.xml.

The table below has ports that could conflict with other ONESOURCE products:

| Port Name | Alternative Port Examples |
| --- | --- |
| socket-binding name="ajp" | port="8019" |
| socket-binding name="http" | port="8088" |
| socket-binding name="https" | port="8444" |
| socket-binding name="remoting" | port="7777" |

Remain in standalone.xml, and continue to the next section.

Create Data Sources

Create data sources by inserting ONESOURCE snippets in standalone.xml and then editing the values.

Insert Data Source Snippets

Use the data source snippets from the Certificate Manager .zip file:

1. Go to the following directory where you unzipped the Certificate Manager software:

Docs/application-server-files/jboss

1. Open certificate-manager-data-source-oracle-jboss.txt in a text editor.
2. Copy all the data source snippets (the entire contents of the file).
3. In standalone.xml, insert the data source snippets immediately above the closing tag </datasources>.
4. Save standalone.xml and remain in the file.
5. Complete the steps in the next sections for editing each data source:
   * Edit Tax Certificate Manager Data Source (page 33)
   * Edit User Management Service Data Source (page 35)
   * Edit Content Management Service Data Source (page 37)

Edit Tax Certificate Manager Data Source

1. In standalone.xml, find the <datasource> element that contains jdbc/TaxCertificateManagerDataSource.

<datasource jndi-name="java:/jdbc/TaxCertificateManagerDataSource" pool-name="TaxCertificateManagerDataSource" enabled="true" use-java-context="true">  
<connection-url>jdbc:oracle:thin:@//host:port/servic e</connection-url>  
<driver-class>oracle.jdbc.driver.OracleDriver</driver-class>  
<driver>ojdbc7.jar</driver>  
<security>  
<user-name>user name</user-name>  
<password>password</password>  
</security>  
<validation>  
<valid-connection-checker class-name="org.jboss.r esource.adapter.jdbc.vendor.OracleValidConnection Checker"/>  
<exception-sorter class-name="org.jboss.resource. adapter.jdbc.vendor.OracleExceptionSorter"/>  
</validation>  
</datasource>

1. Change the values in the snippet that correspond to the elements in the table below.

| JDBC/TAXCERTIFICATEMANAGERDATASOURCE | |
| --- | --- |
| <connection-url> jdbc:oracle:thin:@//host:port/service</connection-url> | Replace the following with values for your implementation:   * host: The name of the system hosting the Certificate Manager database. * port: The Certificate Manager database port; the default is 1521. * service: The name of your Oracle service.  |  | | --- | | Use the following format for Oracle 11g: url="jdbc:oracle:thin:@host:port:service" | |
| <driver>ojdbc7.jar</driver> | Only change this if you are using a different driver (for example, ojdbc6.jar). |
| <user-name>user name</user-name> | Replace user name with the user name of the Certificate Manager schema (for example, certmgr). |
| <password>password</password> | Replace password with the password of the Certificate Manager schema (for example, certmgr). |

1. Save standalone.xml, and remain in the file to complete additional edits in the next section.

Edit User Management Service Data Source

|  |
| --- |
| This data source points to the Determination database, not to the Certificate Manager database. |

1. In standalone.xml, find the <datasource> element that contains jdbc/UserManagementServiceDataSource.

<datasource jndi-name="java:/jdbc/UserManagementServiceDataSource" pool-name="UserManagementServiceDataSource" enabled="true" use-java-context="true">  
<connection-url>jdbc:oracle:thin:@//host:port/service</connection-url>  
<driver-class>oracle.jdbc.driver.OracleDriver</driver-class>  
<driver>ojdbc7.jar</driver>  
<security>  
<user-name>user name</user-name>  
<password>password</password>  
</security>  
<validation>  
<valid-connection-checker class-name="org.jboss.resource.adapter.jdbc.vendor.OracleValidConnectionChecker"/>  
<exception-sorter class-name="org.jboss.resource.adapter.jdbc.vendor.OracleExceptionSorter"/>  
</validation>  
</datasource>

1. Change the values in the snippet that correspond to the elements in the table below.

| JDBC/USERMANAGEMENTSERVICEDATASOURCE | |
| --- | --- |
| <connection-url> jdbc:oracle:thin:@//host:port/service</connection-url> | Replace the following with values for your implementation:   * host: The name of the system hosting the Determination database. * port: The Determination database port; the default is 1521. * service: The name of your Oracle service.  |  | | --- | | Use the following format for Oracle 11g: url="jdbc:oracle:thin:@host:port:service" | |
| <driver>ojdbc7.jar</driver> | Only change this if you are using a different driver (for example, ojdbc6.jar). |
| <user-name>user name</user-name> | Replace user name with the user name of the Determination Tax schema (for example, sbtax). |
| <password>password</password> | Replace password with the password of the Determination Tax schema (for example, sbtax). |

1. Save standalone.xml, and remain in the file to complete additional edits in the next section.

Edit Content Management Service Data Source

|  |
| --- |
| This data source points to the Determination database, not to the Certificate Manager database. |

1. In standalone.xml, find the <datasource> element that contains jdbc/ContentManagementServiceDataSource.

<datasource jndi-name="java:/jdbc/ContentManagementServiceDataSource" pool-name="ContentManagementServiceDataSource" enabled="true" use-java-context="true">  
<connection-url>jdbc:oracle:thin:@//host:port/service</connection-url>  
<driver-class>oracle.jdbc.driver.OracleDriver</driver-class>  
<driver>ojdbc7.jar</driver>  
<security>  
<user-name>user name</user-name>  
<password>password</password>  
</security>  
<validation>  
<valid-connection-checker class-name="org.jboss.resource.adapter.jdbc.vendor.OracleValidConnection Checker"/>  
<exception-sorter class-name="org.jboss.resource.adapter.jdbc.vendor.OracleExceptionSorter"/>  
</validation>  
</datasource>

1. Change the values in the snippet that correspond to the elements in the table below.

| JDBC/USERMANAGEMENTSERVICEDATASOURCE | |
| --- | --- |
| <connection-url> jdbc:oracle:thin:@//host:port/service</connection-url> | Replace the following with values for your implementation:   * host: The name of the system hosting the Determination database. * port: The Determination database port; the default is 1521. * service: The name of your Oracle service.  |  | | --- | | Use the following format for Oracle 11g: url="jdbc:oracle:thin:@host:port:service" | |
| <driver>ojdbc7.jar</driver> | Only change this if you are using a different driver (for example, ojdbc6.jar). |
| <user-name>user name</user-name> | Replace user name with the user name of the Determination Tax schema (for example, sbtax). |
| <password>password</password> | Replace password with the password of the Determination Tax schema (for example, sbtax). |

1. Save standalone.xml, and remain in the file to complete additional edits in the next section.

Remove Subsystem Heading

Remove the subsystem setting in standalone.xml:

1. Locate and remove the following lines:

<subsystem xmlns="urn:jboss:domain:jpa:1.1">  
<jpa default-datasource="" default-extended-persistence-inheritance="DEEP"/>  
</subsystem>

|  |
| --- |
| For Oracle 19c support: Search for the logger <logger category="jacorb.config">. Add the following code as well:  <logger category="org.jboss.modules"> <level name="ERROR"/> </logger> |

1. Save and close standalone.xml.

Install Logback Module

Note: Skip this section for CM 2.2.6.0 as JBOSS 8 doesn’t support LOGBACK

Complete the steps to install the logback module:

Insert Module

1. Create the following directory path in JBoss:

JBOSS\_HOME/modules/system/layers/base/ch/qos/logback/main

1. Go to the following directory where you unzipped the Certificate Manager software:

Docs/application-server-files/jboss/logback/main

1. Copy module.xml, logback-classic-1.1.2.jar, and logback-core-1.1.2.jar.
2. Paste all three files into your new JBoss directory.
3. Go to the following directory where you unzipped the Certificate Manager software:

Docs/application-server-files/jboss/

1. Copy logback.xml, and then paste it into the same directory as module.xml, logback-classic-1.1.2.jar, and logback-core-1.1.2.jar.

Add Dependencies

1. Go to the following directory in JBoss:

JBOSS\_HOME/modules/system/layers/base/org/jboss/logging/main/

1. Open module.xml in a text editor.
2. Replace the <dependencies> block with the following:

<dependencies>  
<module name="org.slf4j"/>  
<module name="ch.qos.logback"/>  
</dependencies>

1. Save and close the file.
2. Change to the following directory:

JBOSS\_HOME/modules/system/layers/base/org/slf4j/main/

1. Open module.xml in a text editor.
2. Replace the <dependencies> block with the following:

<dependencies>  
<module name="ch.qos.logback"/>  
</dependencies>

1. Save and close the file.

Insert Logback File

1. Go to the following directory where you unzipped the Certificate Manager software:

Docs/application-server-files/jboss/

1. Copy logback.xml.
2. Paste logback.xml into the following directory:

JBOSS\_HOME/standalone/configuration

For Java 17

Insert jakarta.jws-api-3.0.0.redhat-00002 File

Please download the jakarta.jws-api-3.0.0.redhat-00002.jar from maven site.

After downloading completed. Please create a folder like below in jboss 8

1. Create a jws folder in this path jboss-eap-8.0\modules\system\layers\base\jakarta\
2. Again, Create api folder in this path jboss-eap-8.0\modules\system\layers\base\jakarta\jws\
3. Again, Create a main folder in this path jboss-eap-8.0\modules\system\layers\base\jakarta\jws\api

Finally, please copy the jakarta.jws-api-3.0.0.redhat-00002 jar in the main folder and create module.xml file with below details.

<!--

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~ 02110-1301 USA, or see the FSF site: http://www.fsf.org.

-->

<module name="jakarta.jws.api" xmlns="urn:jboss:module:1.9">

<resources>

<resource-root path="jakarta.jws-api-3.0.0.redhat-00002.jar"/>

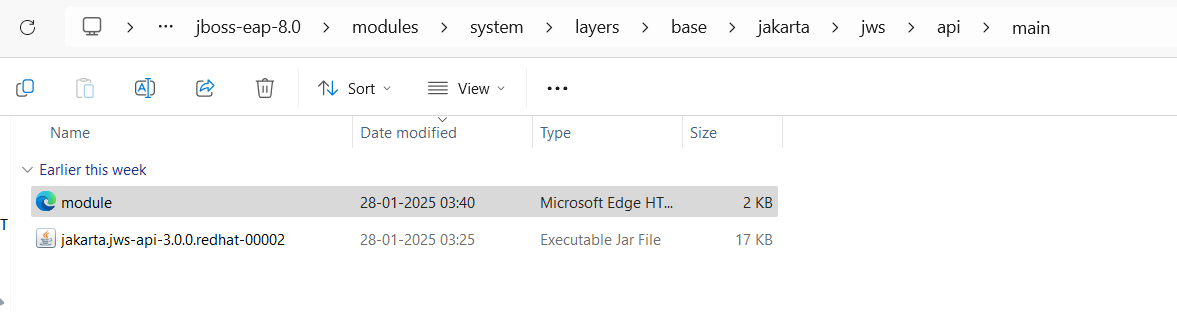
</resources>

<dependencies>

<module name="javax.api"/>

</dependencies>

</module>



Deploy Certificate Manager Under JBoss

To deploy Certificate Manager:

1. Start JBoss by executing standalone.sh or standalone.bat in the following directory:

JBOSS\_HOME/bin

1. Go to the WarFiles directory where you unzipped the Certificate Manager software.
2. Copy installer.war, and then paste it into JBOSS\_HOME/standalone/deployments.
3. Open a browser and check the status at the installation URL (http://<host>:<port>/installer). The initial installation may take a few minutes and is finished when you see the notification installer ok in the browser window.
4. Return to the WarFiles directory where you unzipped the Certificate Manager software, and copy the following files:
   * tax-certificate-manager-app.war
   * user-management-app.war
   * cm-soap-service-app.war
   * content-management-app.war
5. Insert these additional .war files into JBOSS\_HOME/standalone/deployments/, and wait until you see \*.deployed files for each .war file in the directory.
6. Open a browser and go to the Certificate Manager Login page (http://<host>:<port>/tax-certificate-manager-app).
7. Log on to Certificate Manager using the built-in administrative user:
   * User name: installer
   * Password: password
8. Remain in Certificate Manager, and go to the instructions in Post-Installation Tasks (page 44).

Post-Installation Tasks

After you finish the application deployment, complete the tasks in the following sections:

|  |
| --- |
| Certificate Manager (page 44)  Determination (page 47)  Additional Configurations (page 55)  Data File Integrator (page 56) |

Certificate Manager

The following configurations require you to be logged on to Certificate Manager. If you are logged on, continue with General Configuration (page 44).

If you have not logged on yet, complete the following:

1. Open a browser and go to the Certificate Manager logon page (http://<host>:<port>/tax-certificate-manager-app).
2. Log on to Certificate Manager using the built-in administrative user:
   * User name: installer
   * Password: password

General Configuration

On the System Configuration page, click General Configuration, and then complete the following settings that affect connectivity and validation:

| Field | Description |
| --- | --- |
| Determination Base URL | Enter the URL of the Determination instance you want to connect to Certificate Manager. Use the following format: http://<host>:<port>/sabrix/services |
| Connector Base URL | |  | | --- | | Leave this field blank if you are doing a standard installation where all the services of Certificate Manager run in the same web container or application server instance. |   Connector Base URL is the location of the User Management Service that enables Certificate Manager users to use Determination roles. Only change this if you are doing a custom installation where you deploy user-management-app.war in a separate instance: http://<host>:<port>/user-management-app/services/ |
| Content Service Base URL | |  | | --- | | Leave this field blank if you are doing a standard installation where all the components of Certificate Manager run in the same web container or application server instance. |   Content Service Base URL is the location of the Content Management Service that provides tax content to Certificate Manager. If you are doing a custom installation where you deploy content-management-app.war in a separate instance, insert the URL for that instance using this format: http://<host>:<port>/content-management-app/services/contentManagementService/ |
| Content Management Password | This password controls access to tax content information, such as lists of states.   |  | | --- | | You do not need to change this unless you want to change the default encrypted password. To change this password, see "Changing the Content Management Password" in the Help documentation. | |
| Enable SOAP Logging | Select this option to add SOAP messages to Certificate Manager logs. Use this for troubleshooting SOAP connections to other software, such as to Determination. |
| Form Validation | Select Enable Form Validation if you want Certificate Manager to validate your entries for certificates. |
| Google Analytics | Select Enable Google Analytics to help Thomson Reuters improve your experience with Certificate Manager. Ensure that a port is open in your firewall that allows incoming and outgoing network traffic to the site [google.com/analytics](http://google.com/analytics). |

Email Configuration

Click Email Configuration to expand that section, and then complete the fields for sending notifications to your customers about their certificates.

|  |
| --- |
| If you are unsure about the correct email settings, insert dummy values and skip the email test. |

1. Complete each of the fields in the following table:

| Field | Required | Description |
| --- | --- | --- |
| Host Name | Yes | Enter the name of the computer hosting your email server. |
| User Name | Yes | Enter the user name for the email account used to send notifications. |
| Sender Name | Yes | Enter the name of the sender of the email notification, for example, Avery Smith. |
| Email Server Port | Yes | Enter the number of the outgoing email port (SMTP). |
| Password | Yes | Enter the password for the email user. |
| Sender Email Address | Yes | Enter the email address of the sender; for example, avery@acme.com. |

1. Click Test email configurations.
2. To test your configuration, enter a valid email address.
3. Click Send.
4. When you finish the email test, click Save System Configuration in the bottom left.

Remove the Installer

Return to the file system and complete the following:

1. Go to JBOSS\_HOME/standalone/deployments.
2. Delete the following files:
   * JBOSS\_HOME/standalone/deployments/installer.war.deployed
   * JBOSS\_HOME/standalone/deployments/installer.war

Determination

Complete the following configurations directly in Determination. Go to your instance (http://<host>:<port>/sabrix), and log on as a user with administrative privileges.

Determination Roles

Certificate Manager users log on using their Determination user names and passwords, but they use special roles for Certificate Manager. Complete the steps in the sections below for Certificate Manager roles.

Creating New Roles

|  |
| --- |
| Skip this task if you are using Determination 5.7.0.0 or later. |

Certificate Manager requires four new Determination roles shown in the following tables. Each table indicates the name, description, application, and permissions for the role. Instructions for adding each role are below the tables.

| ROLE: Certificate Manager Admin | | | | |
| --- | --- | --- | --- | --- |
| DESCRIPTION: Full access to the entire Certificate Manager application and required Determination web services. | | | | |
| Application | Create | Modify | Delete | View |
| Home |  |  |  | X |
| Display Error |  |  |  | X |
| Company Data |  |  |  | X |
| Change Password | X | X | X | X |
| Web Services |  |  |  | X |
| Web Services: Company Service | X | X | X | X |
| Web Services: Customer Service | X | X | X | X |
| Web Services: Exemption Certificate Service | X | X | X | X |
| Web Services: User Service | X | X | X | X |

| ROLE: Certificate Manager Super User | | | | |
| --- | --- | --- | --- | --- |
| DESCRIPTION: Full access to Certificate Manager and required Determination web services, with the exception of Certificate Manager system configuration. | | | | |
| Application | Create | Modify | Delete | View |
| Home |  |  |  | X |
| Display Error |  |  |  | X |
| Company Data |  |  |  | X |
| Change Password | X | X | X | X |
| System |  |  |  | X |
| Web Services |  |  |  | X |
| Web Services: Company Service | X | X | X | X |
| Web Services: Customer Service | X | X | X | X |
| Web Services: Exemption Certificate Service | X | X | X | X |
| Web Services: User Service | X | X | X | X |

| ROLE: Certificate Manager User | | | | |
| --- | --- | --- | --- | --- |
| DESCRIPTION: Partial access to Certificate Manager for adding or editing customers and certificates and for running reports. | | | | |
| Application | Create | Modify | Delete | View |
| Home |  |  |  | X |
| Display Error |  |  |  | X |
| Company Data |  |  |  | X |
| Change Password | X | X | X | X |
| Web Services |  |  |  | X |
| Web Services: Company Service | X | X | X | X |
| Web Services: Customer Service | X | X | X | X |
| Web Services: Exemption Certificate Service | X | X | X | X |
| Web Services: User Service | X | X | X | X |

| ROLE: Certificate Manager View Only | | | | |
| --- | --- | --- | --- | --- |
| DESCRIPTION: Partial access to Certificate Manager for searching customers, contacts, or certificates; and for running reports. | | | | |
| Application | Create | Modify | Delete | View |
| Home |  |  |  | X |
| Display Error |  |  |  | X |
| Company Data |  |  |  | X |
| Change Password | X | X | X | X |
| Web Services |  |  |  | X |
| Web Services: Company Service |  |  |  | X |
| Web Services: Customer Service |  |  |  | X |
| Web Services: Exemption Certificate Service |  |  |  | X |
| Web Services: User Service |  |  |  | X |

Refer to the four tables above as you complete the following steps to add each role:

1. Go to Menu > System > Roles.
2. Click Actions > Add.
3. In Role, enter the name from the first role table above: Certificate Manager Admin.

|  |
| --- |
| Role names are case sensitive. |

1. In Description, enter the following from the first role table: Full access to Certificate Manager and required Determination web services.
2. Click Submit.
3. Select the boxes under Create, Modify, Delete, or View according to the permissions shown in the first role table above.
4. Click Submit when you finish selecting permissions.
5. Repeat steps 2 through 7 to create the three additional roles shown in the other three tables above.
6. When you finish, confirm you have the following roles and descriptions in Determination:

| Role | Description |
| --- | --- |
| Certificate Manager Admin | Full access to the entire Certificate Manager application and required Determination Web Services. |
| Certificate Manager Super User | Full access to Certificate Manager and required Determination web services, with the exception of Certificate Manager system configuration. |
| Certificate Manager User | Partial access to Certificate Manager for adding or editing customers and certificates, and for running reports. |
| Certificate Manager View Only | Partial access to Certificate Manager for searching customers, contacts, or certificates, and for running reports. |

Assigning the Certificate Manager Admin Role

Designate one of your Determination users as a Certificate Manager administrator to complete the remaining steps of the configuration.

|  |
| --- |
| Later, after you complete these initial configurations, you can grant Certificate Manager roles to additional Determination users. |

1. Go to Menu > System > Users, and then click on the user to whom you want to assign the administrative role.
2. Click the Roles tab.
3. Click Actions > Attach Role.
4. Complete the fields listed in the User Roles table below:

| Field | Description |
| --- | --- |
| Role | Select the role Certificate Manager Admin. |
| Company | Select a Determination company. |
| Start Date | Enter the date the role becomes active. Use the format MM/DD/YYYY; for example, 01/01/2021. |
| End Date | Enter the date the role becomes inactive (optional). Use the format MM/DD/YYYY; for example, 12/31/2021. |
| Is Cascading | Select if you want this user's role to apply to child companies. |

1. Click Submit.
2. Remember the name of this Determination user because you will use it in Additional Configurations (page 55).
3. Remain in Determination and continue to the next section.

Determination Configuration Parameter

|  |
| --- |
| Skip this step if you are using Determination 5.6.x. |

Determination versions 5.7.0.0 and later allow you to link directly to the Certificate Manager Login page:

1. Log on to Determination.
2. Go to Menu > System > Configuration.
3. Click Actions > Add.
4. Insert the following in the Name column: CERTIFICATE\_MANAGER\_URL.
5. Insert the Certificate Manager URL in the Value column (for example, http://<host>:<port>/tax-certificate-manager-app).
6. Click Submit.

Additional Configurations

The basic installation of Certificate Manager is complete, but you need to make some additional configurations in Determination and Certificate Manager before you can use the software.

Determination

* Assign Certificate Manager roles to Determination users
* Configure certificate settings for companies in Determination

Certificate Manager

* Import forms
* Configure custom properties
* Configure default certificate status
* Configure exempt reasons
* Disable installer user

The instructions for these settings are in the Certificate Manager Help:

1. Log on to Certificate Manager using the Determination user who has the role Certificate Manager Admin.
2. In the upper-right corner of any page, click Help.
3. In the upper-right corner of Help, click the hamburger menu:



1. Go to Introduction > Initial Configurations.
2. Complete all the tasks in the Initial Configurations topic.

Data File Integrator

If you plan to perform bulk uploads of customer and certificate data, see the overview topic about Data File Integrator in Certificate Manager Help:

1. In the upper-right corner, click the hamburger menu:



1. Go to Supporting Software > Data File Integrator.

Data File Integrator installation instructions are available in the [Knowledge Base](https://www.onesourceidtsupport.com/).