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| ONESOURCE™ Certificate Manager |

Installation Guide

Microsoft SQL Server Database and Tomcat

2.2.x.x

Document Version 1

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DOCUMENT HISTORY

| Version  Number | Version Date | Summary |
| --- | --- | --- |
| 1 | December 2021 | Created first version for Certificate Manager 2.2.x.x. |
| 2 | April 22, 2022 | Added steps for encrypting Tomcat data source credentials using the AES-256 standard. |
| 3 | June 30, 2025 | Java 17 Upgrade |

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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.

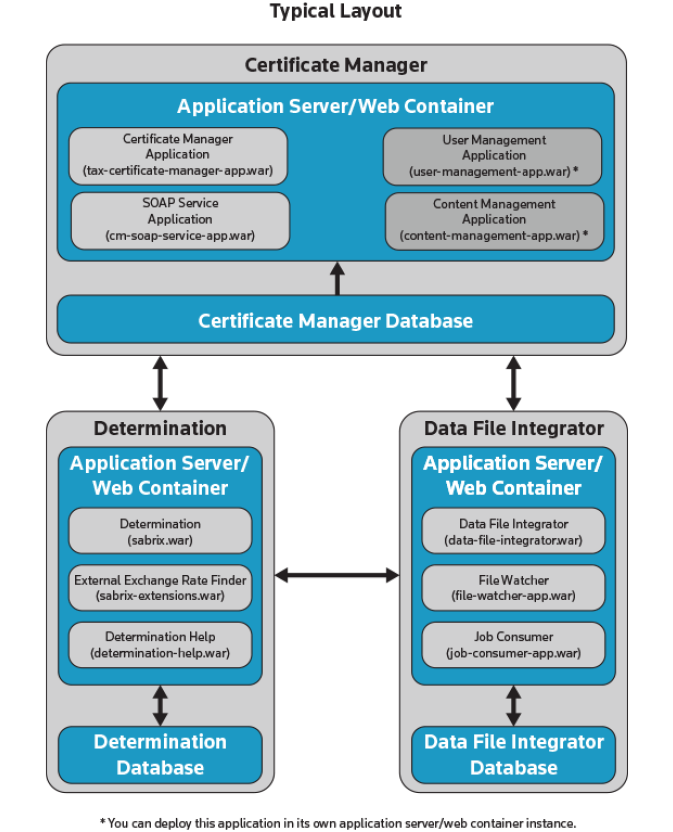
Certificate Manager is composed of several applications (see below). The typical layout is to deploy all the applications in a single application server/web container instance. However, you can deploy the User Management Application or the Content Management Application in separate instances.

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/](https://www.thomsonreuters.com/en/policies/copyright.html) | 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/](https://tax.thomsonreuters.com/support/onesource/customer-center/) | Download ONESOURCE Indirect Tax software. |
| Other ONESOURCE Indirect Tax Products and Services  [https://tax.thomsonreuters.com/products/brands/onesource/indirect-tax/](http://www.microsoft.com/) | Browse descriptions of other ONESOURCE Indirect Tax products and services. |
| Documentation Feedback  [onesource.indirect.tax.fb@thomsonreuters.com](https://tax.thomsonreuters.com/support/onesource/customer-center/) | Send feedback about ONESOURCE Indirect Tax documentation. |

Style Conventions

Thomson Reuters uses the following 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.

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| This pencil symbol indicates suggestions or additional information. |

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| 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. /\* Some code snippets may have numbered lines with a gray background. \*/
   1. /\* If you copy lines from code snippets that include line numbers, be sure to remove those line numbers. \*/

Tomcat Checklists

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

Prerequisites

| Prerequisites | |
| --- | --- |
| Task | Complete? |
| [Review System Requirements](#_Ref-1208139955) |  |
| [Gather Administrative Information](#_Ref-859140685) |  |
| [Download the Software](#_Ref-677170206) |  |

Installation

| Tomcat Configuration | |
| --- | --- |
| Task | Complete? |
| Download the Microsoft JDBC Driver for SQL Server (page 18) |  |
| Create the Database (page 21) |  |
| Set JAVA\_HOME (page 23) |  |
| Configure JDBC (page 23) |  |
| Configure Tomcat Logging (page 24) |  |
| Insert Properties Files (page 25) |  |
| Configure Tomcat Initialization (page 27) |  |
| Create Data Sources in Tomcat (page 27) |  |
| Change Tomcat Ports (page 38) |  |
| Configure Certificate Manager in Tomcat (page 23) |  |

Post-Installation Tasks

| Prerequisites | |
| --- | --- |
| Task | Complete? |
| Post-Installation Tasks (page 41) |  |
| General Configuration (page 41) |  |
| Email Configuration (page 43) |  |
| Determination Roles (page 44) |  |
| Determination Configuration Parameter (page 50) |  |
| Additional Configurations (page 51) |  |

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| Prerequisites  Complete the following tasks before you install and configure Certificate Manager:  Review System Requirements (page 9)  Gather Administrative Information (page 11)  Download the Software (page 12)   * Certificate Manager (page 13) * Data File Integrator (page 15) |

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](http://onesource.indirect.tax.fb@thomsonreuters.com/).

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 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](http://google.com/analytics). If you plan to do bulk uploads of customers and certificates, also download Data File Integrator.

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| 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.

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| 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 Microsoft SQL Server. After you confirm that you are using the correct database version, review the following sections.

Download the Microsoft JDBC Driver for SQL Server

The Microsoft JDBC Driver for SQL Server is used to enable communication with the Microsoft SQL Server database. The Certificate Manager software uses various versions of the JDBC Driver, depending on your Java version.

| Driver Version | JAVA Version | SQL Server Version |
| --- | --- | --- |
| sqljdbc42.jar | 7 | SQL Server 2012 |
| mssql-jdbc-7.0.0.jre8.jar | 8 | SQL Server 2016 |
| mssql-jdbc-9.4.0.jre8.jar | 9 | SQL Server 2019 |

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| Be sure to use the correct driver for the Java version used in your installation. This guide uses mssql-jdbc-7.0.0.jre8.jar in all examples, but this may not be correct for your installation. Depending upon your Java version, change the jreS.jar file. |

**Note: *mssql-jdbc-11.2.0.jre17.jar* and *mssql-jdbc-12.8.1.jre11.jar* are recommended for Certificate Manager 2.2.6.0 version**

To download the driver:

1. Open a browser and go to the [Microsoft](https://tax.thomsonreuters.com/support/onesource/customer-center/) web site.
2. In the search field, enter Microsoft JDBC Driver 7.0.
3. Select the article containing the JDBC download.
4. Click Download and select the .exe file.

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| The executable contains both versions of the driver. |

1. Click Next.
2. If the file does not automatically download, save the file to a temporary location on your hard drive.
3. Run the executable you downloaded to extract a copy of mssql-jdbc-7.0.0.jre8.jar.
4. Make a note of the location of mssql-jdbc-7.0.0.jre8.jar because you will use this later during the installation.

Create the Database

From Certificate Manager version 2.2.6.0 onwards we need to use SqlServer 2019 & SqlServer 2022

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| Set Mixed Mode Authentication in Microsoft SQL Server before you run the script below. |

Create the required database and database user:

1. Go to the following directory where you unzipped the Certificate Manager software: Docs/database-creation-scripts/sql-server.
2. Copy CreateSqlServerUserAndDatabase.bat, and then insert it in a working directory on the server that is hosting Microsoft SQL Server.
3. Double-click CreateSqlServerUserAndDatabase.bat.
4. To accept the default values in square brackets [ ], press ENTER, or type your own values:

| Prompt | Description |
| --- | --- |
| Enter the name or IP address of the server hosting SQL Server | Enter the name of the system hosting SQL Server. |
| Enter the SQL Server instance name (leave blank for a default instance) [null] | Leave blank for a default instance. |
| Use WINDOWS authentication during database creation [N]? | If you enter y, Windows authentication is used during database creation, and you skip the following two prompts. If you enter n (default), the next two prompts ask you to enter the user name and password of a user with database creation privileges. |
| Enter the name of the user with System Administrator privileges that will create the databases [sa]: | Enter a user with sufficient permissions to create databases (the sysadmin or dbcreate roles). The default is sa. |
| Enter the password for that user [Password1]: | Replace Password1 with the password of the user specified above. |
| Enter the path to your preferred SQL Server datafile directory: | Enter the full directory path to the datafile directory.   |  | | --- | | If the directory does not exist, an error message will appear. Either create the directory and try again, or enter a different path and try again. | |
| Enter the name of the SQL Server Certificate Manager database to be created [CERTMGR]: | Enter a name for the Certificate Manager database. The default is CERTMGR. |
| Enter the name of the LOGIN user to associate with this database [certmgr]: | Enter a name for the login user associated with the Certificate Manager database. |
| Enter the name of the user to associate with this database [certmgr]: | Enter a user to be granted permissions on the Certificate Manager database. |
| Enter the database password for this user in the Certificate Manager database [certmgr]: | Enter the password for the Certificate Manager database user. |

When the script finishes, press ENTER.

Configure Certificate Manager in Tomcat

**From Certificate Manager version 2.2.6.0 onwards we need to use Tomcat 10 & Tomcat 11.**

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

Set JAVA\_HOME

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

Configure JDBC

This installation requires the database JBDC driver mssql-jdbc-7.0.0.jre8.jar file that you downloaded in Download the Microsoft JDBC Driver for SQL Server). Insert this driver into the lib directory below TOMCAT\_HOME.

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| Configure Tomcat Logging   1. Go to following directory where you unzipped the Certificate Manager software: Docs/application-server-files/tomcat/conf 2. Copy logback.xml. 3. Insert logback.xml into the directory TOMCAT\_HOME/conf. |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Insert Properties Files  Certificate Manager requires two properties files to initialize the environment for Tomcat instances using SQL Server.   1. Go to the directory where you unzipped the Certificate Manager software: Docs/application-server-files/tomcat/lib 2. Copy taxCertificateManager.properties and contentManagementService.properties. 3. Insert the files into TOMCAT\_HOME/lib. 4. Open each of the properties files and change the default schema according to the table below:  | File Name | Parameter | Value | | --- | --- | --- | | taxCertificateManager.properties | tcm.default\_schema= | Replace certmgr with your Certificate Manager schema name. | | contentManagementService.properties | determination.default\_schema= | Replace determination\_schema with the Determination tax schema name (for example, sbxtax). |  1. Save and close the files. |

Configure Tomcat Initialization

Insert the file setenv into Tomcat to allocate memory and set a log parameter. The file has these default settings:

| 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. |
| -Dlogback.configurationFile= | ../conf/logback.xml | Do not change this logging parameter. |

1. Go to the following directory where you unzipped the Certificate Manager software:  
   Docs/application-server-files/tomcat/bin
2. Copy setenv.bat.
3. Go to the directory TOMCAT\_HOME/bin and insert setenv.
4. If you need to increase the memory settings because you anticipate large certificate loads, open setenv in a text editor.
5. Change the values in bold below:  
   set "JAVA\_OPTS=-Xms512m -Xmx1024m -Dlogback.configurationFile=../conf/logback.xml"
6. Save and close setenv.

Create Data Sources in Tomcat

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

Insert Data Source Snippets

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

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

Docs/application-server-files/tomcat/conf

1. Open certificate-manager-data-source-mssql-tomcat.txt in a text editor.
2. Copy all the data source snippets (the entire contents of the file).
3. Go to the directory TOMCAT\_HOME/conf.
4. Open the file server.xml in a text editor.
5. In server.xml, insert the data source snippets immediately above the closing tag </GlobalNamingResources>.

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| Certificate Manager offers an option to encrypt the Tomcat data source user name and password. In addition to the sections below, see Encrypting Tomcat Data Source Credentials (page 36) to encrypt the Tomcat data source credentials. |

1. Remain in server.xml and complete the steps in the next sections for editing each data source.

Edit Tax Certificate Manager Data Source (page 30)

Edit User Management Service Data Source (page 32)

Edit Content Management Service Data Source (page 34)

Edit Tax Certificate Manager Data Source

In server.xml, find the <Resource> element that contains jdbc/TaxCertificateManagerDataSource.

|  |
| --- |
| <Resource name="jdbc/TaxCertificateManagerDataSource" auth="Container" type="javax.sql.DataSource" username="user name" password="password" driverClassName="com.microsoft.sqlserver.jdbc.SQLServerDriver" url="jdbc:sqlserver://host:port;databasename=database name;" validationQuery="select 1" maxTotal="10" maxIdle="4"/>  **Note:**   1. From Certificate Manager version 2.2.6.0 onwards we need to add ‘encrypt=true’ and ‘trustServerCertificate=true’ as below:   url=”jdbc:sqlserver://host:port;databaseName=name;encrypt=true;trustServerCertificate=true” under Resource tag.   1. mssql-jdbc-11.2.0.jre17.jar and mssql-jdbc-12.8.1.jre11.jar are recommended for Certificate Manager 2.2.6.0 version. |

Change the values inside the <Resource> element that correspond to the elements in the table below:

| Element | Description |
| --- | --- |
| username="user name" | Replace user name with the Certificate Manager database user name (for example, certmgr). |
| password="password" | Replace password with the Certificate Manager database user password (for example, certmgr). |
| url="jdbc:sqlserver://host:port;databasename=database name;" | 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 (default 1433). * database: The name of the Certificate Manager database. |

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

Edit User Management Service Data Source

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

In server.xml, find the <Resource> element that contains jdbc/UserManagementServiceDataSource.

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| <Resource name="jdbc/UserManagementServiceDataSource" auth="Container" type="javax.sql.DataSource" username="user name" password="password" driverClassName="com.microsoft.sqlserver.jdbc.SQLServerDriver" url="jdbc:sqlserver://host:port;databasename=database name;" validationQuery="select 1" maxTotal="10" maxIdle="4"/>  **Note:**   1. From Certificate Manager version 2.2.6.0 onwards we need to add ‘encrypt=true’ and ‘trustServerCertificate=true’ as below:   url=”jdbc:sqlserver://host:port;databaseName=name;encrypt=true;trustServerCertificate=true” under Resource tag.   1. mssql-jdbc-11.2.0.jre17.jar and mssql-jdbc-12.8.1.jre11.jar are recommended for Certificate Manager 2.2.6.0 version. |

Change the values in the snippet that correspond to the elements in jdbc/UserManagementServiceDataSource as shown in the table below:

| Element | Description |
| --- | --- |
| username="user name" | Replace user name with the user name of the Determination Tax schema (for example, sbtax). |
| password="password" | Replace password with the password of the Determination Tax schema (for example, sbtax). |
| url="jdbc:sqlserver://host:port;databasename=database name;" | Replace the following with values for your implementation:   * host: The name of the system hosting the Determination database. * port: The Determination database port (default 1433). * database: The name of the Determination database. |

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

Edit Content Management Service Data Source

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

In server.xml, find the <Resource> element that contains jdbc/ContentManagementServiceDataSource.

|  |
| --- |
| <Resource name="jdbc/ContentManagementServiceDataSource" auth="Container" type="javax.sql.DataSource" username="user name" password="password" driverClassName="com.microsoft.sqlserver.jdbc.SQLServerDriver" url="jdbc:sqlserver://host:port;databasename=database name;" validationQuery="select 1" maxTotal="10" maxIdle="4"/>  **Note:**   1. From Certificate Manager version 2.2.6.0 onwards we need to add ‘encrypt=true’ and ‘trustServerCertificate=true’ as below:   url=”jdbc:sqlserver://host:port;databaseName=name;encrypt=true;trustServerCertificate=true” under Resource tag.   1. mssql-jdbc-11.2.0.jre17.jar and mssql-jdbc-12.8.1.jre11.jar are recommended for Certificate Manager 2.2.6.0 version. |

Change the values inside the <Resource> element that correspond to the elements in the table below:

| Element | Description |
| --- | --- |
| username="user name" | Replace user name with the user name of the Determination Tax schema (for example, sbtax). |
| password="password" | Replace password with the password of the Determination Tax schema (for example, sbtax). |
| url="jdbc:sqlserver://host:port;databasename=database name;" | Replace the following with values for your implementation:   * host: The name of the system hosting the Determination database. * port: The Determination database port (default 1433). * database: The name of the Determination database. |

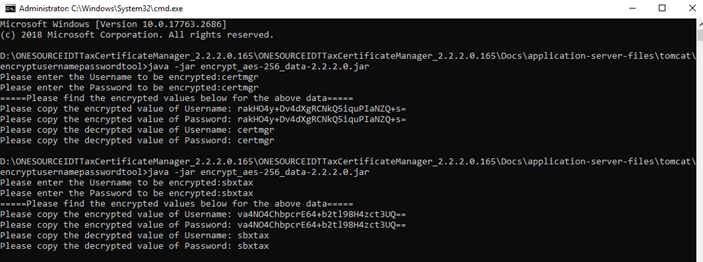
Save standalone.xml, and remain in the file to complete additional edits in the next section.

Encrypting Tomcat Data Source Credentials

The steps below take you through the process of encrypting Tomcat data source credentials for the Tax Certificate Manager Data Source, User Management Service Data Source , and Content Management Service Data Source using the AES-256 standard. Encrypting Tomcat data source credentials is optional.

To encrypt Tomcat data source credentials:

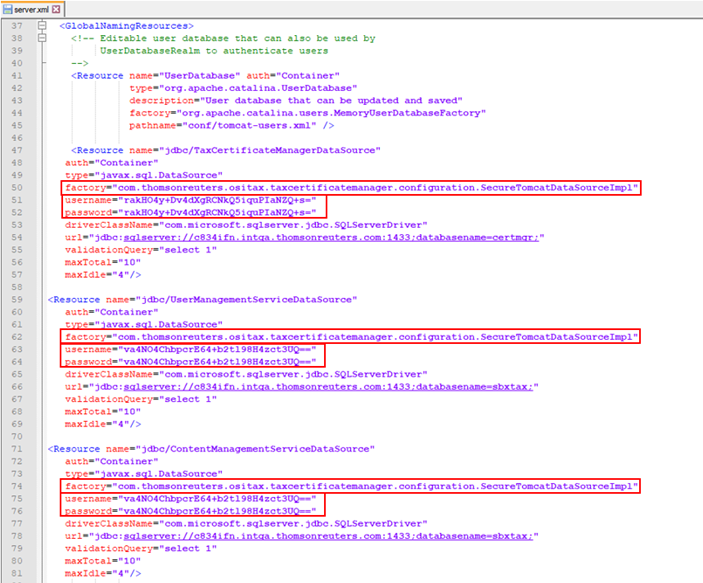
1. Locate the encrypt\_aes-256\_data-2.2.2.0.jar file in the path \Docs\application-server-files\tomcat\encryptusernamepasswordtool where you unzipped the ONESOURCEIDTTaxCertificateManager\_2.2.2.x.x.zip file. The encrypt\_aes-256\_data-2.2.2.0.jar file generates the encrypted value for the username and password text and uses AES-256 as the encoding mechanism.
2. Copy the encrypt\_aes-256\_data-2.2.2.0.jar file and paste it in <TomcatBaseDirectory>\lib folder.
3. Open the Command Prompt window.
4. Enter the following command, which will generate the encrypted values: java -jar encrypt\_aes-256\_data-2.2.2.0.jar. The following graphic shows an example:



1. Update the server.xml file in <TomcatBaseDirectory>\conf by replacing the existing username and password in the <Resource> element with the encrypted username and password. In addition, add the following factory parameter:

factory="com.thomsonreuters.ositax.taxcertificatemanager.configuration.SecureTomcatDataSourceImpl"

The following graphic shows the <Resource> element:



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| Change Tomcat Ports  If you are running other ONESOURCE products in separate Tomcat instances on the same server, change your ports for Certificate Manager to avoid conflicts.  For example, change all 8xxx ports to 9xxx in server.xml:   * 8080 becomes 9080 * 8005 becomes 9005   When you finish editing server.xml, save and close the file. |

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| Deploy Certificate Manager Under Tomcat  First, deploy the Certificate Manager installer, and then individually deploy the applications.  Installer   1. Stop Tomcat: In the bin directory under TOMCAT\_HOME, execute the shutdown script shutdown.bat. 2. Go to the WarFiles directory where you unzipped the Certificate Manager software. 3. Copy installer.war, and then insert the file into TOMCAT\_HOME/webapps. 4. Start Tomcat: In the bin directory under TOMCAT\_HOME, execute the startup script startup.bat. 5. Open a browser, and then 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. 6. Stop Tomcat. 7. Remove the following from TOMCAT\_HOME/webapps:    * File: TOMCAT\_HOME/webapps/installer.war    * Directory: TOMCAT\_HOME/webapps/installer/ |

Applications

1. Return to the WarFiles directory where you unzipped the Certificate Manager software.
2. Copy cm-soap-service-app.war, and then insert the file into TOMCAT\_HOME/webapps.
3. Start Tomcat.
4. Wait until Tomcat creates the directory webapps/cm-soap-service-app.
5. From the WarFiles directory, copy the following files and insert them into webapps. Copy the files one at a time, waiting between each file for Tomcat to finish creating a new directory in webapps.

| File | New Tomcat Directory |
| --- | --- |
| content-management-app.war | webapps/content-management-app |
| user-management-app.war | webapps/user-management-app |
| tax-certificate-manager-app.war | webapps/tax-certificate-manager-app |

1. Open a browser and go to the Certificate Manager Login 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
3. Remain in Certificate Manager and then go to Post-Installation Tasks (page 41).

Post-Installation Tasks

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

Certificate Manager (page 41)

Determination (page 44)

Additional Configurations (page 51)

Data File Integrator (page 52)

Certificate Manager

The following configurations require you to be logged on to Certificate Manager. If you are logged on, continue with General Configuration (page 41).

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](https://customercenter.sabrix.com/). |

Email Configuration

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

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| 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.

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

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| 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.

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| 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.

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| 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 51).
3. Remain in Determination and continue to the next section.

Determination Configuration Parameter

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| 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://tax.thomsonreuters.com/support/onesource/customer-center/).