

# ONESOURCE™ INDIRECT TAX DETERMINATION

## UPGRADE GUIDE

5.13.X.X

Document Version 1

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## DOCUMENT HISTORY

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V1	February 2021	Created first version of this guide for ONESOURCE Indirect Tax Determination 5.13.x.x.

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# INTRODUCTION

The ONESOURCE Indirect Tax Determination software is a highly scalable and reliable solution for business applications needing consolidated tax determination, calculation, and recording. A three-tier application built on industry standard Java technology and state-of-the-art design principles, the Determination software is designed to optimize performance, reliability, interoperability, manageability, and security.

This guide explains how to upgrade Determination to version 5.13.x.x.

## 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

## RESOURCES

Several resources help you become familiar with ONESOURCE Indirect Tax Determination and master its features. Help is installed with the application. All documents are posted on the [ONESOURCE Customer Center](#). To locate documents specific to your application, enter the search term "Determination documentation."

DETERMINATION RESOURCES	
Resource	Description
Help	This Help system gives assistance within Determination. Use Help after Determination is installed and configured.
Installation Guide	This guide is intended for technical users and contains complete details about how to install and configure Determination.
Platform Support	This describes the combinations of operating systems, databases, and application servers on which Determination operates.

**DETERMINATION RESOURCES**

Resource	Description
Product Support Lifecycle	This lists the end-of-life dates for the ONESOURCE Indirect Tax applications.
Upgrade Guide	This guide describes the procedures for upgrading an instance of Determination and refers to configuration information in the <i>Installation Guide</i> .
Customization Guide	This guide is intended for technical users. It describes types of customization and shows examples.
Data Dictionary	This resource is intended for technical users. It contains a list of all the fields in the Reporting database.
Sizing Guide	This guide is intended for technical users. It contains an architectural overview and discusses components, database, and server sizing.

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

**ONESOURCE RESOURCES**

Resource	Description
ONESOURCE Customer Center <a href="https://tax.thomsonreuters.com/support/onesource/customer-center/">https://tax.thomsonreuters.com/support/onesource/customer-center/</a>	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 <a href="https://customercenter.sabrix.com/">https://customercenter.sabrix.com/</a>	Download ONESOURCE Indirect Tax software.
Other ONESOURCE Indirect Tax Products and Services <a href="https://tax.thomsonreuters.com/products/brands/onesource/indirect-tax/">https://tax.thomsonreuters.com/products/brands/onesource/indirect-tax/</a>	Browse descriptions of other ONESOURCE Indirect Tax products and services.
Documentation Feedback <a href="mailto:onesource.indirect.tax.fb@thomsonreuters.com">onesource.indirect.tax.fb@thomsonreuters.com</a>	Send feedback about ONESOURCE Indirect Tax documentation.

# STYLE CONVENTIONS

We use 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 Determination 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.  
   * /  
2  /* Be cautious if you copy lines from the code snippets-t  
   he line numbers are included! */
```

# PREREQUISITES

Complete the following tasks before you attempt to upgrade ONESOURCE Indirect Tax Determination.

Review System Requirements .....	5
Java .....	5
Determining Your Current Versions .....	6
Download the Software .....	7
Updating Tax Content .....	7
Backing Up Your Database .....	8
Duplicate Users .....	8
Emptying Temporary Audit Tables .....	9
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## REVIEW SYSTEM REQUIREMENTS

ONESOURCE Determination 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](#).

## JAVA

ONESOURCE Determination requires an application server to host its various components, and the application server must use Oracle Java or IBM Java or Amazon Corretto. Search the ONESOURCE Customer Center to find the platform support information specific to your product version. If your application server does not provide its own version of Java, you must install it separately.



## DETERMINING YOUR CURRENT VERSIONS

You need to know which versions of Determination and Tax Content are currently installed in your environment.

To view the installed versions on your system, do the following:

1. Log on to Determination (<http://<host>:<port>/sabrix/>).
2. Go to **Menu > System > About**.

The example below is from a pre-upgraded version 5.12.1.2 instance.

About Determination			
System Version: 5.12.1.2	Model Version: G.2.1	Audit Version: AUDIT-G.4	Build ID: 75.75
<b>Tax Data Providers:</b>			
Tax Data Provider	Type	Version	Comment
Sabrix INTL Tax Data	INTL	2020.08.3.G	Sabrix Aug 2020.3
Sabrix US Tax Data	US	2020.08.3.G	Sabrix Aug 2020.3
To contact Customer Support, please visit our <a href="#">Customer Support</a> web site.			<a href="#">Create Troubleshooter File</a>
Portions of this software contain libraries licensed from third parties as listed in the Installation Guide.			
To obtain these libraries, request them using the Software Support Network.			

Record your version information in the table below. You will use these values in the following section.

ITEM	VERSION (IF INSTALLED)
Determination Software	Example version: 5.12.1.2 Your version: _____
International Tax Content	Example version: 2020.08.3.G Your version: _____
United States Tax Content	Example version: 2020.08.3.G Your version: _____

## DOWNLOAD THE SOFTWARE

To download and install the software, get the *ONESOURCEIDTDetermination\_513xx.zip* file from the Indirect Tax Customer Center:

1. Open the Indirect Tax Customer Center at <https://customercenter.sabrix.com/>.
2. Log on using the username and password provided by Customer Support.
3. Find Determination in the **Available Products** list and verify that **Installed Version** is set to **None**.
4. Select **Download** for Determination.
5. Save the file.
6. Unzip the *ONESOURCEIDTDetermination\_513xx.zip* file.

## UPDATING TAX CONTENT



Determination must have current Tax Content before you begin the upgrade.



Refer to [Apply Tax Content \(page 18\)](#) to understand the correct Tax Content version to use.

To install a Tax Content update, follow this general procedure:

1. Log on to the Determination software.
2. Go to **Menu > System > Import/Export**.
3. Click the **Import** tab, and then click **Browse**.
4. Select the tax update file you downloaded, and then click **Open**.



**IMPORTANT:** You must import each Tax Content update in the correct order (date and version). If you are uncertain about this step, contact Customer Support.

5. Click **Import**, and when the pop-up appears, click **Next** on each page until the import starts. You can close the pop-up at any time—even before the import is complete. The results of the import are displayed in the History tab.
6. Once the import is finished, repeat this process for the other Tax Content updates.

## BACKING UP YOUR DATABASE

Before performing any upgrade processes, back up all database instances/schemas hosting Determination. By doing so, you can restore your original data if you encounter interruptions during the upgrade process.

## DUPLICATE USERS

Determination does not support duplicate user name entries in the database. During the upgrade process, the installer checks for duplicate user names. When duplicate users are found, the installer appends "\_DET5130x\_[Sequential Number]" to those entries. For example, two entries for SMITH become SMITH\_DET5130x\_1 and SMITH\_DET5130x\_2.

If found, the installer displays a list of duplicate user names and the new replacement names.

5 duplicate user names found. Renamed the inactive duplicate data.

User Name	Renamed User Name
BobSmith	BobSmith_DET5111x_1
BobSmith	BobSmith_DET5111x_2
BobSmith	BobSmith_DET5110x_3
MaryClark	MaryClark_DET5110x_4
MaryClark	MaryClark_DET5110x_5

If the installer cannot append a user name, the upgrade fails. Duplicate user names that cannot be resolved are left in the database and must be modified manually before completing the upgrade. A message similar to the following displays:

Aborting installation. 11 duplicate user names found with more than 60 characters after appending DET5110x and maximum duplicate user count. Please remove or rename these inactive duplicate user manually.

User Name
-----------

MarkHam
---------

MarkHam
---------

MarkHam
---------

MarkHam
---------

```
| MarkHam |  
| MaryHart |  
| MaryHart |  
| MaryHart |  
| TomSmith123456 |  
| TomSmith123456 |  
| TomSmith123456 |
```

## EMPTYING TEMPORARY AUDIT TABLES



Skip this section if you are upgrading from Determination 5.6.0.0.

If your current installation uses temporary audit tables, empty the tables before performing an upgrade. You are using temporary audit tables if the Configuration parameter `AUDIT_TIME_INTERVAL` is set to a value greater than zero. If you are not using this parameter, skip to [Stopping Determination Processes](#).

To empty the audit tables:

- Ensure that Determination is not currently calculating and that no users are currently accessing the Workbench.
- Log on to Determination as the dba user.
- Navigate to **Menu > System > Configuration**.
- Set `AUDIT_TIME_INTERVAL` to a small number, such as 1 minute.
- Submit the change.
- Restart your application server for this parameter to take effect.
- Wait for the interval specified by the parameter.
- Verify that the data has moved from the temporary to the permanent tables. For example, there should be no records in the table `TB_INVOICES_TEMP` of the audit database.
- Shut down Determination as described in the next section.

## STOPPING DETERMINATION PROCESSES

Stop all Determination processes on any running instances before performing the upgrade. This includes tax calculations, automatic Tax Content updates, and Import/Export processes.

To ensure that Determination processes are not running while you are performing the upgrade, stop the application server process serving Determination. Follow the instructions for your application server to do so. If you are running in a clustered environment, repeat this step for each node in the cluster.

## CLEARING BROWSER HISTORY

Because there are some page layout changes in this release, we recommend that you clear your browser history. This ensures that the new Determination pages display without interference from cached pages of the previous version. Follow the instructions from your browser vendor to complete this task.

# APPLICATION UPGRADE

Your upgrade path is determined by the ONESOURCE Determination version you are currently using. Find the section below that corresponds to your current Determination version:

- [Versions 5.0.2.0–5.5.x.x](#)
- [Version 5.6.x.x or Higher](#)



The upgrade process resets all the attributes of the dba user except the password. For example, if the dba user has custom roles, you need to reapply them after the upgrade.

## VERSIONS 5.0.2.0–5.5.X.X

The following instructions are designed to help you upgrade to Determination 5.13.x.x from versions in the range of 5.0.2.0 to 5.5.x.x.



**This upgrade is significantly different from previous Determination upgrades.** Please read carefully before proceeding.

**If you are on a Determination version prior to 5.8.x.x, you must first perform incremental upgrades to the latest available minor version before proceeding to the latest version.**




CURRENT DETERMINATION VERSION	UPGRADE TO VERSION
5.0.2.0 through 5.3.0.1	5.5.1.0
5.5.1.0 through 5.6.2.3	5.6.2.4
5.6.2.4 through 5.8.1.0	5.8.1.1
5.8.1.1	5.13.x.x

To give you better performance, Determination 5.13.x.x contains new architecture and supports new application server versions. To confirm you have a supported application server version, review platform support and product support lifecycle information listed in the [ONESOURCE Customer Center](#). If you do not have a supported version prior to the Determination upgrade, either complete an in-place application server upgrade or a fresh application server installation.

The architectural changes in Determination 5.13.x.x are significantly different from your current version, and they make the Determination upgrade similar to a fresh installation—even if you complete an in-place upgrade of your application server.

For this reason, follow the steps in the *ONESOURCE Indirect Tax Determination Installation Guide* to complete the upgrade; however, not all installation guide steps are required. The following tables explain the steps that are necessary for each type of upgrade. Each table below corresponds to a particular chapter in the installation guide:


CHAPTER: "CONFIGURING YOUR DATABASE"		
Database Type	Section(s)	Comments
Oracle	Database Initialization Parameters	If you are using WebLogic, see the note about setting OPEN_CURSORS to 3000.
	"Preparing Oracle For XA Transactions"	Complete all the steps in "Preparing Oracle For XA Transactions."

CHAPTER: "CONFIGURING YOUR DATABASE"		
Database Type	Section(s)	Comments
SQL Server	"Downloading the Microsoft JDBC Driver for SQL Server"	Review "Downloading the Microsoft JDBC Driver for SQL Server."
	"Preparing SQL Server for XA Transactions"	Complete all steps in "Preparing SQL Server for XA Transactions."
	(Execute additional database commands shown in the right column)	<p>After you complete the steps in "Preparing SQL Server for XA Transactions," execute the following database commands as a user with administrative privileges. This adds the role "SqlJDBCXAUser" to the Determination users in the master database. Change sbxtax and sbxaud if you use different names.</p> <p>Keep the commands before and after the carriage return symbol (  ) on the same line:</p> <pre>USE [master]  GO  CREATE USER [sbxtax] FOR LOGIN [sbxtax] WITH  DEFAULT_SCHEMA=[dbo]  GO  exec sp_addrolemember [SqlJDBCXAUser], [sbxtax]  GO  CREATE USER [sbxaud] FOR LOGIN [sbxaud] WITH  DEFAULT_SCHEMA=[dbo]  GO  exec sp_addrolemember [SqlJDBCXAUser], [sbxaud]  GO</pre>
DB2	"Tuning Database Performance"	There are some optional, new DB2 database settings for long-running transactions. These are listed in the second table under "Tuning Database Performance."




## CHAPTER: "CONFIGURING THE APPLICATION SERVER"

Application Server	Section(s)	Comments
JBoss	"Configuring JBoss Enterprise Edition"	Follow all the steps in "Configuring JBoss Enterprise Edition."
Tomcat	"Configuring Tomcat"	Follow all the steps in "Configuring Tomcat."
IBM WebSphere	"Configuring IBM WebSphere"	<p><b>New Application Server Installation</b></p> <p>If you replaced WebSphere with a newer, supported version, follow all the steps in the chapter "Configuring IBM WebSphere."</p>
		<p><b>Existing or Upgraded Application Server</b></p> <p>If you plan to use your existing, supported WebSphere version, or if you completed an in-place WebSphere upgrade, you can reuse some of your previous Determination configurations.</p> <p>Using the WebSphere documentation provided by IBM, complete the following steps:</p> <ul style="list-style-type: none"> <li>• Undeploy the SabrixTaxEngine application.</li> <li>• Remove the existing Tax and Audit data sources.</li> <li>• Remove the existing JDBC Provider for Determination.</li> </ul> <p>In the <i>ONESOURCE Indirect Tax Installation Guide</i>, complete these sections under "Configuring IBM WebSphere":</p> <ul style="list-style-type: none"> <li>• "Modifying Transaction Timeouts"</li> <li>• "Creating the Oracle (or DB2) JDBC Provider"</li> <li>• "Creating the Tax Data Source"</li> <li>• "Modifying the Tax Data Source"</li> <li>• "Creating the Audit Data Source"</li> <li>• "Modifying the Audit Data Source"</li> <li>• "Deploying the Application"</li> </ul>

CHAPTER: "RUNNING THE IMPLEMENTER"		
Chapter	Section(s)	Comments
"Running the Implementer"	All	<p>Complete all the steps in "Running the Implementer."</p> <div>  <p>The Determination installer looks for duplicate commodity codes within the same merchant and product group combination. If it finds any duplicates, Determination displays the message on the screen that the installation has completed with errors, and it lists the duplicates. The duplicates are also recorded in the <i>sabrix.log</i> file.</p> <p>It is important that you remove any duplicates because this could affect your tax calculations. Note that you cannot use Company exports from other instances to remove duplicate commodity codes. Contact Customer Support if you need help removing duplicate commodity codes.</p> </div>

CHAPTER: "CLUSTERING"		
Chapter	Section(s)	Comments
"Clustering"	All	<p>Determination 5.13.x.x requires new steps to configure clustering.</p> <div>  <p>Skip this section if you are not clustering Determination.</p> </div>

 The upgrade process resets all the attributes of the dba user except the password. For example, if the dba user has custom roles, you need to reapply them after the upgrade.

When you finish the steps in the *ONESOURCE Indirect Tax Determination Guide*, return to this upgrade guide and review the next section [After the Upgrade](#).

## VERSION 5.6.X.X OR HIGHER

The following instructions help you upgrade to Determination 5.13.x.x from version 5.6.x.x or higher.



The instructions in this section only apply to upgrades that use the same application server version.

If you are upgrading application servers during your upgrade to 5.13.x.x, follow the more extensive steps in [Versions 5.0.2.0–5.5.x.x](#).



As of version 5.6.1.0, Determination no longer includes Utility Reports. If you are running a separate instance of Tomcat for Utility Reports, stop that instance and remove it because that instance is no longer used by Determination.

**If you are on a Determination version prior to 5.8.x.x, you must first perform incremental upgrades to the latest available minor version before proceeding to the latest version.**

CURRENT DETERMINATION VERSION	UPGRADE TO VERSION
5.0.2.0 through 5.3.0.1	5.5.1.0
5.5.1.0 through 5.6.2.3	5.6.2.4
5.6.2.4 through 5.8.1.0	5.8.1.1
5.8.1.1	5.13.x.x

Complete the following:

1. Undeploy the existing Determination application in your application server (for assistance, consult the documentation provided by your application server vendor).



For Tomcat, remove the following from the *webapps* directory:

- *sabrix*
- *sabrix-extensions*
- *sabrix.war*
- *sabrix-extensions.war*

2. Find the Determination 5.13.x.x application file(s):
  - **Tomcat** (*sabrix.war* and *sabrix-extensions.war*): Located in the *tomcat* directory where you unzipped *ONESOURCEIDTDetermination\_513xx.zip*.
  - **All Other Application Servers** (*sabrix.ear*): Located in the root directory where you unzipped *ONESOURCEIDTDetermination\_513xx.zip*.
3. Deploy the Determination application file(s) in your application server. Instructions for this are in the section "Deploying the Application" of the *ONESOURCE Indirect Tax Determination Installation Guide*.
4. Follow the steps in the chapter "Running the Implementer" in the *ONESOURCE Indirect Tax Determination Installation Guide*.
5. Restart the application server instance that is hosting Determination. The upgrade is complete.



If you are using JBoss, we recommend you make an additional parameter change and restart the application server. See the topic "Controlling HTTP Parameters" in the JBoss ONESOURCE Indirect Tax Determination installation guide.

# AFTER THE UPGRADE

## APPLY TAX CONTENT



The Compatibility Version for Tax Content changed in Version 5.8.0.0. If you are using Determination 5.7.0.3 or prior you must use Compatibility Version G tax US and INTL content. If you are using Determination 5.8.0.0 or greater you must use Compatibility Version G.2 tax for US and INTL Content.

**Applying the incorrect version or edition (Master or Update) file will cause critical errors to your Determination system.**

**If you are uncertain about which version or edition (Master or Update) file you should apply, contact Customer Support before proceeding.**

Your Determination upgrade path determines whether you would use the "Master" content file or the "Update" content file for Tax Content updates. The general rule to follow:

- If you are upgrading to another minor version (example, 5.11.x.x to 5.12.x.x), then apply the **Master** content file.
- If you are upgrading within a minor version (example, 5.12.1.4 to 5.12.2.0) then apply the **Update** content file.

Once you have completed the upgrade by running the Determination Implementer, you must download and install G.2 US and INTL Content. Complete the following download process:

1. Log on to the Customer Center by entering the user name and password assigned by Customer Support.
2. Locate **Sabrix INTL Tax Data** in the list.
3. For **Platform**, select your current Determination version. For example, **5.13.x.x / G.2**.



When you perform monthly updates of Determination content, remember to always select the version corresponding to the Determination version you have installed; for example **5.13.x.x / G.2**.

4. Set the **Current Installed Version** to **None**.
5. Click **Download**.

6. Locate **Sabrix US Tax Data** in the list and repeat the download process.
7. Install both Content files. For more information, see [Updating Tax Content](#).

## RE-RUN THE REPORTING INSTALLER



The following only applies if—before your upgrade to version 5.13.x.x—you have been using Reporting 6.2.0.0 with a version of Determination that is prior to version 5.5.0.0.

If you just upgraded from a version of Determination that is prior to 5.5.0.0, and you were using Reporting 6.2.0.0, you need to re-run the Reporting 6.2.0.0 installer to ensure that Reporting 6.2.0.0 and Determination 5.13.x.x are synchronized.

For example, if you had been using Reporting 6.2.0.0 along with Determination 5.3.0.1, you would need to re-run the Reporting installer once you upgraded Determination to version 5.13.x.x.

See the section “Running the Installer” in the *ONESOURCE Indirect Tax Reporting Installation Guide* for details.