

Oracle Financial Services Investigation Hub

Installation Guide

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ORACLE
Financial Services

Oracle Financial Services Investigation Hub Installation Guide

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Document Control

Version Number	Revision Date	Change Log
8.1.2.1.0	December 2022	<ul style="list-style-type: none">• Updated Bug ID for v8.1.2.1.0 in the Preparing for Installation section.• Added a new Executing ML Paragraph in L1 and L2 Notebooks section.• OJET Upgrade (all UI elements are updated according to UI in the entire document).• Updated step 1 in the Accessing IH Notebooks through Compliance Studio 8.1.2.1.0 section.• Added a new patch details for Compliance Studio in the Prerequisites section.
8.1.2.0.0	August 2022	Removed the Jar file details in the Accessing IH Notebooks through Compliance Studio 8.1.2.1.0 section.
8.1.2.0.0	April 2022	Added a new Accessing IH Notebooks through Compliance Studio 8.1.2.1.0 section.
8.1.1.1.0	December 2021	There is no content update from the previous version. Only the version number has been changed.
8.1.1.0.0	October 2021	This is the first version created for IH 8.1.1.0.0 release based on OFS Compliance Studio 8.1.1.0.0 release.

This table records the number of revisions or changes done to this document as part of a release.

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1 Preface

This section provides supporting information for the OFS Investigation Hub application Installation Guide.

Topics:

- [Summary](#)
- [Audience](#)
- [Related Documents](#)
- [Conventions](#)
- [Abbreviations](#)

1.1 Summary

Before you begin the installation, ensure that you have access to the Oracle Support Portal with valid login credentials to notify us of any issues at any stage quickly. You can obtain the login credentials by contacting Oracle Support.

1.2 Audience

The Installation Guide is intended for system engineers responsible for installing and configuring the OFS Investigation Hub Application's components.

Prerequisites for the Audience

The document assumes that you have experience in installing Enterprise components and basic knowledge about the following is recommended:

- PGQL and PGX
- UNIX commands
- Database concepts

1.3 Related Documents

This section identifies additional documents related to the OFS Investigation Hub application. You can access the following documents from [Oracle Help Center Documentation Library](#):

- *Oracle Financial Services Investigation Hub Administration and Configuration Guide*
- *Oracle Financial Services Investigation Hub User Guide*
- *Oracle Financial Services Investigation Hub ReadMe*

1.4 Conventions

The following table lists the text conventions used in this document:

Table 1: Conventions Used in this Guide

Convention	Meaning
Boldface	Boldface type indicates graphical user interface elements associated with an action or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text on the screen, or text you enter.

1.5 Abbreviations

The following table lists the abbreviations used in this document:

Table 2: Abbreviations and Their Meaning

Abbreviation	Meaning
OFS	Oracle Financial Services
HTTPS	Hypertext Transfer Protocol Secure
JDBC	Java Database Connectivity
LDAP	Lightweight Directory Access Protocol
LHS	Left Hand Side
MOS	My Oracle Support
OS	Operating System
SFTP	Secure File Transfer Protocol
URL	Uniform Resource Locator
WAR	Web application Archive
JAR	Java Archive
PGX	Parallel Graph Analytics
PGQL	Property Graph Query Language
XML	Extensible Markup Language
IH	Investigation Hub

2 Investigation Hub Application Installation

This chapter provides the necessary information required to understand the installation of the Oracle Financial Service (OFS) Investigation Hub application.

Topics:

- [Prerequisites](#)
- [Preparing for Installation](#)
- [Installing the Software](#)
- [Post Installation Steps](#)

2.1 Prerequisites

The installation of this application depends on a few prerequisites, which are discussed in the following list:

- Oracle Financial Services Compliance Studio Application Release 8.1.2.1.0 must be installed. For further information, see [Oracle Financial Services Compliance Studio Installation Guide](#).
- On top of **ECM 8.0.8.0.0**, apply the following patches:
 - 8.0.8.0.41 (BUG: **32559114**): ECM-Investigation Hub Integration Patch
 - 8.0.8.0.28 (BUG: **31497997**): ECM-ML4AML Integration Patch
- On top of **ECM 8.0.8.1.0** (BUG: **32589501**), apply the following patches:
 - 8.0.8.1.3 (BUG: **33164973**): ECM-Investigation Hub Integration Patch
 - 8.0.8.1.4 (BUG: **33395125**): ECM-ML4AML Integration Patch
- On top of **Compliance Studio 8.1.2.1.0**, apply the following patch:
 - 8.1.2.1.3 (BUG: **34924198**): Investigation Hub Patch

2.2 Preparing for Installation

1. Login to <https://support.oracle.com/> with a valid Oracle account and search for the patch ID (Bug ID - **34566796**) under the *Patches & Updates* tab.

You can also check the patch ID in the [Oracle Financial Services Investigation Hub Release Notes](#).

2. Copy the downloaded installer archive to the Download Directory (in Binary Mode) on the setup identified for OFS Compliance Studio installation.

2.3 Installing the Software

There is no separate installer to import the IH notebooks as Model Drafts through the OFS Compliance Studio.

2.3.1 Obtaining IH Notebooks

Once you obtain the installer, copy the installer (in BINARY mode) to the system on which the OFSAA Infrastructure components will be installed.

NOTE

You must be logged in to the UNIX operating system as a non-root user.

1. Extract the contents of the Oracle Financial Services Investigation Hub 8.1.2.1.0 to Download Directory using the following command:

```
unzip OFS_FCCIH_8.1.2.1.0_LINUX.zip
```

2. Copy the notebooks from <IH_installer_path>/OFS_FCCIH/notebook to local directory.

2.3.1.1 Accessing IH Notebooks through Compliance Studio 8.1.2.1.0

If you want to use Investigation Hub notebooks in Compliance Studio 8.1.2.1.0 release, then follow the below steps in the environment where Compliance Studio is installed:

1. Navigate to <COMPLIANCE_STUDIO_INSTALLATION_PATH>/pgx/pgx-server/bin.

Example:

```
/scratch/fccstudio/CS_8121_newCluster/compStudio_18101429/OFS_COMPLIANCE_STUDIO/pgx/pgx-server/bin
```

2. Restart Compliance Studio.

NOTE

See the [Oracle Financial Services Compliance Studio Installation Guide](#) for further information.

2.3.1.2 Executing ML Paragraph in L1 and L2 Notebooks

To execute ML paragraph in L1 and L2 notebooks, follow these steps:

1. Navigate to the <COMPLIANCE_STUDIO_INSTALLATION_PATH>/deployed/mmg-home/mmg-studio/interpreter-server/pgx-interpreter-bundledJRE-21.4.9 directory.
2. Create a folder and name as “**workaround**” and then create a folder “**python**” inside the workaround folder.

For example, <COMPLIANCE_STUDIO_INSTALLATION_PATH>/deployed/mmg-home/mmg-studio/interpreter-server/pgx-interpreter-bundledJRE-21.4.9/workaround/python directory.

3. Download `zeppelin_python.py` file from [My Oracle Support \(Doc ID 2909218.1\)](#) and place it in the **python** folder.
4. Navigate to the `<COMPLIANCE_STUDIO_INSTALLATION_PATH>/deployed/mmg-home/mmg-studio/conf/interpreter-conf/fcc-python.json` directory.
5. Change the default value of `zeppelin.python` property as `"<COMPLIANCE_STUDIO_INSTALLATION_PATH>/deployed/python-packages/defaultVirtualEnv/bin/python3"`.

Figure 1: Zeppelin.python Property

```

1,
"properties": {
  "zeppelin.python": {
    "envName": null,
    "propertyName": "zeppelin.python",
    "defaultValue":
"/scratch/fccstudio/CS_8121_newCluster/compStudio_18101429/OFS_COMPLIANCE_STUDIO/deployed/python-packages/defaultVirtualEnv/bin/python
3",
    "description": "Python directory. It is set to python by default.(assume python is in your $PATH)"
  },
},

```

6. Navigate to the `<COMPLIANCE_STUDIO_INSTALLATION_PATH>/deployed/mmg-home/mmg-studio/interpreter-server/pgx-interpreter-bundledJRE-21.4.9/bin/pgx-interpreter-bundledJRE` directory.

7. Search the **CLASSPATH** and remove the following:

```
CLASSPATH="$APP_HOME/lib/*:$APP_HOME/conf
```

```
if [ -z $JAVA11_HOME ] ; then
```

```
    JAVA_HOME="$APP_HOME"
```

```
else
```

```
    JAVA_HOME=$JAVA11_HOME
```

```
fi
```

```
JAVACMD="$JAVA_HOME/bin/java"
```

8. Add the **CLASSPATH** and **JAVACMD** as given below:

```
CLASSPATH="$APP_HOME/workaround/:$APP_HOME/workaround:$APP_HOME/lib/*:$APP_HOME/conf"
```

```
JAVACMD="$APP_HOME/bin/java"
```

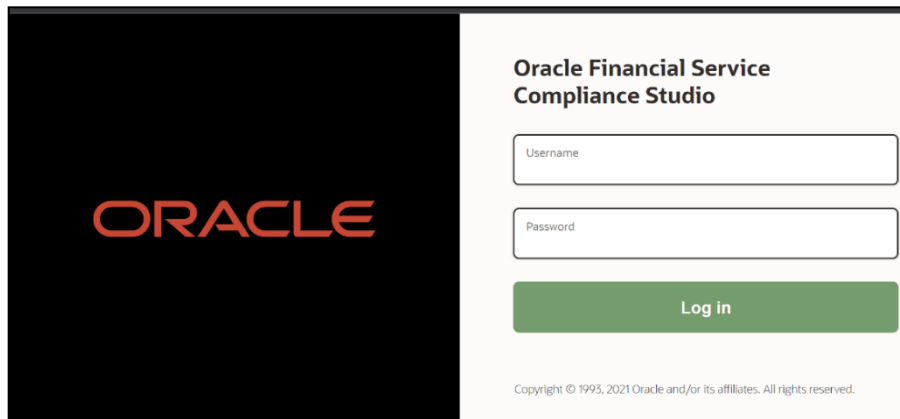
9. Enter the URL in the following format in the web browser:

```
https://<Host_Name>:<Port_Number>/cs/home
```

Here `<Port_Number>` is **7001** for the OFS Compliance Studio application installed on-premise.

10. The OFS Compliance Studio application login page is displayed.

Figure 2: Login Page



11. Enter the **Username** and **Password**.

12. Click **Login**.

After login into the OFS Compliance Studio application, you must change the port number in the same URL to access the Data Studio application.

13. To access the Data Studio application, modify the logged-in URL in the following format:

`https://<Host_Name>:<Port_Number>/cs`

Here `<Port_Number>` is **7008** for the Data Studio application installed on-premise.


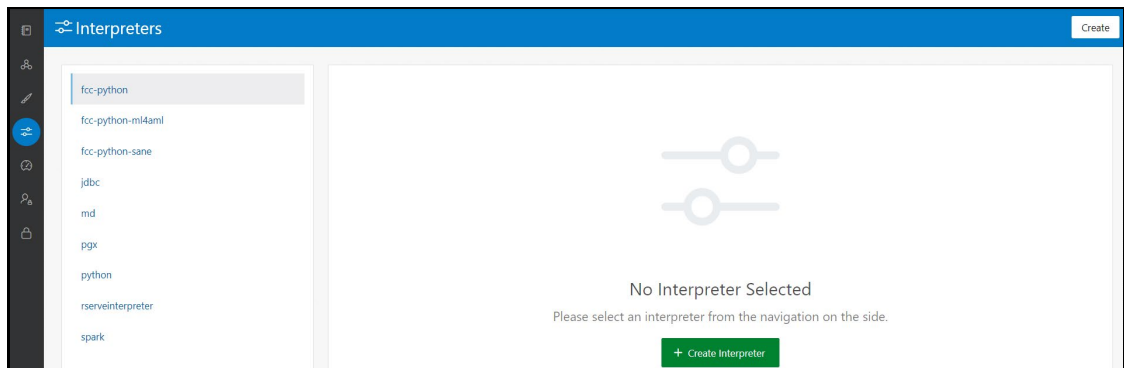
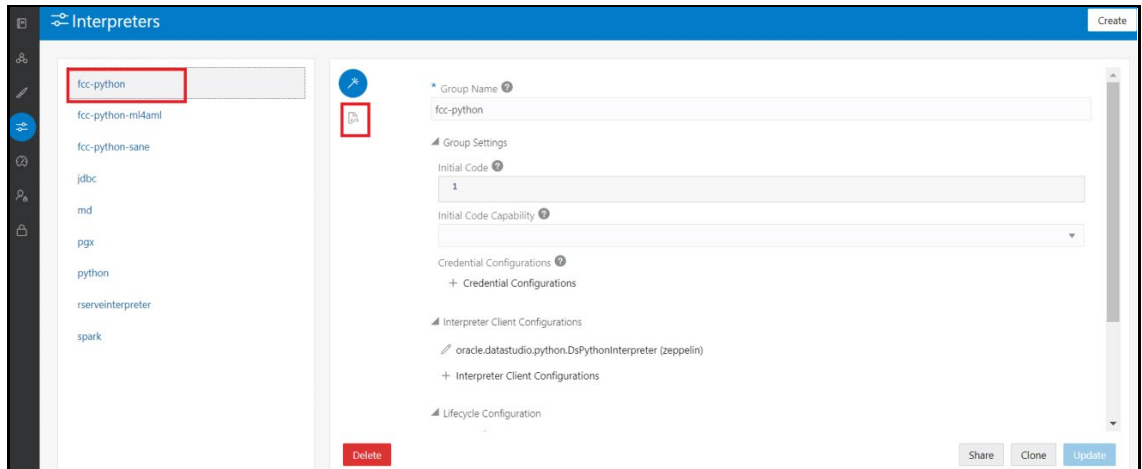
a. Click **Interpreters** . By default, the Interpreters page lists all the available interpreters on the LHS.

Figure 3: Interpreters



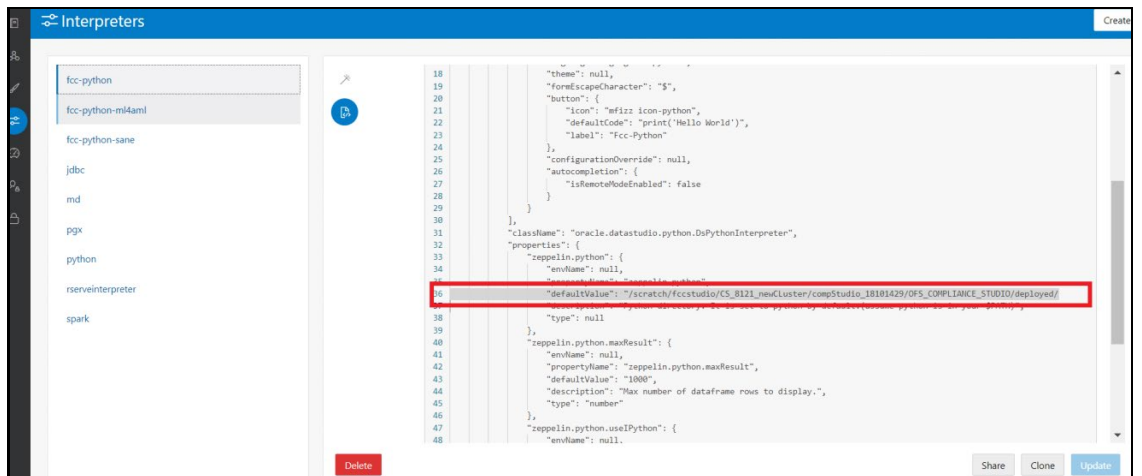
b. Click **fcc-python** interpreter on the LHS. The default configured interpreter variant is displayed on the RHS.

Figure 4: fcc-python Interpreter



- c. Click **Plain Configuration** on the RHS and then change the default value of `zeppelin.python.as` to `"<COMPLIANCE_STUDIO_INSTALLATION_PATH>/deployed/python-packages/defaultVirtualEnv/bin/python3"`.

Figure 5: Default value of Zeppelin.python



14. Restart Compliance Studio. To do this, navigate to the `<COMPLIANCE_STUDIO_INSTALLATION_PATH>/bin` directory and execute the command `./compliance-studio.sh --restart`.

2.3.2 Importing IH Notebooks

To create an objective (folder) and Draft to import the IH notebooks manually through the Compliance Studio application, perform the following steps:

NOTE

- There is no separate installer to import the IH notebooks as Model Drafts through the OFS Compliance Studio, which is available for all the users.
- For IH Notebook to be executable, it needs to be imported into the **Sandbox** workspace.
- In the case of the Special Investigation notebook, creating an Objective and Draft to import the notebook must be performed for each user separately.
- An Administrator can also import the IH notebooks for all users.
- The importing notebook process is the same for On-Premise and Kubernetes.

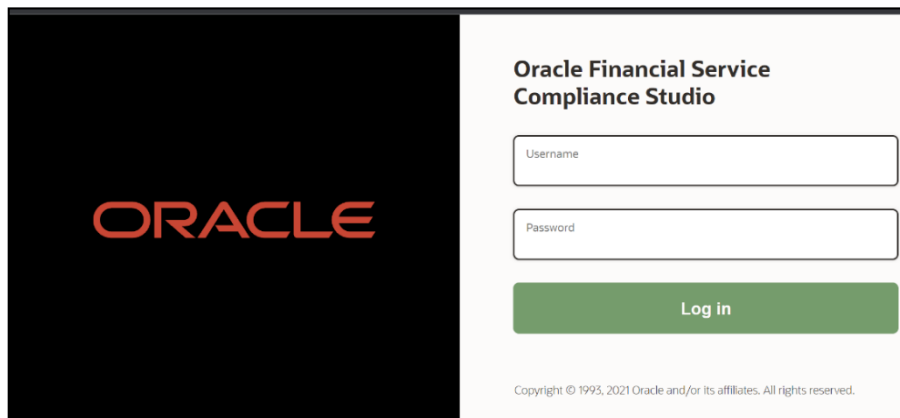
1. Enter the URL in the following format in the web browser:

`https://<Host_Name>:<Port_Number>/cs/home`

Here <Port_Number> is **7001** for the OFS Compliance Studio application installed on-premise.

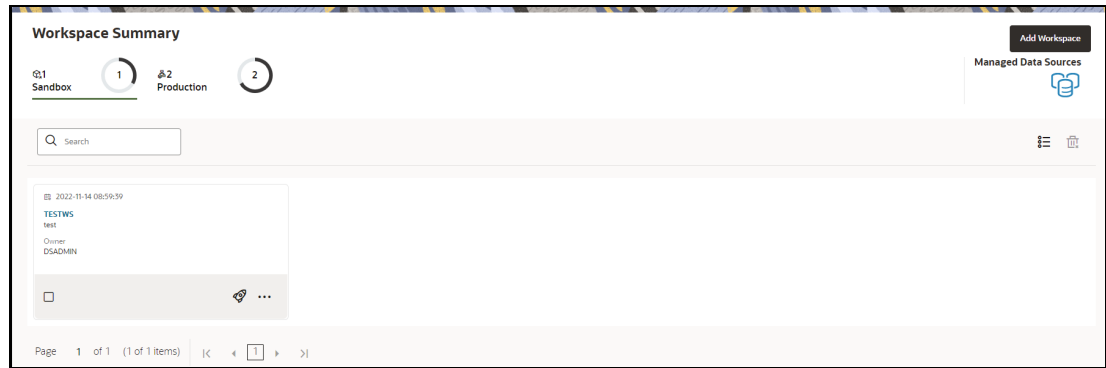
2. The OFS Compliance Studio application login page is displayed.


Figure 6: Login Page



3. Enter the **Username** and **Password**.
4. Click **Login**.
5. After login into the OFS Compliance Studio application, the Workspace Summary page is displayed.

Figure 7: Workspace Summary page



6. Select Launch workspace  for a corresponding **Sandbox** on the Workspace Summary page to display the application configuration and model creation menu.

NOTE For IH Notebook to be executable, it needs to be imported into the **Sandbox** workspace.


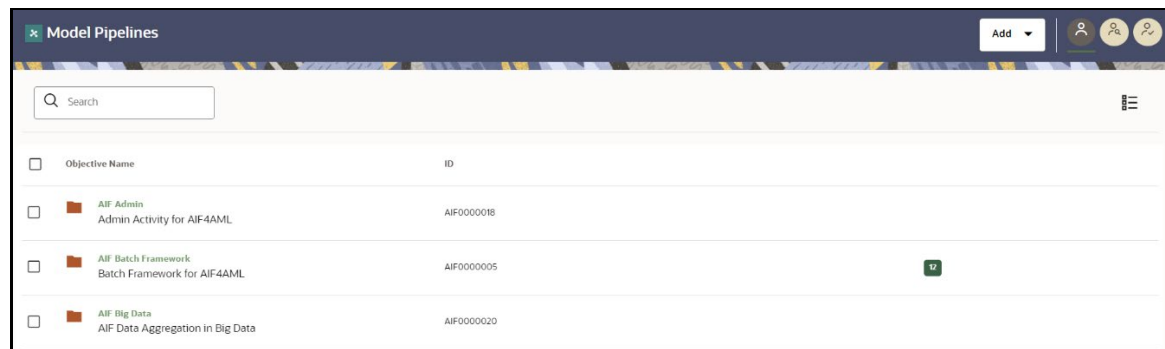
7. Click **Model Pipelines**  to display the **Model Pipelines** page.

Figure 8: Model Pipelines




8. Click **Add**  and select **Objective** from the list. The **Add Objective** window is displayed.

Figure 9: Add Objective

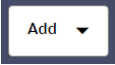
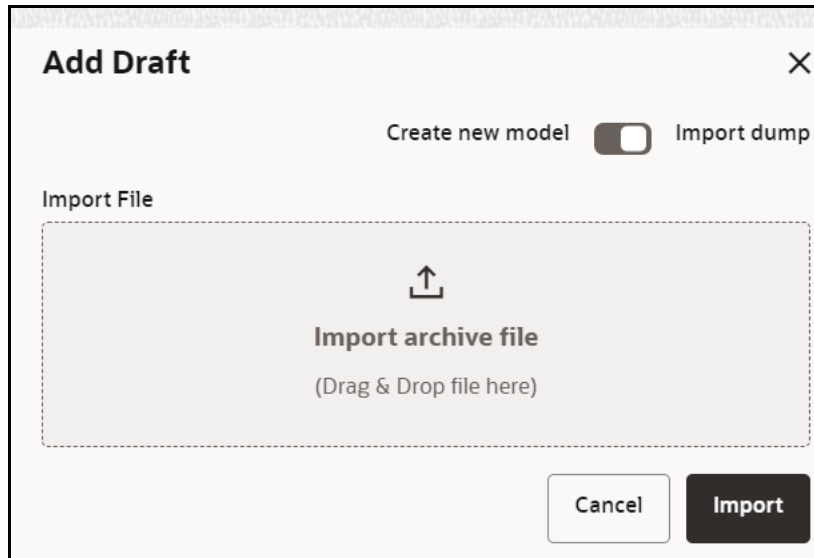
- a. Provide the **Objective Name** and **Description**. For example, enter **InvestigationHub** as a new objective.
 - b. Click **Save**. The new Objective will be created.
9. Open the **Objective** (InvestigationHub) folder, click  icon, and select **Draft** to display Add Draft window.

Figure 10: Add Draft



10. Toggle the **Import Dump** button.
- a. Click **Import Archive File** and browse the path where downloaded notebooks are available in the local directory. See [Obtaining the Notebooks](#) section.

Import the following Notebooks from your local directory one by one.

- Investigation_Hub_Special_Investigation.dsnb
- Investigation_Hub_Generate_Correlated_Networks.dsnb
- Investigation_Hub_ECM_Integration_L2.dsnb
- Investigation_Hub_ECM_Integration_L1.dsnb

NOTE

- Generate Correlated Networks notebook is an example for non-ECM customers. It is a sample notebook, and you can create based on your requirement.
- It is applicable for the Administrator. An Administrator can configure the parameters for Investigation using the Special Investigations notebook. For more information, see the [Oracle Financial Services Investigation Hub Administration and Configuration Guide](#).

- b. Click **Import**.

11. After import into the InvestigationHub Objective, the Model Pipelines page is displayed.

Figure 11: Investigation Hub Objective after importing notebooks

<input type="checkbox"/>	Objective Name	ID	Owner	Tags
<input type="checkbox"/>	L1 Enables the investigator to view a case and search for one or multiple names and/or addresses in order to examine their network, red flags, and risk factors.	1669023642438	DSADMIN	ecm_integration investigation hub
<input type="checkbox"/>	L2 Enables the investigator to view a case and search for one or multiple names and/or addresses in order to examine their network, red flags, and risk factors.	1669023665937	DSADMIN	ecm_integration investigation hub
<input type="checkbox"/>	S1 Enables the investigator to search for one or multiple names and/or addresses in order to examine their network, red flags, and risk factors.	1669023692734	DSADMIN	investigation hub special investigations

2.3.2.1 Example

The importing process is the same for all users, but they must create Objectives and Drafts individually.

2.3.2.1.1 User1



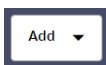
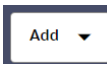
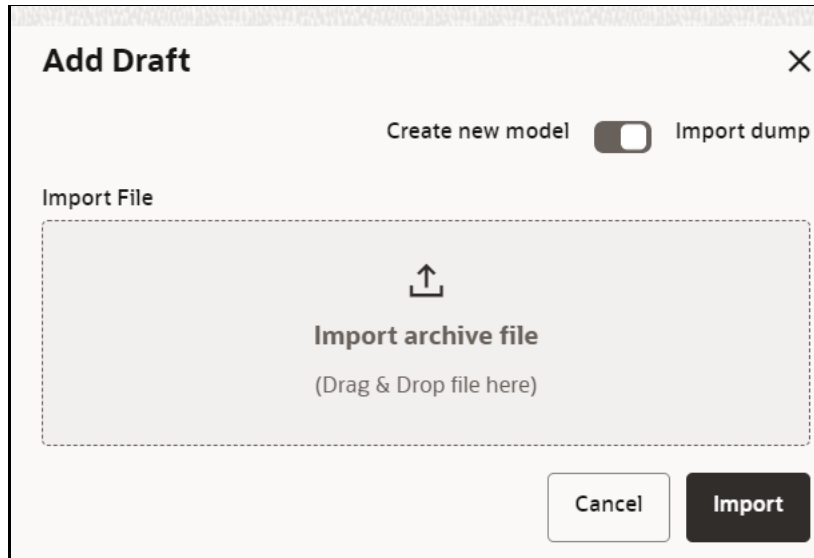
1. Login into the OFS Compliance Studio application as **User1**.
2. Select Launch workspace  for a corresponding **Sandbox** on the Workspace Summary.
3. Click **Model Pipelines**  to display the **Model Pipelines** page.
4. Click **Add**  and select **Objective** from the list to display Add Objective window.
 - a. Provide the **Objective Name** and **Description**. For example, enter **InvestigationHub** as a new objective.
 - b. Click **Save**. The new Objective will be created.
5. Open the **Objective** (InvestigationHub) folder, click  icon, and select **Draft** to display Add Draft window.

Figure 12: Add Drafts to Import notebooks



6. Toggle the **Import Dump** button.
 - a. Click **Import Archive File** and browse the path where downloaded notebooks are available in the local directory.


Import the following Notebooks from your local directory one by one.

 - Investigation_Hub_Special_Investigation.dsnb
 - Investigation_Hub_Generate_Correlated_Networks.dsnb
 - Investigation_Hub_ECM_Integration_L2.dsnb
 - Investigation_Hub_ECM_Integration_L1.dsnb
 - b. Click **Import**.
7. After import into the InvestigationHub Objective, the Model Pipelines page is displayed.

Figure 13: Investigation Hub Objective after importing notebooks

Objective Name	ID	Owner	Tags
<input type="checkbox"/> L1 Enables the investigator to view a case and search for one or multiple names and/or addresses in order to examine their network, red flags, and risk factors.	1669023642438	DSADMIN	ecm_integration investigation_hub
<input type="checkbox"/> L2 Enables the investigator to view a case and search for one or multiple names and/or addresses in order to examine their network, red flags, and risk factors.	1669023663937	DSADMIN	ecm_integration investigation_hub
<input type="checkbox"/> SI Enables the investigator to search for one or multiple names and/or addresses in order to examine their network, red flags, and risk factors.	1669023692734	DSADMIN	investigation_hub special_investigations

2.3.2.1.2 User2

8. Login into the OFS Compliance Studio application as a **User2**.
9. Select Launch workspace  for a corresponding **Sandbox** on the Workspace Summary.
10. Navigate to the Model Pipelines. **User2** cannot access the IH notebooks that are imported by **User1**.
11. **User2** must perform the steps to import IH notebooks. Follow the same steps performed by **User1** to import the notebooks. See [User1](#) section.

2.3.2.1.3 Administrator

An Administrator can also import the IH notebooks for all users. Follow the same steps performed by **User1** to import the notebooks. See [User1](#) section.

The users (**User1** and **User2**) can navigate to **Model Pipelines > InvestigationHub** Objective and access imported notebooks.







2.4 Post Installation Steps

After importing the notebooks, you can view the notebooks in the following UI path:

Perform the following post-installation steps:

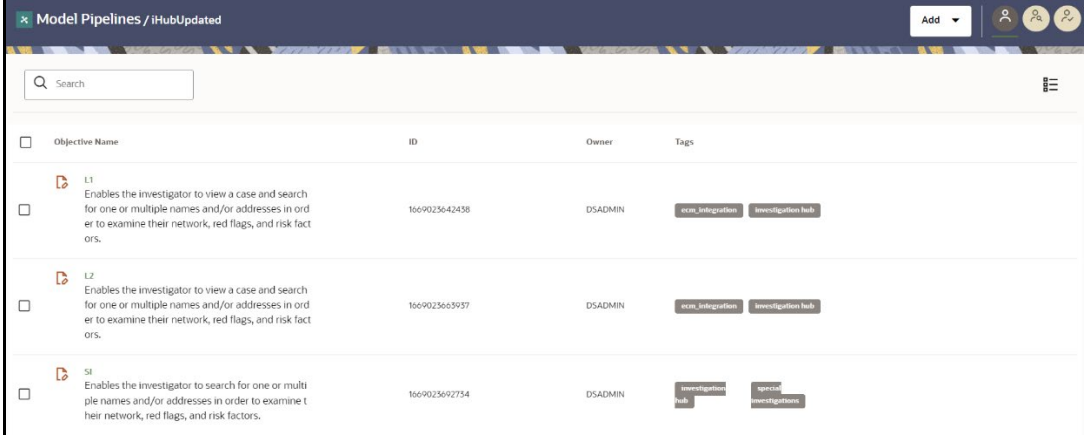
1. Load the graph. For more information, see the *Loading the Graph* section in [Oracle Financial Services Investigation Hub Administration and Configuration Guide](#).
2. On the Workspace Summary page, select **Launch workspace**.
3. Navigate to **Model Pipelines**, where you can find the Objective.

Figure 14: Investigation Hub Objective

<input type="checkbox"/>	 AMLES AMLES Models	AMLES00002	
<input type="checkbox"/>	 AMLES Admin AMLES Application	AMLES00001	
<input type="checkbox"/>	 AMLES Batch Framework Batch Framework for AMLES	AMLES00005	
<input type="checkbox"/>	 ASC Automatic Scenario Calibration	ASCRT	
<input type="checkbox"/>	 IHub investigation hub	1668416727104	

4. Click the **<Investigation Hub>** Objective. Ensure that the following notebooks are available in the Investigation Hub objective.

Figure 15: Notebooks in Investigation Hub Folder



<input type="checkbox"/>	Objective Name	ID	Owner	Tags
<input type="checkbox"/>	L1 Enables the investigator to view a case and search for one or multiple names and/or addresses in order to examine their network, red flags, and risk factors.	1669023642438	DSADMIN	icon_integration investigation hub
<input type="checkbox"/>	L2 Enables the investigator to view a case and search for one or multiple names and/or addresses in order to examine their network, red flags, and risk factors.	1669023663937	DSADMIN	icon_integration investigation hub
<input type="checkbox"/>	S1 Enables the investigator to search for one or multiple names and/or addresses in order to examine their network, red flags, and risk factors.	1669023692754	DSADMIN	investigation hub special investigations

OFSAA Support

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- Do you need more information? If so, where?
- Are the examples correct? Do you need more examples?
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