

IBM_® OpenPages_® GRC Platform

UCF Integration on OpenPages via TDI Connector (Windows OS)

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Prerequisites

This task requires that *OpenPages 7.4 or higher* be installed. Additionally, the following installers should be downloaded from IBM Passport Advantage® web site:

https://www.ibm.com/software/passportadvantage/pao_customer.html

Note: IBM Security Directory Integrator is the latest name for IBM Tivoli Directory Integrator. You might see TDI and SDI used interchangeably in the documentation.

1. IBM Tivoli Directory Integrator (Any one of the below based on OS Environment):

IBM Tivoli Directory Integrator Identity Edition V7.1.1 for Windows - x86-64 - Image/Part No. CZUF7ML

2. IBM TDI FixPack 4:

 IBM Tivoli Directory Integrator Identity Edition V7.1.1 Fix Pack 4 for OpenPages GRC Platform 7.2, 7.4 and 7.4 Multiplatform Multilingual – Image/Part No. CN7SRML

3. TDI / SDI Connector:

 IBM OpenPages GRC SDI Connector for UCF Common Controls Hub 7.4.0 Multiplatform Multilingual – Image/Part No. CNQIOML

4. UCF Common Controls Hub Basic Subscription:

You must have a UCF Common Controls Hub Basic Subscription with the API Access add-on to use the connector.

https://cch.commoncontrolshub.com/account-login.php

You must also have IBM OpenPages GRC Platform version 7.4 or later.

Installation Instructions

IBM OpenPages GRC SDI Connector for UCF Common Controls Hub is an optional connector that you can install. Use the connector to import data from the Unified Compliance Framework (UCF) Common Controls Hub into IBM OpenPages GRC Platform.

Complete the following steps/tasks to install and configure the UCF connector.

Procedure

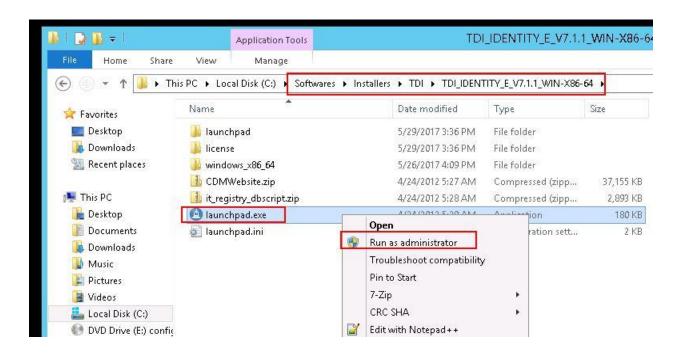
Task 1: Install TDI 7.1.1 and its Fix Pack 4

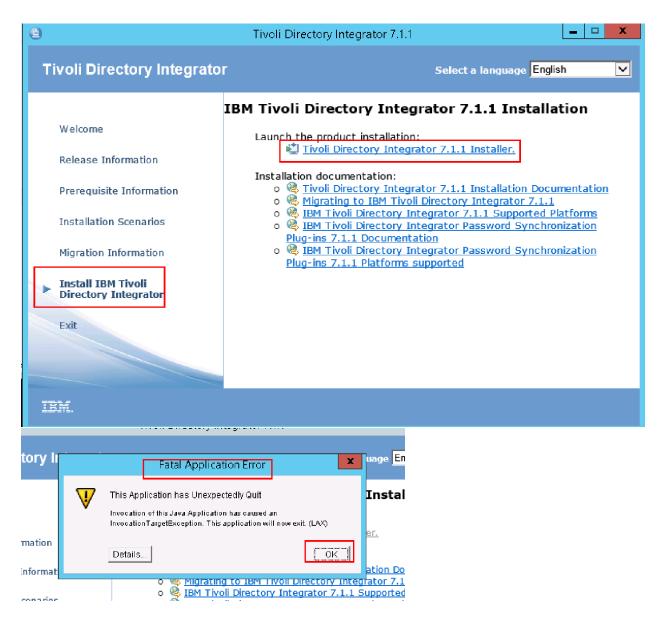
Install IBM Tivoli Directory Integrator 7.1.1 and then install IBM Tivoli Directory Integrator Fix Pack 4 from the OpenPages GRC Platform installation media. Here TDI is installed on Windows OS.

Install TDI

TDI is a general purpose integration tool that lets you build integrations between multiple data sources and targets. Along the way you'll want to map attributes between the systems, as well as apply trivial or complex transformation of the data as it moves from one place to the other.

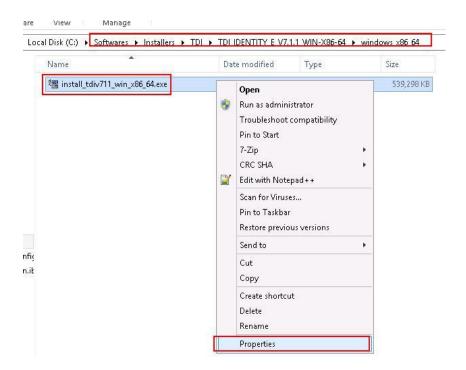
There are primarily two pieces to TDI. First, the Eclipse development Environment where integrations are built, tested and maintained. Secondly, the lightweight Java engine that runs the integrations. The TDI server runs equally well on a Windows laptop, Linux, SunOS, AIX, i5OS and zOS.

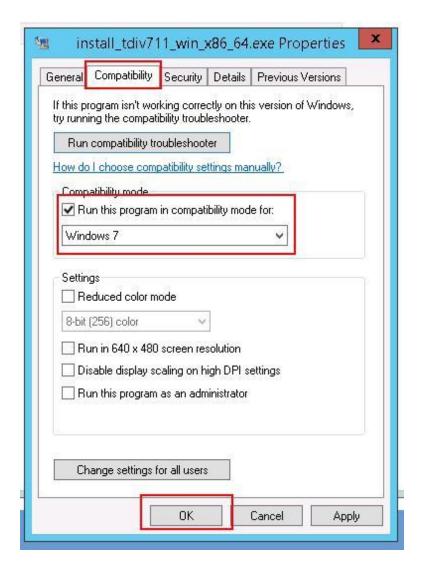




If you face the above error during install, then follow the below steps
The TDI 7.1.1 installer needs to be executed in Windows 7 compatibility mode.

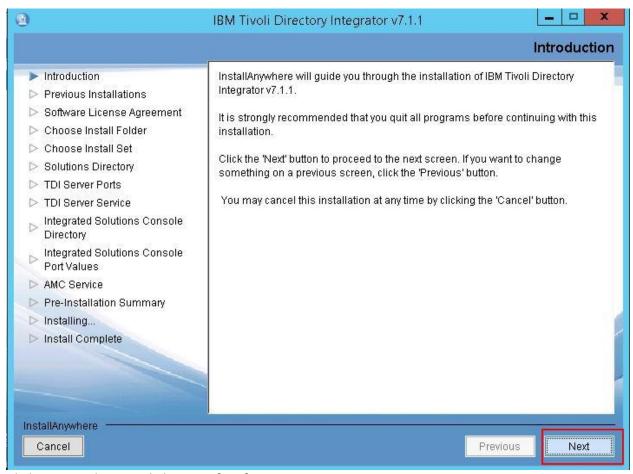
- Right Click on the TDI installer file and select Properties from the Context menu. For eg: Click on <ISO_Image>\windows_x86_64\\
 install_tdiv711_win_x86_64.exe and select Properties.
- Click on the Compatibility tab.
- Under the Compatibility mode section, set the the check box to true for " Run this program in compatibility mode for "
- Under the drop down select Windows 7.
- Click on OK to apply the compatibility mode.
- Now run the installer and proceed normally.



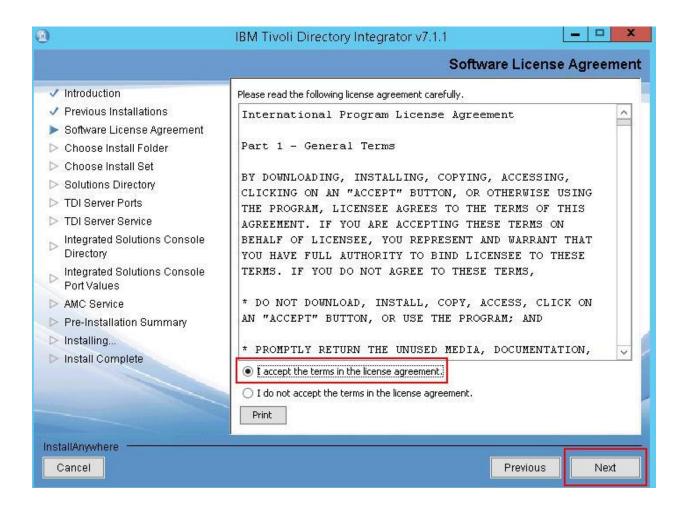


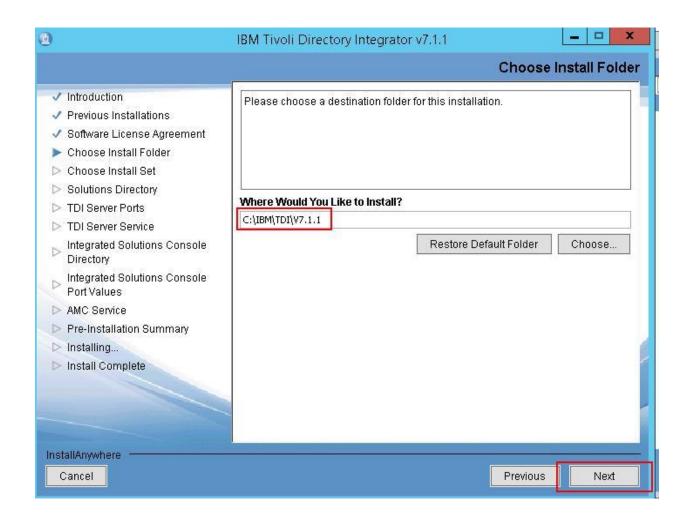
After done the above step, Follow the same steps to install TDI. (refer Page 1)

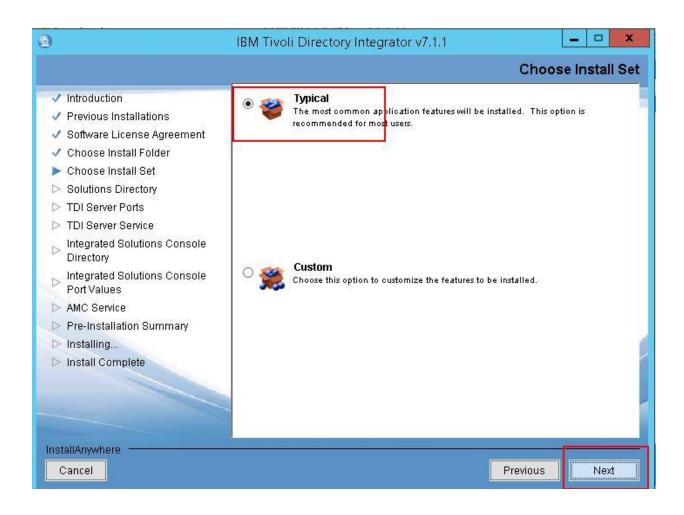


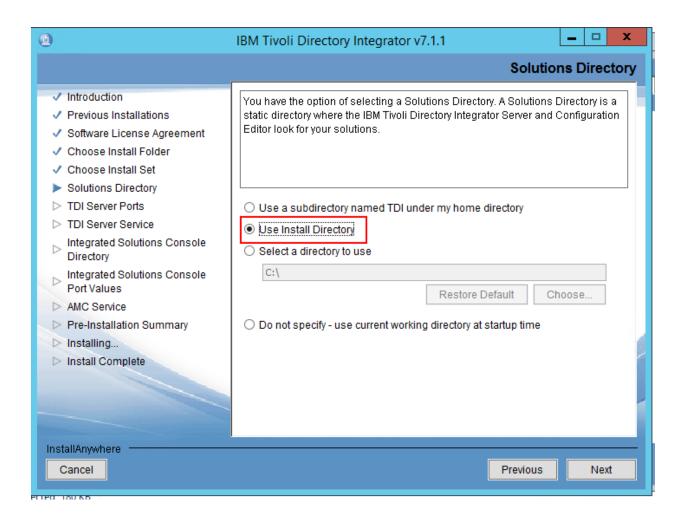


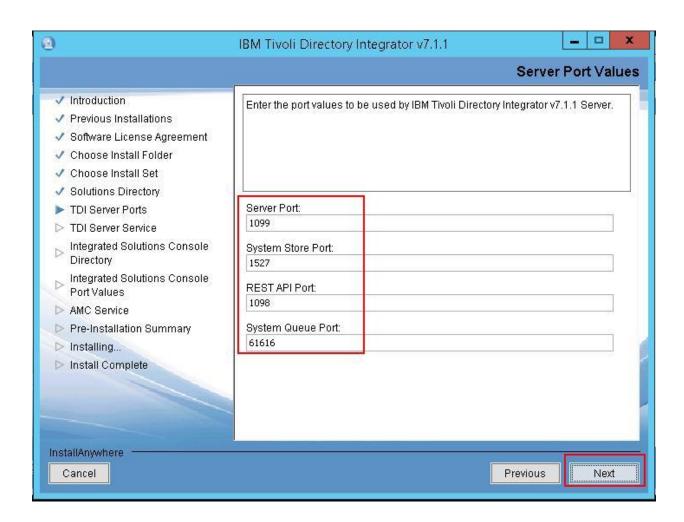
Click Next and again Click Next after few mins

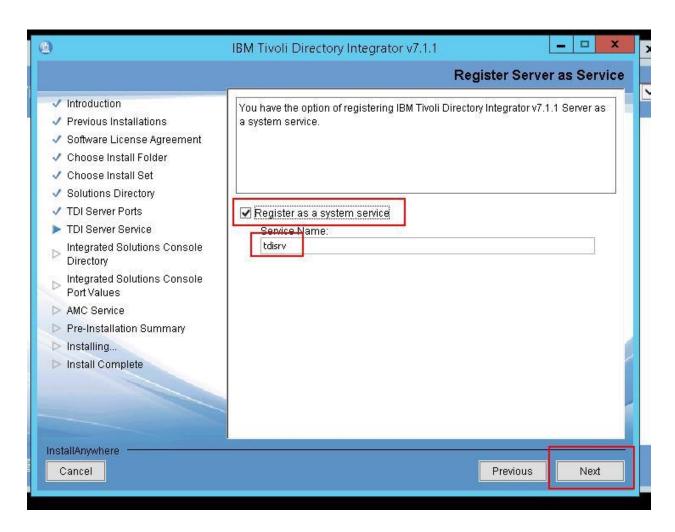




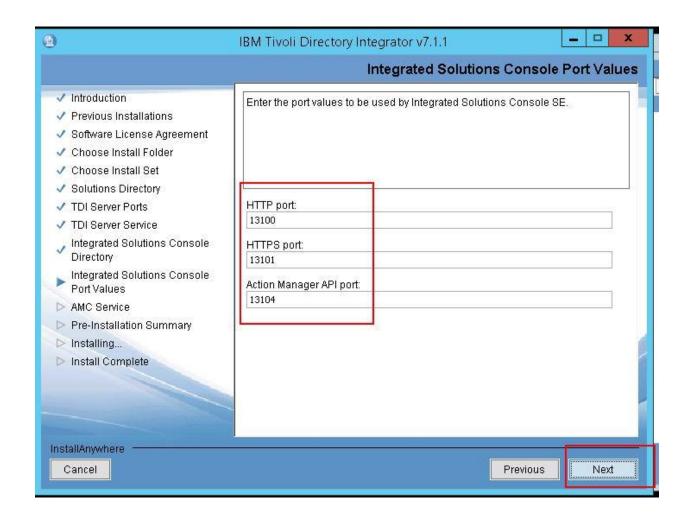


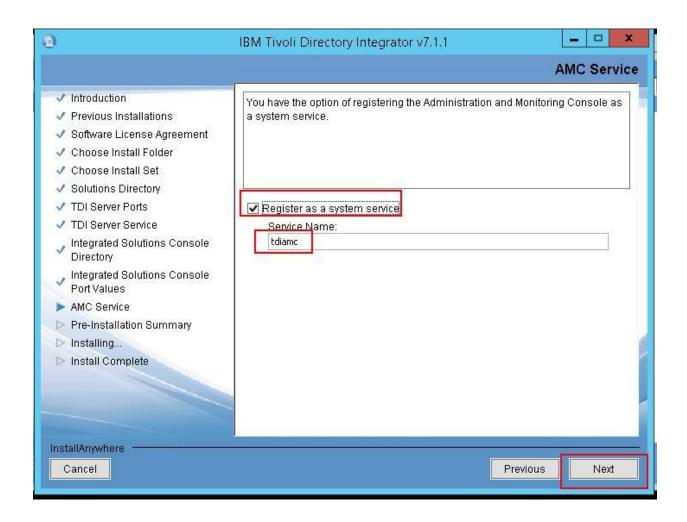


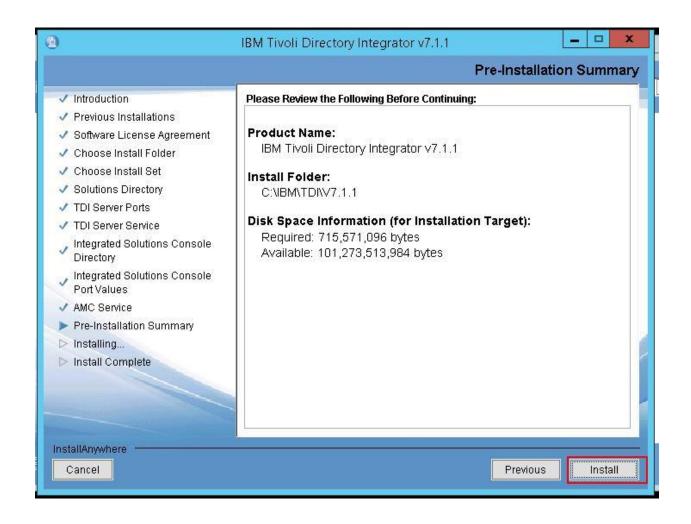


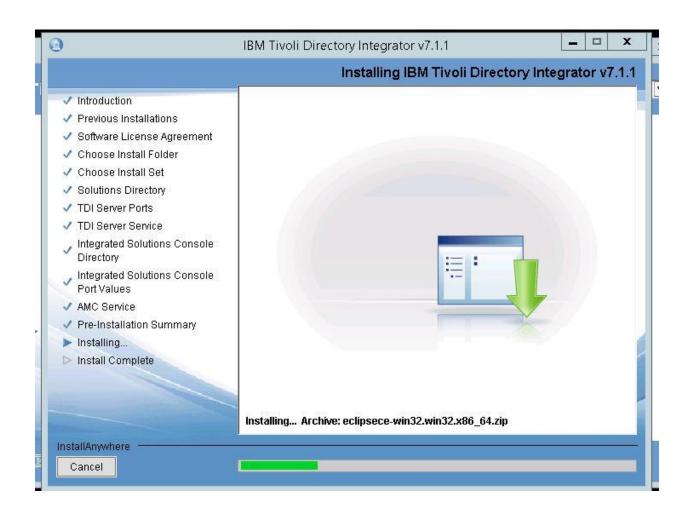


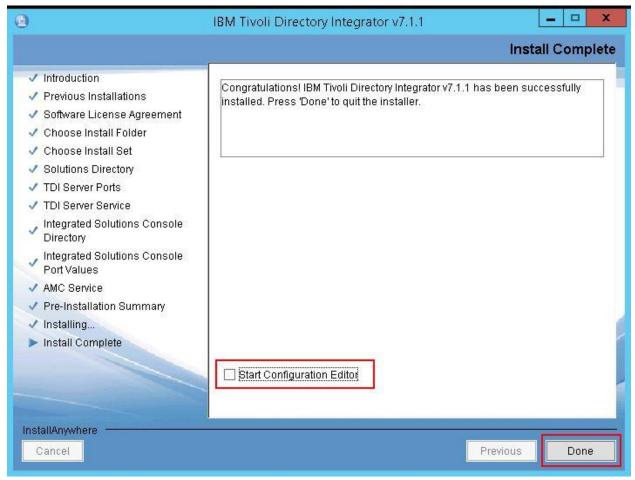
Click Next and again Click Next









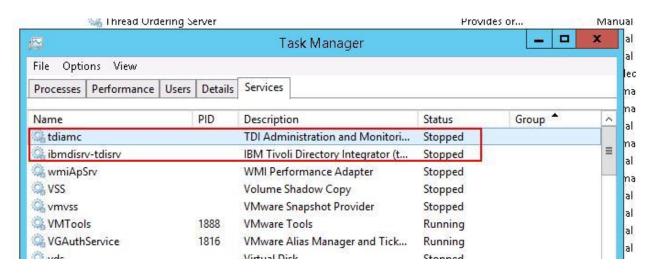


Click Done and Close all.

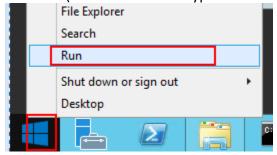
Install TDI FixPack 4:

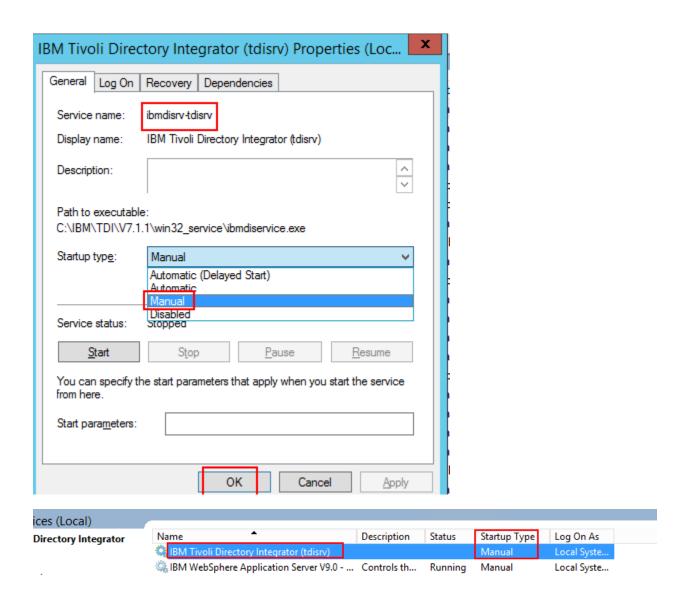
Stop the TDI Sever and AMC

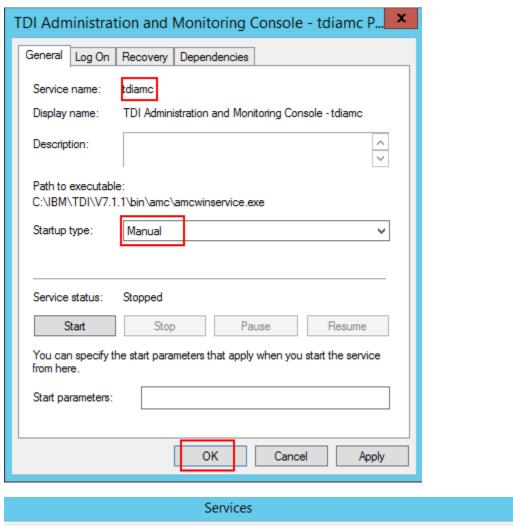
Open Task Manager -> Services Tab -> Stop the below services

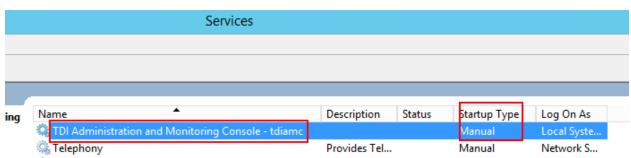


 Also change the StartupType from Automatic to Manual by using Windows Services. (Run Command -> type services.msc)

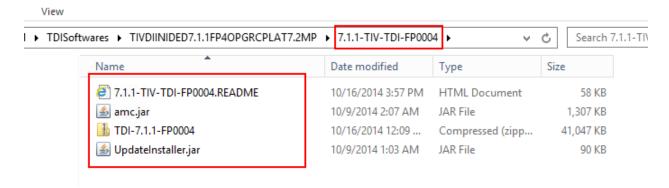




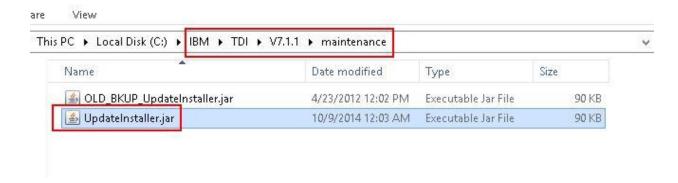




 Download the 7.1.1-TIV-TDI-FP0004.zip and unzip the contents in any preferred folder.



 Copy the file UpdateInstaller.jar from the fixpack package and replace the copy in the <TDI install dir>\maintenance directory.



- On Windows:
 - Open the Command Prompt with Admin Privileges.
 - Navigate to the following directory <TDI_install_dir>\bin
 - o Execute the following command

applyUpdates.bat -update <unzipped fixpack folder>/TDI-7.1.1-FP0004.zip

Unzipped folder path: (Please see the second step on above)

C:\Softwares\Installers\TDI\TIVDIINIDED7.1.1FP4OPGRCPLAT7.2MP\7.1.1-TIV-TDI-FP0004



This should install the fixpack successfully.

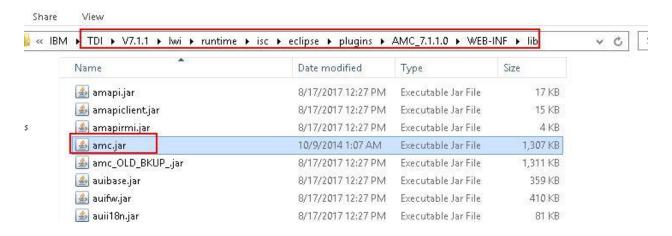
Applying AMC Fix

 Stop the application server. In case of default TDI installation execute stop_tdiamc.bat file. The stop_tdiamc.bat is present in the <TDI_Install_Dir>/bin/amc directory.

(In our case no need to do this. This was already done)

Note: <TDI_Install_Dir> is C:\IBM\TDI\V7.1.1

 Replace the amc.jar file present in the current deployment with the new amc.jar file. The amc.jar file is present in <TDI_Install_Dir>/lwi/runtime/isc/eclipse/plugins/AMC_7.1.1.0/WEB-INF/lib directory.

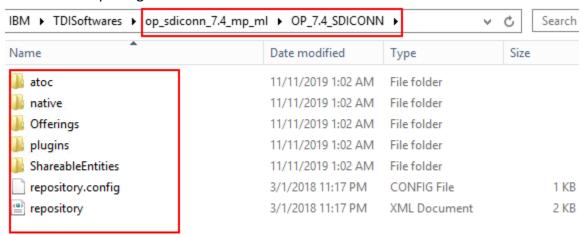


Task 2: Install IBM OpenPages GRC SDI Connector for UCF Common Controls Hub

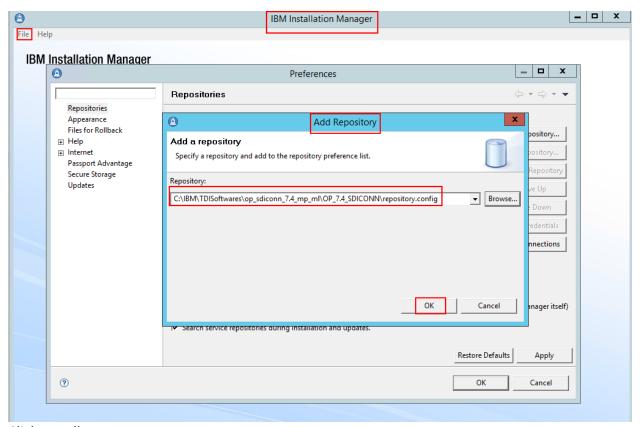
You must run the IBM OpenPages GRC SDI Connector for UCF Common Controls Hub installation program on the OpenPages admin application server.

Steps to Install SDI Connector

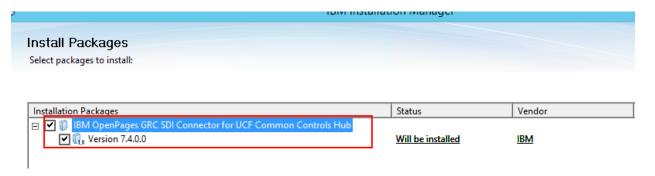
1. Extract the package files.



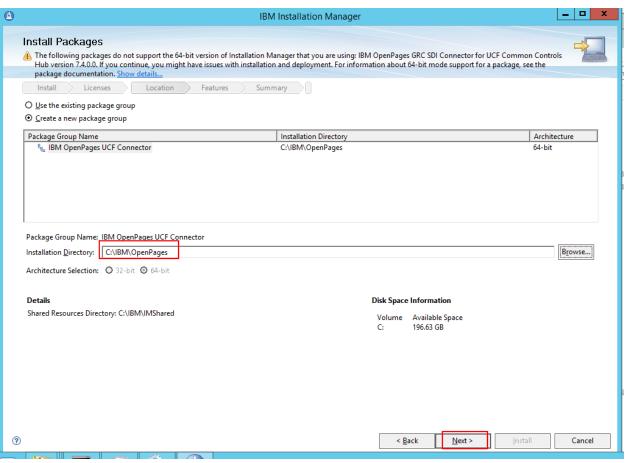
- 2. On the admin application server, run IBM Installation Manager.
- 3. Add the UCF connector repository to IBM Installation Manager.
 - a. Click File > Preferences.
 - b. Click Repositories and then click Add Repository.
 - c. Select the UCF connector installer package.
 - d. Click the repository.config file.
 - e. Click OK.
 - f. Click OK to return to the main IBM Installation Manager page.



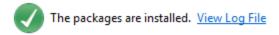
- 4. Click Install.
- 5. Select IBM OpenPages GRC SDI Connector for UCF Common Controls Hub and Version 7.4, and click Next.



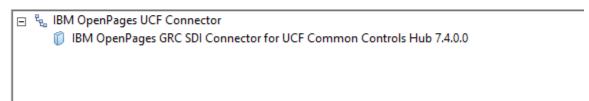
- 6. Accept the license agreement and click Next.
- 7. Type the location of your IBM OpenPages GRC Platform installation directory (OP_HOME Default is C:\OpenPages).



- 8. Click Next.
- 9. Click Next. If any errors appear on the page, follow the instructions to fix them before you continue. If you see warning messages about the 64-bit version of IIM, you can ignore them.
- 10. Click Install and after few mins Click Finish.



The following package was installed:



Task 3: Import the Assembly Lines

The ucf_integration.xml file is located in the <OP-HOME>/integrations/UCF directory. This is the project file that you use to import the assembly lines and other project files into Tivoli Directory Integrator.

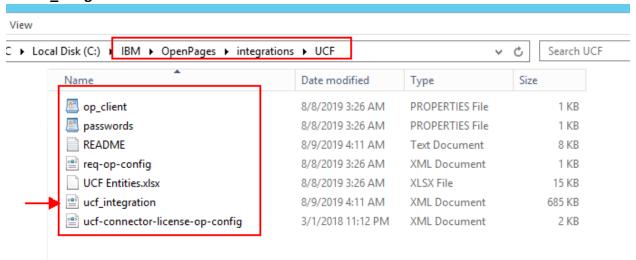
The UCF connector uses three assembly lines to import objects.

- UCF Authority Documents to OP Mandates
- UCF Citations to OP Submandates
- UCF Controls to OP Requirements

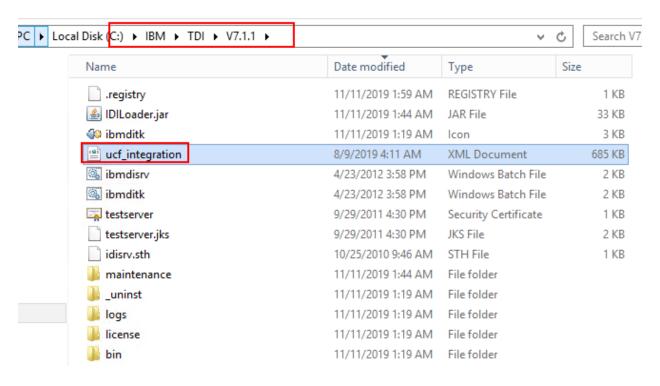
An assembly line is commonly referred to as an AL in the Tivoli Directory Integrator documentation.

Steps to import assembly lines:

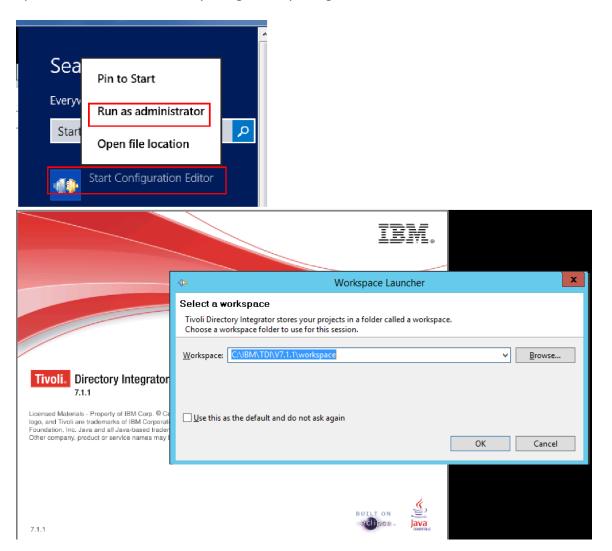
 Go to the <OP_Home>/integrations/UCF directory and locate the ucf_integration.xml file



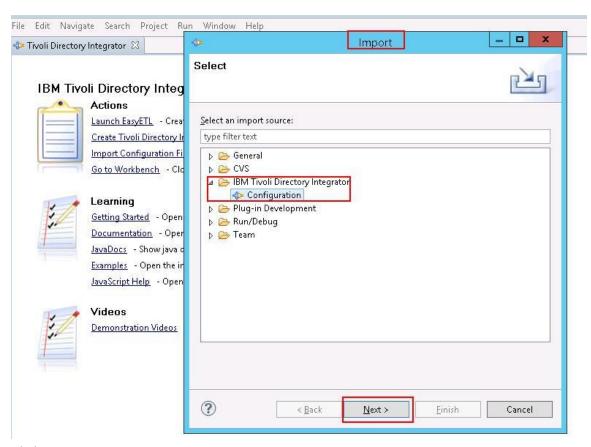
2. Copy the file to the server where IBM Tivoli Directory Integrator is installed.



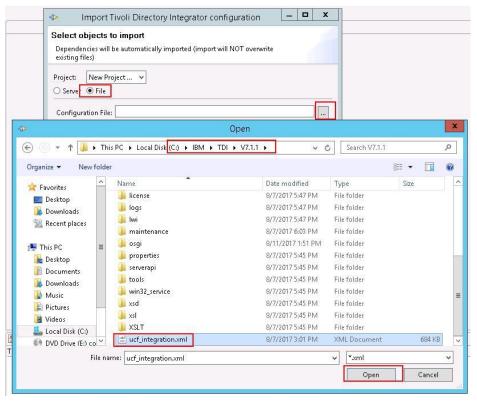
3. Open the IBM Tivoli Directory Integrator by using Windows search



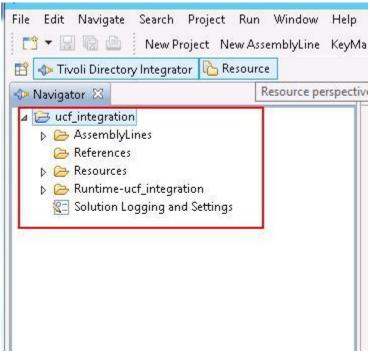
- 4. Import the **ucf_integration.xml** file as a new project in IBM Tivoli Directory Integrator.
 - a. Click File > Import > IBM Tivoli Directory Integrator > Configuration.



- b. Click Next.
- c. Select New Project in the Project list.
- d. Click File.
- e. Click the browse button next to the Configuration File field. Select the **ucf_integration.xml** file.



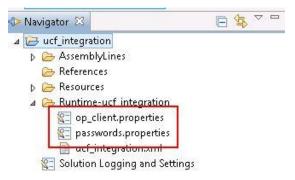
- f. Click Finish.
- g. Type a name for the project, such as ucf_integration
- h. Click Finish. The project is displayed in the TDI Configuration Editor and the project files are created in your TDI workspace directory.



- 5. Copy the UCF connector property files into your project runtime Tivoli Directory Integrator workspace directory.
 - a. Go to the <OP Home>/integrations/UCF directory.
 - b. Copy the following files to the Runtime-ucf_integration directory. Runtime-ucf_integration directory is in TDI Workspace:

C:\IBM\TDI\V7.1.1\workspace\ucf_integration\Runtime-ucf_integration

- passwords.properties
- op_client.properties
- 6. Right-click the ucf_integration project in the TDI Configuration Editor and click Refresh.

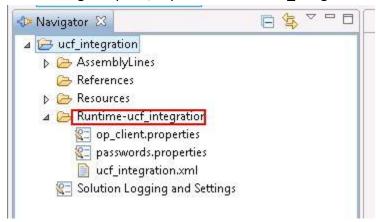


Task 4: Configure the property files

You must configure the connection information that the UCF connector uses to connect to IBM OpenPages GRC Platform and to UCF Common Controls Hub. You configure the connection information by updating property files and by entering passwords in the Tivoli Directory Integrator Configuration Editor. Do this procedure after you import the assembly lines.

Steps to Configure the properties files:

- 1. Open the Tivoli Directory Integrator Configuration Editor, open the **ucf_integration** project.
- 2. In the Navigator pane, expand Runtime-ucf integration.



- 3. Right-click the **op_client.properties** file and click Text Editor.
- 4. Set or change the property values.

For example:

```
op_api_root=/grc/api
op_url=http://<op-server>:10108
op_user=OpenPagesAdministrator
```

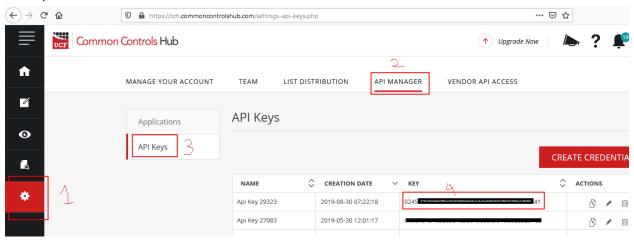
```
# (C) Copyright IBM Corporation 2017. All Rights Reserved.

op_api root=/grc/api
op_url=http://preserved.ibm.com:10108

op_user=OpenPagesAdministrator
```

- 5. Save the changes and exit the text editor.
- 6. Right-click the **password.properties** file and click Text Editor.
- 7. Type the password of the OpenPages user that you used in the **op_client.properties** file.

 Enter your UCF Common Controls Hub token in the ucf_api_token parameter. To get your token, log in to UCF Common Controls Hub. Click Settings > API Manager > API Keys. Click Create Credentials/ Get Existing Credentials. If you are unable to create a token, contact UCF Common Controls Hub.



9. Save the changes and exit the text editor. The values in the password.properties file are automatically encrypted.

```
passwords,properties

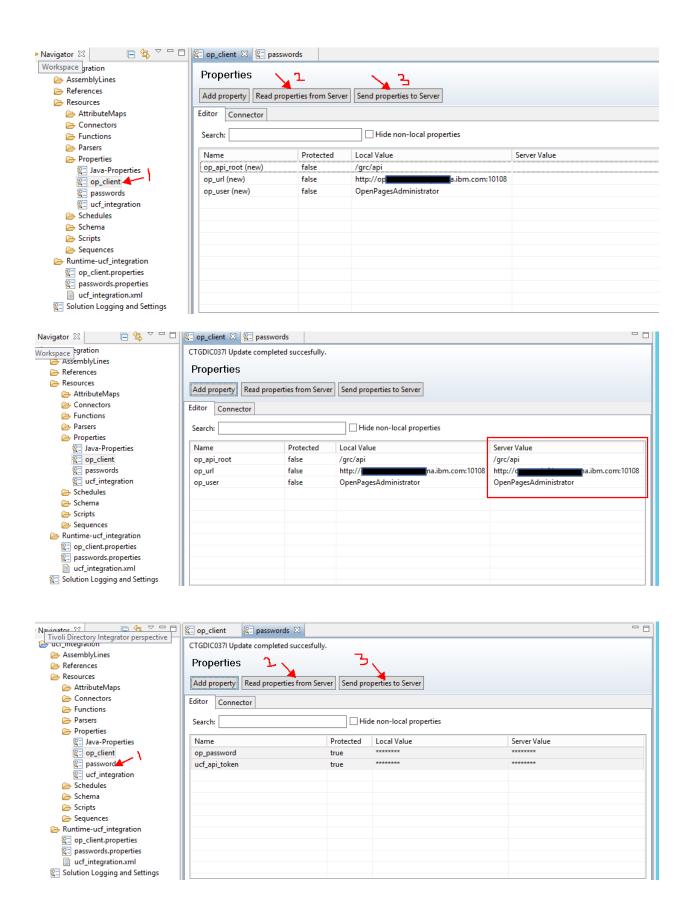
# (C) Copyright IBM Corporation 2017. All Rights Reserved.

{protect}-op_password=passw0rd

{protect}-ucf_api_token=024
```

- 10. Refresh the property files and the connectors with the updated connection information.
 - a. In the Navigator pane, expand Resources > Properties.
 - b. Right-click op client, and then click Open.
 - c. Click Read properties from Server, and then click Send properties to Server.
 - d. Click Save, and then close the window.
 - e. Right-click passwords, and then click Open.
 - f. Click Read properties from Server, and then click Send properties to Server.
 - g. Click Save, and then close the window.

Please see the screenshot in below.



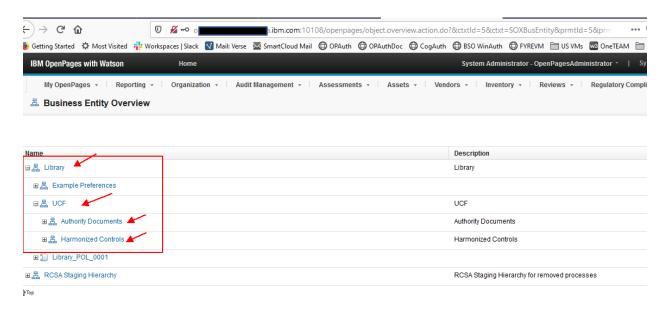
Task 5: Configure OpenPages for UCF Integration

1. Importing UCF Business Entities

Import the business entities that are used by UCF into OpenPages GRC Platform. When the UCF connector imports data into OpenPages, the business entities are used for the imported objects. The **UCF Entities.xlsx file** contains the business entity structure for UCF. Import this file by using FastMap.

Steps to Import UCF BE:

- Log in to OpenPages as a user with administrative privileges. Ex: :10108/openpages">http://cop-Server>:10108/openpages
- 2. Click **Reporting > FastMap** Import.
- 3. Click Choose File and select the **UCF Entities.xlsx** file. The file is located in the **<OP Home>/integrations/UCF** directory.
- 4. Click **Import** data.
- Review the verification report, and then click Import data. The import process begins. The progress of the import is displayed in the FastMap Import Status window.
- 6. Click Refresh to update the window.
- 7. Verify the import.
 - a. Log in to OpenPages as a user with administrative privileges.
 - b. Click Organization > Business Entity Overview.
 - c. Expand **Library > UCF**. The business entity UCF is updated. It has two child entities, Authority Documents and Harmonized Controls.



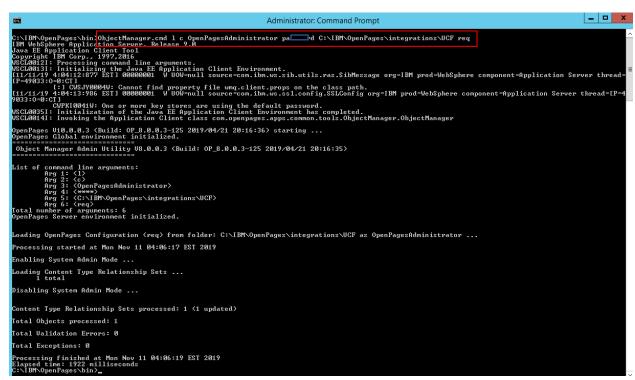
2. Updating object type relationships for UCF

The UCF connector requires an additional object type relationship. SOXBusEntity must be a parent of Requirement. Use ObjectManager to load the object relationship.

Steps to load the object relationship:

- 1. Log on to the OpenPages administrative application server.
- 2. Copy the **req-op-config.xml file** to the administrative application server. The req-op-config.xml is in the <OP Home>/integrations/UCF directory.
- 3. Open a command line. If you are using Microsoft Windows, open a command prompt with the Run as Administrator option.
- 4. Go to the **<OP-HOME>/bin** directory.
- 5. Run the following command. Replace <loader-file-path> with the location of the reg-op-config.xml file.

ObjectManager.cmd|sh|c <OpenPages Administrator user> <OpenPages Administrator password> <loader-file-path> req



- If you encounter any errors, review the log file, OP_HOME/bin/logs/ObjectManager.log.
- 7. Verify the update.
 - a. Log in to OpenPages.
 - b. Click Administration > Object Types.
 - c. Click Requirement.
 - d. Click **Parent Associations**. Verify that **SOXBusEntity** is in the list.

3. <u>Updating UCF field groups</u>

You may need to update the UCF field groups and fields. You need to update the enumerated string values for the following:

- UCF-Mand field group, UCF Category field
- UCF-SubMand field group, UCF Guidance Area field
- UCF-Req field group, UCF Guidance Area field

The changes that you need to make are the same for each field.

Note: Please check the below enumerated string values already available on OP system under the given field group. From OP7.4 onwards the below values already present in the OP system.

Steps to update enumerated String values:

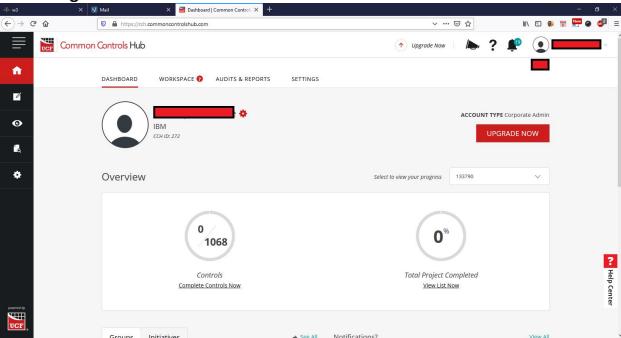
- 1. Log in to OpenPages as a user with administrative privileges. Ex: http://<OP-Server>:10108/openpages
- 2. Click Administration > Field Groups.
- 3. Click UCF-Mand, and then click UCF Category.
- 4. Add the following values if not present:
 - Risk Management Organizations
 - Banking and Finance Organizations
 - Energy Organizations
 - Healthcare and Life Science Organizations
 - Payment Card Organizations
 - Records Management Organizations
 - Security and Privacy Organizations
 - International
 - North America
 - Australia-Oceania
 - Asia
 - Configuration
 - South America
 - Africa
 - Europe
- 5. Click UCF-SubMand, and then click UCF Guidance Area.
- 6. Repeat steps 4 and 5 to update the values.
- 7. Click **UCF-Req**, and then click **UCF Guidance Area**. Repeat steps 4 and 5 to update the values.

Task 6: Configure the UCF Common Controls Hub

Logon to the Common Controls Hub URL on your browser.

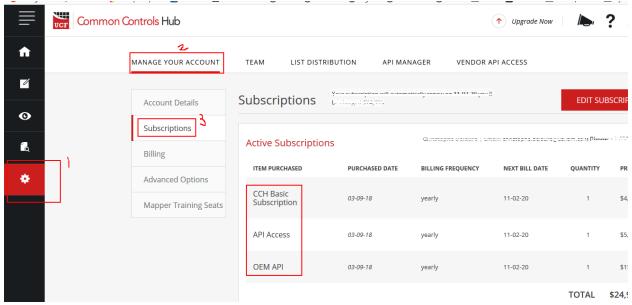
https://cch.commoncontrolshub.com

Home Page:

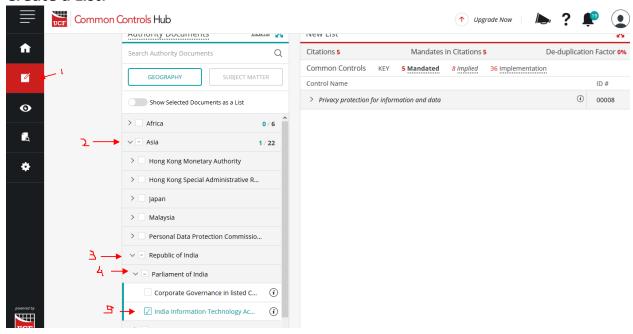


Makes sure you have the following subscription access.

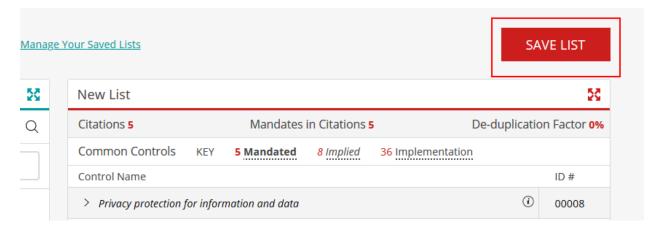
Subscription Page:



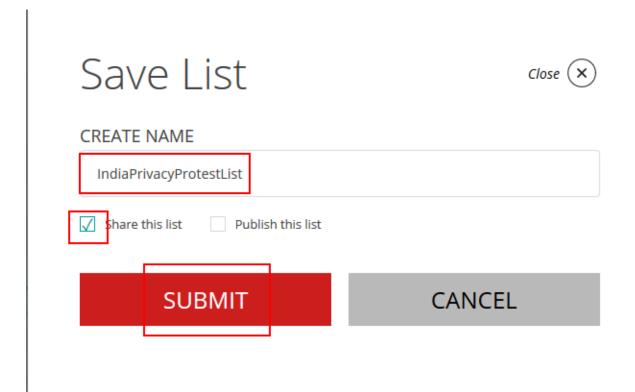
Create a List:



- 1 -> Open the CCH Workspace to Create/Edit the List (containing your chosen authority documents)
- 2 -> Choose the Level 1 (Ex: Continent/Region Specific)
- 3 -> Choose the Level 2 (Ex: Country Specific)
- 4 -> Choose the Level 3
- 5 -> Choose the Level 4 (In this example, this is the Authority documents)



After chose the Authority documents, Now click to button Save List to save on List.



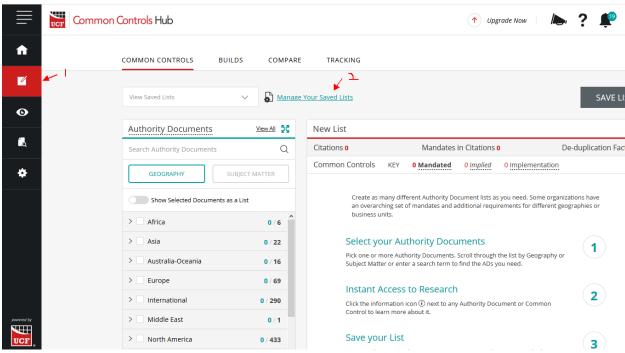
Provide the Authority Document List name and enable the check box if you want to **SHARE** and/or **Publish** the List. Then Click Submit to save the list.



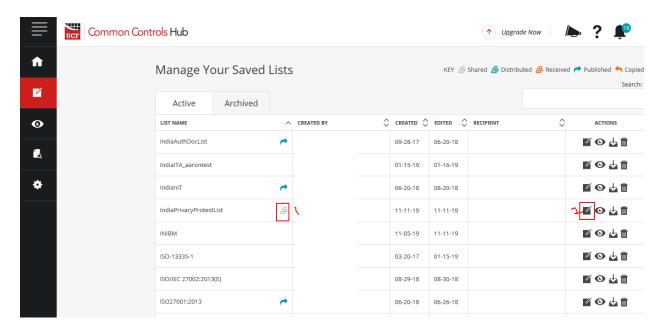
Now the list is saved.

Note: You can edit/modify the list include OR exclude the chosen authority documents.

Edit the Saved List:

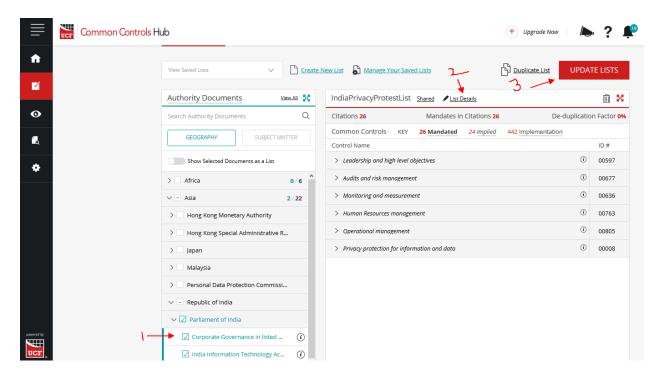


- 1 -> Choose the Workspace
- 2 -> Manage the Existing Saved Lists

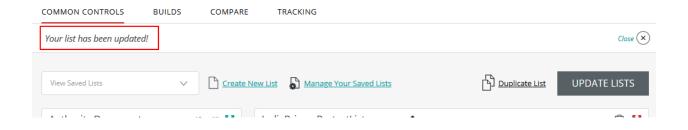


Note:

- 1 -> List is Shared to public and this list ready to mapped with UCF connector via TDI
- 2 -> Edit the List (Which is already opted the required Mandates/SubMandates/Requirements documents for the given list)

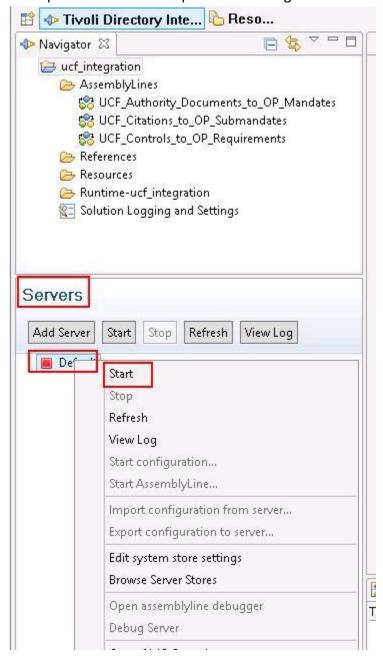


- 1 -> Include the other Authority Document in the List
- 2 -> Update the List (This is for option you can Share and/or Publish the List)
- 3 -> Update the List

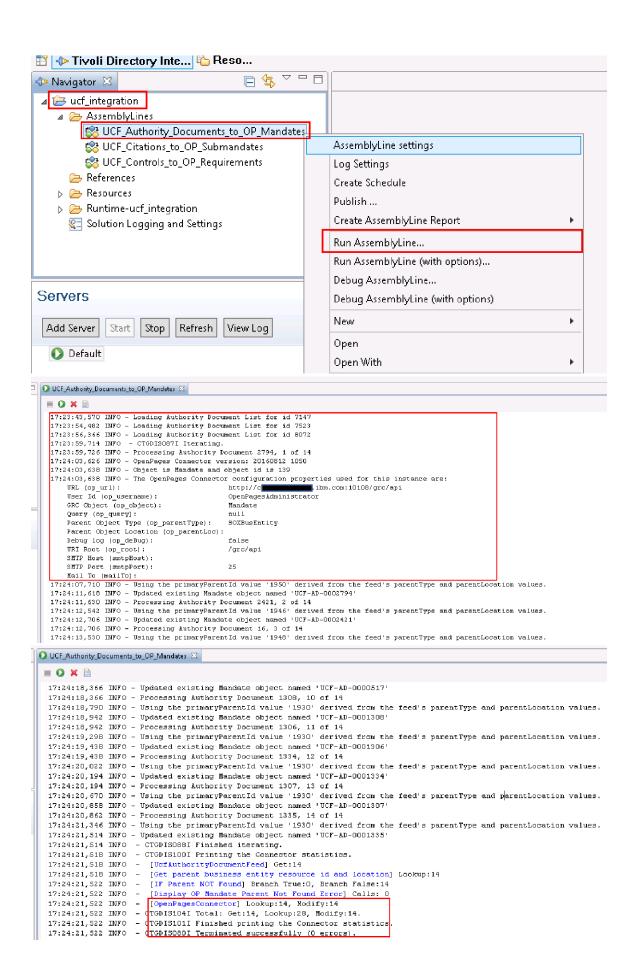


Task 7: Load UCF Data to OpenPages using TDI

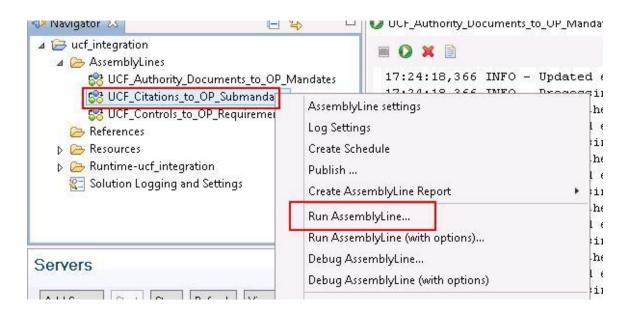
1. Open the IBM Tivoli Directory Integrator and make sure the TDI server is running, if not please follow the steps. Check the logs in the Console tab.



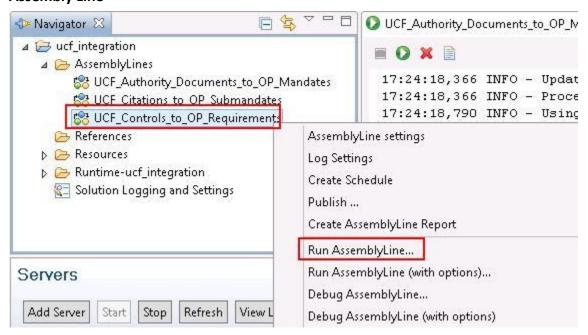
- 2. Open the **ucf integration** project.
- 3. Expand AssemblyLines
- First load the UCF Mandates Data by using Right Click
 UCF_Authority_Documents_to_OP_Mandates and choose Run Assembly Line
- 5. Verify the data load logs



6. After successful Mandates data load then load the UCF SubMandates Data by using Right Click UCF_Citations_to_OP_Submandates and choose Run Assembly Line

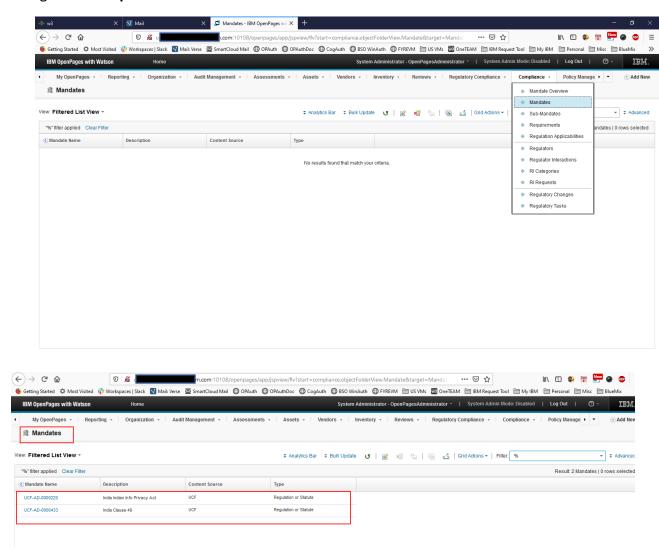


 After successful Sub-Mandates data load then load the UCF Requirements Data by using Right Click UCF_Controls_to_OP_Requirements and choose Run Assembly Line



Task 8: Test the UCF Data on OpenPages

Logon to the OpenPages Application UI Navigate to **Compliance** Menu -> Choose **Mandates**



Also Navigate to **Compliance** Menu -> Choose **SubMandates** to view the data. Also Navigate to **Compliance** Menu -> Choose **Requirements** to view the data.

Post-Installation Instructions

Please check the logs If you experience any issues or have any questions, please send an email to prakashr@in.ibm.com.

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