Universal CMDB, Universal Discovery, and Configuration Manager

Software Version: 10.30

End-to-End Workflow Walkthrough Guide

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How to Deal with License Upgrade from a Previous Version to UCMDB 10.20?

This end-to-end workflow walkthrough scenario describes licensing services for upgrading UCMDB to 10.20 from a version earlier than 10.10. This workflow includes the following steps:

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Step 4. Launch License summary report and check license usage 10
Step 5. Review the counted OS instances in the Licensed OSIs Report 11
Step 6. Install additional license capacity when you discover more OSs than you are licensed for 13

Step 1. Upgrade UCMDB to version 10.20

For detailed instructions about upgrading UCMDB, see the *HPE Universal CMDB Deployment Guide*.

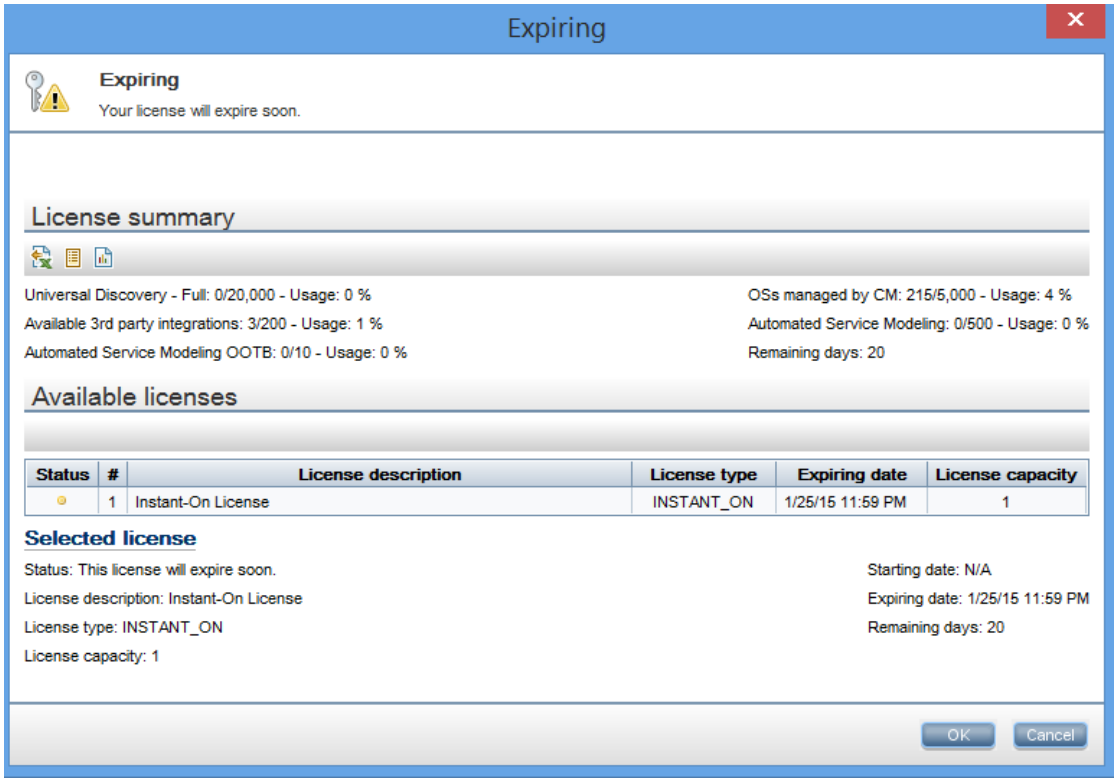
Step 2. Check the License summary report

The permissive Instant-On License is installed by default and is going to expire in 21 days.

1. Launch UCMDB UI as Admin user.
2. Click the ***<License status>*** button on the status bar.

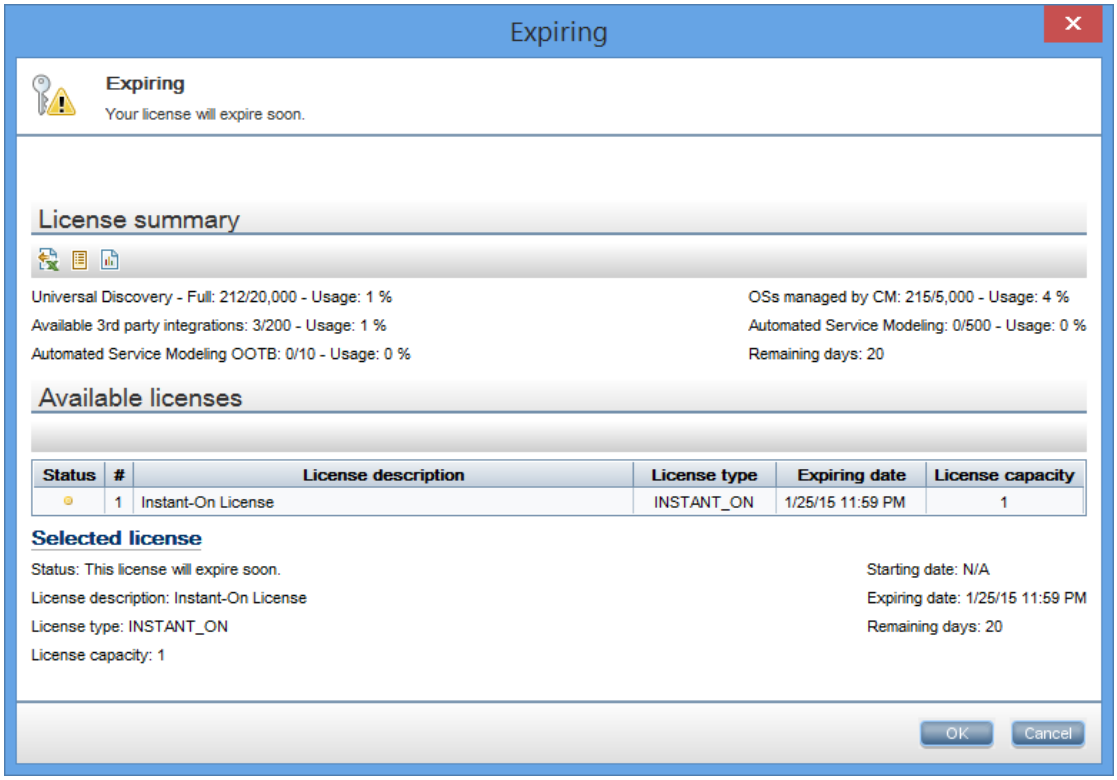
   The License summary report window opens.
3. Check the License summary report.
   - Only Instant-On license is listed even though you have had some licenses installed when you worked with the previous version. The license issued for previous versions are not compatible with UCMDB 10.20 and they are not visible.

- The UD Full license usage is not yet displayed even if there are discovered OSIs in your UCMDB. This is because they were not touched by Probe 10.20 yet.
- OSs managed by CM usage displays the number of OSIs belonging to the results of the managed in CM views.
- The Managed Data Repository (MDR) usage is displayed according to the third party integrations you have in UCMDB.
- Automated Service Modeling OOTB provides a capacity of 10 service discovery actions, which are always available regardless of what license are installed.
- The Automated Service Modeling usage is zero. This can be consumed since version 10.20.



4. Wait for Probe 10.20 to run discovery.
5. Check the License summary again.
   - The Instant-On license expiring in several days is listed.
   - Universal Discovery Full usage is displayed according to how many discovered operating systems you have in UCMDB.
   - OSs managed by CM usage displays the number of OSs that belong to the results of the managed in CM views

- The MDR usage is displayed according to the third party integrations you have in UCMDB.
- Automated Service Modeling OOTB provides a capacity of 10 service discovery actions, which are always available regardless of what license are installed.
- The Automated Service Modeling usage is zero. This can be consumed since version 10.20.

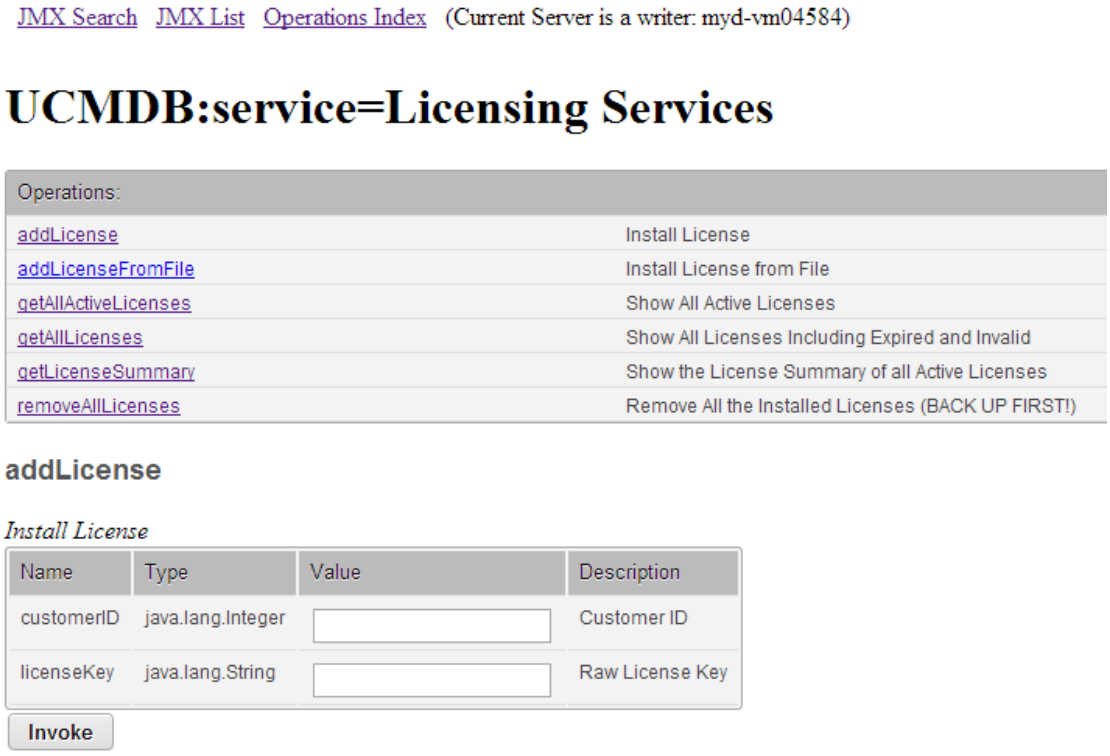


Step 3. Install licenses issued for UCMDB 10.20, check licenses details and license capacity using JMX console

1. Install the licenses issued for UCMDB 10.20, according to the contract you already have, by using **JMX Console** > **Licensing Services** > **addLicense**.

   When installing licenses, the Instant-On is overwritten.

   For details, see the *How to Manage UCMDB Licenses Using the JMX Console* section in the *HPE Universal CMDB JMX Reference Guide*.


JMX Search JMX List Operations Index (Current Server is a writer: myd-vm04584)

UCMDB:service=Licensing Services

Operations:	
addLicense	Install License
addLicenseFromFile	Install License from File
getAllActiveLicenses	Show All Active Licenses
getAllLicenses	Show All Licenses Including Expired and Invalid
getLicenseSummary	Show the License Summary of all Active Licenses
removeAllLicenses	Remove All the Installed Licenses (BACK UP FIRST!)

addLicense

Install License

Name	Type	Value	Description
customerID	java.lang.Integer		Customer ID
licenseKey	java.lang.String		Raw License Key

Invoke

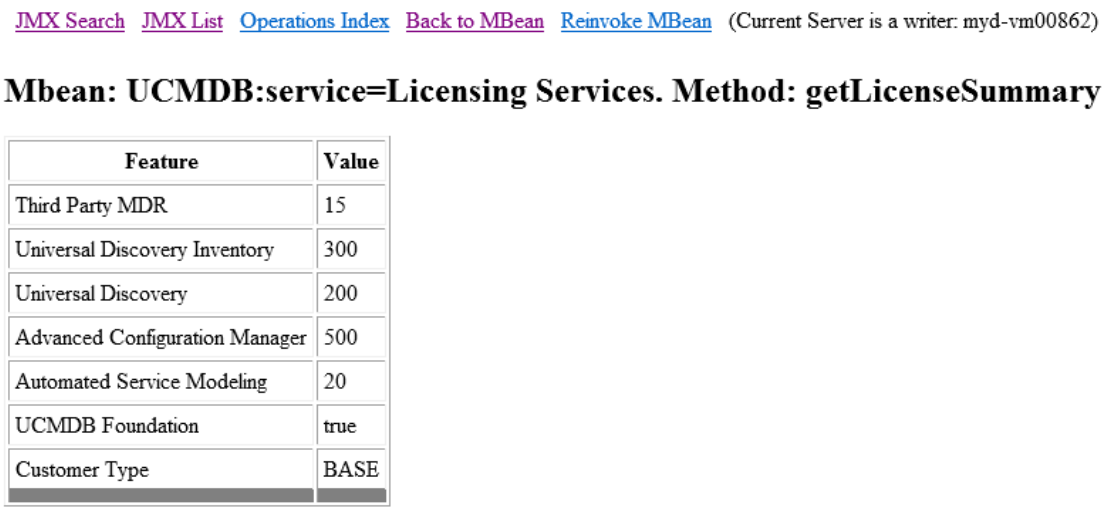
2. Check information about licenses details by using the **getAllLicenses** method of Licensing Services from the JMX console.

JMX Search JMX List Operations Index Back to MBean Reinvoke MBean (Current Server is a writer: myd-vm00862)

Mbean: UCMDB:service=Licensing Services. Method: getAllLicenses

Feature	Value
License	UCMDB-CM - Advanced Configuration Manager per OS Instance
Type	TERM
Start Time	Wed Jan 07 02:00:00 IST 2015
End Time	Fri May 01 02:59:59 IDT 2015
Capacity	500
License	Universal Discovery Inventory per OS Instance
Type	TERM
Start Time	Wed Jan 07 02:00:00 IST 2015
End Time	Fri May 01 02:59:59 IDT 2015
Capacity	300
License	HP UCMDB Automated Service Modeling pack of 10
Type	TERM
Start Time	Wed Jan 07 02:00:00 IST 2015
End Time	Fri May 01 02:59:59 IDT 2015
Capacity	2
License	Universal Discovery per OS Instance
Type	TERM
Start Time	Wed Jan 07 02:00:00 IST 2015
End Time	Fri May 01 02:59:59 IDT 2015
Capacity	200
License	UCMDB Third Party Integration per MDR
Type	TERM
Start Time	Wed Jan 07 02:00:00 IST 2015
End Time	Fri May 01 02:59:59 IDT 2015
Capacity	15

3. Check information about licensed capacity by using the **getLicenseSummary** method of Licensing Services from the JMX console.



JMX Search JMX List Operations Index Back to MBean Reinvoke MBean (Current Server is a writer: myd-vm00862)

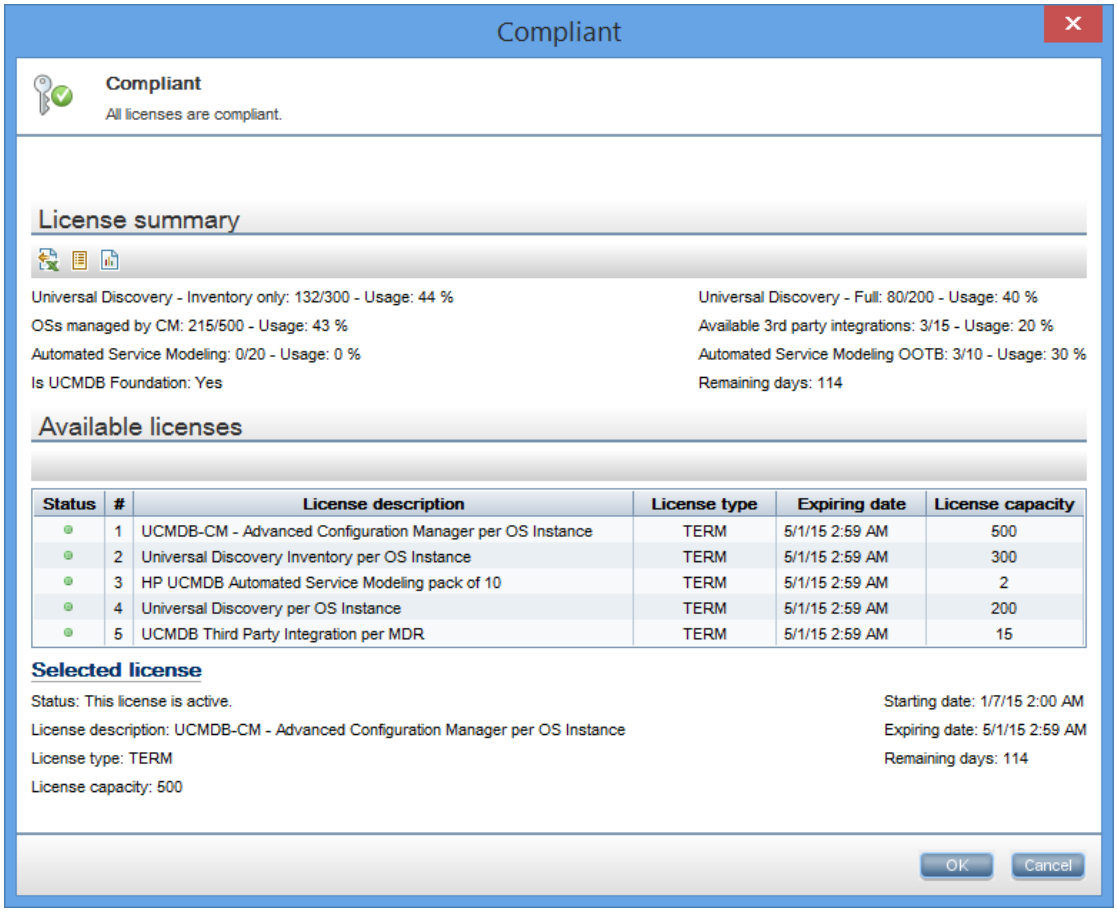
Mbean: UCMDB:service=Licensing Services. Method: getLicenseSummary

Feature	Value
Third Party MDR	15
Universal Discovery Inventory	300
Universal Discovery	200
Advanced Configuration Manager	500
Automated Service Modeling	20
UCMDB Foundation	true
Customer Type	BASE

Step 4. Launch License summary report and check license usage

Launch License summary report from UCMDB UI and check the license usage, according to what capacity you are licensed for:

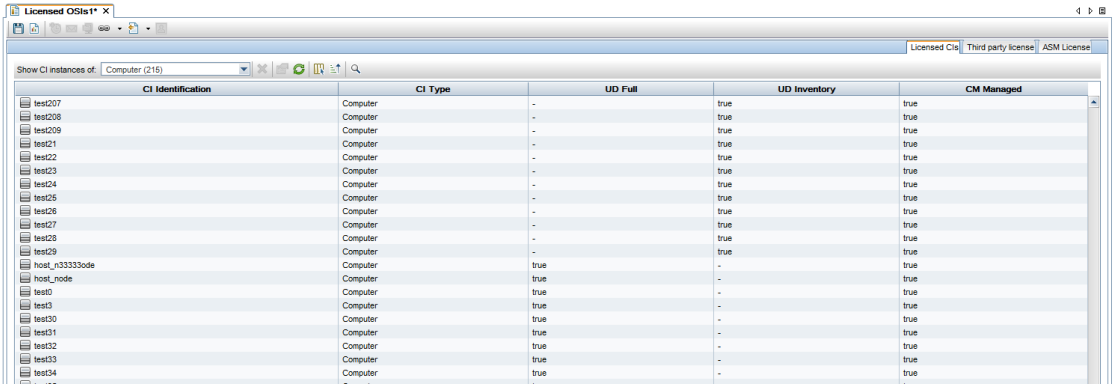
- The installed licenses details are displayed in Available licenses panel.
- UD Full usage – number of OSIs discovered by Full discovery jobs
- UD Inventory usage – number of OSIs discovered by Inventory discovery jobs
- OSIs managed by CM usage – number of OSIs that are managed by CM
- Available third party integrations usage – number of integrations with non HP products
- Advanced Service Modeling usage – number of service discovery activities
- Oracle LMS – in case you have license for Oracle LMS report
- Foundation – in case you have Foundation license

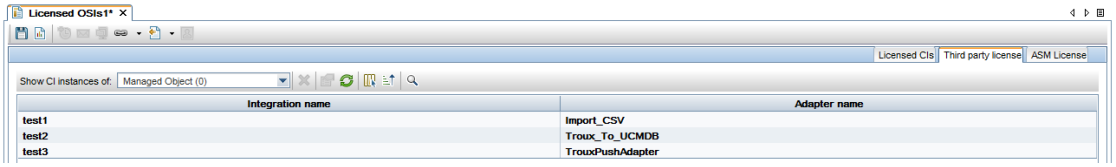


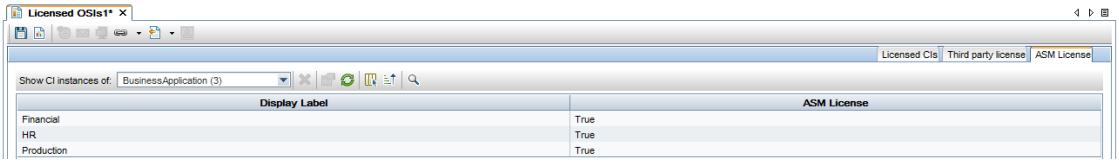
Step 5. Review the counted OS instances in the Licensed OSIs Report

1. Select **Managers > Modeling > Reports.** In the **Custom Reports** pane, click **Administration** and do one of the following:
   - Right-click **Licensed OSIs Report** and select **Create New Report**.
   - Double-click **Licensed OSIs Report**.
   - Select **Licensed OSIs Report** and drag it onto the right pane.
2. Review the counted OS instances in the Licensed OSIs Report:
   - OSs that are discovered by UD Full jobs have **True** in the **UD Full** column if they are covered by license capacity, "**False**" if not covered, and "**-**" if not applicable for the license type.

- OSs that are discovered by UD Inventory license have **True** in the **UD Inventory** column if they are covered by license capacity, "**False**" if not covered, and "**-**" if not applicable for the license type.
- OSs that are managed in Configuration Manager have **True** in the **CM Managed** column if they are covered by license capacity, "**False**" if not covered, and "**-**" if not applicable for the license type.
- The **Third party licenses** tab shows the integration points consuming capacity from the UCMDB third party integration license.
- The **ASM License** tab shows the service discovery activities created in UCMDB.
- If no capacity is consumed from a license type, the relevant column will not be displayed.



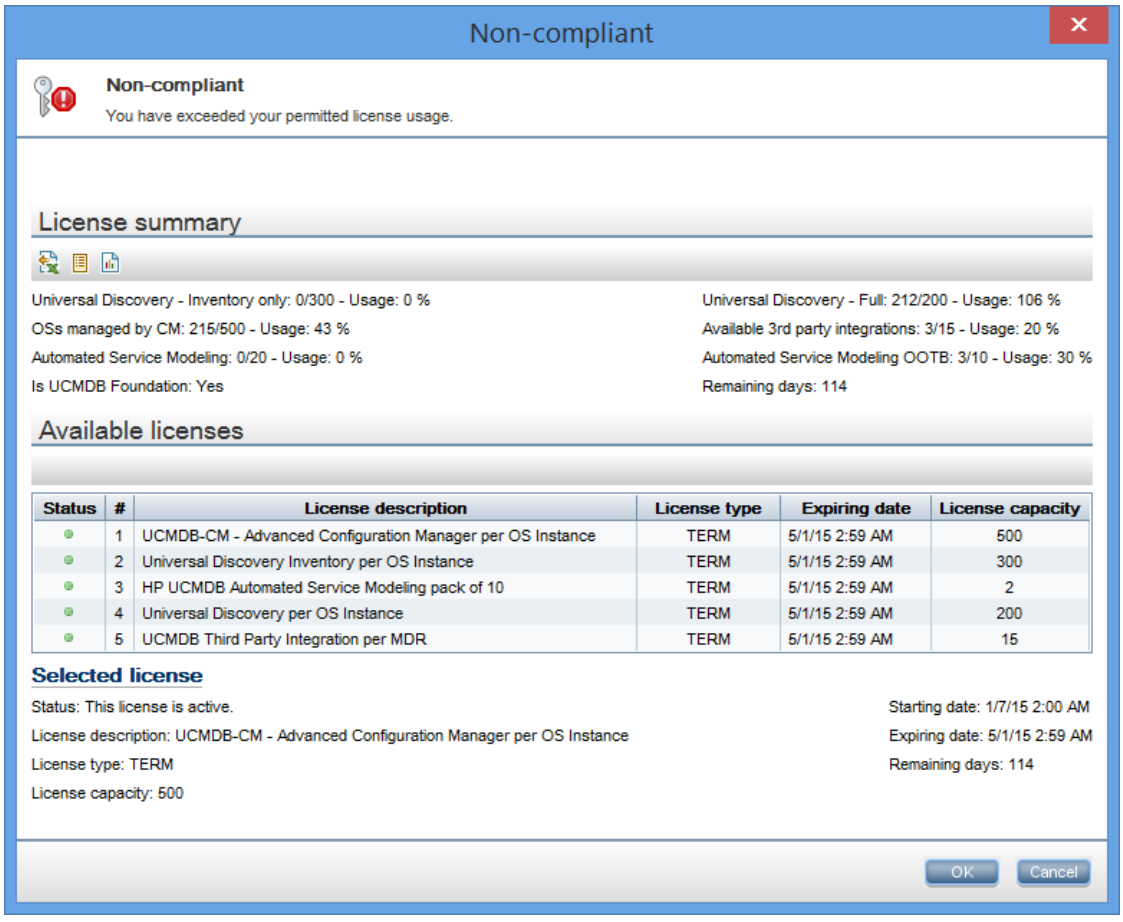




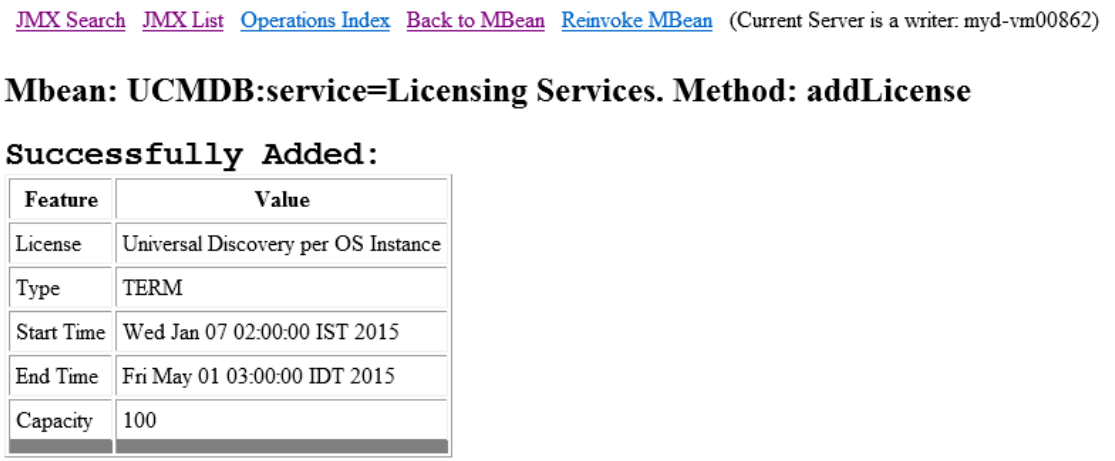
Step 6. Install additional license capacity when you discover more OSs than you are licensed for

When discovering more Operating Systems than you are licensed for, you are still able to use UCMDB Server. However, the server status is Non-compliant.

1. Launch License Summary report to check what exceeded capacity is.



2. In order to be compliant, you can install additional license capacity using the **addLicense** method in the JMX console.



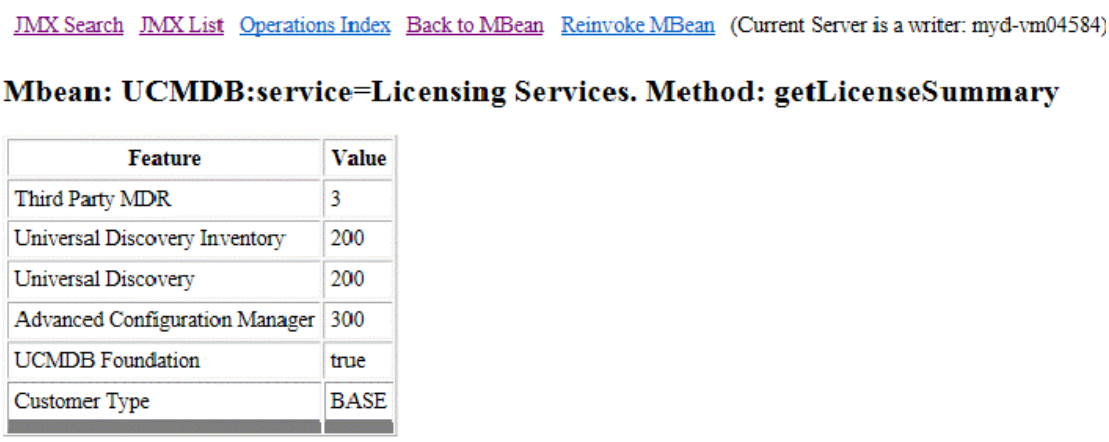
JMX Search JMX List Operations Index Back to MBean Reinvoke MBean (Current Server is a writer: myd-vm00862)

Mbean: UCMDB:service=Licensing Services. Method: addLicense

Successfully Added:

Feature	Value
License	Universal Discovery per OS Instance
Type	TERM
Start Time	Wed Jan 07 02:00:00 IST 2015
End Time	Fri May 01 03:00:00 IDT 2015
Capacity	100

3. In the JMX console, invoke the **getLicenseSummary** method to verify that the licensed capacity is increased.



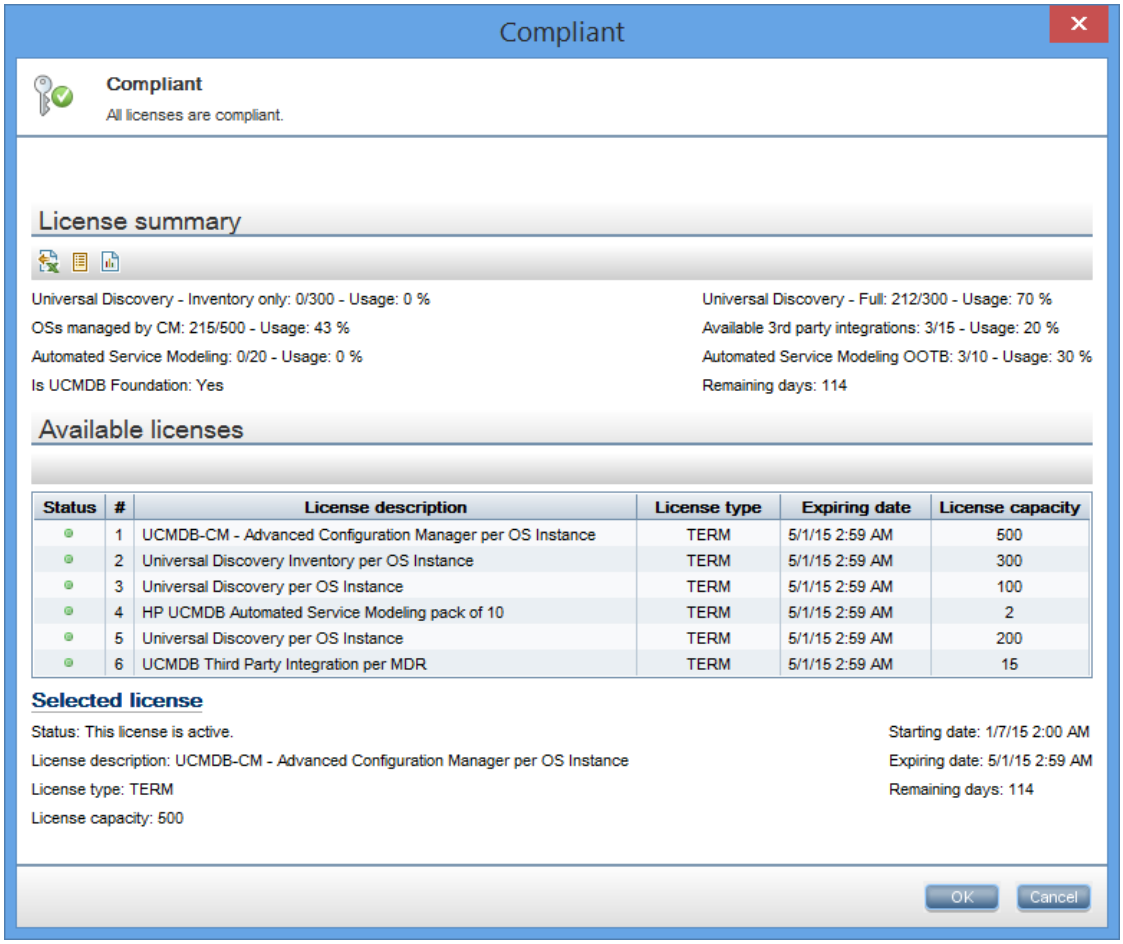
JMX Search JMX List Operations Index Back to MBean Reinvoke MBean (Current Server is a writer: myd-vm04584)

Mbean: UCMDB:service=Licensing Services. Method: getLicenseSummary

Feature	Value
Third Party MDR	3
Universal Discovery Inventory	200
Universal Discovery	200
Advanced Configuration Manager	300
UCMDB Foundation	true
Customer Type	BASE

4. Launch License summary report again.

   Now the UCMDB Server status is **Compliant**.


Compliant
Compliant
All licenses are compliant.
License summary
Universal Discovery - Inventory only: 0/300 - Usage: 0 %
OSs managed by CM: 215/500 - Usage: 43 %
Automated Service Modeling: 0/20 - Usage: 0 %
Is UCMDB Foundation: Yes
Universal Discovery - Full: 212/300 - Usage: 70 %
Available 3rd party integrations: 3/15 - Usage: 20 %
Automated Service Modeling OOTB: 3/10 - Usage: 30 %
Remaining days: 114
Available licenses
Status # License description License type Expiring date License capacity
1 UCMDB-CM - Advanced Configuration Manager per OS Instance TERM 5/1/15 2:59 AM 500
2 Universal Discovery Inventory per OS Instance TERM 5/1/15 2:59 AM 300
3 Universal Discovery per OS Instance TERM 5/1/15 2:59 AM 100
4 HP UCMDB Automated Service Modeling pack of 10 TERM 5/1/15 2:59 AM 2
5 Universal Discovery per OS Instance TERM 5/1/15 2:59 AM 200
6 UCMDB Third Party Integration per MDR TERM 5/1/15 2:59 AM 15
Selected license
Status: This license is active.
License description: UCMDB-CM - Advanced Configuration Manager per OS Instance
License type: TERM
License capacity: 500
Starting date: 1/7/15 2:00 AM
Expiring date: 5/1/15 2:59 AM
Remaining days: 114
OK
Cancel

How to Create a Dynamic Widget from UCMDB UI?

This end-to-end workflow walkthrough scenario describes how to create a Dynamic Widget from UCMDB and demonstrates the resulting widget in the UCMDB Browser.

This workflow includes the following steps:

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Step 2. Enable or disable the widget for different roles 18
Step 3. View the resulting widget in the UCMDB Browser 19

Step 1. Create a Dynamic Widget by using the Pattern View Editor

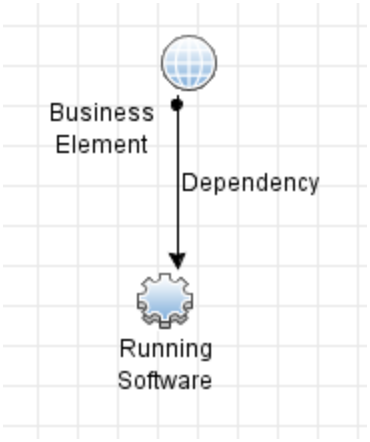
To create a Dynamic Widget, follow these steps:

1. Log on to UCMDB, and then open the Modeling Studio.
2. Click **New**, and then select **Dynamic Widget**.

   The **New Dynamic Widget** window opens.
3. Select **Create new query**, and then click **OK**.

   The Pattern View Editor opens.
4. From the **CI Types** pane, drag and drop the **BusinessElement** and **RunningSoftware** CI types into the **Query Definition** canvas, and then add a Dependency relationship between the two CITs.

   For detailed instructions, refer to the *How to Add Query Nodes and Relationships to a TQL Query* section in the *HPE Universal CMDB Modeling Guide*.



5. Right-click the **Business Element** query node in the canvas and then select **Set As Contact Query Node**.
6. Click the **Report** button to switch to the Report Definition mode. For each node, select and add any needed attributes into the **Report Layout** column.

   > **Note:** You can also add all the attributes for each node, and then enable the needed attributes in the **Widget** tab.

7. Click the **Widget** button to switch to the Widget Definition mode. Configure the values in the following four columns for each attribute:
   - **Overview**: Defines if the attribute is visible in the preview mode for the widget. Up to six attributes can be visible.
   - **Details**: Defines if the attribute appears after you click the **Details** button.
   - **Refocusable**: Defines if the value of the attribute appears as a link that directs to the CI to which the value belongs.
   - **Group Name**: Categorizes properties in groups.

   > **Note:** All the above configurations only apply to the Properties Mode widget type.

8. Select the top level of the tree in the **Hierarchy** pane, and then select one of the following mode in the **Widget Type** field.
   - Properties Mode
   - Topology Map Mode
   - Topology CIT Group Mode
   - Topology Textual Mode

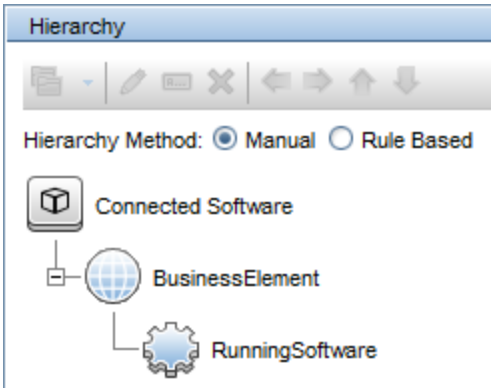
The Properties Mode displays attribute values from the nodes returned by the topology returned by the view that is created. All the other modes display a map of the topology.

> **Note:** If you change the widget type, the UCMDB Browser user need to log off and log on again to see the change in the resulting widget.

9. (Optional) If you set the widget type to Properties Mode, you can also group nodes by CI Type so that the information presentation is more structured.

   The following steps demonstrate how to add a grouping on the Running Software node:

   a. Click the **View** button to switch to the View mode. In the **Hierarchy** pane, drag and drop the **RunningSoftware** node under the **BusinessElement** node, as shown in the following screen shot.

   b. Right-click the **RunningSoftware** node, and then select **Add Group By CI Type**.

10. Click **Save**.

11. Enter `Connected Software` in the **View name** field, and then click **OK**.

Step 2. Enable or disable the widget for different roles

You can enable or disable the Dynamic Widget on a role basis. To do this, follow these steps:

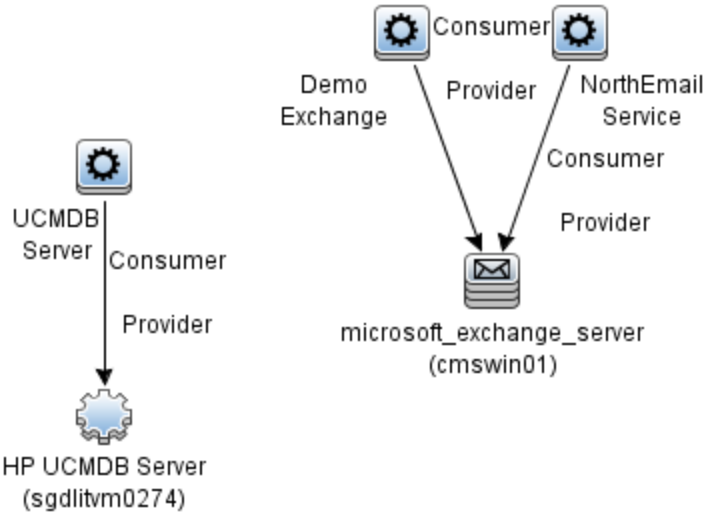
1. Go to **Security** > **Roles Manager**.
2. Select the role for which you want to enable the Dynamic Widget.
3. In the **Resource** tab, under **Resource Types**, select **UCMDB Browser Widgets**.

You can see the new Connected Software widget under **Available UCMDB Browser Widgets**.

4. Drag and drop the Connected Software widget to the **Selected UCMDB Browser Widgets With Permissions** column.

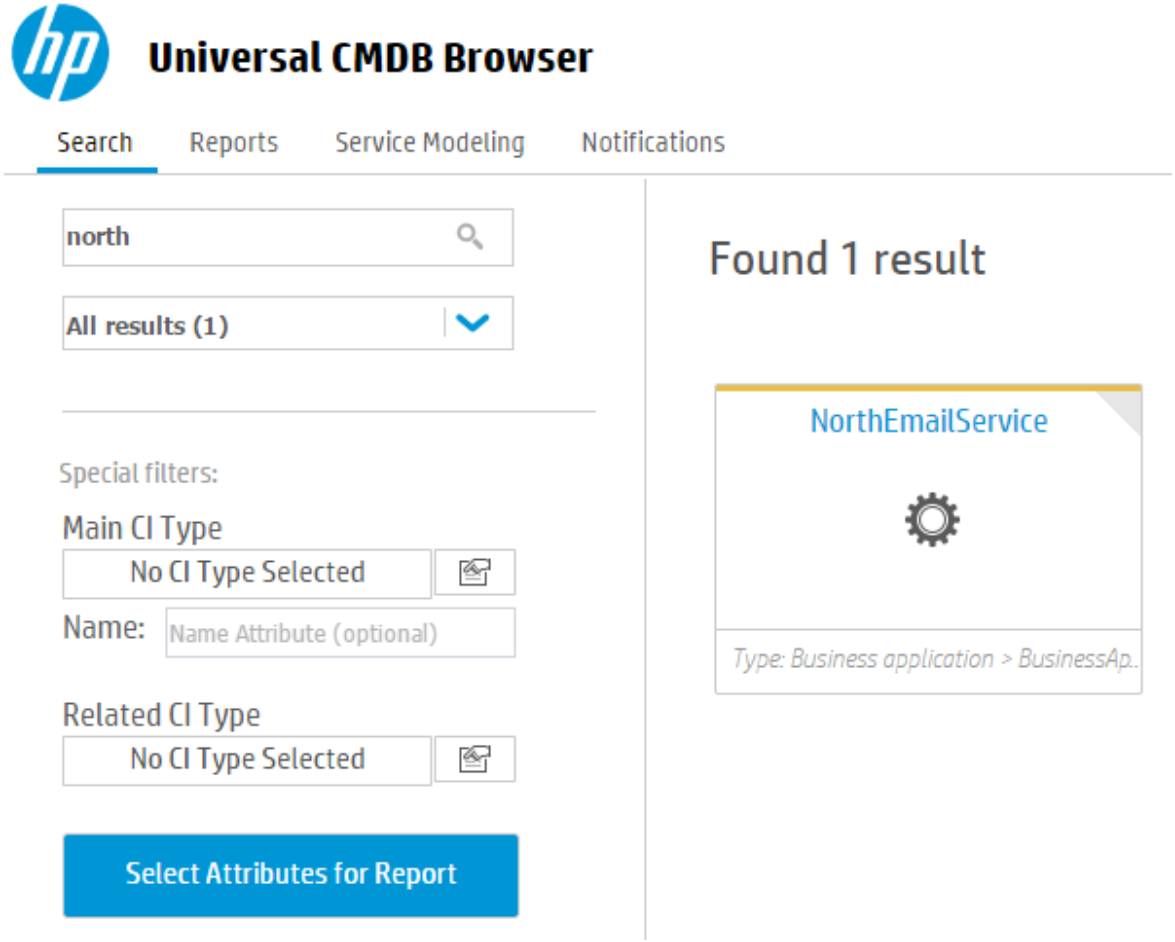
Step 3. View the resulting widget in the UCMDB Browser

In the UCMDB Browser, to view the resulting widget of the Dynamic Widget created above, you need to search for a Business Element that has connected Running Software instances. If you do not know which Business Element has connected Running Software instances, you can preview the result of the Connected Software view from UCMDB and see which CIs have data. For example, the following result indicates that the NorthEmailService CI has data.



Therefore, you can search for NorthEmailService to view the data. The UCMDB Browser returns the result as shown in the following screen shot.

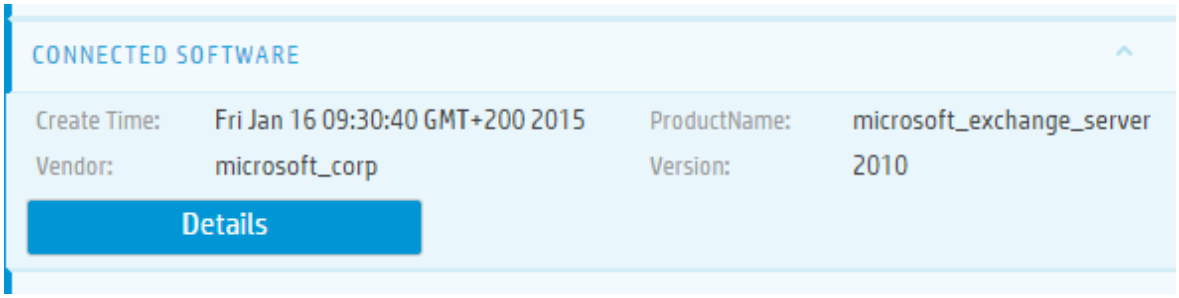
> **Note:** Make sure that you log on as a user that has the permission to see the widget.



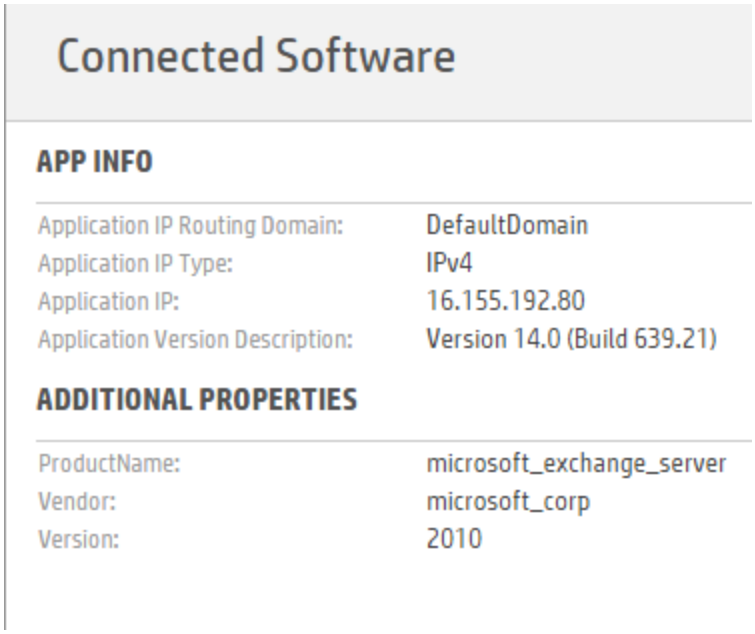
The UCMDB Browser presents the information based on the configurations in step 7, 8, and 9 when you create the Dynamic Widget.

If the widget type is Properties Mode

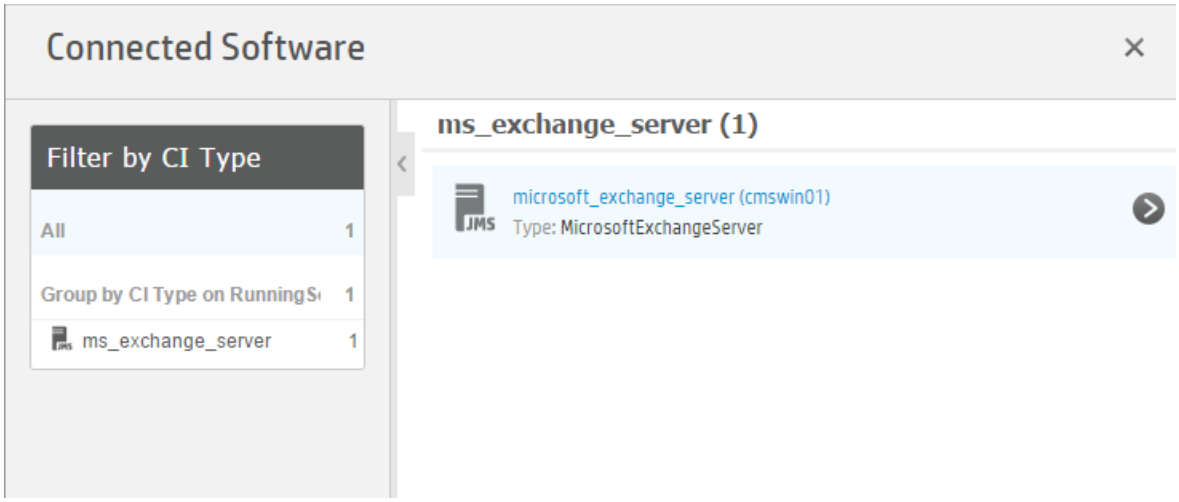
When you select the search result, you can see the following new widget.



If the nodes are not grouped by CI Types, when you click the **Details** button, the detailed information is presented as follows. The attributes are grouped according to the defined group name.

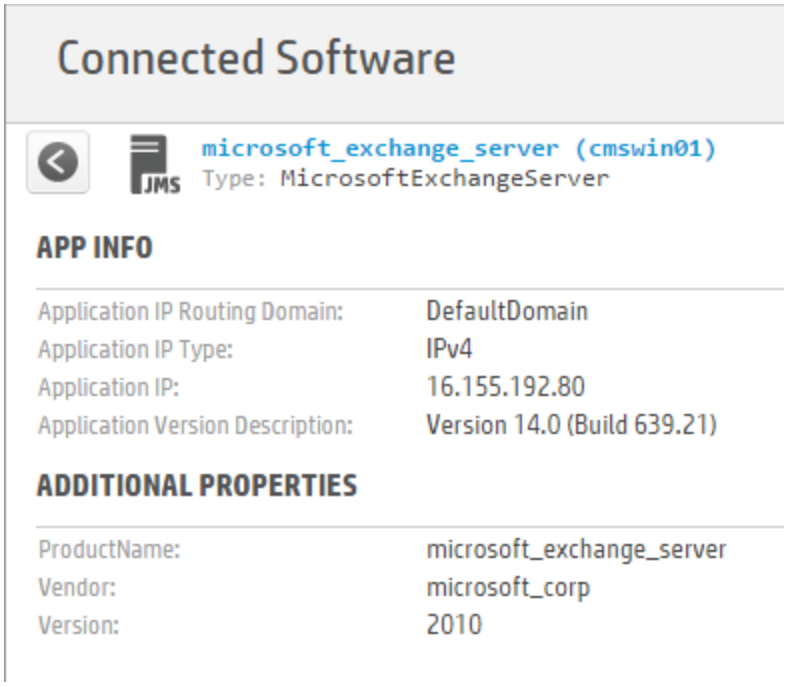


If the nodes are grouped by CI Types, when you click the **Details** button, the detailed information is presented as follows.



If there are more than one Running Software, they will be listed under the exchange server.

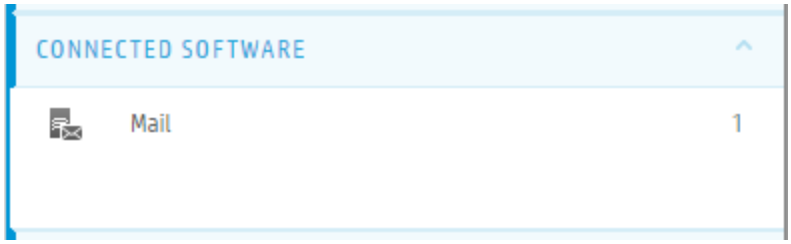
You can select a CI to view its properties, as shown in the following screen shot.



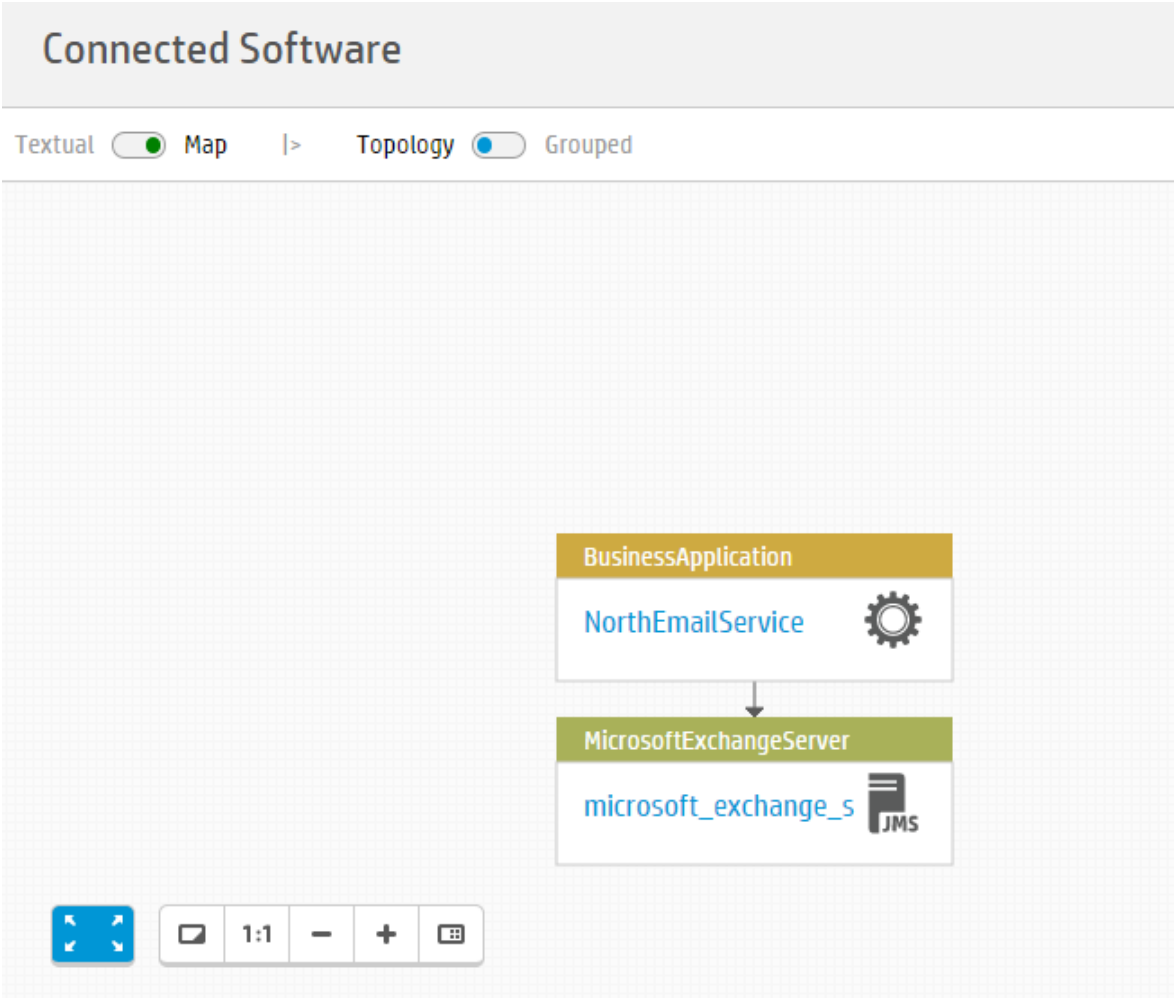
For instructions on how to group nodes by CI Types, see Step 9 on page 18.

If the widget type is Topology Mode

When you click the search result, the new widget appears as follows.



When you hover the mouse over the widget and then click the **Details** button, the following map appears.


Connected Software
Textual
Map
Topology
Grouped
BusinessApplication
NorthEmailService
MicrosoftExchangeServer
microsoft_exchange_s
JMS
1:1

How to Work with Generic Adapter Mapping UI?

This end-to-end workflow walkthrough scenario describes how to integrate UCMDB with Service Manager in order to import the newly discovered 3D Printer CIs into Service Manager.

This workflow includes the following steps:

Step 1. Create the new CI Type in UCMDB 24
Step 2. Import the new CIs in UCMDB 25
Step 3. Create the TQL query to see all the 3D Printer instances 26
Step 4. Create the integration point to the Service Manager server 28
Step 5. Create the new CI Type and the mapping for the new CI Type in Service Manager 30
Step 6. Create the push job for the new CI Type and push the CIs to Service Manager 35

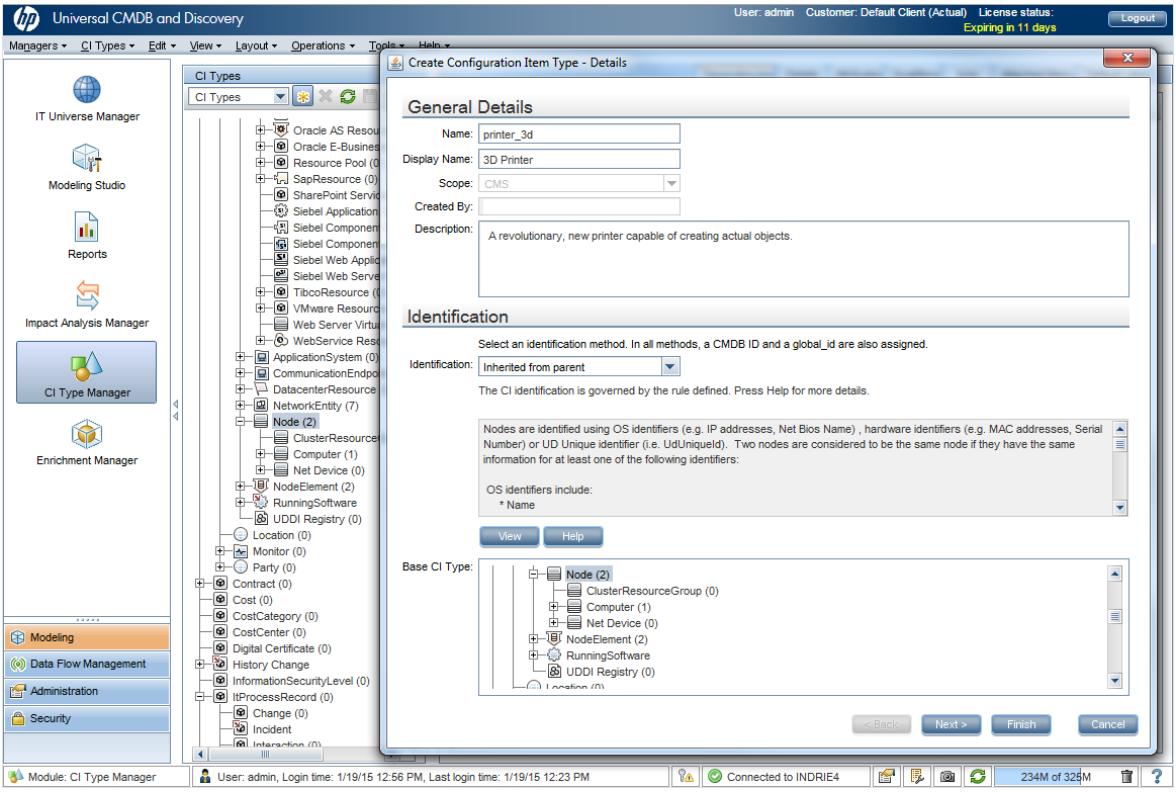
Step 1. Create the new CI Type in UCMDB

Follow these steps to create the new 3D Printer CI Type in UCMDB:

1. Log on to UCMDB, and then open the CI Type Manager.
2. Select the **Node** element in the CI Types tree, and then click **New** .

   The new 3D Printer CI Type will be a child of the existing Node CI type.
3. Follow the Create CI Type Wizard to create the new CI Type.

   For details about how to create a new CI Type, refer to the *How to Create a CI Type* section in the *HPE Universal CMDB Modeling Guide*.

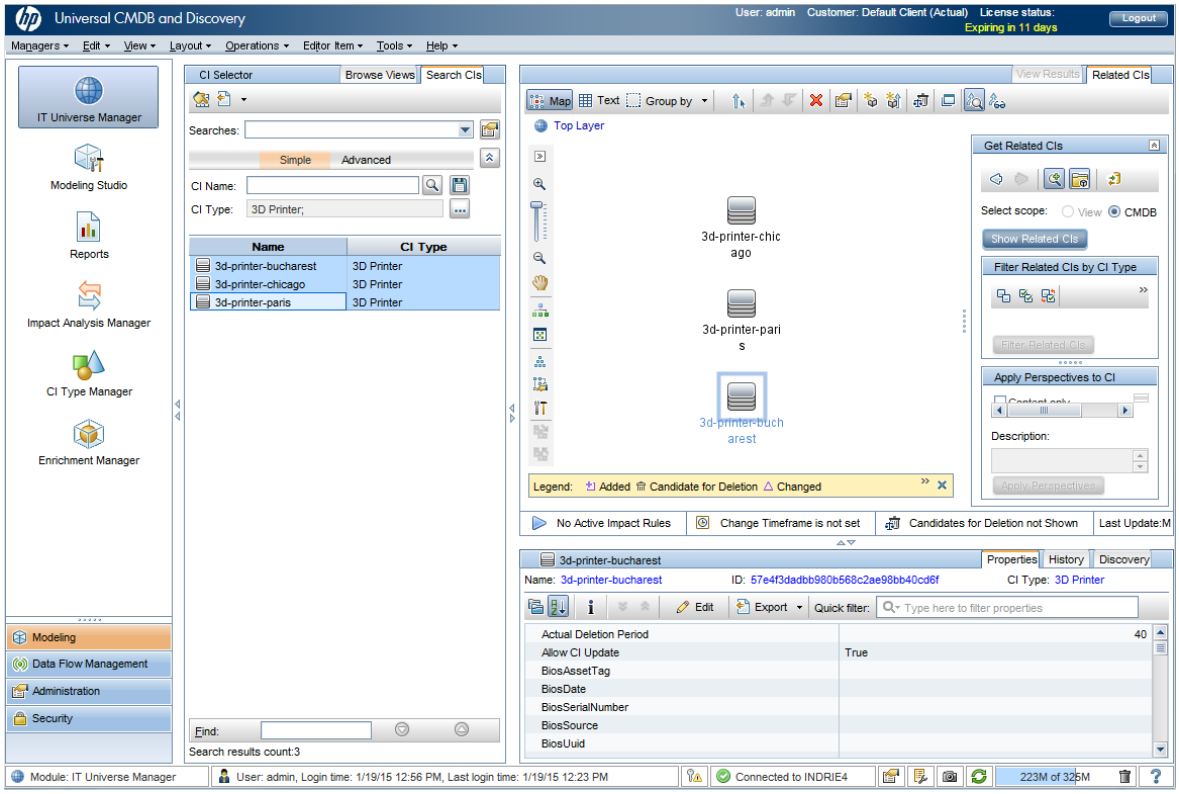


Step 2. Import the new CIs in UCMDB

Import the new CIs in UCMDB either by integration population or by discovery.

For more information, refer to the following topics in the *HPE Universal CMDB Data Flow Management Guide*:

- *How to Work with Population Jobs*
- *How to Run Module/Job-based Discovery*

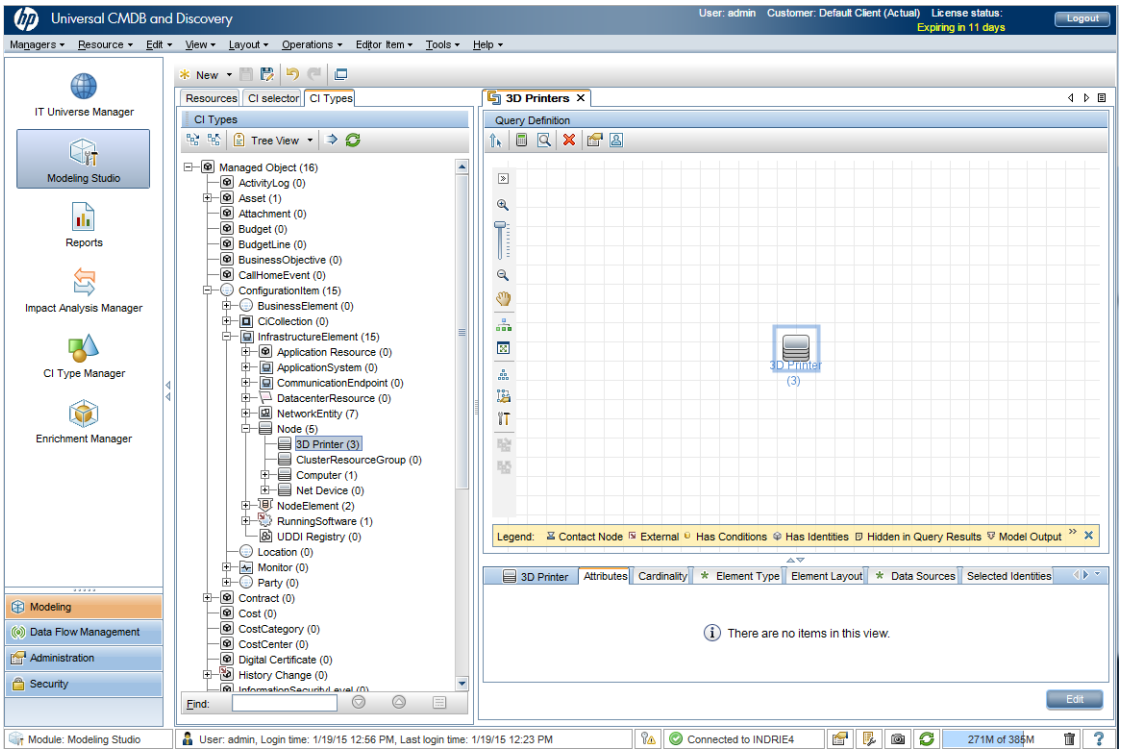


Step 3. Create the TQL query to see all the 3D Printer instances

Follow these steps to create the TQL query to see all the 3D Printer instances:

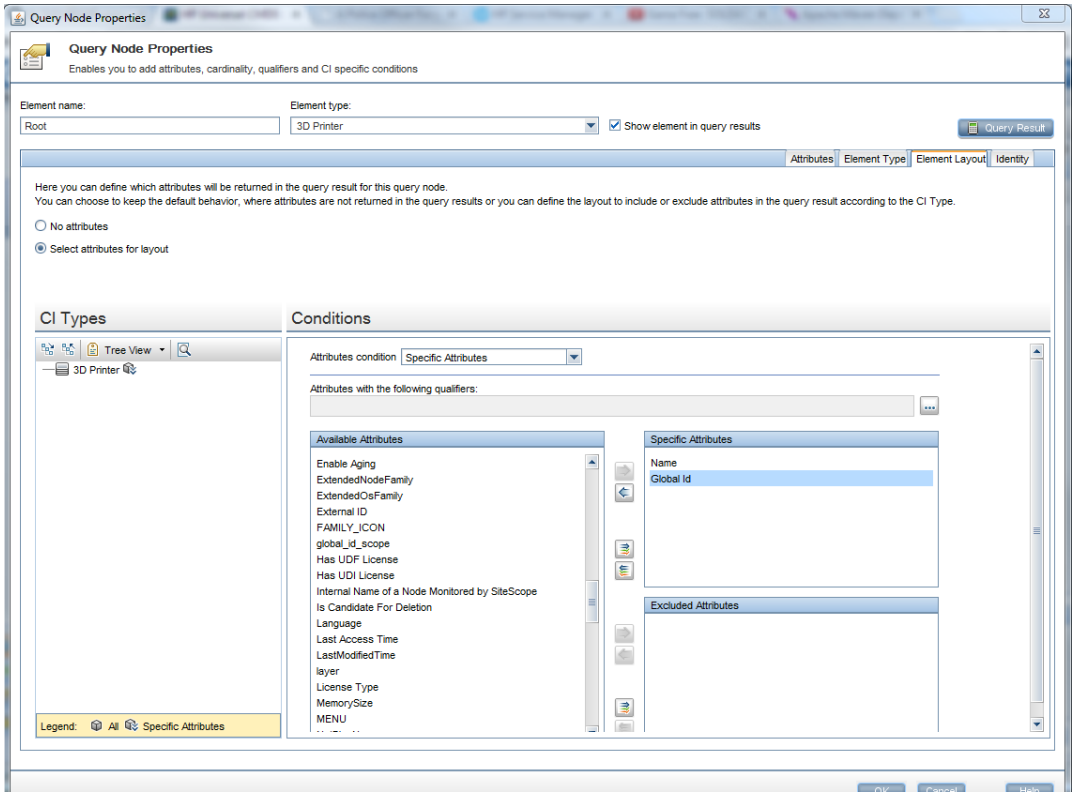
1. Go to the Modeling Studio, click **New** , and then click **Query**.
2. From the **CI Types** pane, locate the **3D Printer** CI type, and then drag and drop the **3D Printer** CI type into the **Query Definition** canvas.

> **Note:** To preview the query result, click the **Preview** button .



3. Right-click the 3D Printer query node, and then click **Query Node Properties**.
4. In the **Query Node Properties** window, make the following changes so that this TQL query can be used to push data to the Service Manager server.
   a. Change the element name to Root to indicate the root of the TQL query.
   b. In the **Element Layout** tab, select the **Select attributes for layout** option, add the **Name** and **Global Id** attributes to the **Specific Attributes** column.

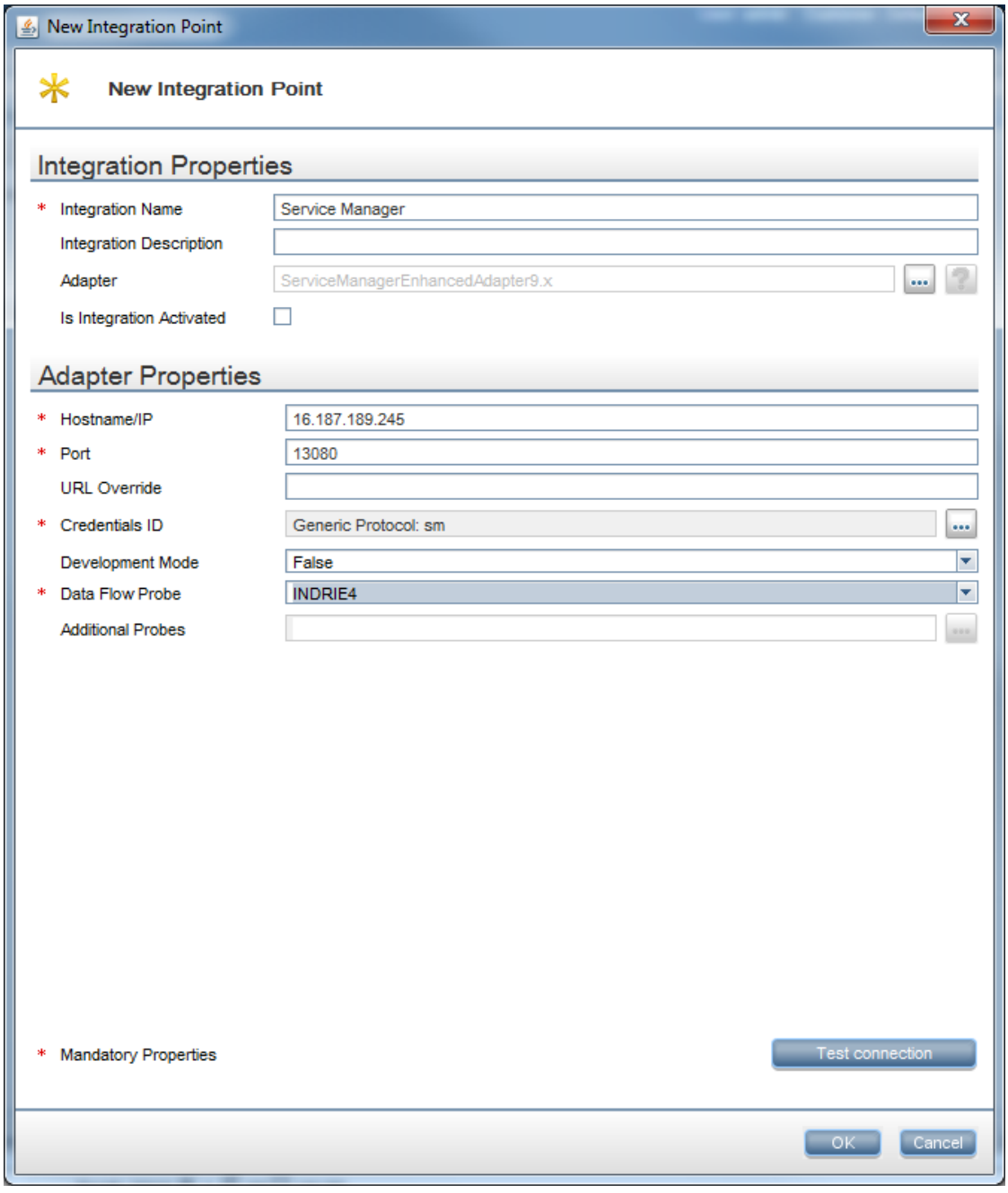
These attributes will be pushed to Service Manager. You can add other attributes if you want.



Step 4. Create the integration point to the Service Manager server

Follow these steps to create the integration point to the Service Manager server:

1. Go to the Integration Studio, and then click **New Integration Point** .
2. Specify the integration name.
3. Click **Select Adapter** , and then Select **ServiceManagerEnhancedAdapter9.x**.
4. Fill in the needed information. The following screen shot shows an example.



5. Click the **Test connection** button to verify the connectivity to the Service Manager server.
6. Click **OK**.

Step 5. Create the new CI Type and the mapping for the new CI Type in Service Manager

Follow these steps to create the new CI Type in Service Manager by using UCMDB's Mapping Tool and to create a mapping for the new 3D Printer CI Type:

1. Right-click the newly created integration point, and then click **Go to Adapter**.

   The **ServiceManagerEnhancedAdapter9.x** adapter opens in Adapter Management.

2. To create the mapping file, make sure the **ServiceManagerEnhancedAdapter9-x** adapter is selected, click **New** , and then click **New Configuration File**.

3. Enter the mapping file name in the **Name** field.

   > **Note:** Include the full path in the **Name** field, for example:
   >
   > `ServiceManagerEnhancedAdapter9-x/mappings/push/SM 3D Printer Push.xml`

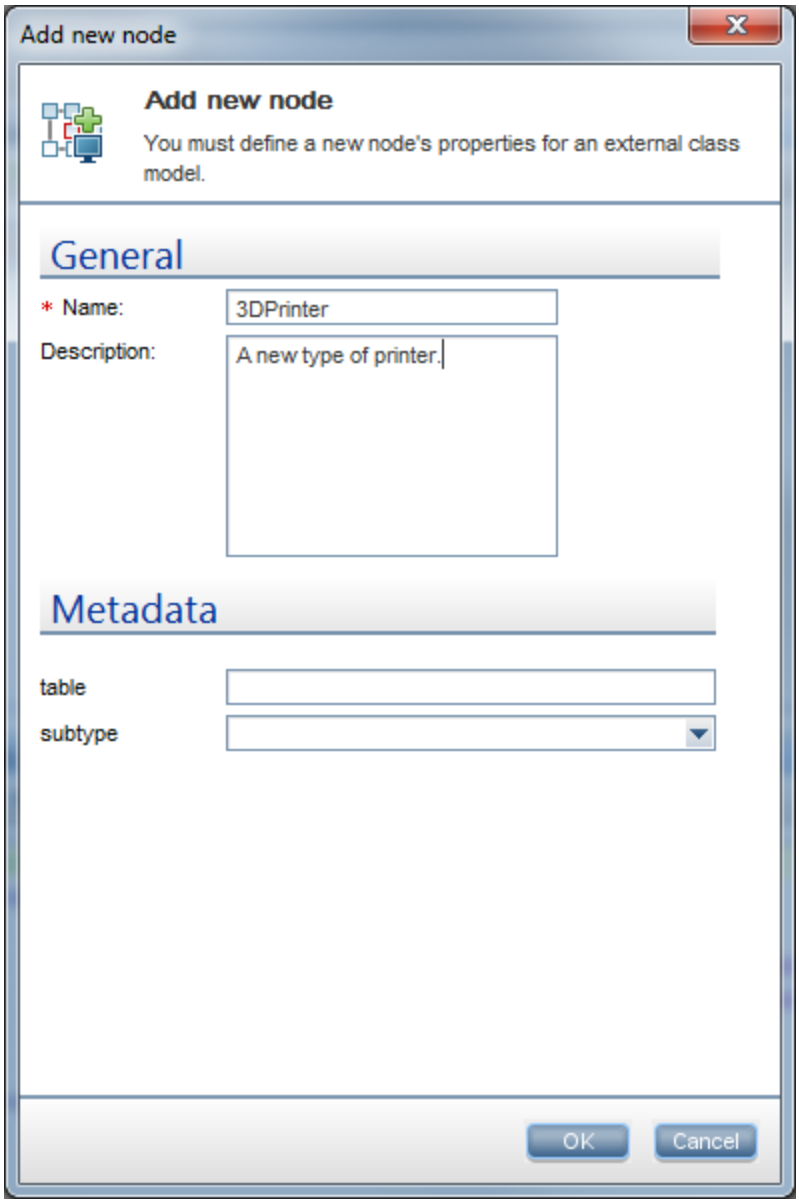
4. Click **OK**, and then click **Yes** if you are prompted with the following message:

   Do you want to open the configuration file with the new mapping tool editor?

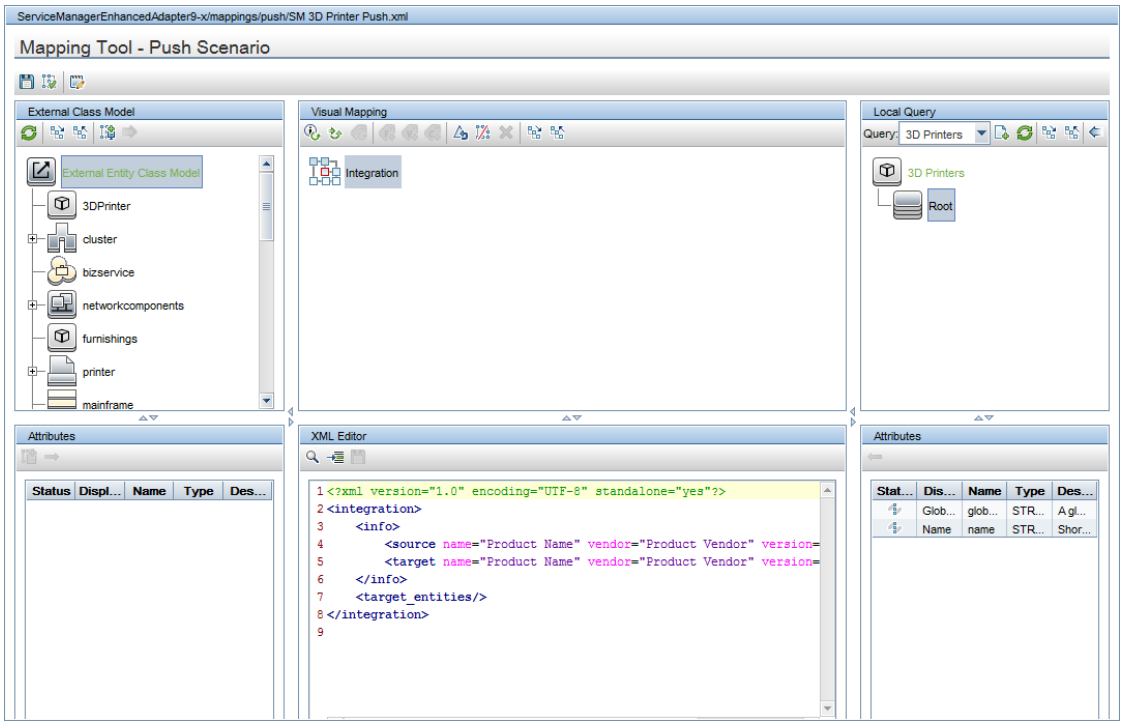
   The UI Mapping Tool opens.

5. Click **Add New CI Type to External Class Model** .

6. Fill in the needed information for the new CI Type, and then click **OK**.

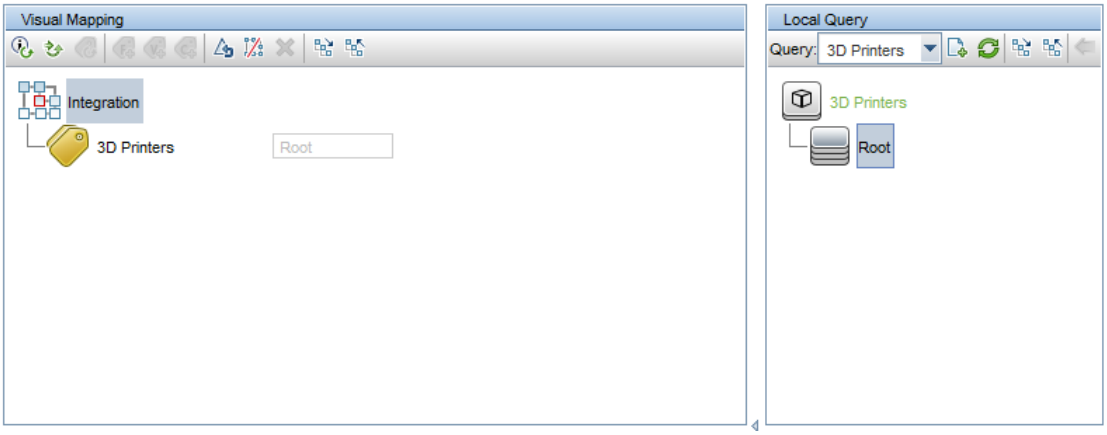


7. Define the TQL query that provides the CIs need be pushed to Service Manager. To do this, click **Add TQL Queries** in the **Local Query** pane, and then select the previously created 3D Printers TQL query.

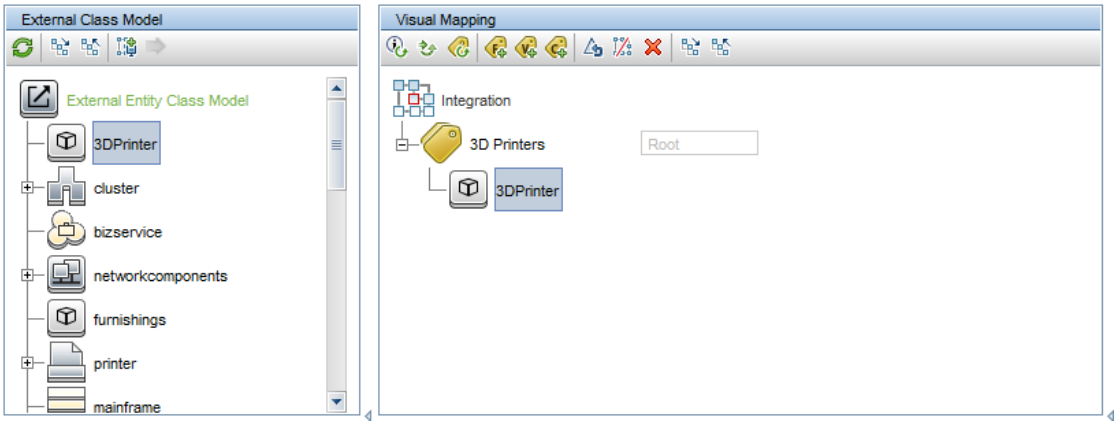


8. Select the Root node under the 3D Printers TQL query node in the **Local Query** pane, and then drag it onto the **Integration** node in the **Visual Mapping** pane.

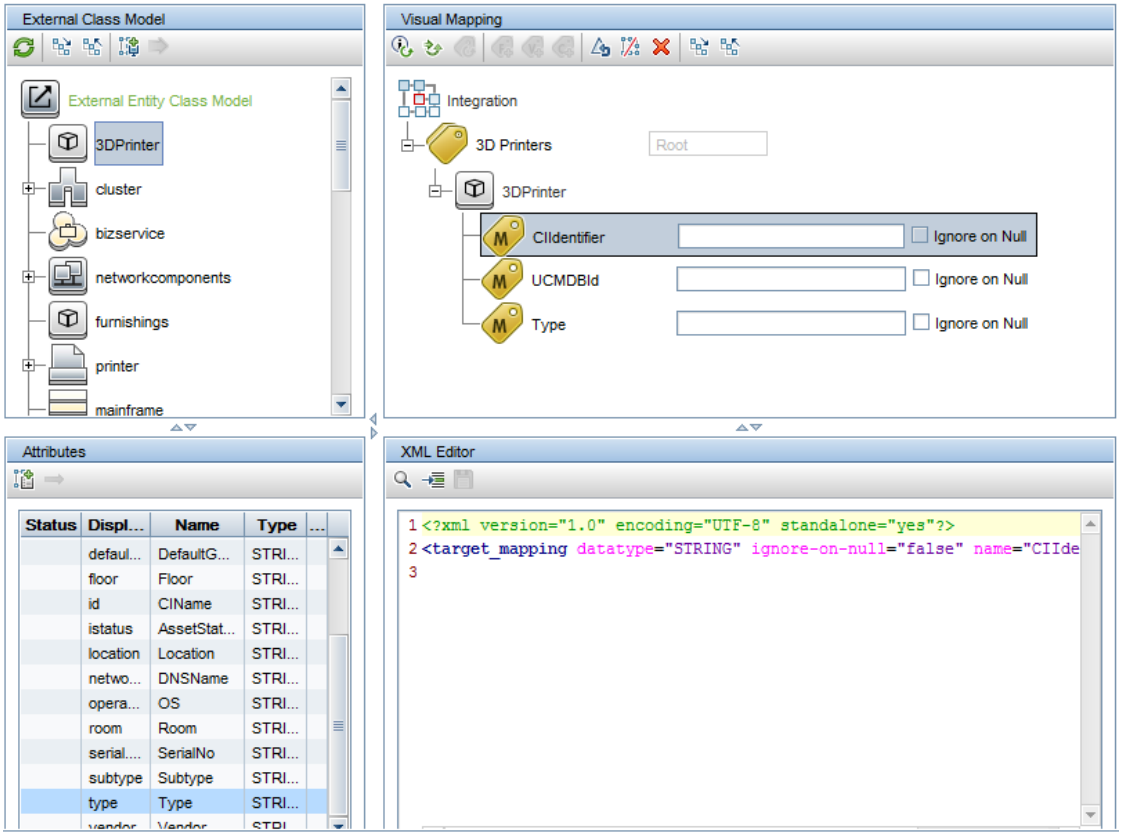
   This configuration indicates that the data source for this mapping is the 3D Printers TQL query rooted in the Root element.



9. Select the Service Manager entities that will be created as a result of the mapping process. To do this, drag the 3DPrinter type from the **External Class Model** pane onto the 3D Printer TQL query node in the **Visual Mapping** pane.



10. Drag the needed attributes of the Service Manager 3DPrinter type from the **Attributes** pane onto the 3DPrinter node in the **Visual Mapping** pane. In this case, the Type attribute and two mandatory attributes: CIIdentifier and UCMDBId.



11. Double click each of the three attributes and enter the values as follows:

- **Type**: `'3dprinter'`

  The Type attribute need be passed to Service Manager as a string. Don not miss the single quotes, which are needed to differentiate a string constant from a variable.

- **UCMDBId**: Use the Global Id attribute from UCMDB.

  To do this, drag the Global Id attribute from the **Attributes** pane onto the **UCMDBId** element in the **Visual Mapping** pane.

- **CIIdentifier**: Use the Name attribute from UCMDB and make a small customization.

  To do this, follow these steps:

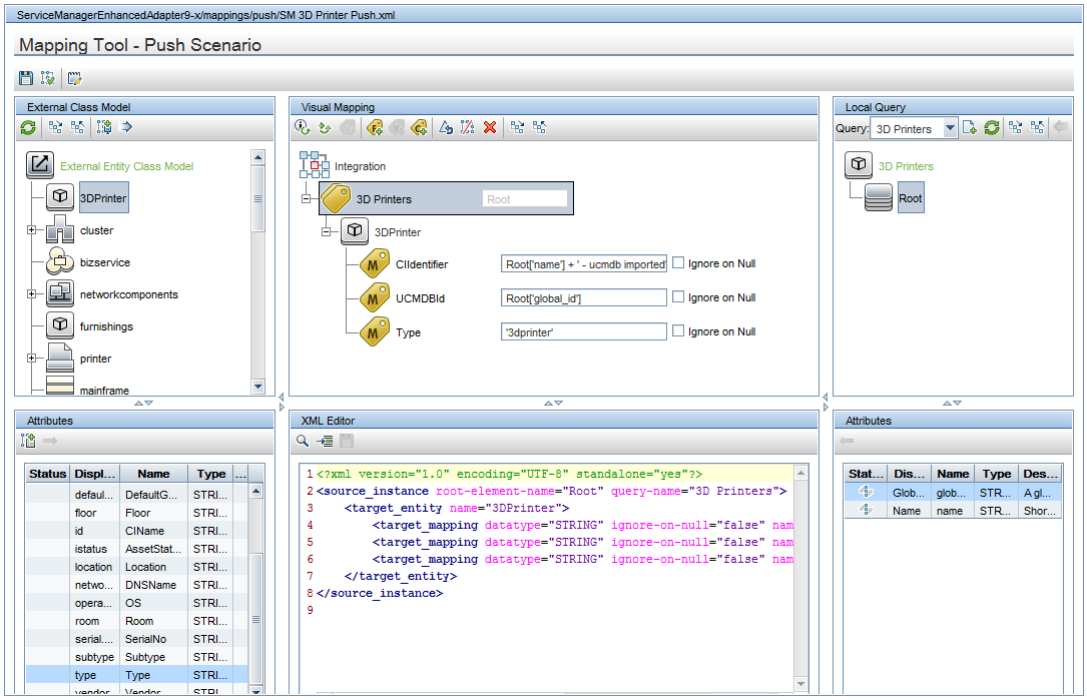
  i. Double-click the **CIIdentifier** element in the **Visual Mapping** pane, and then type `Root[`. A drop-down box appears and shows the available attributes for the Root TQL query element of the 3D Printer CI Type.

  ii. Select **Root['name']**.

  iii. Continue type `+ ' - ucmdb imported'`.

  The final value is `Root['name'] + ' - ucmdb imported'`.

The following screen shot shows the result of the mapping process.



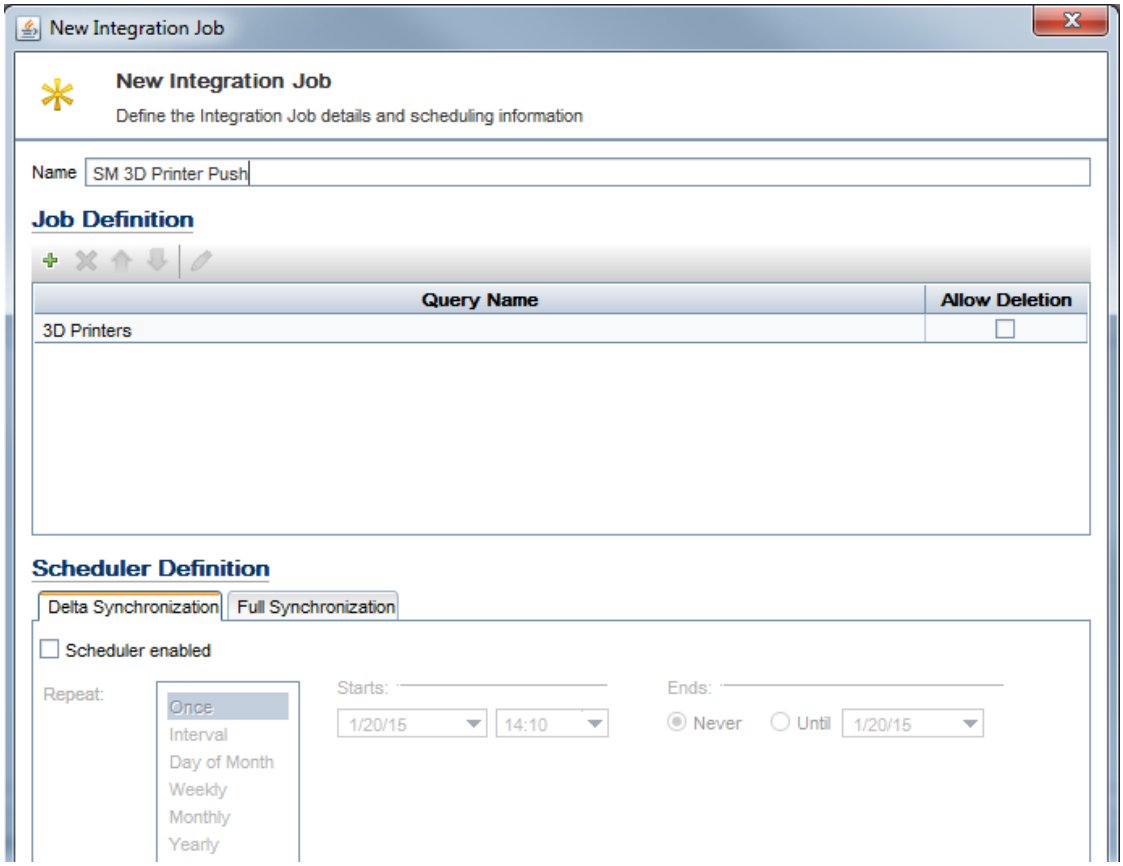
12. Click **Save** .

Step 6. Create the push job for the new CI Type and push the CIs to Service Manager

Follow these steps to create the push job for the newly created 3D Printer CI Type and push the CIs to Service Manager:

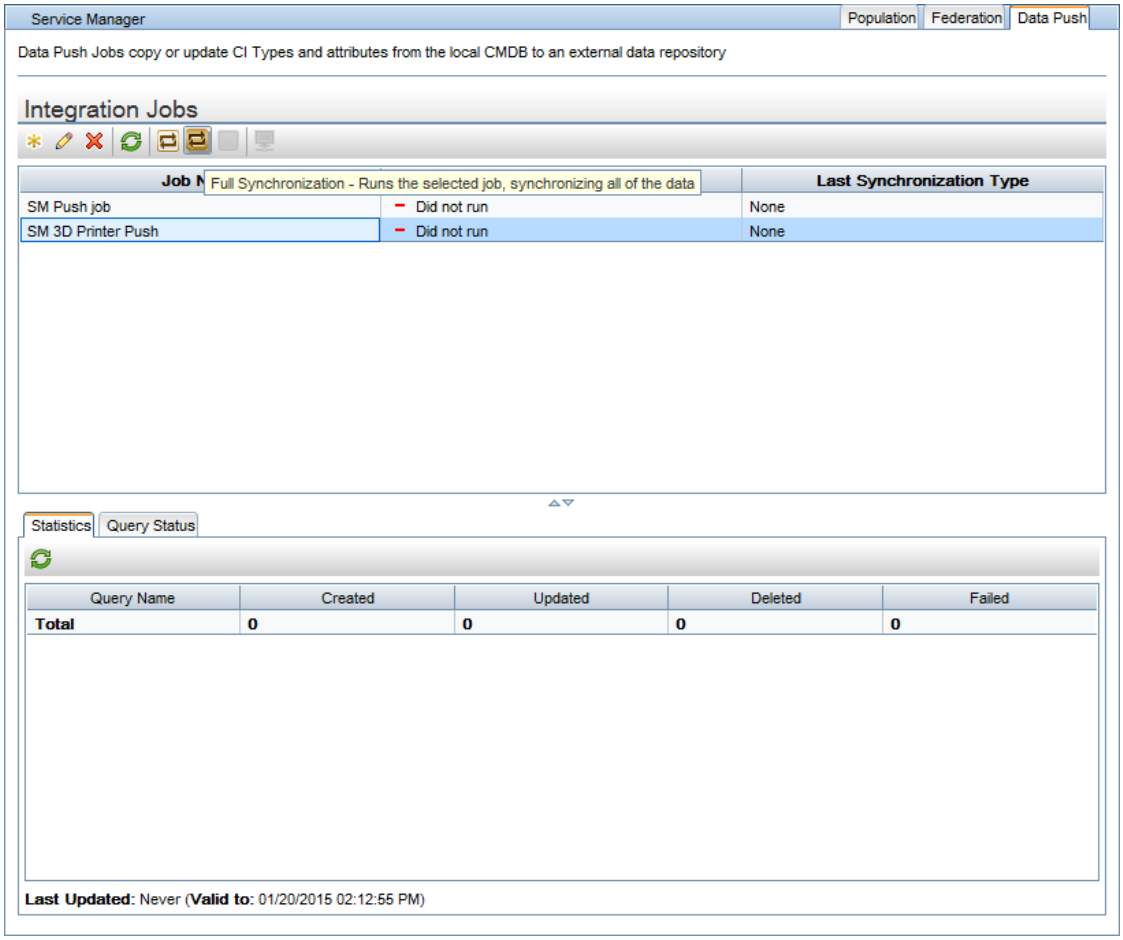
1. Go to Adapter Management.
2. Right-click the **ServiceManagerEnhancedAdapter9-x** adapter, click **Go to Integration Point**, and then click the newly created integration point for Service Manager.

   The Integration Studio opens.
3. Make sure the Service Manager integration point is selected, and then open the **Data Push** tab.
4. Click **New Integration Job**, and add the 3D Printers TQL query as follows.

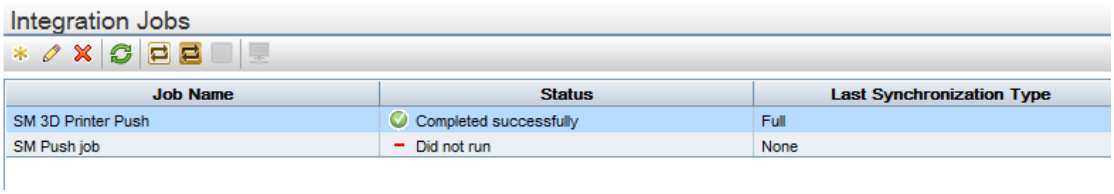


5. Click **Save Integration Point** .

6. Select the newly created SM 3D Printer Push job, and then click **Full Synchronization** in the **Integration Jobs** section.



7. Click **Refresh** to check if the job is finished.



How to Work with Assisted Modeling in UCMDB Browser?

This end-to-end workflow walkthrough scenario describes how a site manager can organize all services in the site, through the UCMDB Browser.

The flow assumes that all services follow this organization scheme: BusinessFunction [contains] BusinessService [contains] BusinessApplication.

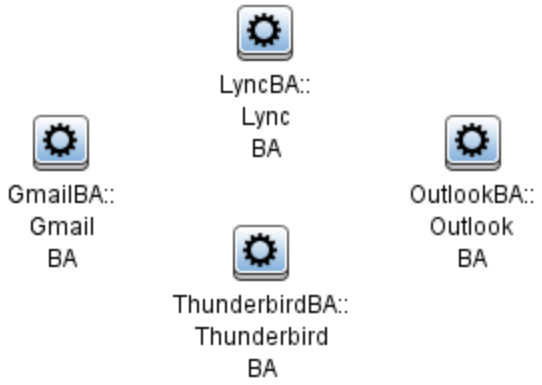
This workflow includes the following steps:

Step 1. Create BusinessApplications CIs 37
Step 2. Create a New Modeling Query 38
Step 3. Assign the MODELING_ENABLED Qualifier to BusinessFunction and BusinessService 39
Step 4. Organize Services by Using Assisted Modeling 40
Step 5. Verification 44

Step 1. Create BusinessApplications CIs

Follow these steps to create BusinessApplications CIs:

1. Log in to UCMDB, and then go to **Modeling > IT Universal Manager**.
2. Create the following CIs if they do not exist:
   - OutlookBA
   - GmailBA
   - ThunderbirdBA
   - LyncBA



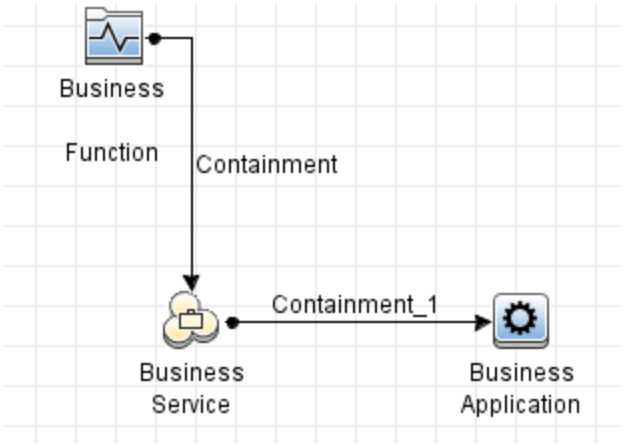
For more information about how to create a CI, refer to *HPE Universal CMDB Modeling Guide> Modeling > IT Universe Manager > Working with CIs*.

Step 2. Create a New Modeling Query

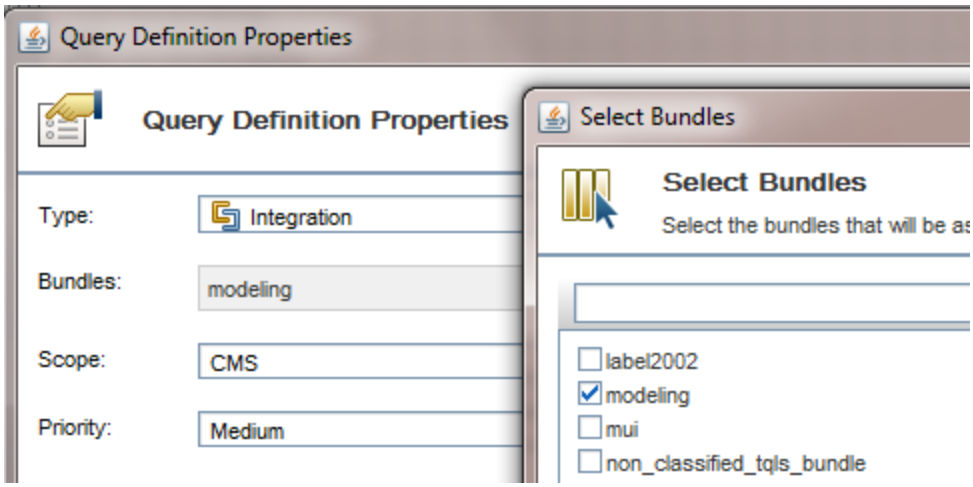
Follow these steps to create a new modeling query:

1. Log in to UCMDB, and then go to **Modeling** > **Modeling Studio**.
2. Create a new query with the following content and relationship:

   BusinessFunction [contains] BusinessService [contains] BusinessApplication



3. Add the query to the **modeling** bundle.



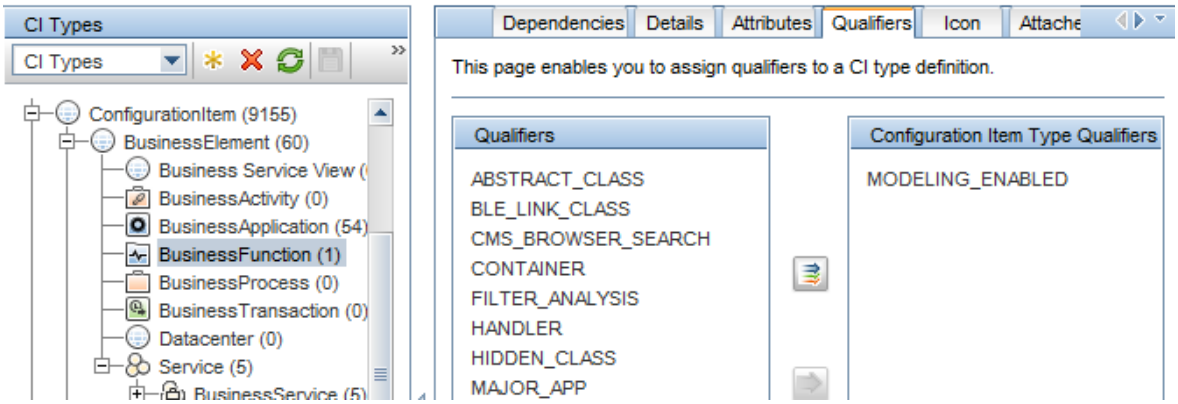
4. Save the query and name it as **ServiceHierarchy**.

For more information about how to create a TQL Query, refer to *HPE Universal CMDB Modeling Guide> Introduction > Topology Query Language > How to Define a TQL Query*.

Step 3. Assign the MODELING_ENABLED Qualifier to BusinessFunction and BusinessService

Make sure both the **BusinessFunction** and **BusinessService** CI Types have the **MODELING_ENABLED** qualifier, so that you can create these CI types by using the Assisted Modeling feature in the UCMDB Browser.

To do this, go to **Modeling** > **CI Type Manager**, select the CI Type, and then go to the **Qualifiers** tab. The **MODELING_ENABLED** qualifier should be in the right column.

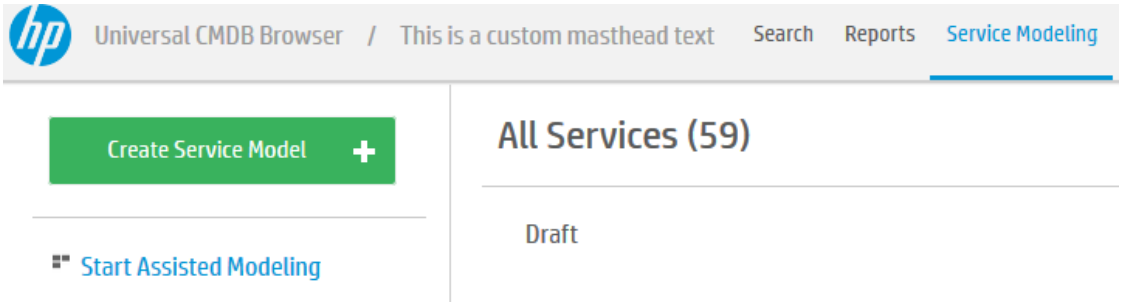


Step 4. Organize Services by Using Assisted Modeling

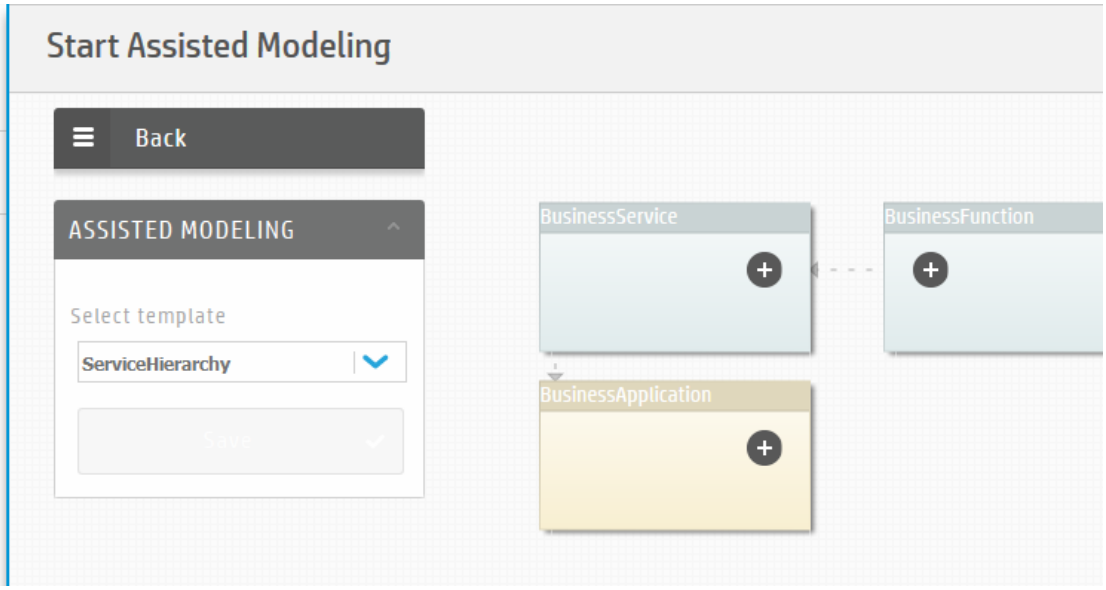
Follow these steps to organize services by using Assisted Modeling in the UCMDB Browser:

1. Log in to the UCMDB Browser.
2. Select the **Service Modeling** tab, and then click the **Start Assisted Modeling** link.

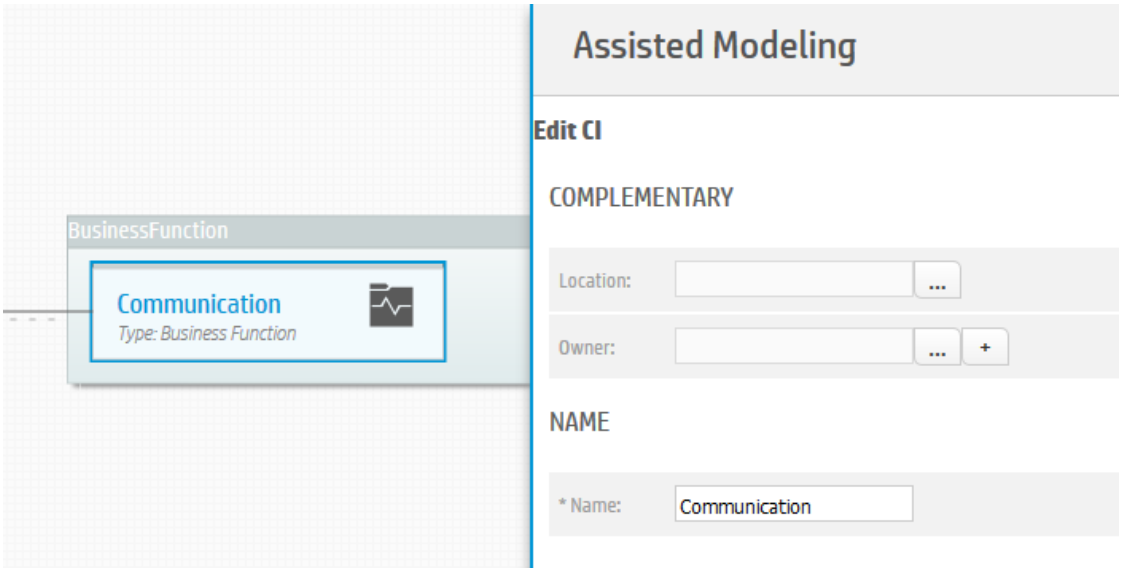
> **Note:** If Service Modeling is not enabled, the **Assisted Modeling** tab appears. Select the **Assisted Modeling** tab.



3. From the **Select template** drop-down list, select **ServiceHierarchy**, which is the query just created.

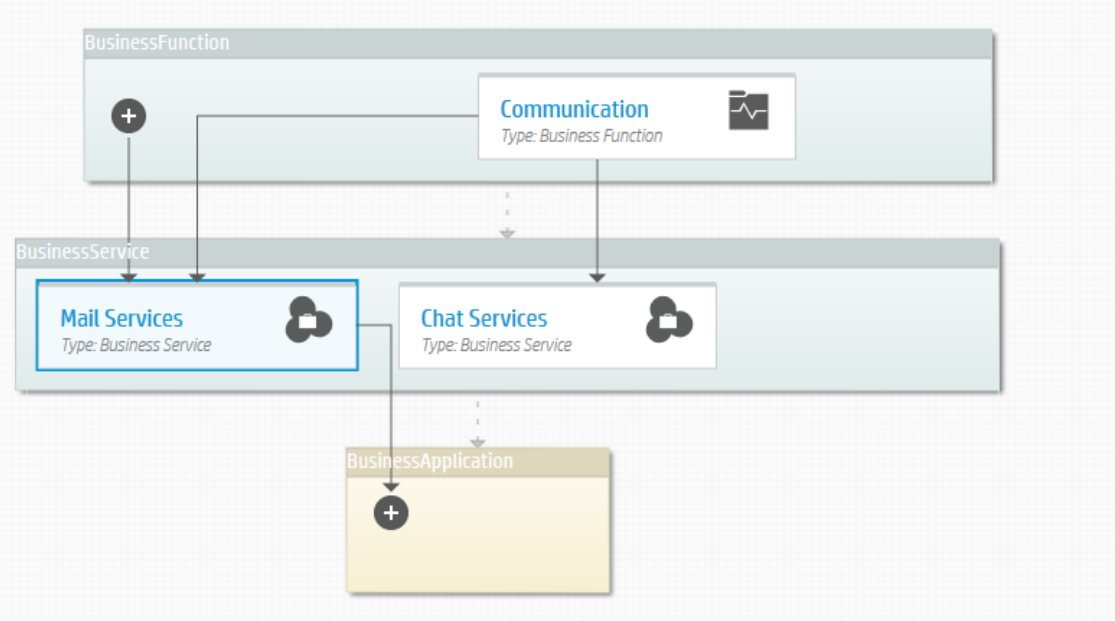


4. Create a new **Communication** CI of the BusinessFunction type. To do this, click the icon in the **BusinessFunction** node, and then click the **Create New BusinessFunction** link. Name the CI as **Communication** and then click **Apply**.

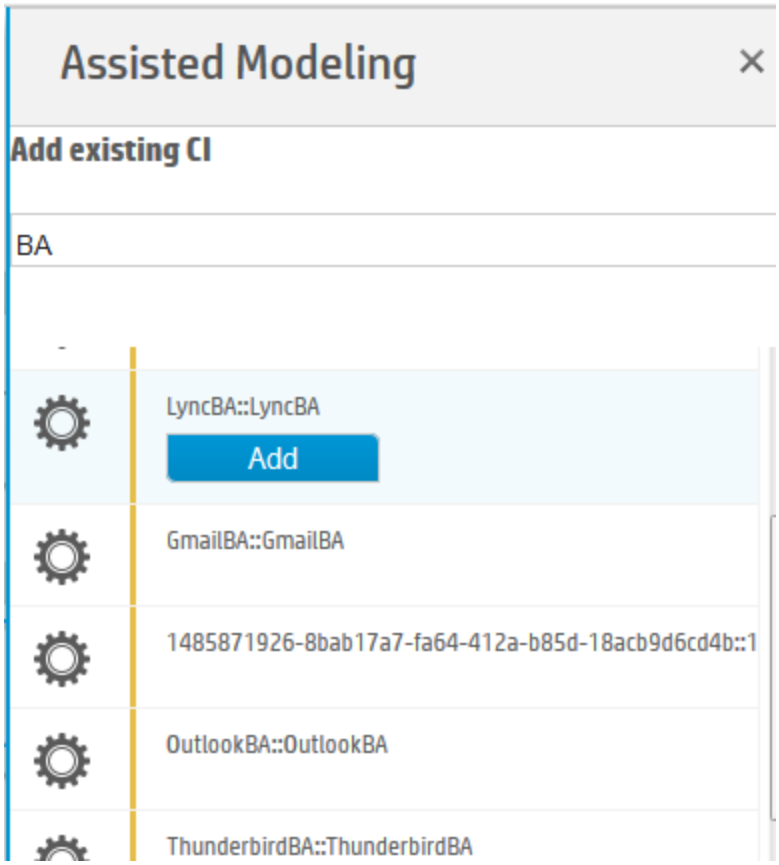


5. Create **Mail Services** and **Chat Services** CIs of the BusinessService type. To do this, follow the similar process as the previous step.
6. Examine if the topology graph now resembles the following example:

> **Note:** The following example uses the **Hierarchical: vertical** layout.

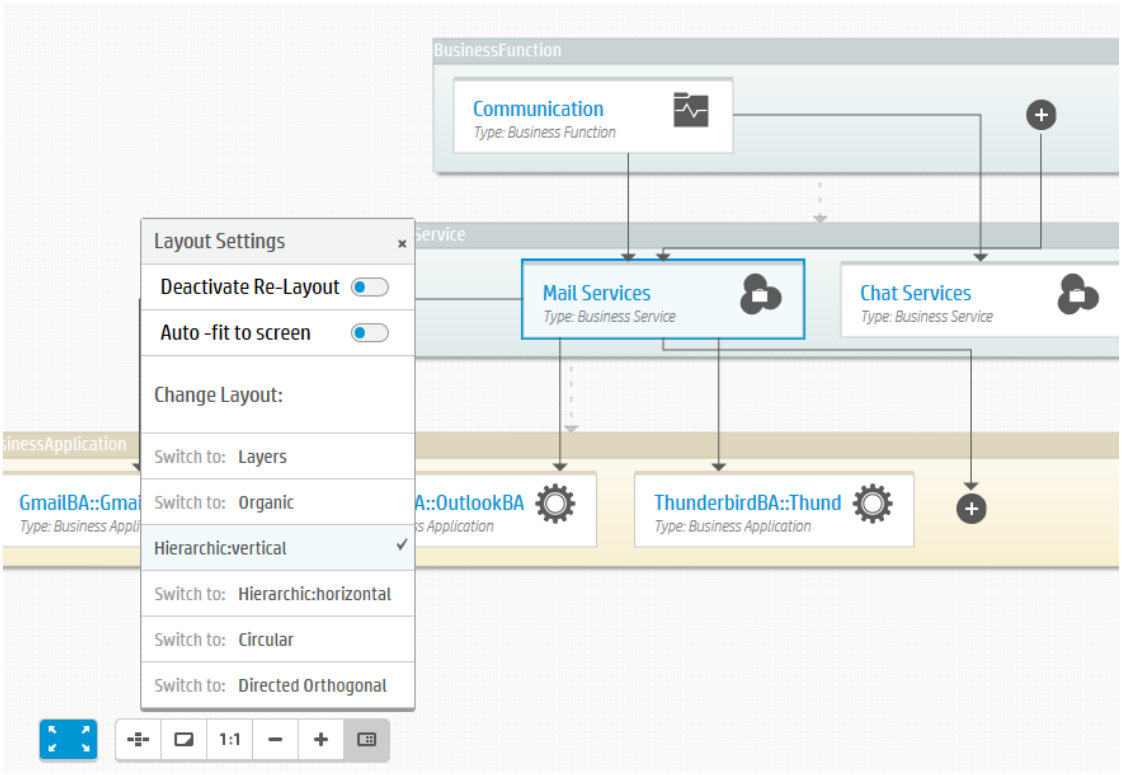


7. Select **Mail Services**, click the + icon inside the **BusinessApplication** node, and then click the **Add existing BusinessApplication** link.
8. Type `BA` in the text field and then press **Enter** to filter the result (because the business application names end with BA). The result should be similar with the following example:



9. Point to **GmailBA**, **OutlookBA**, and **ThunderbirdBA**, and then click the **Add** button that appears under each item.
10. Examine if the topology graph now resembles the following example:

> **Note:** The following example uses the **Hierarchical: vertical** layout.

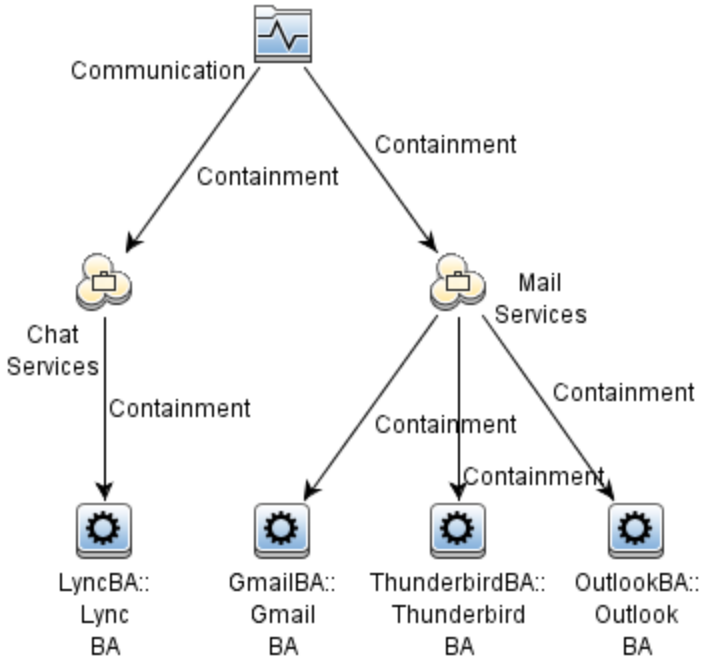


11. Add the **LyncBA** CI inside the **BusinessApplication** node and links to **Chat Services**. To do this, follow the similar procedure as Step 7 to 9.
12. Click the **Save** button. The following message appears at the top:

    `Topology saved successfully`

Step 5. Verification

Log in to UCMDB and check if the created links and CIs are as expected:


Communication
Containment
Containment
Chat
Services
Containment
Mail
Services
Containment
Containment
Containment
LyncBA::
Lync
BA
GmailBA::
Gmail
BA
ThunderbirdBA::
Thunderbird
BA
OutlookBA::
Outlook
BA

How to Perform the Daily Monitoring Process?

This end-to-end workflow walkthrough scenario describes how to perform the daily monitoring process.

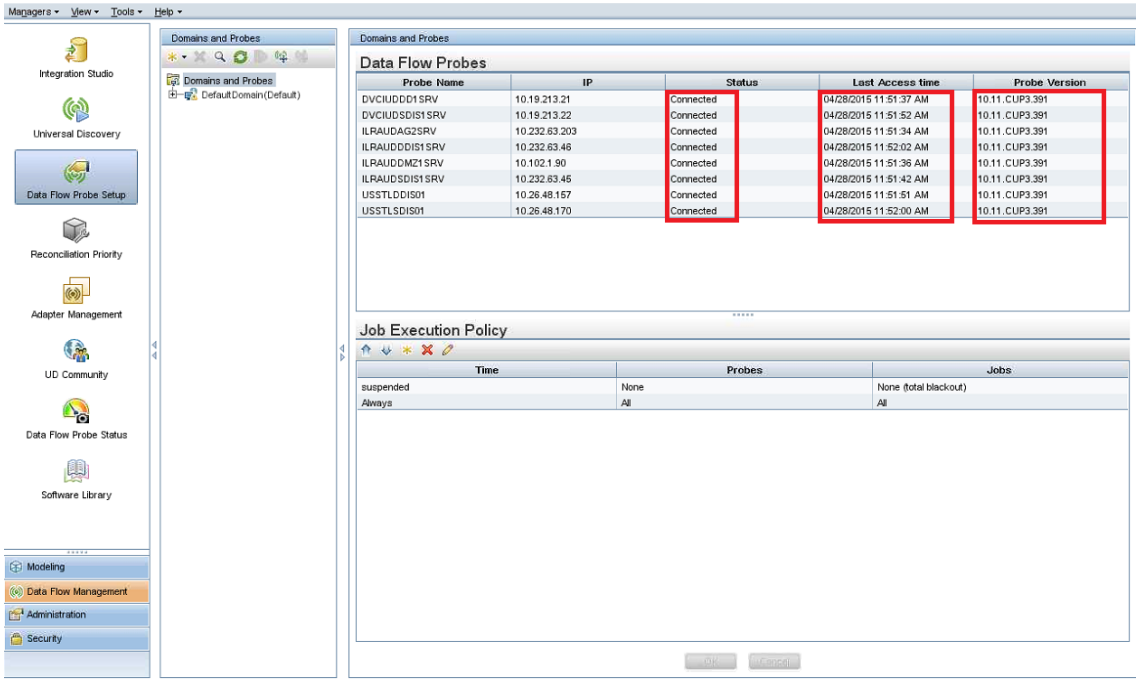
This workflow includes the following steps:

Step 1. Check UCMDB UI 46
Step 2. Check UCMDB Server 49
Step 3. Check Probes 50

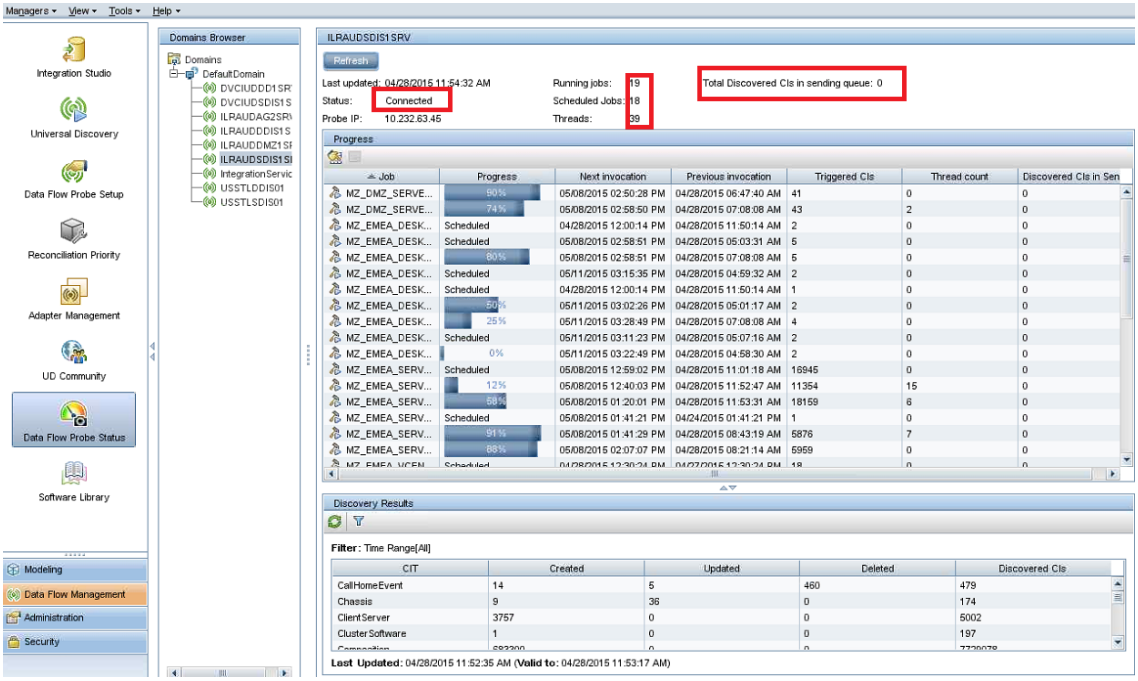
Step 1. Check UCMDB UI

Check the following items:

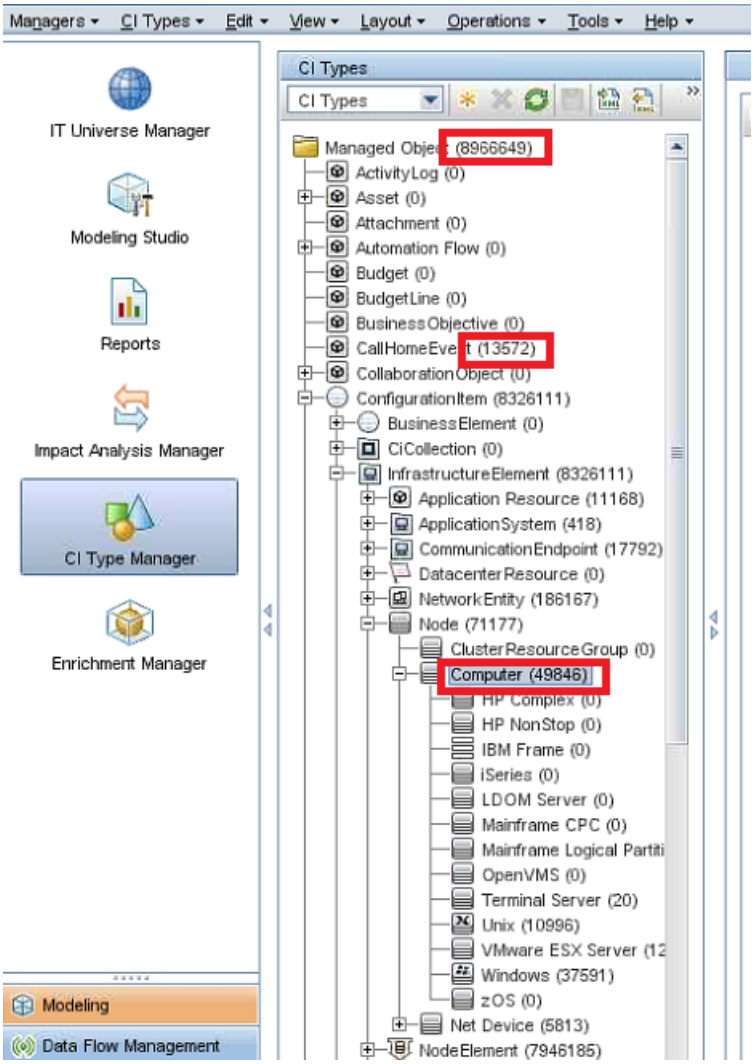
- The status of each probe:
  - The status should be **Connected**.
  - The last access time should be within 30 seconds.
  - The probe version should be up to date.



- The status of the jobs on each probe:
  - The status of each probe should be **Connected**.
  - The running job number and thread number should be as expected and will not cause performance issue. For more information, contact HP Support.
  - Sending queue should not be accumulating.



- The total CI number:
  - The total CI number should not exceed the limitation.
  - The **CallhomeEvent** CI number should not be accumulating.
  - The total Computer CI number should be as expected.



Step 2. Check UCMDB Server

Check the following items:

- Regular CPU and memory usage of the UCMDB server.
- Regular CPU, memory, and Disk I/O usage of the server database.
- Confirm no Java dump file exists in the following folder:

  ***<UCMDBServer_Installation_Folder>*\bin**

Step 3. Check Probes

Check the following items:

- Regular CPU and memory usage of the probe service.
- Regular CPU and memory usage of the ProbeDB service.
- Regular CPU and memory usage of the XMLEnricher service.
- The probe server has enough disk space.
- Confirm no Java dump file exists in the following folder:

  ***<DataFlowProbe_Installation_Folder>*\bin**
- Check scan files if the **Inventory Discovery by Scanner** job is running:
  - All the files in the following folder should be updated within one hour:

    ***<DataFlowProbe_Installation_Folder>*\runtime\xmlenricher\Scans\incoming**
  - All the files in the following folder should be updated within eight hours:

    ***<DataFlowProbe_Installation_Folder>*\runtime\xmlenricher\Scans\sending**

    A few files that were updated eight hours ago might be cause by system glitch and should be deleted.
  - The **Corrupt**, **Delta**, or **Error** subfolder of the following folder should not contain any files:

    ***<DataFlowProbe_Installation_Folder>*\runtime\xmlenricher\Scans\failed**

    Such a file can be caused by exception in the xml enricher. Try to reprocess the scan file by copying it to the **incoming** folder.

How to Relate Two CIs from the UCMDB Browser

This end-to-end workflow walkthrough scenario describes how to relate two CIs from the UCMDB Browser. This walkthrough is based on UCMDB Browser 4.04, however, the instruction applies for other UCMDB Browser versions.

This document provides step-by-step instructions for two different approaches to relate two CIs:

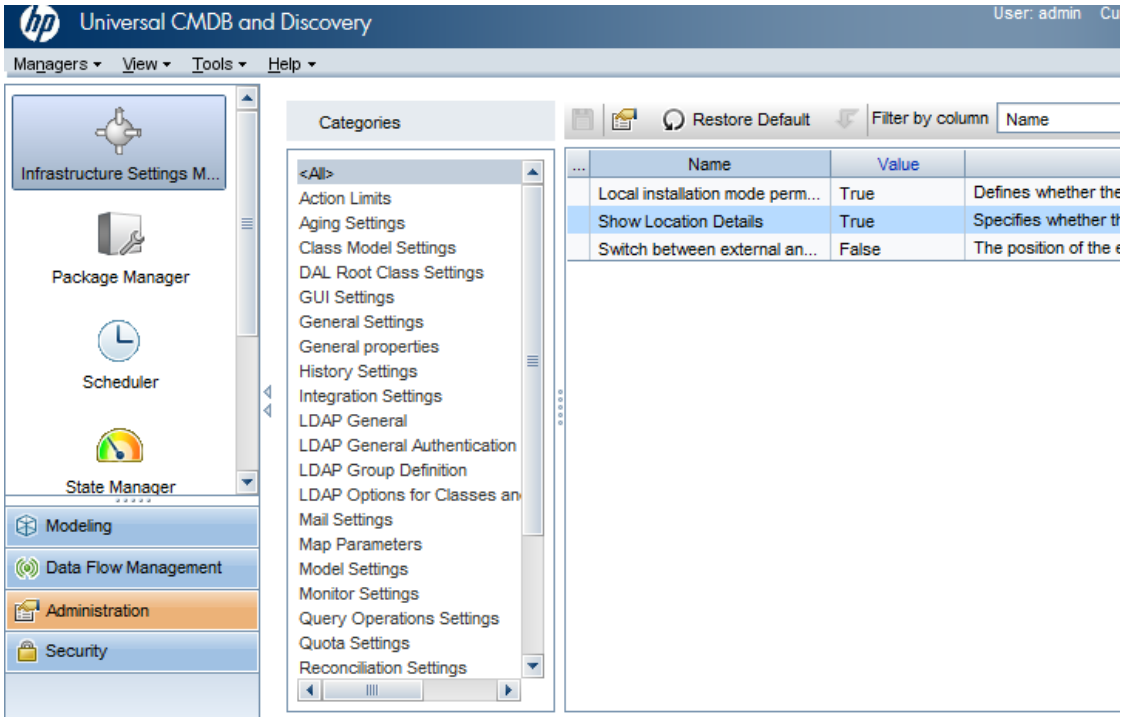
Relate Two CIs by Using the Properties Widget 51
Relate CIs by Using Assisted Modeling 53

Relate Two CIs by Using the Properties Widget

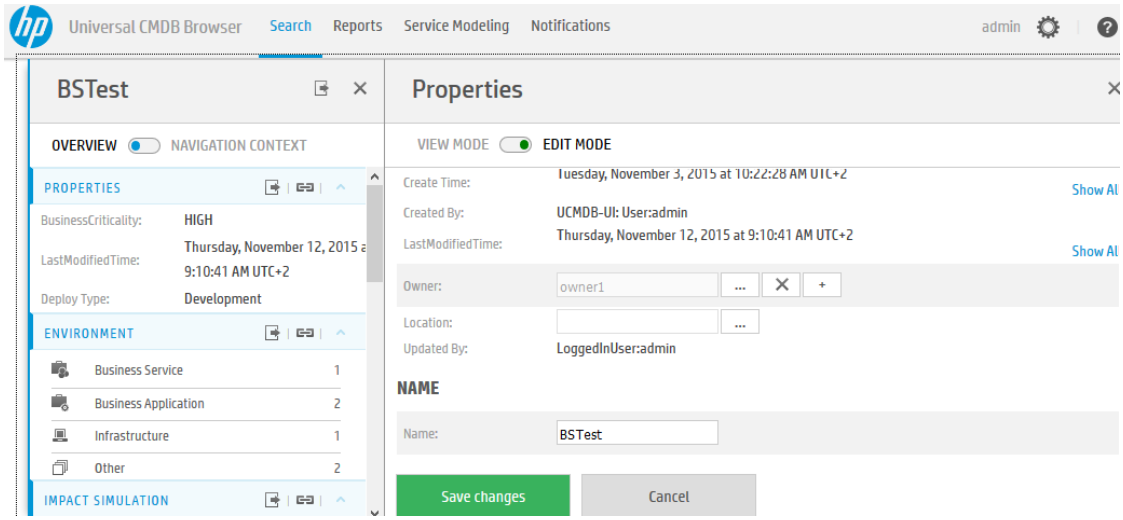
You can relate two CIs by using the Properties widget. For any selected CI, you can relate Owner CIs and Location CIs. To do this, follow these steps:

1. Make sure the **Show Location Details** and **Show Owner Details** options are set to true.

   You can find these options in **UCMDB UI > Administration > Infrastructure Settings Manager**. The default values are true.



2. Go to the UCMDB Browser, select a CI, click **PROPERTIES** to expand the widget, and then switch to the edit mode.



3. Edit the corresponding fields to create relationships:
   - To create a Membership relationship between the Locations and the selected CI, select one or more Locations.

- To create an Ownership relationship between the Owners and the selected CI, select one or more Owners (which are all Party CI Types).

> **Note:** If the selected CI is a Node, then, similar with Owner and Location, you will also be able to select IP Addresses. In this case, Containment relationships will be created between the selected CI and the entered IP Addresses.

4. Click **Save changes**.

Relate CIs by Using Assisted Modeling

As you see, there are many limitations when relating CIs through the Properties widget. If your needs cannot be fulfilled because of these limitations, you can use Assisted Modeling.

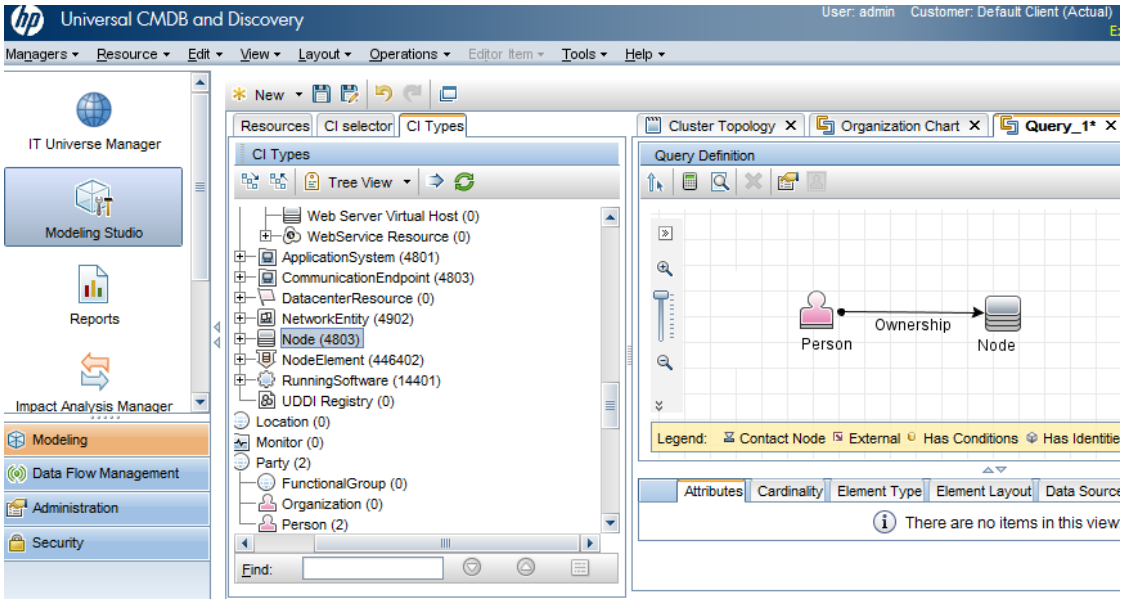
Through Assisted Modeling, you can relate any kind of CIs; you can relate two or more existing CIs, or even create new CIs related to existing CIs.

There are already some OOTB modeling queries that you can use to create and relate CIs. In addition, you can create and use any number of custom modeling queries.

This section provides step-by-step instructions on how to relate an Owner and a Node through Assisted Modeling. Even though you can do the same task through the Properties widget, using Assisted Modeling is highly configurable and you can relate any kind of CIs in an identic manner.

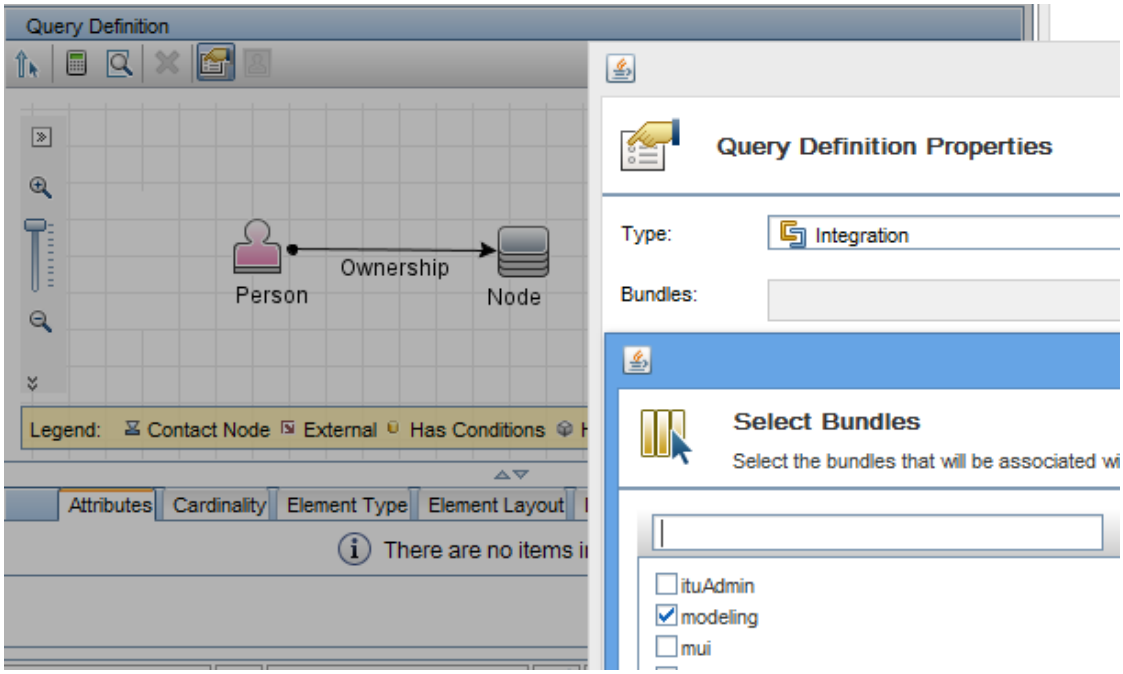
Step 1. Create the modeling query from the UCMDB UI

1. Go to **UCMDB UI > Modeling Studio**, click the **New** button, and then select **Query**.
2. Create a query that resembles the following example:



This query defines the kinds of CIs you want to relate. In this case, the query defines a Person CI and a Node CI with the Ownership relationship. For more information about how to create a query, see "How to Define a TQL Query" on page 1.

3. Add the query to the modeling bundle so that you can use it in Assisted Modeling. To do this, click the **Query Definition Properties** button, select **modeling** for the **Bundles** field, and then click **OK**.



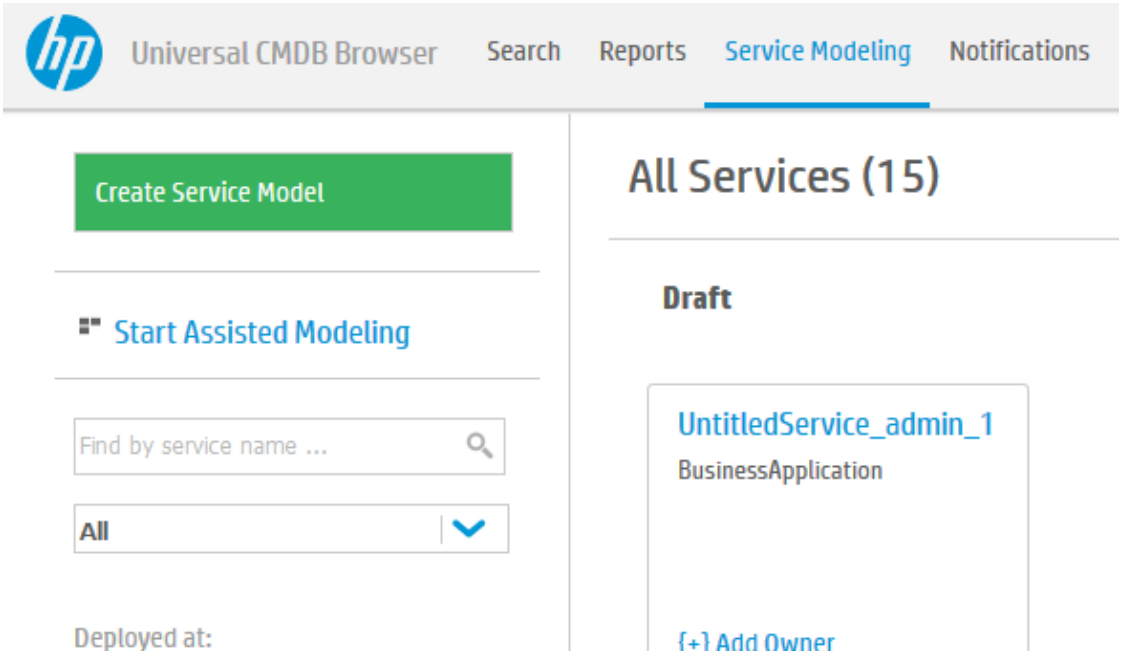
4. Click the **Save** button, type the name of the query, and then click **OK**.

Step 2. Relate CIs

Before you continue, keep in mind that the modeling queries are cached. You need to wait for a while before you can see the query you just created in the UCMDB Browser. The amount of time is specified in **Infrastructure Setting Manager > Time for which information in the Browser cache is valid**, which by default is 5 minutes.

Follow the steps below to relate CIs:

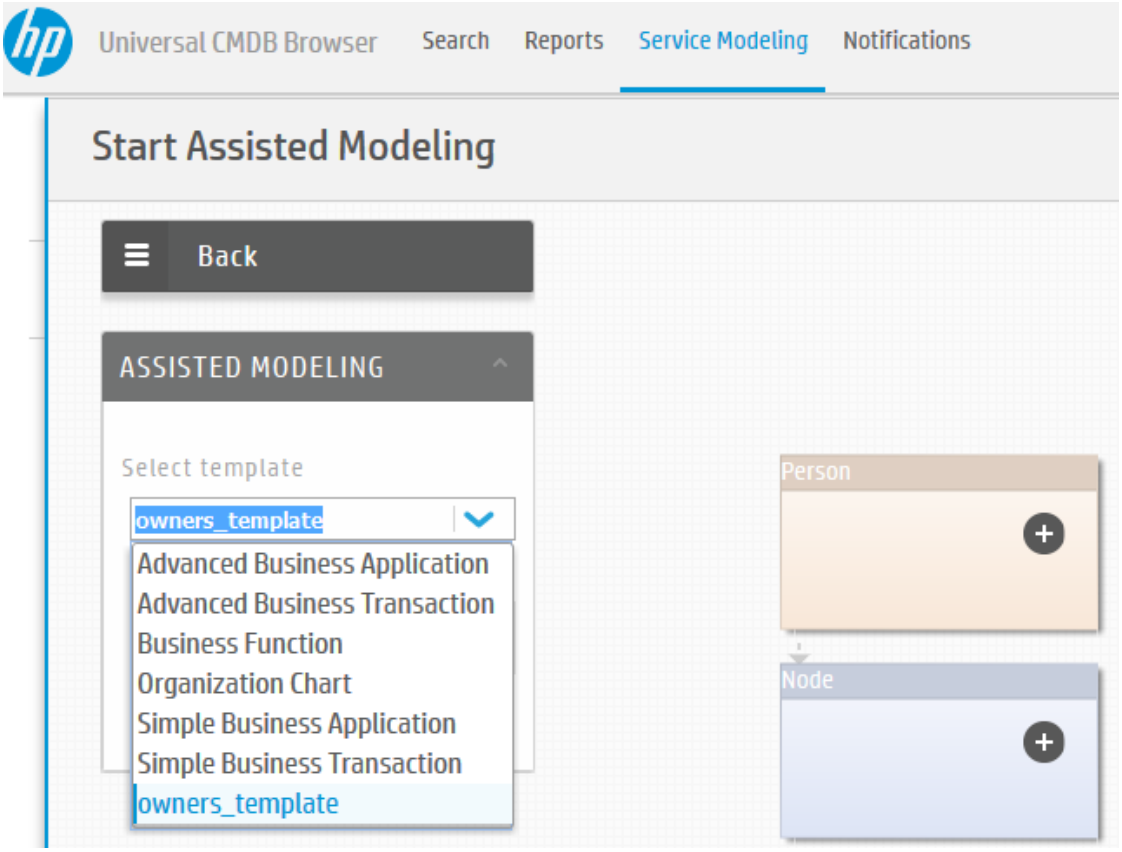
1. Open the UCMDB Browser, and then do one of the following according to what you see:
   - Go to the **Service Modeling** tab, and then click **Start Assisted Modeling**.
   - Go to the **Assisted Modeling** tab.



Note:

- If you do not have the access right to the Service Modeling feature, you do not see the **Service Modeling** tab. Instead, you see the **Assisted Modeling** tab.
- You must have the View right to at least one modeling query (one query added to the modeling bundle) in order to see the link to access Assisted Modeling.

2. In the **Select template** drop-down list, select the query you just created.



The topology map then loads the query. Both nodes have the Plus icon.

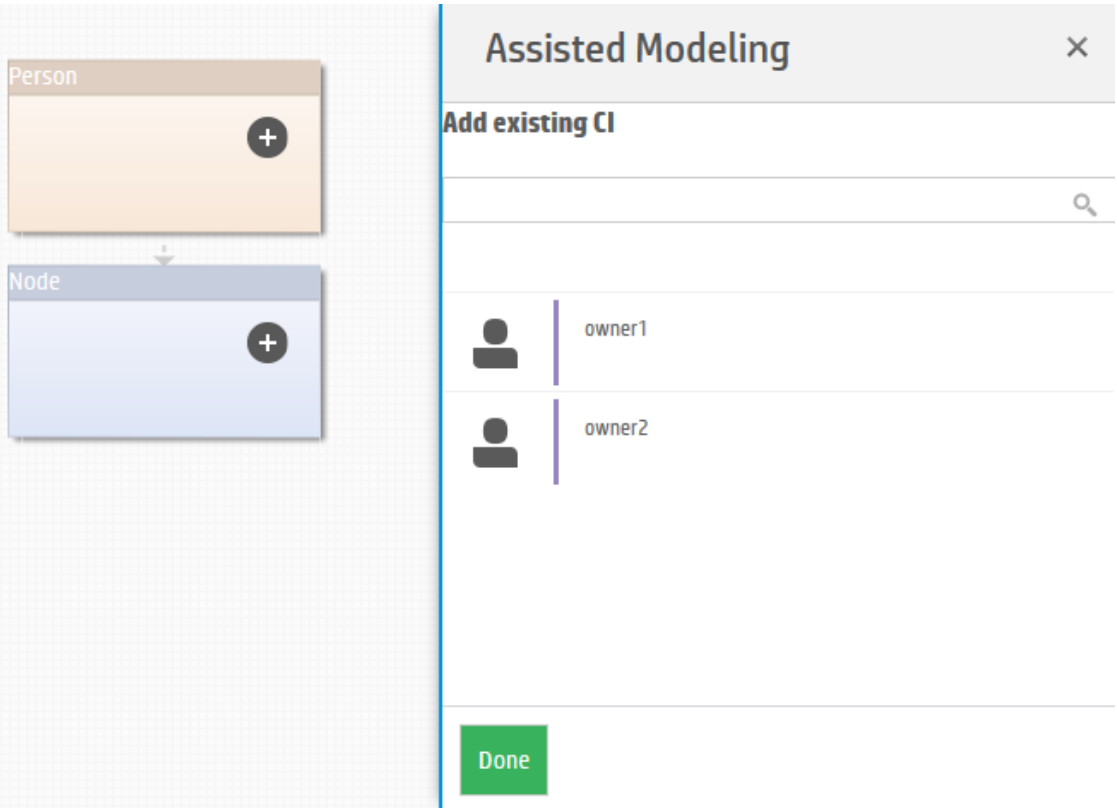
3. Click the Plus icon in the Person CI Type.

4. In the **Add new CI to the template** panel, click **Add Existing Person**.

> **Note:** In this panel, a **Create New Person** link is also available to create a Person CI. If you do not see this link, you need to add the MODELING_ENABLED qualifier to the CI Type. To do this, go to **UCMDB UI > Modeling > CI Types Manager**, select the Person CI Type, go to the **Qualifiers** tab, and then add the SERVICE_MODEL qualifier to the **Configuration Item Type Qualifiers** pane.

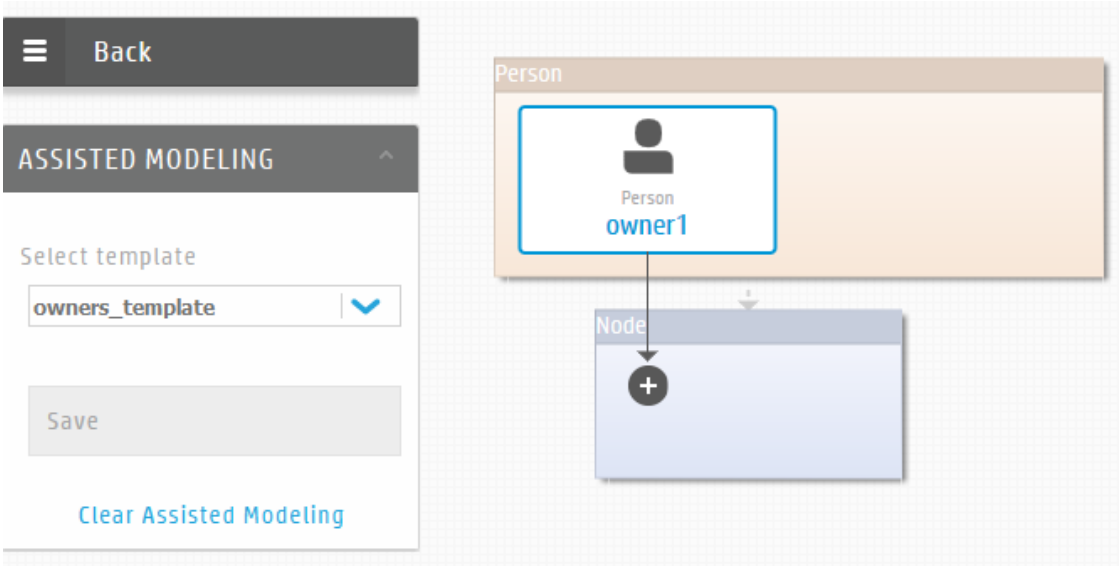
5. In the **Add existing CI** panel, type a keyword in the **Search** field. All the Person CIs with the display name that matches the keyword are displayed below the **Search** field.

   If you do not type any keyword, all Person CIs are displayed.



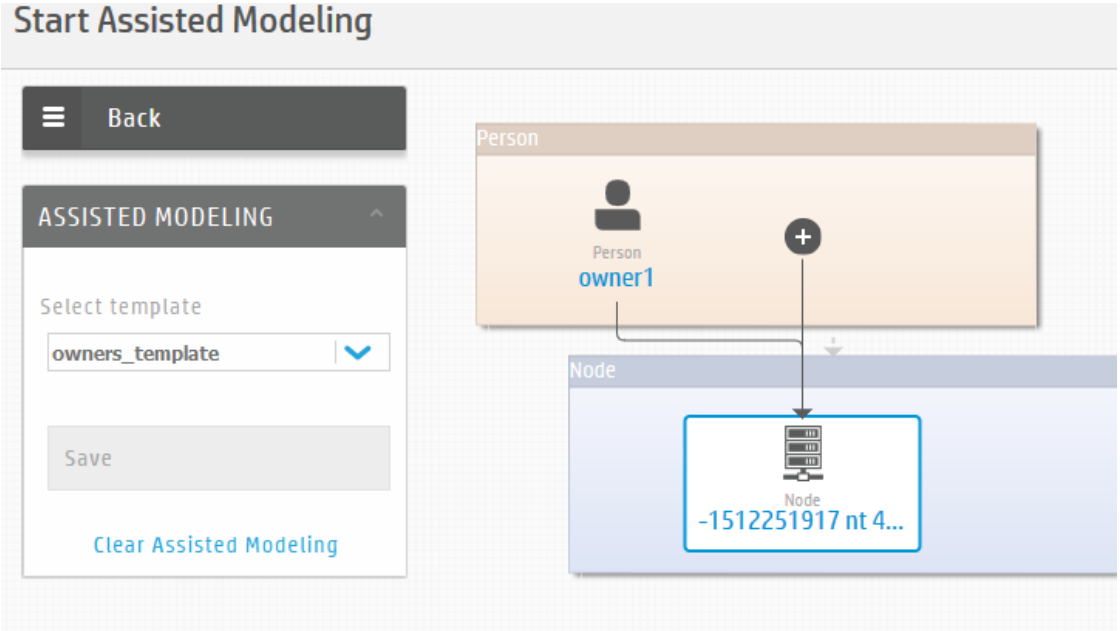
6. Point to the Person CI you want to relate, and then click the **Add** button that appears.

   The Person CI is then added to the topology map.



7. Click the Plus icon in the Node CI Type, and then follow the similar steps (from Step 3 to Step 6) to add a Node CI.

   The added Node CI is automatically linked to the Person CI with the relationship that is specified in the query. The resulting topology map resembles the following.



> **Note:** From here, you can do a number of things:

- Relate more CIs to the existing CIs in the map. When you select an existing CI in the topology map, the Plus icon appears in the other CI Type. You can follow the similar steps to relate CIs.
- Edit the CI (instead of going through the Properties widget). When you select a CI, the panel that opens on the right allows you to edit the CI.

8. Click the **Save** button.

   A message pops up and tells you if the template is properly saved.

You have successfully related two CIs using the UCMDB Browser. You can check the relationship between the two CIs by using one of the following methods:

- Use the Properties widget in the UCMDB Browser.
- Go to **UCMDB UI > IT Universe Manager > Search CIs**, search for the node you just related, and then click the **Show Related CIs** button.

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