



HP Universal CMDB, Universal Discovery, and Configuration Manager

Software Version: 10.20

End-to-End Workflow Walkthrough Guide

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Licensing Services: Upgrade UCMDB from a Previous Version to 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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1. Upgrade UCMDB to version 10.20

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

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.

Expiring

**Expiring**
Your license will expire soon.


License summary



Universal Discovery - Full: 0/20,000 - Usage: 0 %
Available 3rd party integrations: 3/200 - Usage: 1 %
Automated Service Modeling OOTB: 0/10 - Usage: 0 %

OSs managed by CM: 215/5,000 - Usage: 4 %
Automated Service Modeling: 0/500 - Usage: 0 %
Remaining days: 20

Available licenses

Status	#	License description	License type	Expiring date	License capacity
	1	Instant-On License	INSTANT_ON	1/25/15 11:59 PM	1

Selected license

Status: This license will expire soon.
License description: Instant-On License
License type: INSTANT_ON
License capacity: 1

Starting date: N/A
Expiring date: 1/25/15 11:59 PM
Remaining days: 20


OK

Cancel




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.

Expiring

**Expiring**
Your license will expire soon.


License summary



Universal Discovery - Full: 212/20,000 - Usage: 1 %
Available 3rd party integrations: 3/200 - Usage: 1 %
Automated Service Modeling OOTB: 0/10 - Usage: 0 %

OSs managed by CM: 215/5,000 - Usage: 4 %
Automated Service Modeling: 0/500 - Usage: 0 %
Remaining days: 20

Available licenses

Status	#	License description	License type	Expiring date	License capacity
	1	Instant-On License	INSTANT_ON	1/25/15 11:59 PM	1

Selected license

Status: This license will expire soon.
License description: Instant-On License
License type: INSTANT_ON
License capacity: 1

Starting date: N/A
Expiring date: 1/25/15 11:59 PM
Remaining days: 20

OK

Cancel

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 *HP 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	<input type="text"/>	Customer ID
licenseKey	java.lang.String	<input type="text"/>	Raw License Key

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)

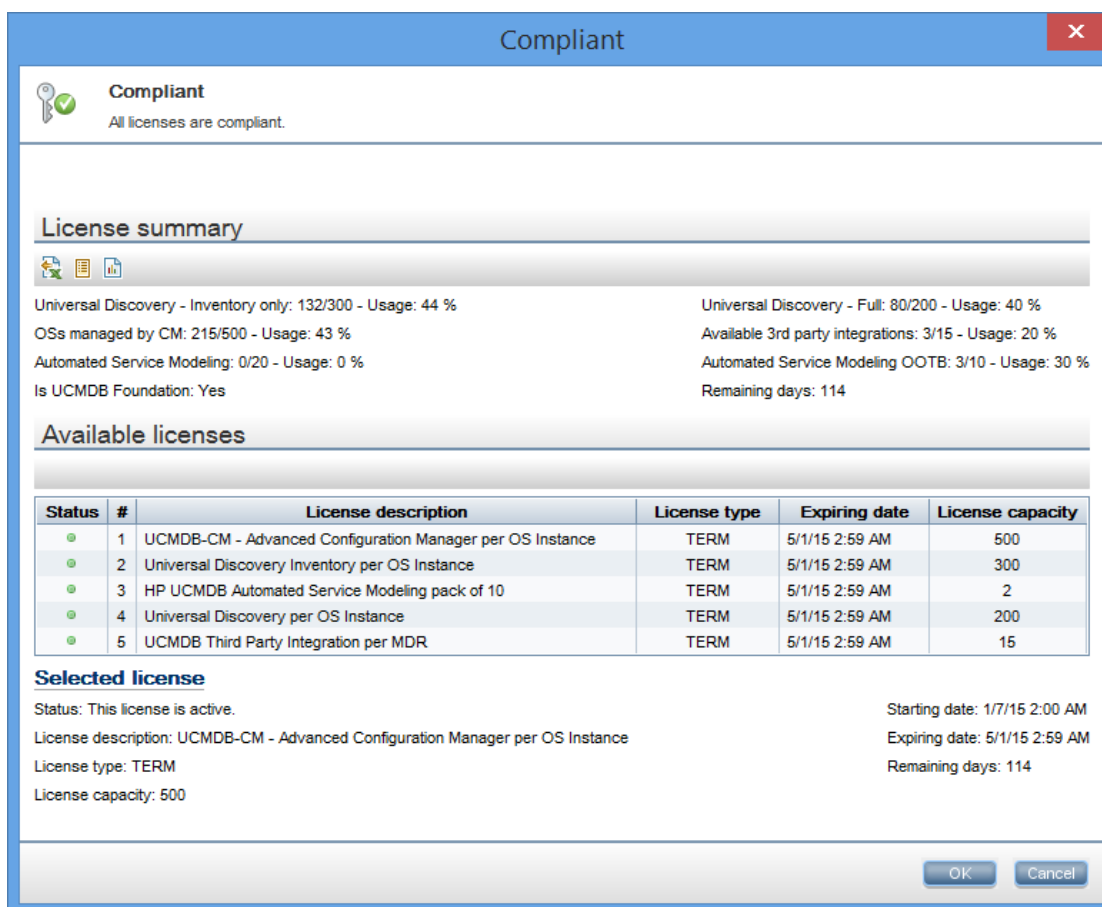
Mbean: UCMDB:service=Licensing Services. Method: getLicenseSummary

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

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



5. Review the counted OS instances in the Licensed OSs Report

1. Select **Managers > Modeling > Reports**. In the **Custom Reports** pane, click **Administration** and do one of the following:
 - Right-click **Licensed OSs Report** and select **Create New Report**.
 - Double-click **Licensed OSs Report**.
 - Select **Licensed OSs Report** and drag it onto the right pane.
2. Review the counted OS instances in the Licensed OSs 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.

Licensed OSIs1*

Show CI instances of: Computer (215)

CI Identification	CI Type	UD Full	UD Inventory	CM Managed
test207	Computer	-	true	true
test208	Computer	-	true	true
test209	Computer	-	true	true
test21	Computer	-	true	true
test22	Computer	-	true	true
test23	Computer	-	true	true
test24	Computer	-	true	true
test25	Computer	-	true	true
test26	Computer	-	true	true
test27	Computer	-	true	true
test28	Computer	-	true	true
test29	Computer	-	true	true
host_n33333code	Computer	true	-	true
host_node	Computer	true	-	true
test0	Computer	true	-	true
test3	Computer	true	-	true
test30	Computer	true	-	true
test31	Computer	true	-	true
test32	Computer	true	-	true
test33	Computer	true	-	true
test34	Computer	true	-	true

Licensed OSIs1*

Show CI instances of: Managed Object (0)

Integration name	Adapter name
test1	Import_CSV
test2	Troux_To_UCMDB
test3	TrouxPushAdapter

Licensed OSIs1*

Show CI instances of: Business.Application (3)


Display Label	ASM License
Financial	True
HR	True
Production	True

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.

Non-compliant

**Non-compliant**
You have exceeded your permitted license usage.






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: 212/200 - Usage: 106 %
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	HP UCMDB Automated Service Modeling pack of 10	TERM	5/1/15 2:59 AM	2
	4	Universal Discovery per OS Instance	TERM	5/1/15 2:59 AM	200
	5	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

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

Create a Dynamic Widget from UCMDB


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:

1. Create a Dynamic Widget by using the Pattern View Editor	15
2. Enable or disable the widget for different roles	18
3. View the resulting widget in the UCMDB Browser	18

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**.

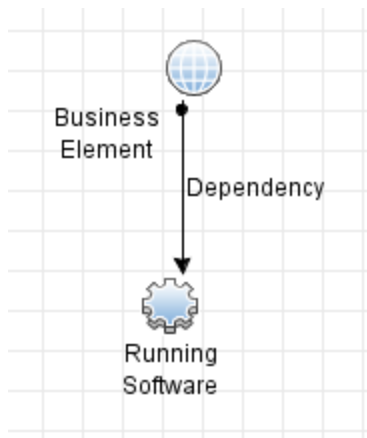
The **New Dynamic Widget** window opens.

- 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 *HP 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

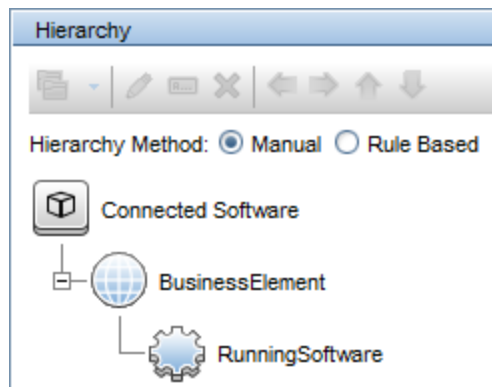
The Properties Mode displays attribute values from the nodes returned by the topology returned by the view that is created. All the other modes display a map of the topology.


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**.

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:

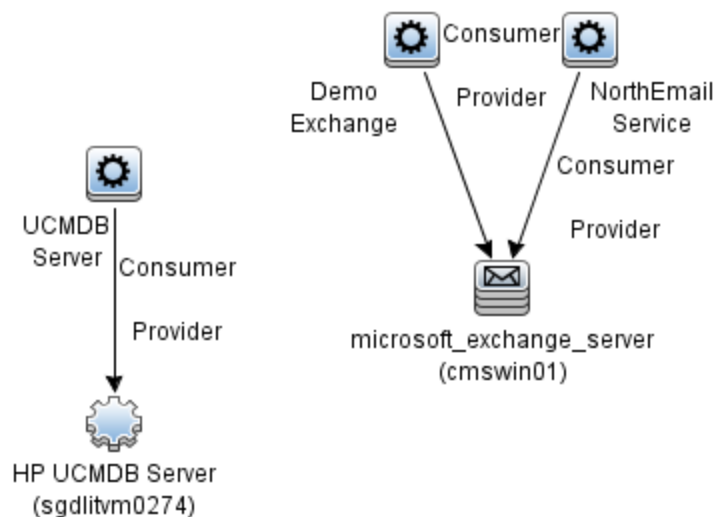
1. Go to **Security > Roles Manager**.
2. Select the role for which you want to enable the Dynamic Widget.
3. In the **Resource** tab, under **Resource Types**, select **UCMDB Browser Widgets**.

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.

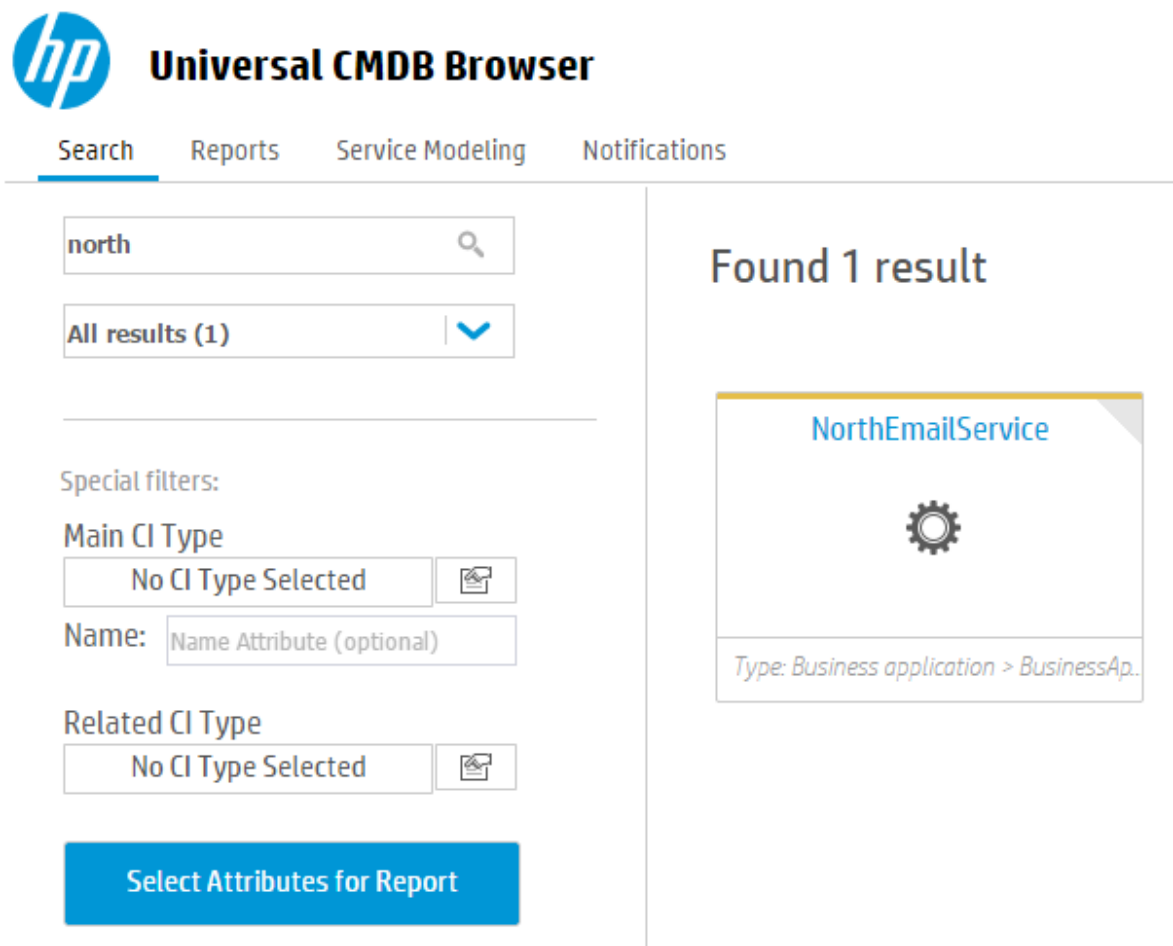
3. View the resulting widget in the UCMDB Browser

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

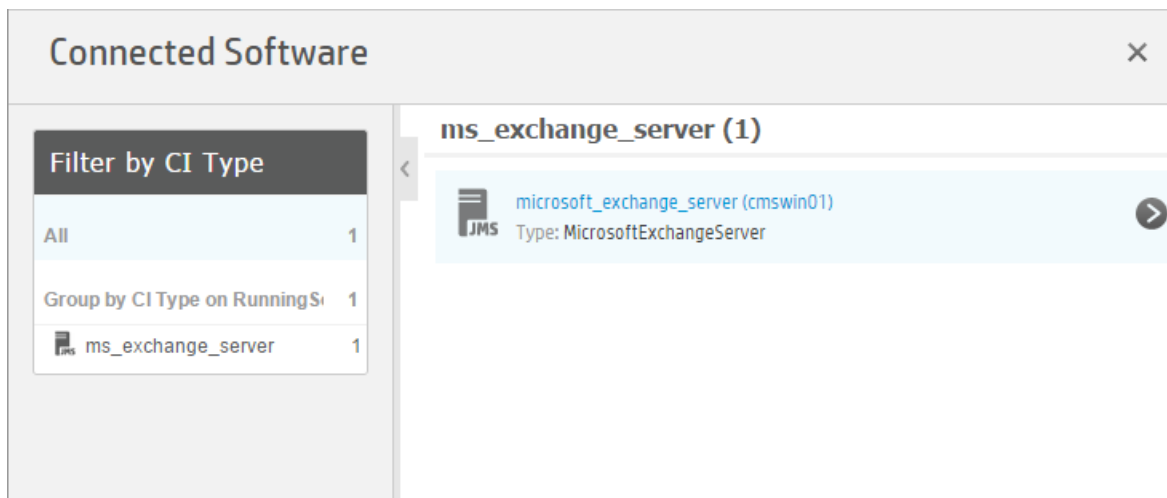
When you select the search result, you can see the following new widget.

CONNECTED SOFTWARE			
Create Time:	Fri Jan 16 09:30:40 GMT+200 2015	ProductName:	microsoft_exchange_server
Vendor:	microsoft_corp	Version:	2010
Details			

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.

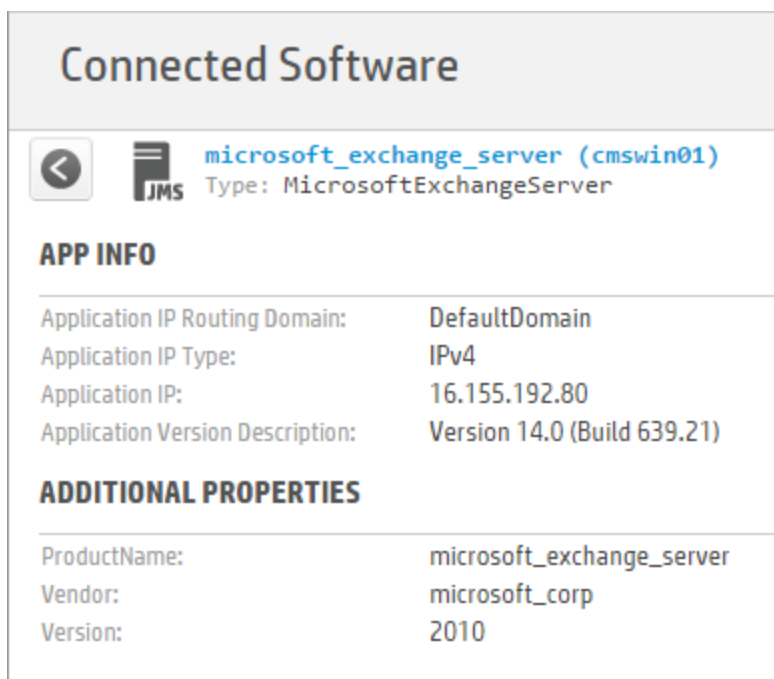
Connected Software	
APP INFO	
Application IP Routing Domain:	DefaultDomain
Application IP Type:	IPv4
Application IP:	16.155.192.80
Application Version Description:	Version 14.0 (Build 639.21)
ADDITIONAL PROPERTIES	
ProductName:	microsoft_exchange_server
Vendor:	microsoft_corp
Version:	2010

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.



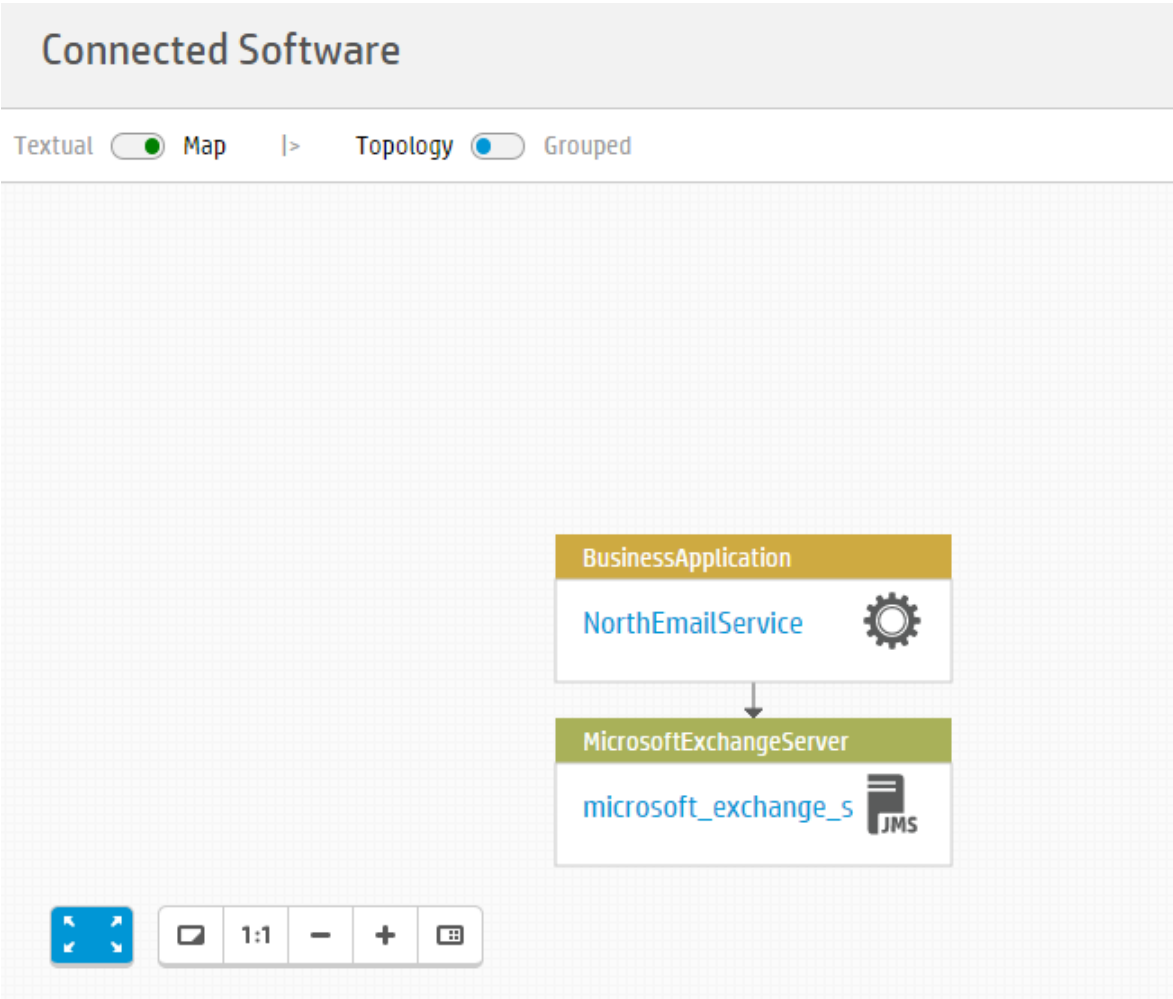
For instructions on how to group nodes by CI Types, see [Step 9 on page 17](#).

If the widget type is Topology Mode

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

CONNECTED SOFTWARE			^
	Mail		1

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



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:

1. Create the new CI Type in UCMDB	23
2. Import the new CIs in UCMDB	24
3. Create the TQL query to see all the 3D Printer instances	25
4. Create the integration point to the Service Manager server	27
5. Create the new CI Type and the mapping for the new CI Type in Service Manager	29
6. Create the push job for the new CI Type and push the CIs to Service Manager	34

1. Create the new CI Type in UCMDB

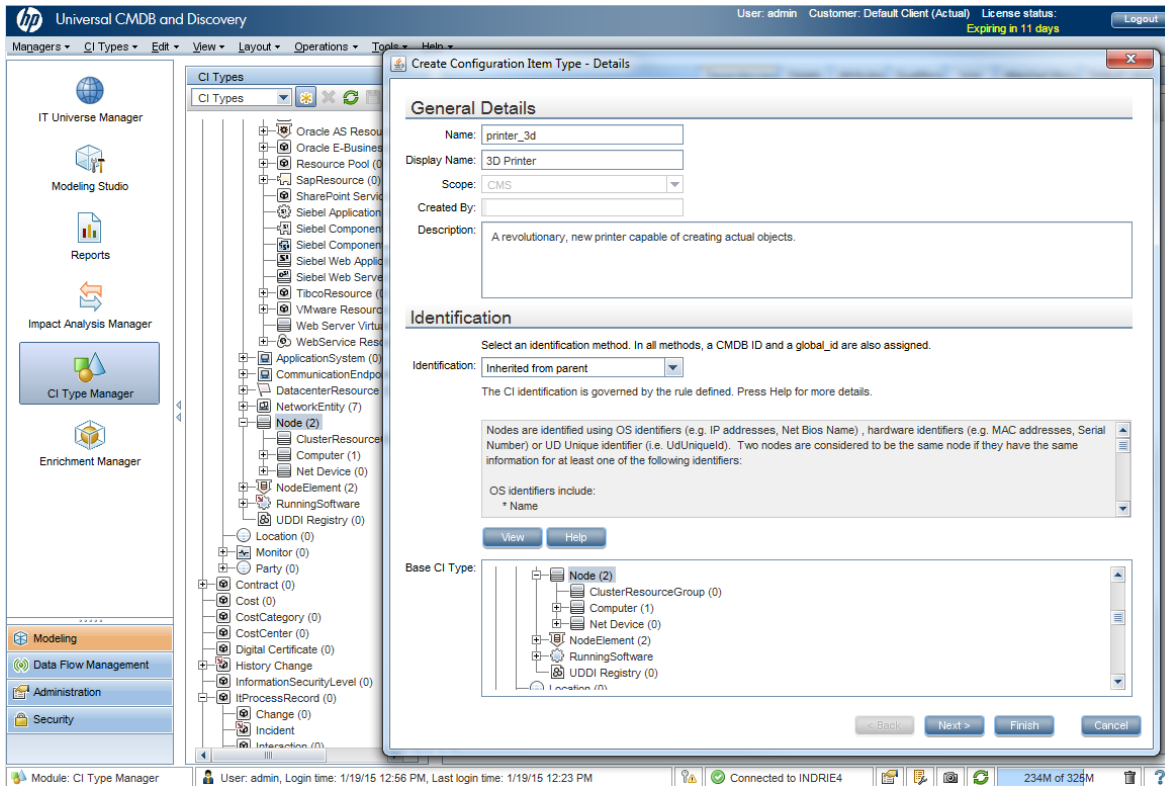
Follow these steps to create the new 3D Printer CI Type in UCMDB:

- 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 *HP Universal CMDB Modeling Guide*.

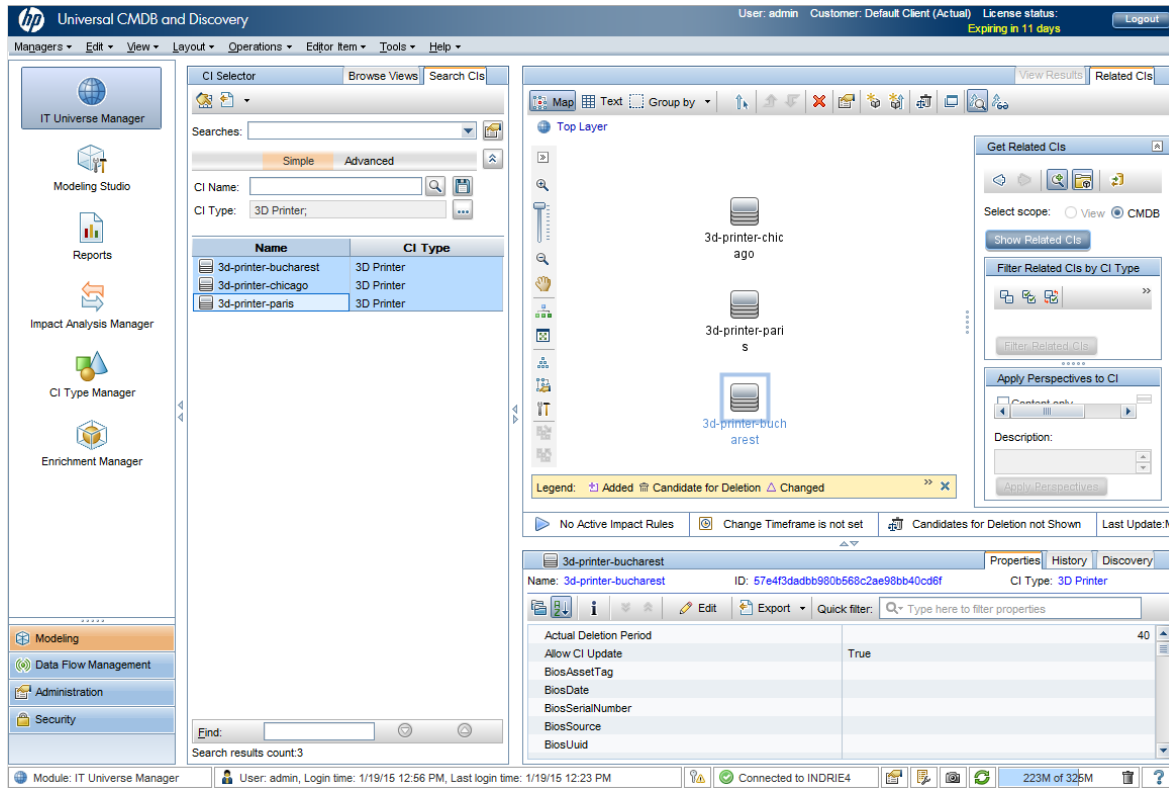


2. Import the new CIs in UCMDB

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


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


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

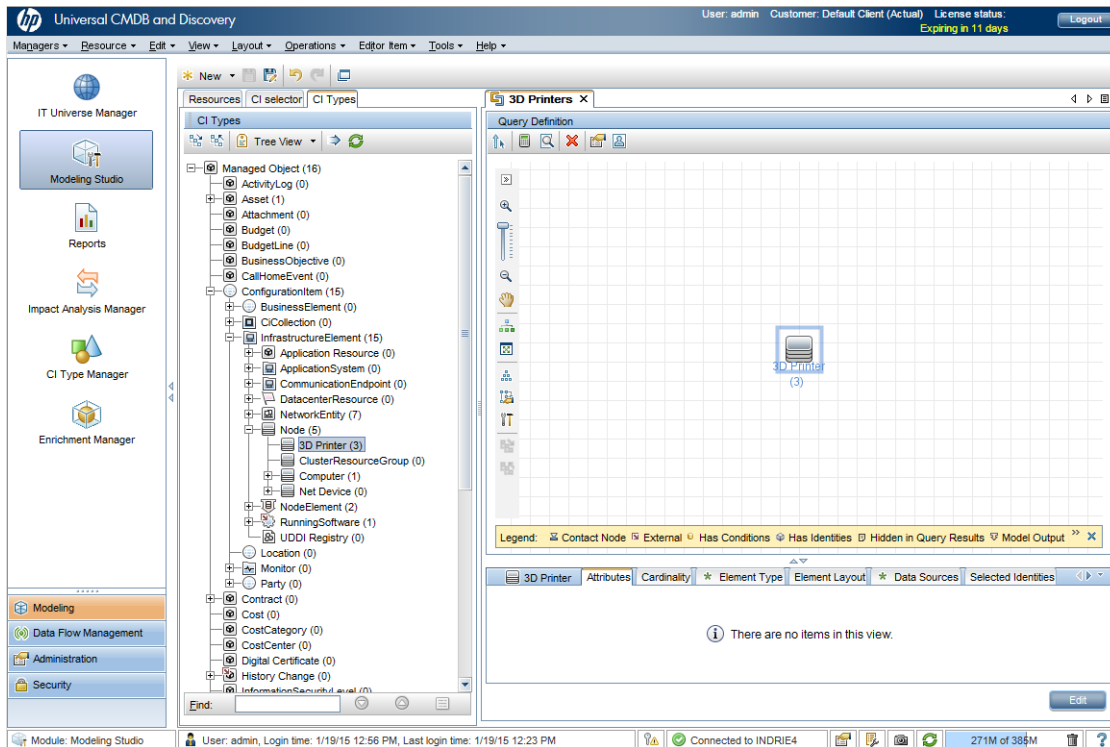


3. Create the TQL query to see all the 3D Printer instances

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

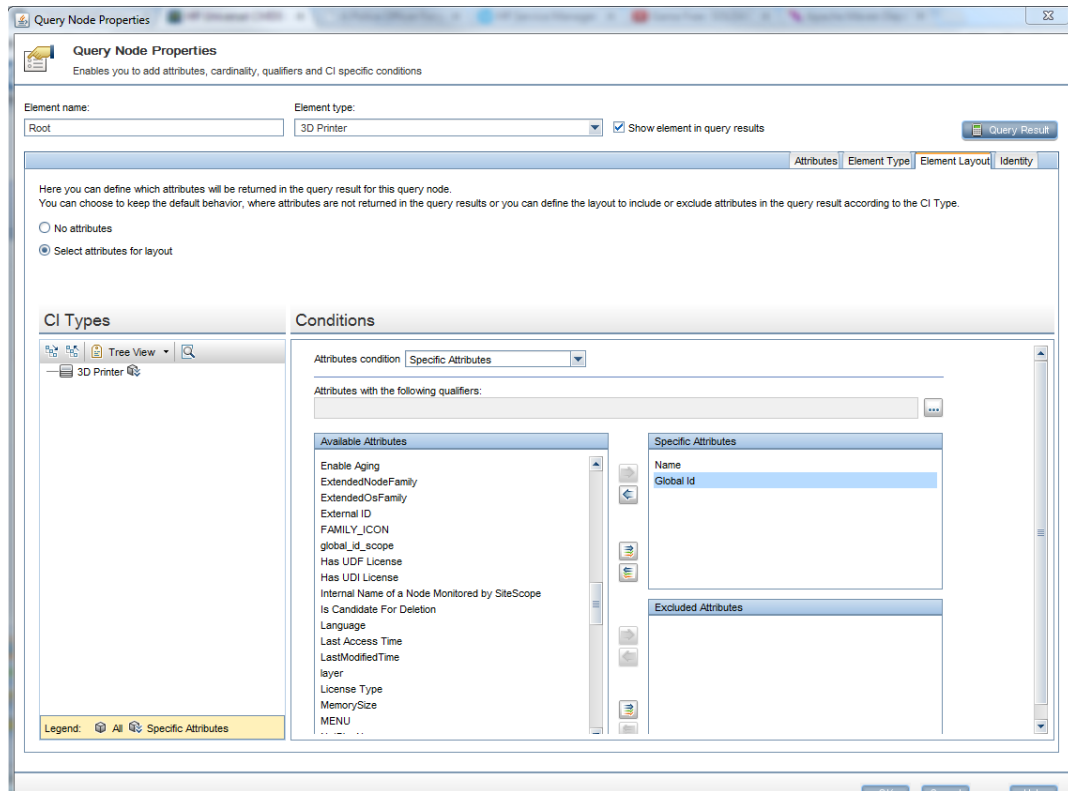
1. Go to the Modeling Studio, click **New** , and then click **Query**.
2. From the **CI Types** pane, locate the **3D Printer** CI type, and then drag and drop the **3D Printer** CI type into the **Query Definition** canvas.

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.



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.

New Integration Point

Integration Properties

- * Integration Name: Service Manager
- Integration Description:
- Adapter: ServiceManagerEnhancedAdapter9.x
- Is Integration Activated: ☐

Adapter Properties

- * Hostname/IP: 16.187.189.245
- * Port: 13080
- URL Override:
- * Credentials ID: Generic Protocol: sm
- Development Mode: False
- * Data Flow Probe: INDRIE4
- Additional Probes:

* Mandatory Properties

Test connection

OK Cancel


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

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**.

Add new node

You must define a new node's properties for an external class model.

General

* Name:


Description:

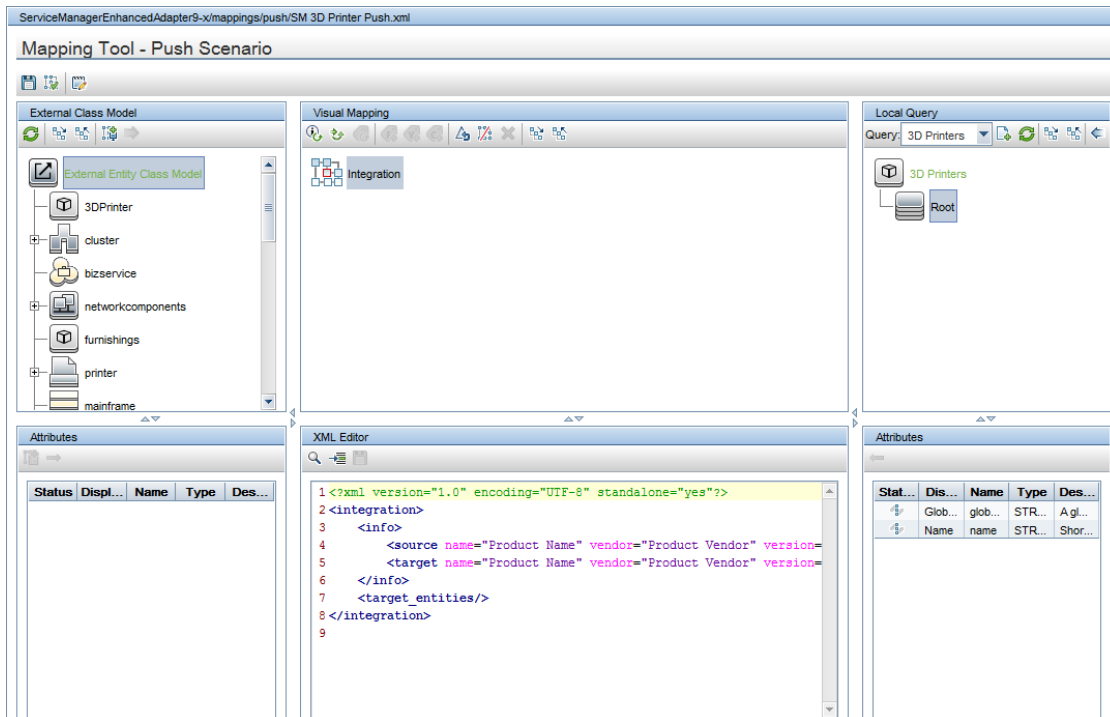
Metadata

table

subtype

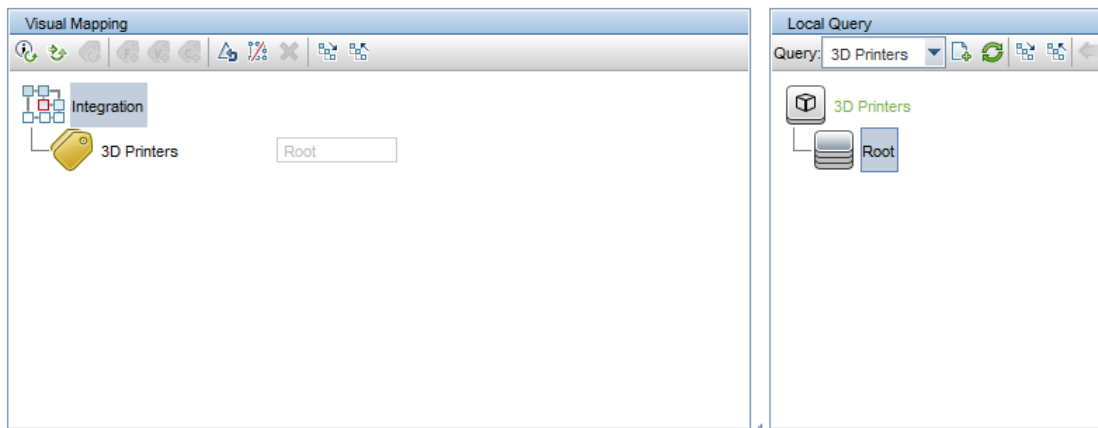
OK Cancel

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.



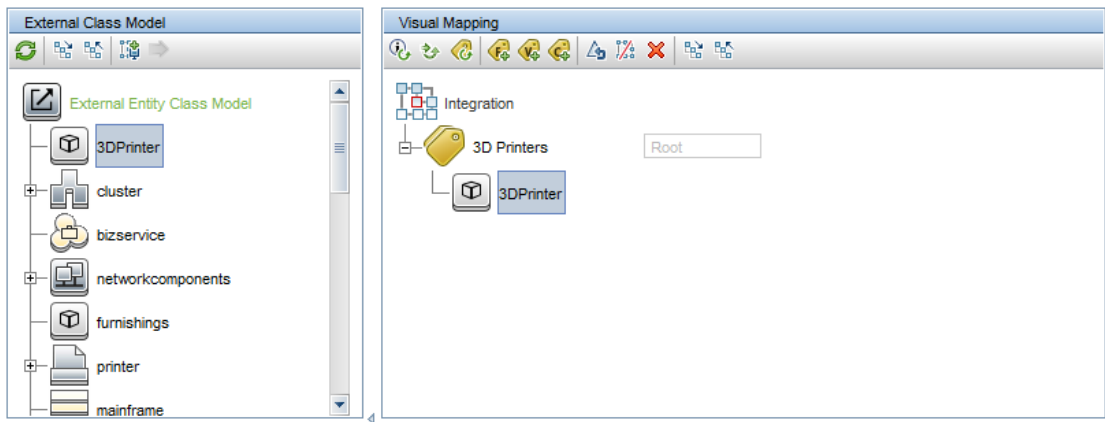
8. Select the Root node under the 3D Printers TQL query node in the **Local Query** pane, and then drag it onto the **Integration** node in the **Visual Mapping** pane.

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

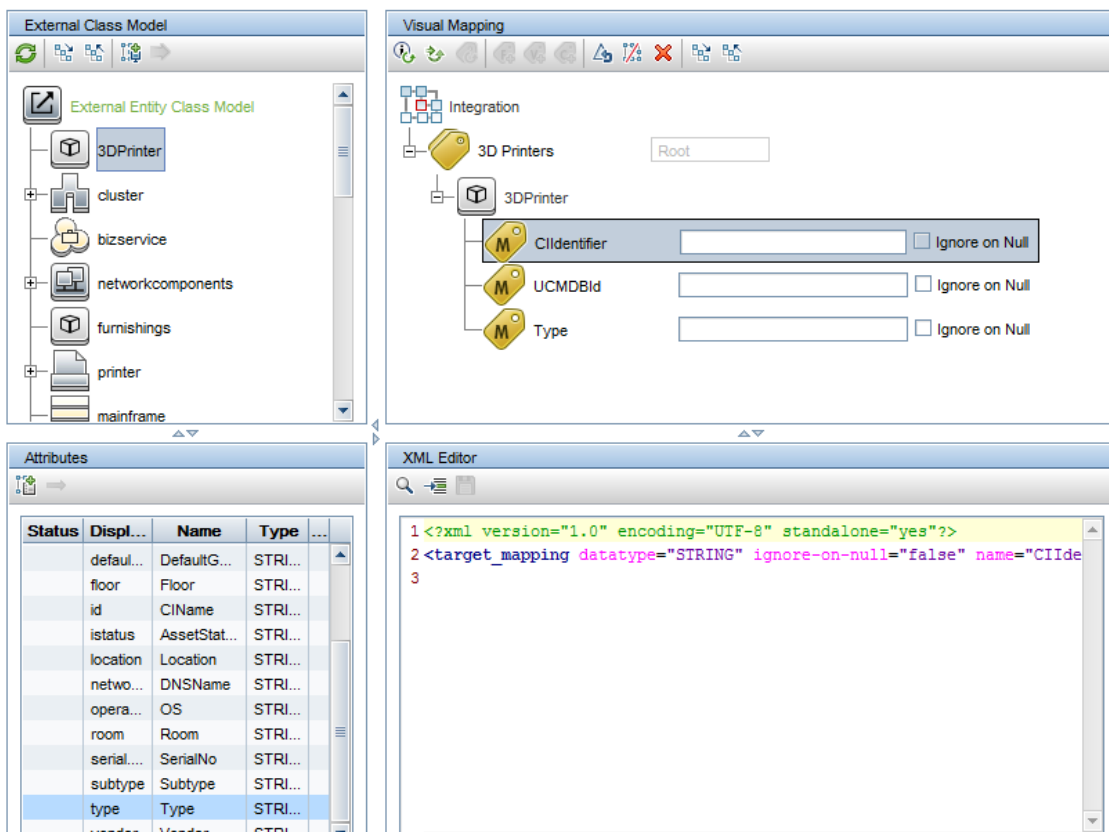


9. Select the Service Manager entities that will be created as a result of the mapping process. To do this, drag the 3DPrinter type from the **External Class Model** pane onto the 3D Printer TQL query

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 UCMBId.



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.

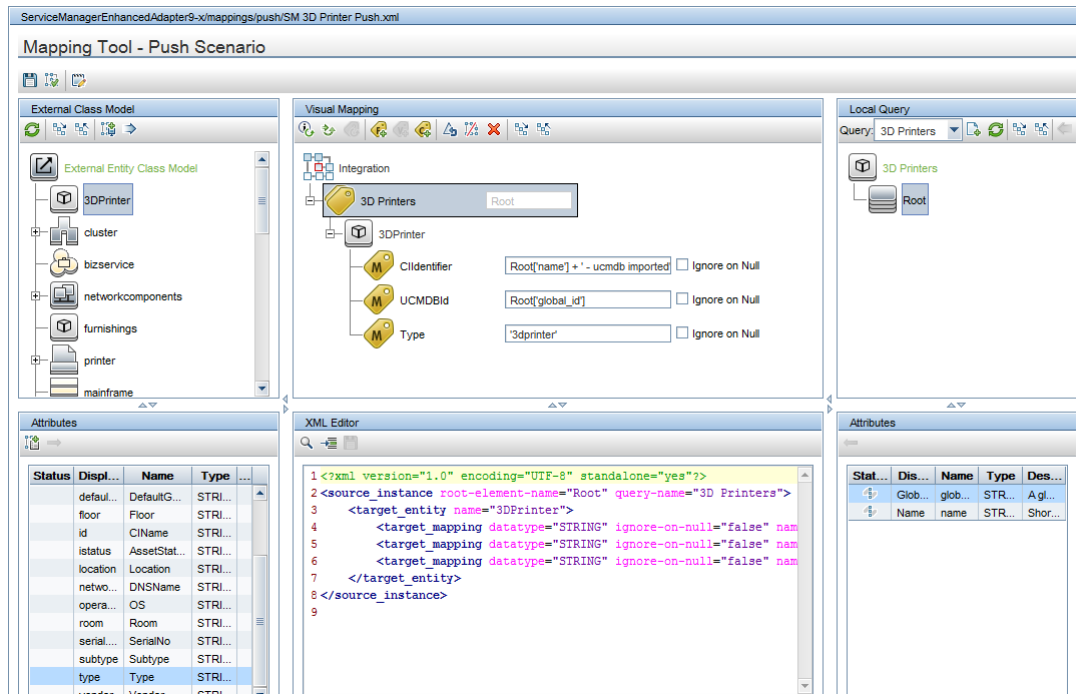
- **CIIdentifier:** Use the Name attribute from UCMDB and make a small customization.

To do this, follow these steps:

- 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.
- Select **Root['name']**.
- Continue type `+ ' - ucldb imported'`.

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

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




12. Click **Save** .

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.

New Integration Job
Define the Integration Job details and scheduling information

Name: SM 3D Printer Push

Job Definition

Query Name	Allow Deletion
3D Printers	<input type="checkbox"/>

Scheduler Definition



☒ Delta Synchronization ☐ Full Synchronization

☐ Scheduler enabled

Repeat: **Once**
Interval
Day of Month
Weekly
Monthly
Yearly

Starts: 1/20/15 14:10

Ends: ☒ Never ☐ Until 1/20/15

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.

Service Manager

PopulationFederationData Push

Data Push Jobs copy or update CI Types and attributes from the local CMDB to an external data repository

Integration Jobs

*✎✕↺📁📄🖨️🖱️


Job	Full Synchronization - Runs the selected job, synchronizing all of the data	Last Synchronization Type
SM Push job	✖ Did not run	None
SM 3D Printer Push	✖ Did not run	None

StatisticsQuery Status

↺

Query Name	Created	Updated	Deleted	Failed
Total	0	0	0	0

Last Updated: Never (Valid to: 01/20/2015 02:12:55 PM)

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

Integration Jobs

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Job Name	Status	Last Synchronization Type
SM 3D Printer Push	✔ Completed successfully	Full
SM Push job	✖ Did not run	None

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Feedback on End-to-End Workflow Walkthrough Guide (Universal CMDB, Universal Discovery, and Configuration Manager 10.20)

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We appreciate your feedback!