



HP Universal CMDB, Universal Discovery, and Configuration Manager

Software Version: 10.21

End-to-End Workflow Walkthrough Guide

Document Release Date: July 2015
Software Release Date: July 2015

Legal Notices

Warranty

The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

The information contained herein is subject to change without notice.

Restricted Rights Legend

Confidential computer software. Valid license from HP required for possession, use or copying. Consistent with FAR 12.211 and 12.212, Commercial Computer Software, Computer Software Documentation, and Technical Data for Commercial Items are licensed to the U.S. Government under vendor's standard commercial license.

Copyright Notice

© 2002 - 2015 Hewlett-Packard Development Company, L.P.

Trademark Notices

Adobe™ is a trademark of Adobe Systems Incorporated.

Microsoft® and Windows® are U.S. registered trademarks of Microsoft Corporation.

UNIX® is a registered trademark of The Open Group.

Documentation Updates

The title page of this document contains the following identifying information:

- Software Version number, which indicates the software version.
- Document Release Date, which changes each time the document is updated.
- Software Release Date, which indicates the release date of this version of the software.

To check for recent updates or to verify that you are using the most recent edition of a document, go to: <https://softwaresupport.hp.com/>.

This site requires that you register for an HP Passport and to sign in. To register for an HP Passport ID, click **Register** on the HP Support site or click **Create an Account** on the HP Passport login page.

You will also receive updated or new editions if you subscribe to the appropriate product support service. Contact your HP sales representative for details.

Support

Visit the HP Software Support site at: <https://softwaresupport.hp.com>.

This website provides contact information and details about the products, services, and support that HP Software offers.

HP Software online support provides customer self-solve capabilities. It provides a fast and efficient way to access interactive technical support tools needed to manage your business. As a valued support customer, you can benefit by using the support website to:

- Search for knowledge documents of interest
- Submit and track support cases and enhancement requests
- Download software patches
- Manage support contracts
- Look up HP support contacts
- Review information about available services
- Enter into discussions with other software customers
- Research and register for software training

Most of the support areas require that you register as an HP Passport user and to sign in. Many also require a support contract. To register for an HP Passport ID, click **Register** on the HP Support site or click **Create an Account** on the HP Passport login page.

To find more information about access levels, go to: <https://softwaresupport.hp.com/web/softwaresupport/access-levels>.

HP Software Solutions Now accesses the HPSW Solution and Integration Portal website. This site enables you to explore HP Product Solutions to meet your business needs, includes a full list of Integrations between HP Products, as well as a listing of ITIL Processes. The URL for this website is <http://h20230.www2.hp.com/sc/solutions/index.jsp>.

Contents

Licensing Services: Upgrade UCMDB from a Previous Version to 10.20	5
Step 1. Upgrade UCMDB to version 10.20	5
Step 2. Check the License summary report	5
Step 3. Install licenses issued for UCMDB 10.20, check licenses details and license capacity using JMX console	8
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
Creating a Dynamic Widget from UCMDB	16
Step 1. Create a Dynamic Widget by using the Pattern View Editor	16
Step 2. Enable or disable the widget for different roles	19
Step 3. View the resulting widget in the UCMDB Browser	19
Working with the Generic Adapter Mapping UI	25
Step 1. Create the new CI Type in UCMDB	25
Step 2. Import the new CIs in UCMDB	26
Step 3. Create the TQL query to see all the 3D Printer instances	27
Step 4. Create the integration point to the Service Manager server	29
Step 5. Create the new CI Type and the mapping for the new CI Type in Service Manager	31
Step 6. Create the push job for the new CI Type and push the CIs to Service Manager	36
Working with Assisted Modeling in UCMDB Browser	39
Step 1. Create BusinessApplications CIs	39
Step 2. Create a New Modeling Query	40
Step 3. Assign the MODELING_ENABLED Qualifier to BusinessFunction and BusinessService	41
Step 4. Organize Services by Using Assisted Modeling	42
Step 5. Verification	46

Performing the Daily Monitoring Process48

 Step 1. Check UCMDB UI48

 Step 2. Check UCMDB Server51

 Step 3. Check Probes52

Send Documentation Feedback53

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:


Step 1. Upgrade UCMDB to version 10.20	5
Step 2. Check the License summary report	5
Step 3. Install licenses issued for UCMDB 10.20, check licenses details and license capacity using JMX console	8
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 *HP 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.

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

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 *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

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

Compliant

 **Compliant**
All licenses are compliant.






License summary



Universal Discovery - Inventory only: 132/300 - Usage: 44 %
 OSs managed by CM: 215/500 - Usage: 43 %
 Automated Service Modeling: 0/20 - Usage: 0 %
 Is UCMDB Foundation: Yes

Universal Discovery - Full: 80/200 - Usage: 40 %
 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

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.

Licensed OSIs1* X

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_133333code	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* X

Show CI instances of: Managed Object (0)

Integration name	Adapter name
test1	Import_CSV
test2	Troux_To_UCMDB
test3	TrouxPushAdapter

Licensed OSIs1* X

Show CI instances of: BusinessApplication (3)

Display Label	ASM License
Financial	True
HR	True
Production	True

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.

Non-compliant

Non-compliant

You have exceeded your permitted license usage.

X

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

Creating 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:

Step 1. Create a Dynamic Widget by using the Pattern View Editor	16
Step 2. Enable or disable the widget for different roles	19
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**.

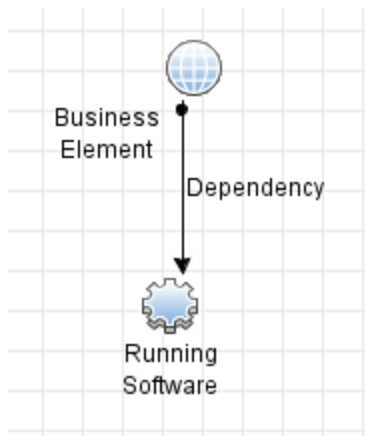
The **New Dynamic Widget** window opens.

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 *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

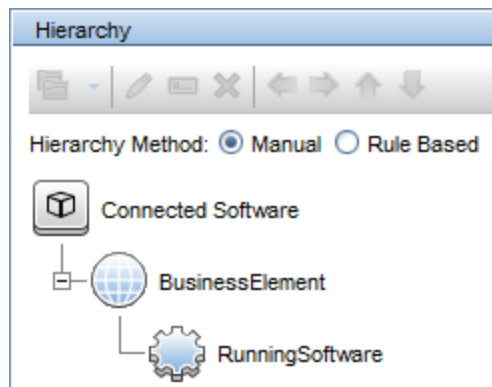
The Properties Mode displays attribute values from the nodes returned by the topology returned by the view that is created. All the other modes display a map of the topology.

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**.

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:

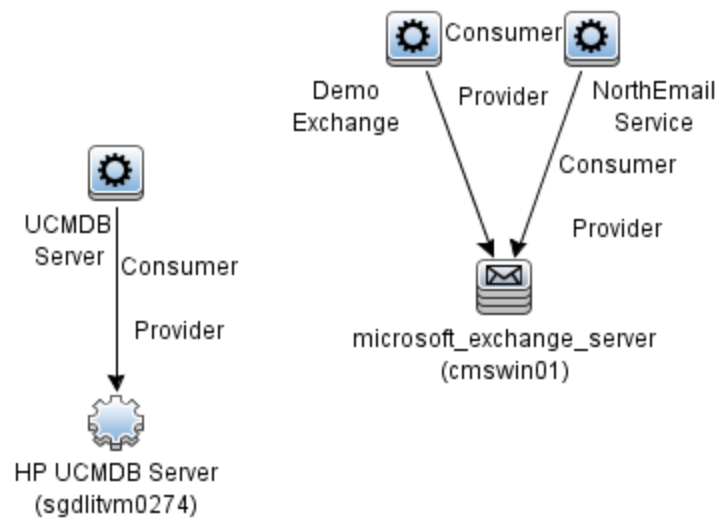
1. Go to **Security > Roles Manager**.
2. Select the role for which you want to enable the Dynamic Widget.
3. In the **Resource** tab, under **Resource Types**, select **UCMDB Browser Widgets**.

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.




Universal CMDB Browser

[Search](#) [Reports](#) [Service Modeling](#) [Notifications](#)




All results (1)




Special filters:

Main CI Type

No CI Type Selected 

Name:


Related CI Type

No CI Type Selected 

Select Attributes for Report

Found 1 result

NorthEmailService




Type: Business application > BusinessAp..

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

Vendor: microsoft_corp

ProductName: microsoft_exchange_server

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.

Connected Software

Filter by CI Type

All

1

Group by CI Type on Running S

1

ms_exchange_server

1

ms_exchange_server (1)

microsoft_exchange_server (cmswin01)

Type: MicrosoftExchangeServer

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.

Connected Software

microsoft_exchange_server (cmswin01)

Type: MicrosoftExchangeServer

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

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.

CONNECTED SOFTWARE

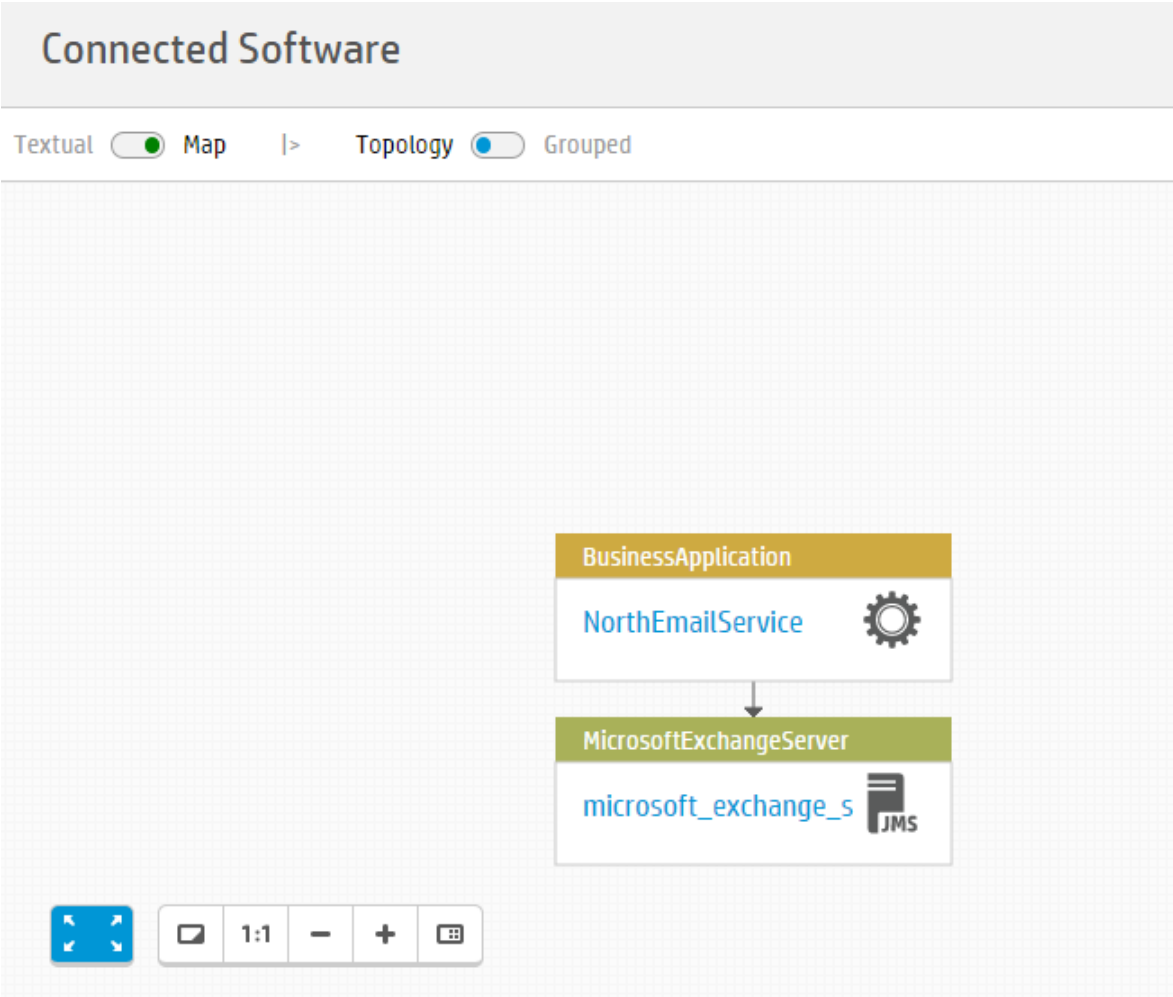
Mail

1

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

HP Universal CMDB, Universal Discovery, and Configuration Manager (10.21)

Page 23 of 53



Working with the 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	25
Step 2. Import the new CIs in UCMDB	26
Step 3. Create the TQL query to see all the 3D Printer instances	27
Step 4. Create the integration point to the Service Manager server	29
Step 5. Create the new CI Type and the mapping for the new CI Type in Service Manager	31
Step 6. Create the push job for the new CI Type and push the CIs to Service Manager	36

Step 1. Create the new CI Type in UCMDB

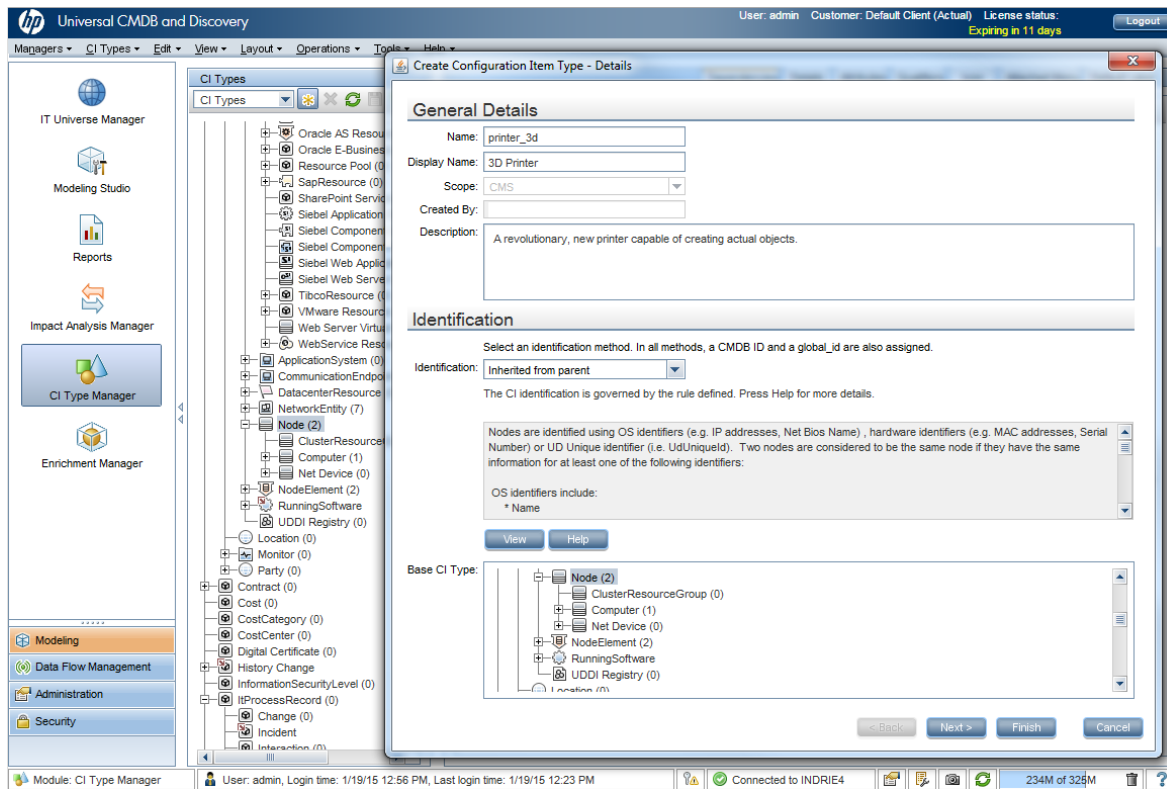
Follow these steps to create the new 3D Printer CI Type in UCMDB:

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 *HP Universal CMDB Modeling Guide*.

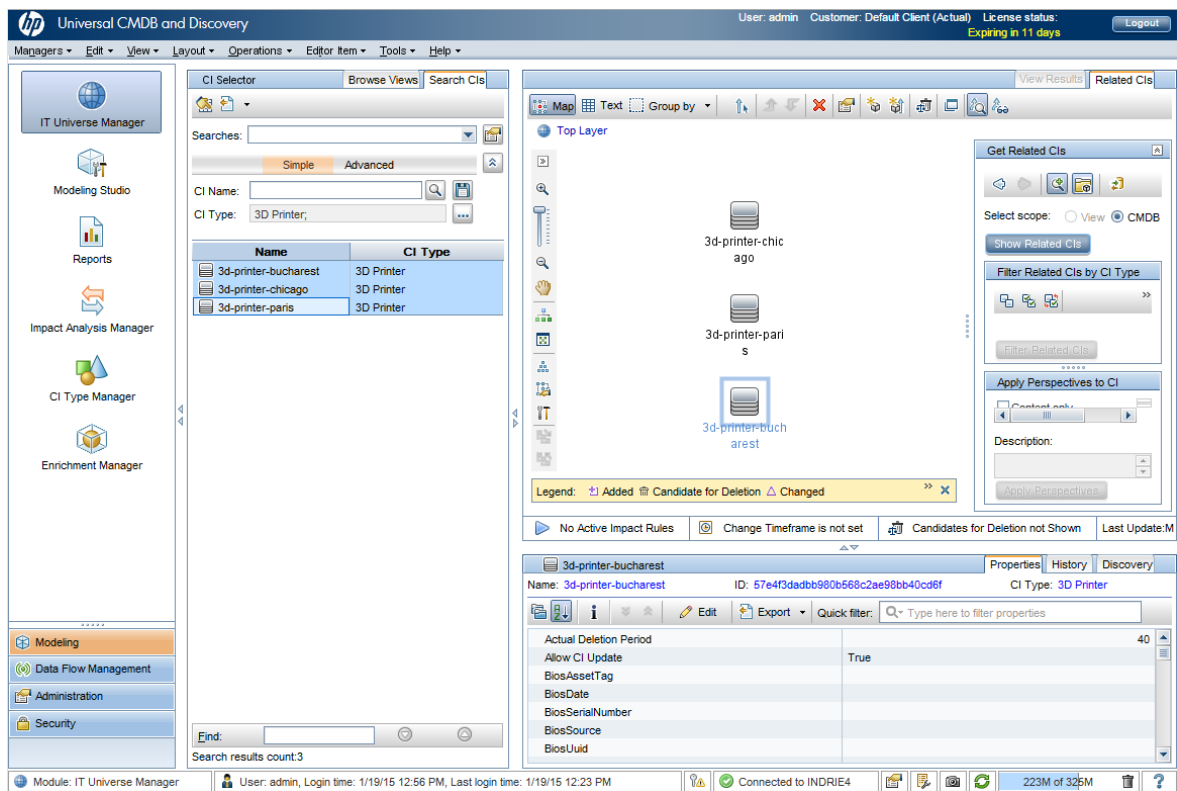


Step 2. Import the new CIs in UCMDB

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


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


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

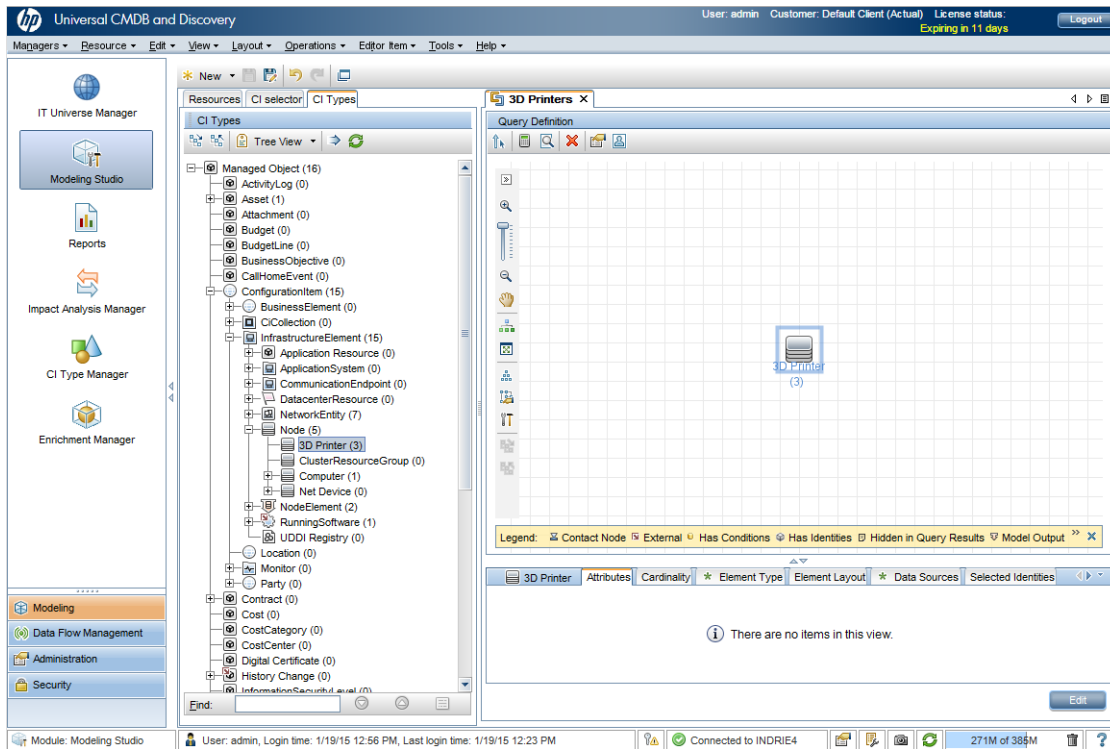


Step 3. Create the TQL query to see all the 3D Printer instances

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

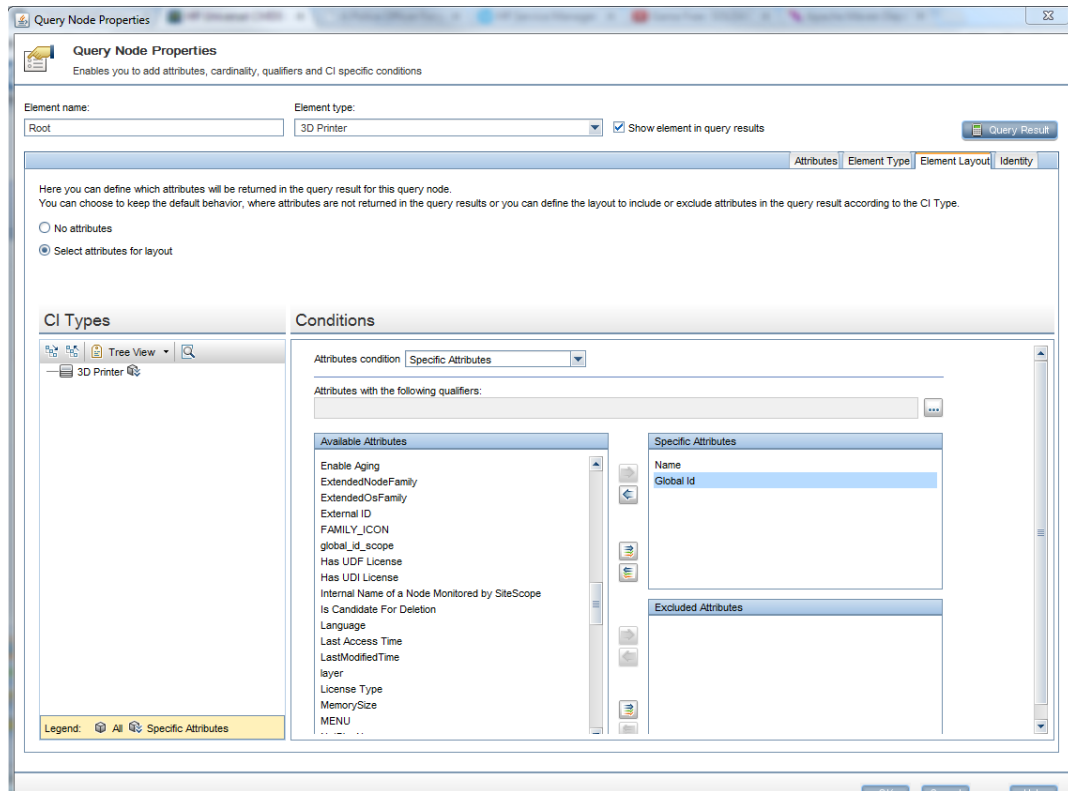
1. Go to the Modeling Studio, click **New** , and then click **Query**.
2. From the **CI Types** pane, locate the **3D Printer** CI type, and then drag and drop the **3D Printer** CI type into the **Query Definition** canvas.

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.

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**.

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**.

Add new node

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

General

* Name: 3DPrinter


Description: A new type of printer.

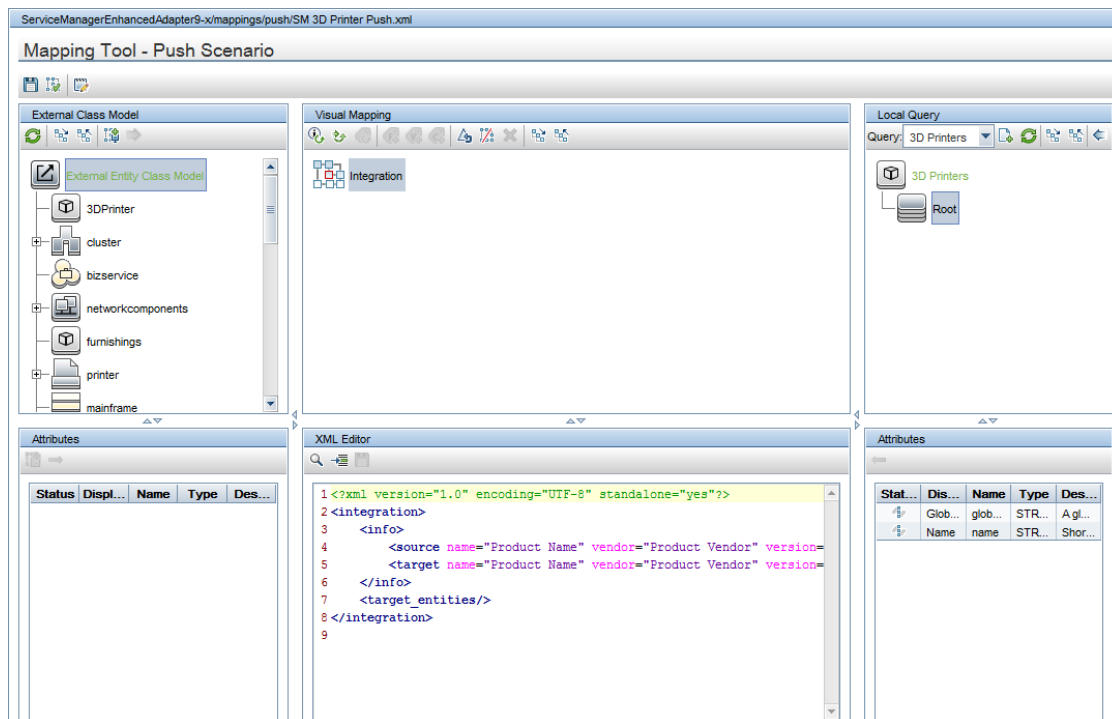
Metadata

table

subtype

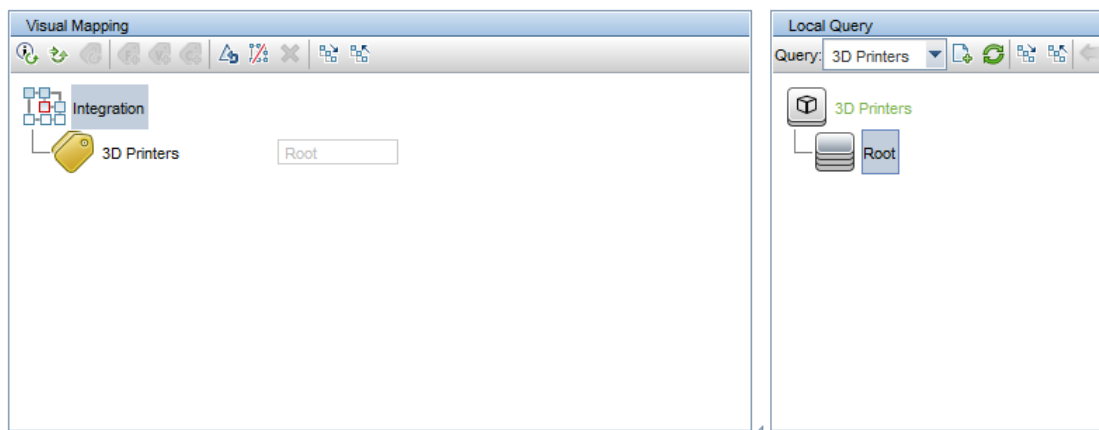
OK Cancel

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.

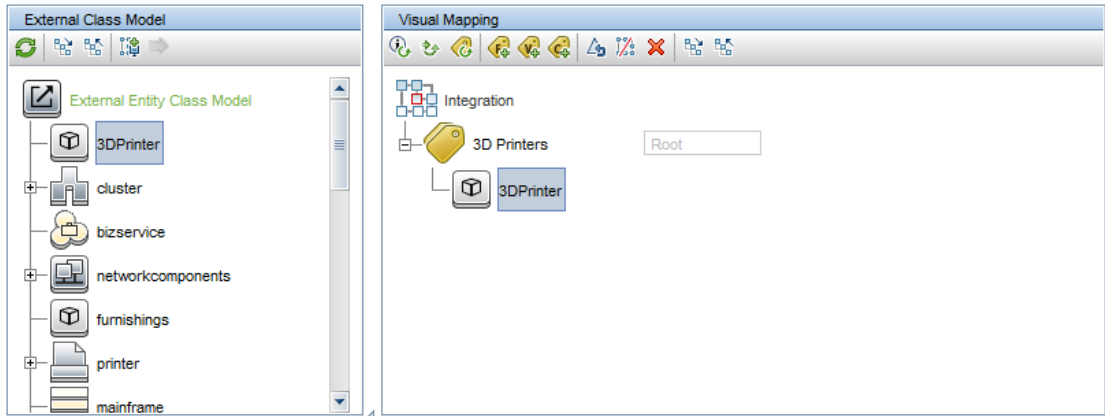


8. Select the Root node under the 3D Printers TQL query node in the **Local Query** pane, and then drag it onto the **Integration** node in the **Visual Mapping** pane.

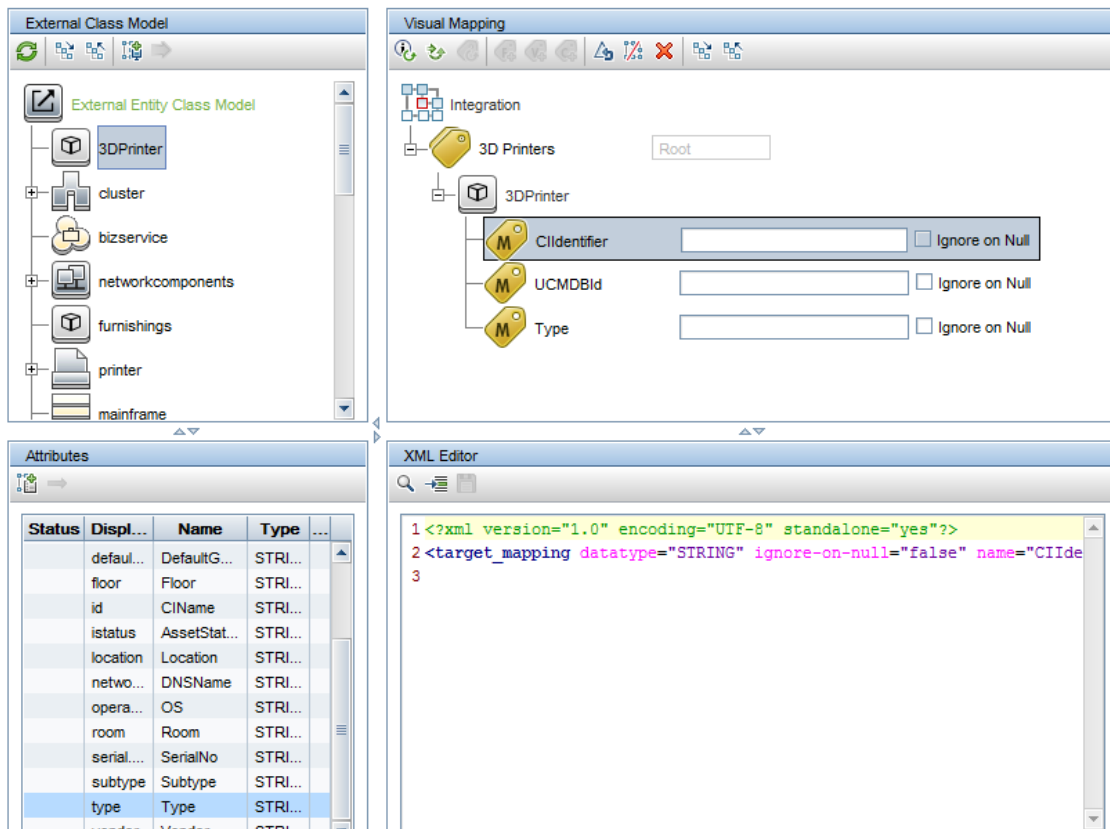
This configuration indicates that the data source for this mapping is the 3D Printers TQL query rooted in the Root element.



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.

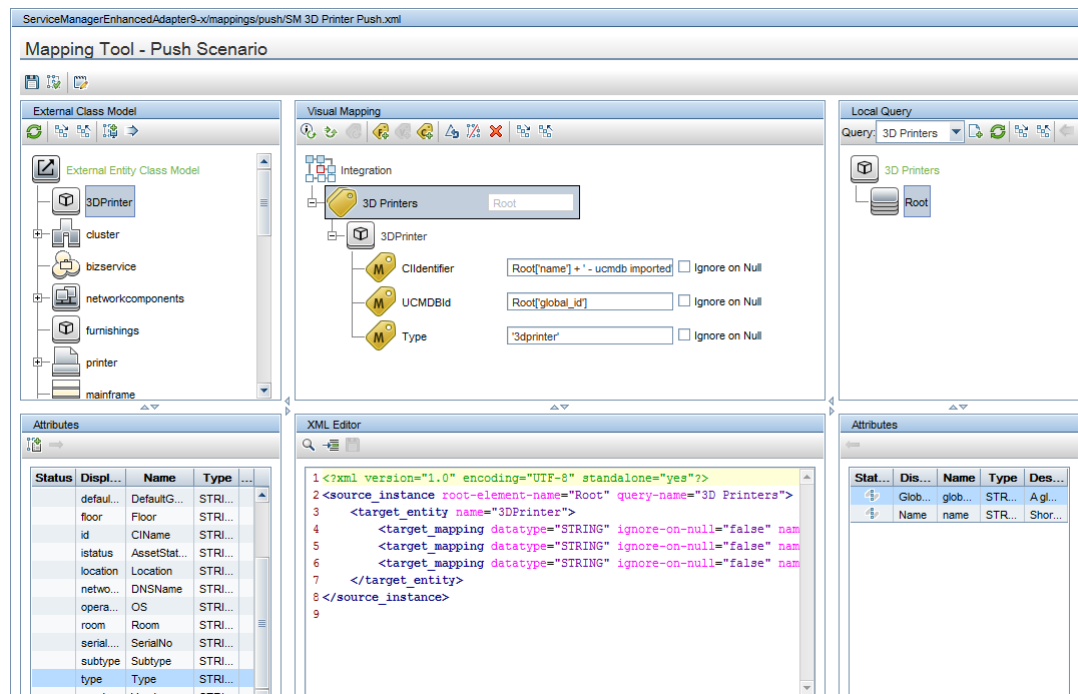
- **CIIdentifier:** Use the Name attribute from UCMDB and make a small customization.

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 `+ ' - 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.

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.

End-to-End Workflow Walkthrough Guide

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

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

*

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

Working 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.

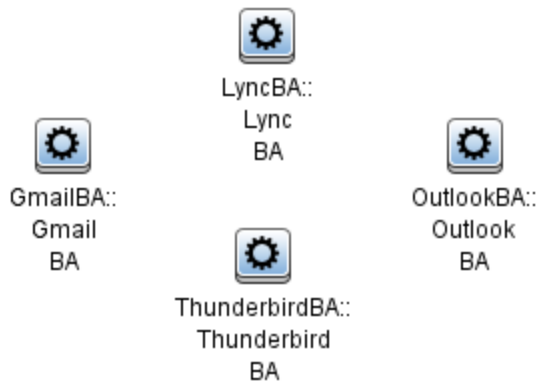
This workflow includes the following steps:

Step 1. Create BusinessApplications CIs	39
Step 2. Create a New Modeling Query	40
Step 3. Assign the MODELING_ENABLED Qualifier to BusinessFunction and BusinessService	41
Step 4. Organize Services by Using Assisted Modeling	42
Step 5. Verification	46

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



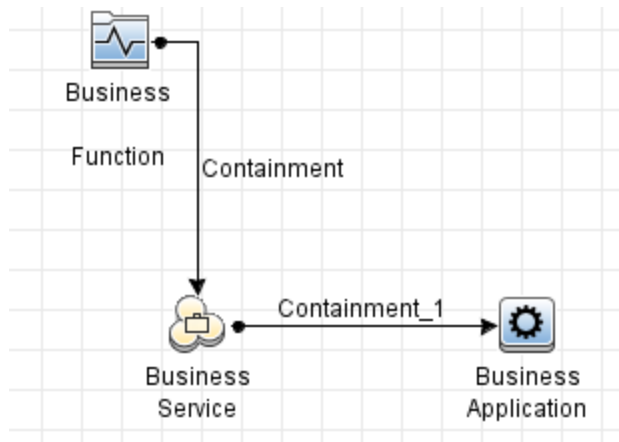
For more information about how to create a CI, refer to *HP Universal CMDB Modeling Guide* > *Modeling* > *IT Universe Manager* > *Working with CIs*.

Step 2. Create a New Modeling Query

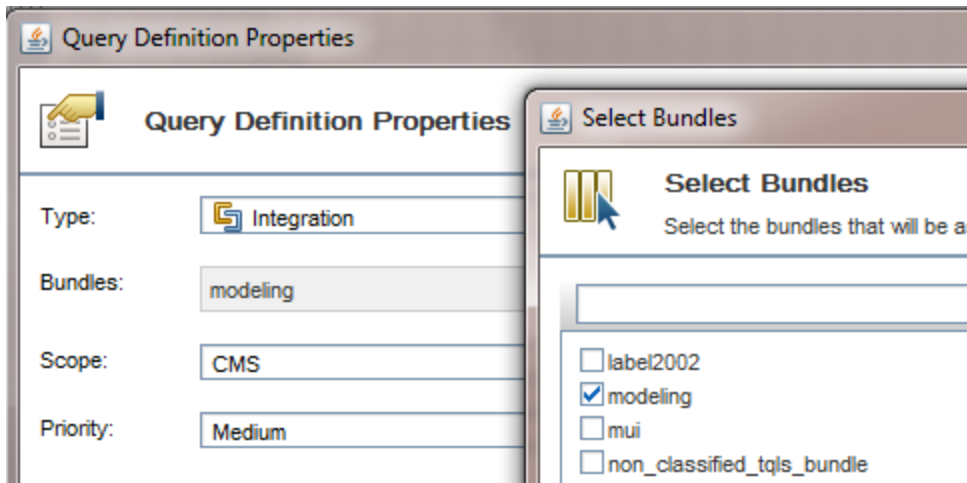
Follow these steps to create a new modeling query:

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.



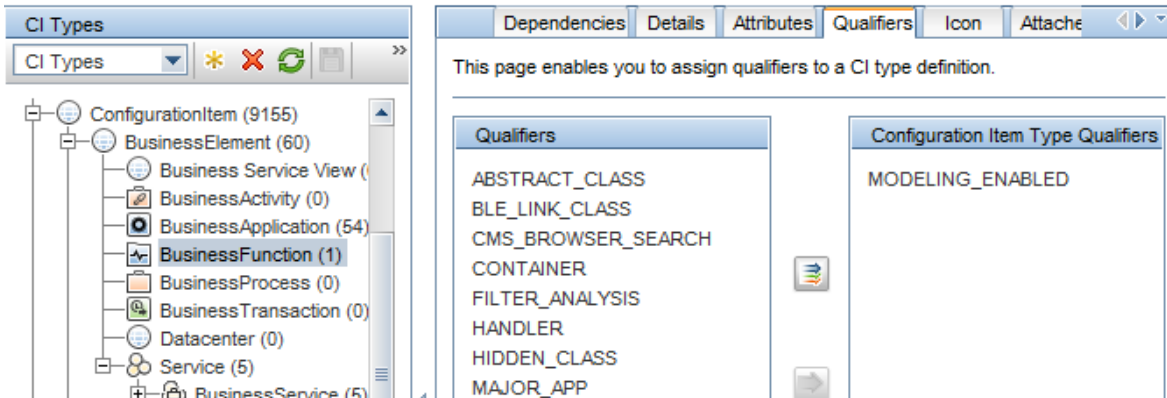
4. Save the query and name it as **ServiceHierarchy**.

For more information about how to create a TQL Query, refer to *HP 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.

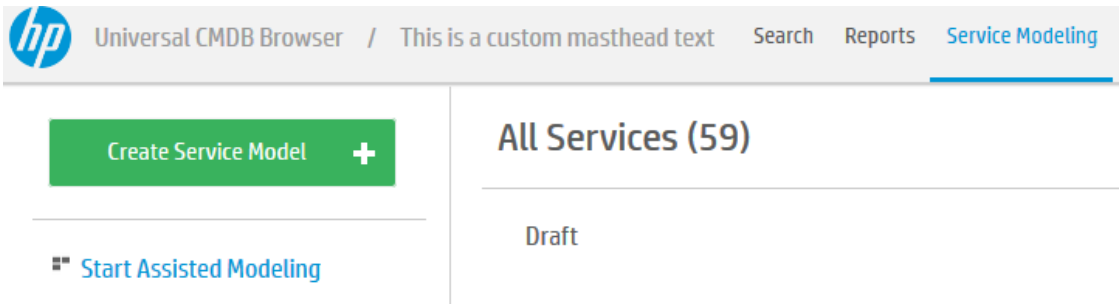


Step 4. Organize Services by Using Assisted Modeling

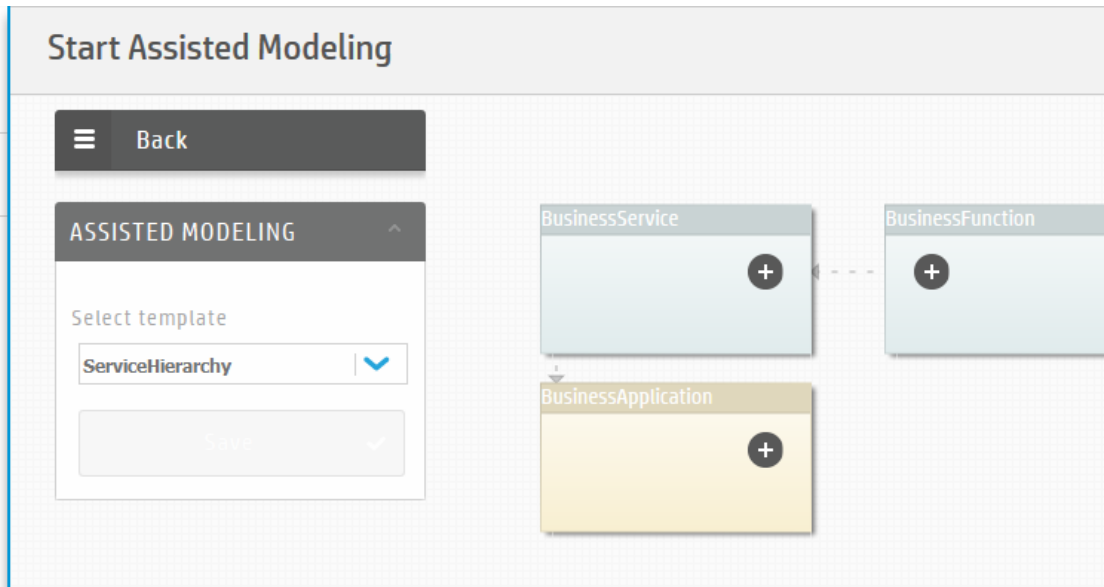
Follow these steps to organize services by using Assisted Modeling in the UCMDB Browser:


- 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.

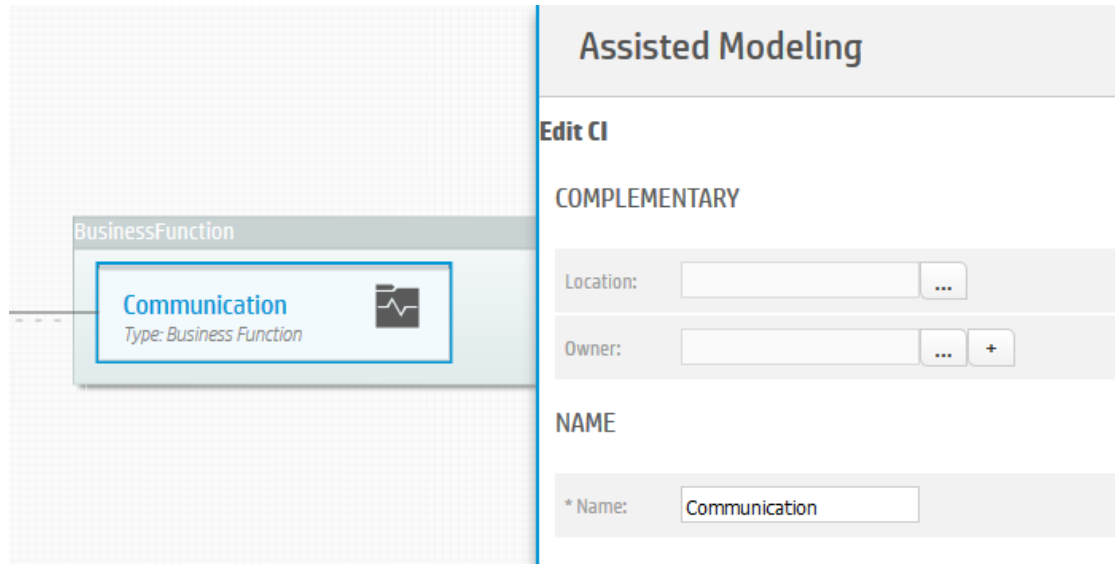


- 3. From the **Select template** drop-down list, select **ServiceHierarchy**, which is the query just created.



- 4. Create a new **Communication** CI of the **BusinessFunction** type. To do this, click the  icon in the

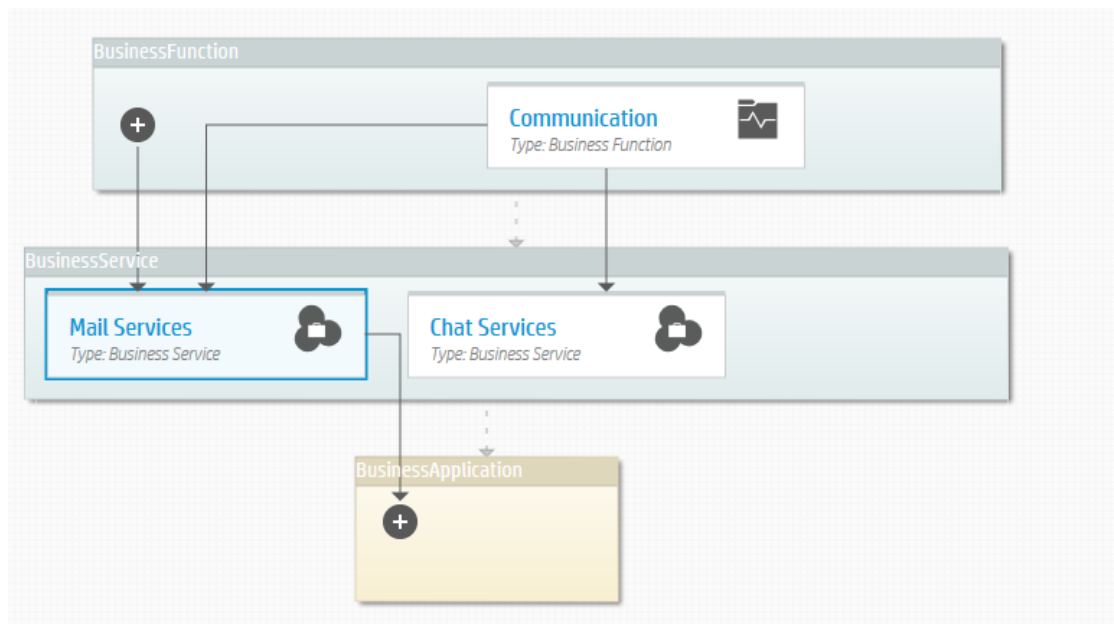
BusinessFunction node, and then click the **Create New BusinessFunction** link. Name the CI as **Communication** and then click **Apply**.




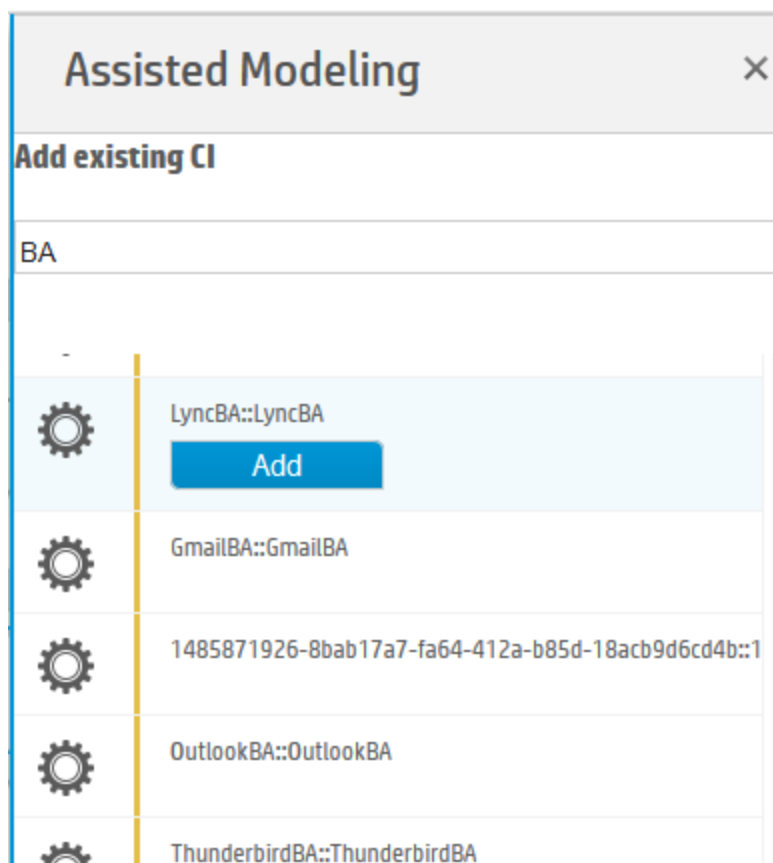
The screenshot displays the 'Assisted Modeling' interface. On the left, a diagram shows a 'BusinessFunction' container with a 'Communication' node inside, labeled 'Type: Business Function'. On the right, the 'Edit CI' form is visible. The form has a 'COMPLEMENTARY' section with 'Location' and 'Owner' fields, each with a dropdown menu. Below this is the 'NAME' section, which includes a '* Name:' label and a text input field containing the word 'Communication'.

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.

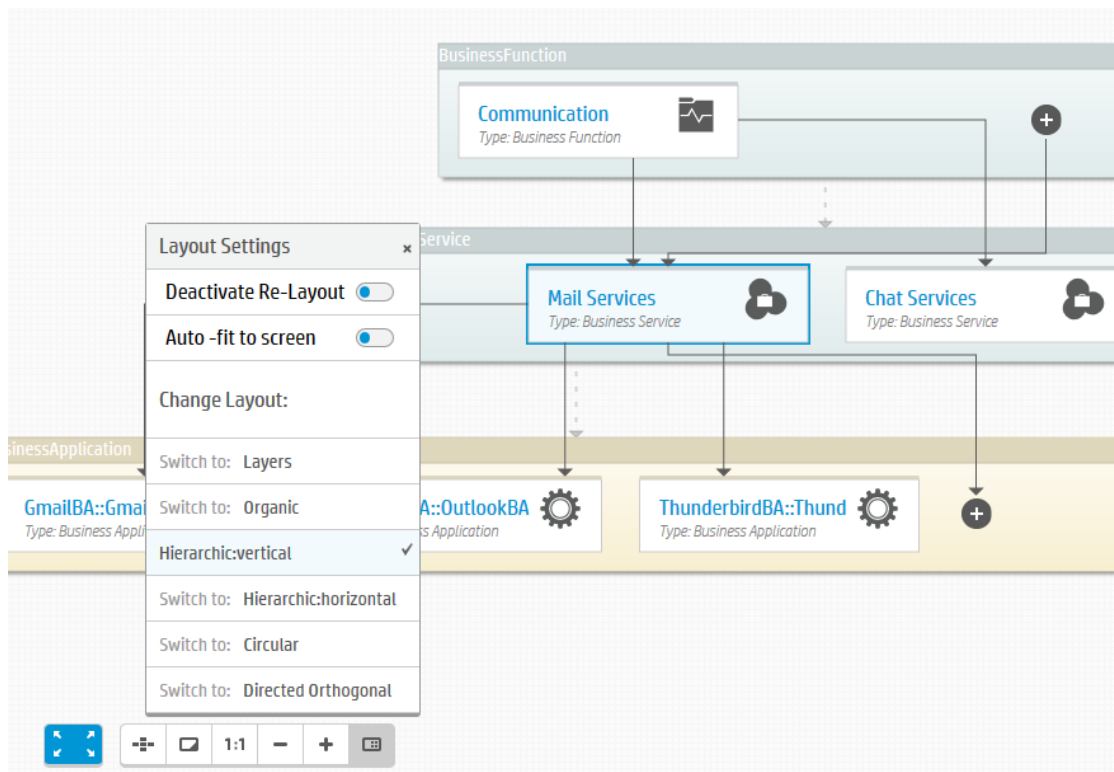


7. Select **Mail Services**, click the  icon inside the **BusinessApplication** node, and then click the **Add existing BusinessApplication** link.
8. Type **BA** in the text field and then press **Enter** to filter the result (because the business application names end with BA). The result should be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

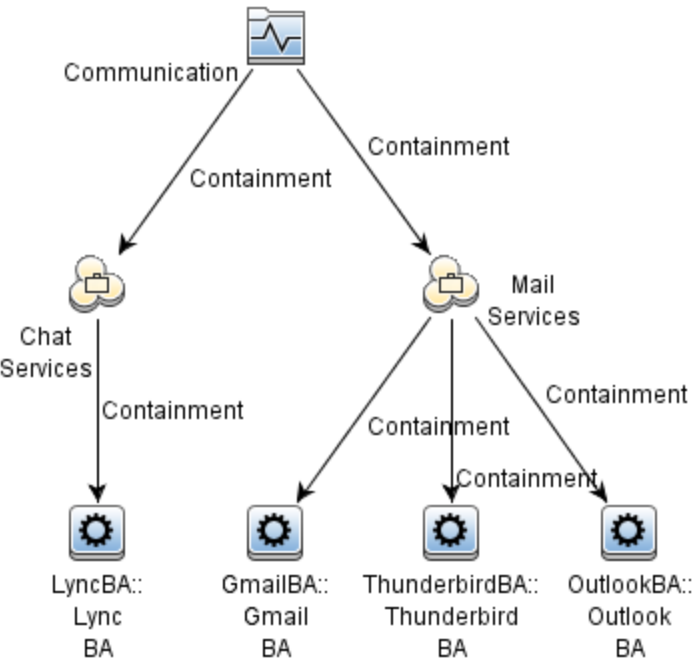


11. Add the **LyncBA** CI inside the **BusinessApplication** node and links to **Chat Services**. To do this, follow the similar procedure as Step 7 to 9.
12. Click the **Save** button. The following message appears at the top:

Topology saved successfully

Step 5. Verification

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



Performing 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	48
Step 2. Check UCMDB Server	51
Step 3. Check Probes	52

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 screenshot displays the HP Universal CMDB UI. On the left is a navigation pane with icons for Integration Studio, Universal Discovery, Data Flow Probe Setup, Reconciliation Priority, Adapter Management, UD Community, Data Flow Probe Status, and Software Library. The main area is titled 'Domains and Probes' and contains a 'Data Flow Probes' table. Below the table is a 'Job Execution Policy' section.

Probe Name	IP	Status	Last Access time	Probe Version
DVCIUDD1SRV	10.19.213.21	Connected	04/28/2015 11:51:37 AM	10.11, CUP3.391
DVCIUDSD1SRV	10.19.213.22	Connected	04/28/2015 11:51:52 AM	10.11, CUP3.391
ILRAUDAG2SRV	10.232.63.203	Connected	04/28/2015 11:51:34 AM	10.11, CUP3.391
ILRAUDD1SRV	10.232.63.46	Connected	04/28/2015 11:52:02 AM	10.11, CUP3.391
ILRAUDDM2SRV	10.102.1.90	Connected	04/28/2015 11:51:36 AM	10.11, CUP3.391
ILRAUDSD1SRV	10.232.63.46	Connected	04/28/2015 11:51:42 AM	10.11, CUP3.391
USSTLDD1S01	10.26.48.167	Connected	04/28/2015 11:51:51 AM	10.11, CUP3.391
USSTLSD1S01	10.26.48.170	Connected	04/28/2015 11:52:00 AM	10.11, CUP3.391

Time	Probes	Jobs
suspended	None	None (total blackout)
Always	All	All

- 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.

End-to-End Workflow Walkthrough Guide

Step 1. Check UCMDB UI

Managers View Tools Help

Domains

DefaultDomain

- DVCIUDDIS1SR
- DVCIUDDIS1S
- ILRAUDAG2SR
- ILRAUDDIS1S
- ILRAUDDM21SI
- ILRAUDSDIS1S
- IntegrationServic
- USSTLDDIS01
- USSTLSDIS01

ILRAUDSDIS1SRV

Refresh

Last updated: 04/28/2015 11:54:32 AM

Status: **Connected**

Probe IP: 10.232.83.45

Running Jobs: 19

Scheduled Jobs: 18

Threads: 29

Total Discovered CIs in sending queue: 0

Progress

Job	Progress	Next invocation	Previous invocation	Triggered CIs	Thread count	Discovered CIs in Sen
MZ_DMZ_SERVE...	90%	05/08/2015 02:50:28 PM	04/28/2015 06:47:40 AM	41	0	0
MZ_DMZ_SERVE...	74%	05/08/2015 02:58:50 PM	04/28/2015 07:08:08 AM	43	2	0
MZ_EMEA_DESK...	Scheduled	04/28/2015 12:00:14 PM	04/28/2015 11:50:14 AM	2	0	0
MZ_EMEA_DESK...	Scheduled	05/08/2015 02:58:51 PM	04/28/2015 05:03:31 AM	5	0	0
MZ_EMEA_DESK...	80%	05/08/2015 02:58:51 PM	04/28/2015 07:08:08 AM	5	0	0
MZ_EMEA_DESK...	Scheduled	05/11/2015 03:15:35 PM	04/28/2015 04:59:32 AM	2	0	0
MZ_EMEA_DESK...	Scheduled	04/28/2015 12:00:14 PM	04/28/2015 11:50:14 AM	1	0	0
MZ_EMEA_DESK...	50%	05/11/2015 03:02:26 PM	04/28/2015 05:01:17 AM	2	0	0
MZ_EMEA_DESK...	25%	05/11/2015 03:28:49 PM	04/28/2015 07:08:08 AM	4	0	0
MZ_EMEA_DESK...	Scheduled	05/11/2015 03:11:23 PM	04/28/2015 05:07:16 AM	2	0	0
MZ_EMEA_DESK...	Scheduled	05/11/2015 03:22:49 PM	04/28/2015 04:58:30 AM	2	0	0
MZ_EMEA_SERV...	Scheduled	05/08/2015 12:59:02 PM	04/28/2015 11:01:18 AM	16945	0	0
MZ_EMEA_SERV...	12%	05/08/2015 12:40:03 PM	04/28/2015 11:52:47 AM	11354	15	0
MZ_EMEA_SERV...	68%	05/08/2015 01:20:01 PM	04/28/2015 11:53:31 AM	18159	6	0
MZ_EMEA_SERV...	Scheduled	05/08/2015 01:41:21 PM	04/24/2015 01:41:21 PM	1	0	0
MZ_EMEA_SERV...	91%	05/08/2015 01:41:29 PM	04/28/2015 08:43:19 AM	5876	7	0
MZ_EMEA_SERV...	88%	05/08/2015 02:07:07 PM	04/28/2015 08:21:14 AM	5959	0	0
MZ_EMEA_UFEN...	Scheduled	04/28/2015 12:30:24 PM	04/27/2015 12:30:24 PM	18	0	0

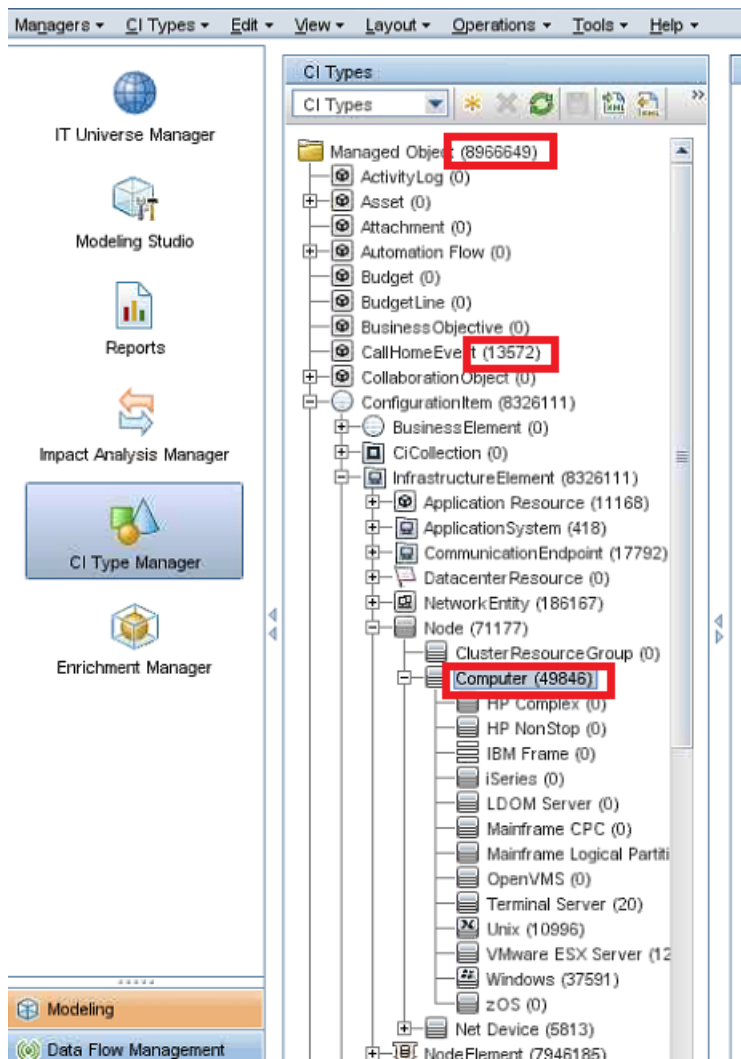
Discovery Results

Filter: Time Range[All]

CIT	Created	Updated	Deleted	Discovered CIs
CellHomeEvent	14	5	460	479
Chassis	9	36	0	174
ClientServer	3757	0	0	5002
ClusterSoftware	1	0	0	197
Communication	000000	0	0	7750078

Last Updated: 04/28/2015 11:52:35 AM (Valid to: 04/28/2015 11:53:17 AM)

- 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 caused 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.

Send Documentation Feedback

If you have comments about this document, you can [contact the documentation team](#) by email. If an email client is configured on this system, click the link above and an email window opens with the following information in the subject line:

Feedback on End-to-End Workflow Walkthrough Guide (Universal CMDB, Universal Discovery, and Configuration Manager 10.21)

Just add your feedback to the email and click send.

If no email client is available, copy the information above to a new message in a web mail client, and send your feedback to cms-doc@hp.com.

We appreciate your feedback!