

Universal CMDB

Software Version: 10.33

End-to-End Workflow Walkthrough Guide

Document Release Date: July 2017 Software Release Date: July 2017



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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 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*>¹/₁₀ 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			×
Your license will expire soon.			
License summary			
Universal Discovery - Full: 0/20,000 - Usage: 0 %	OS	s managed by CM: 21	5/5,000 - Usage: 4 %
Available 3rd party integrations: 3/200 - Usage: 1 %	Aut	omated Service Mode	ling: 0/500 - Usage: 0 %
Automated Service Modeling OOTB: 0/10 - Usage: 0 %	Rer	maining 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.		Starting	date: N/A
License description: Instant-On License		Expiring	date: 1/25/15 11:59 PM
License type: INSTANT_ON		Remaini	ng days: 20
License capacity: 1			
			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

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

- 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			×
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 % Available licenses	Aut		5/5,000 - Usage: 4 % ling: 0/500 - Usage: 0 %
	1	1	
Status # License description • 1 Instant-On License	License type INSTANT ON	Expiring date 1/25/15 11:59 PM	License capacity
Selected license Status: This license will expire soon. License description: Instant-On License License type: INSTANT_ON License capacity: 1		Starting	date: N/A date: 1/25/15 11:59 PM ng days: 20
			OK Cancel

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

 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	Туре	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
Туре	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
Туре	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
Туре	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
Туре	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
Туре	TERM
Start Time	Wed Jan 07 02:00:00 IST 2015
End Time	Fri May 01 02:59:59 IDT 2015
	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 HPE 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

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

	Compliant			>
₿⊘	Compliant All licenses are compliant.			
Licen	se summary			
🔂 🔳	щ.			
	Discovery - Inventory only: 132/300 - Usage: 44 %	Universal	Discovery - Full: 80/20	00 - Usage: 40 %
	aged by CM: 215/500 - Usage: 43 %		Brd party integrations:	-
	I Service Modeling: 0/20 - Usage: 0 %			OTB: 3/10 - Usage: 30 9
			days: 114	
Availa	3 Foundation: Yes able licenses	Remaining	uays. 114	
Availa Status	able licenses	License type	Expiring date	License capacity
	able licenses			License capacity
Status	# License description	License type	Expiring date	
Status ©	# License description 1 UCMDB-CM - Advanced Configuration Manager per OS Instance	License type TERM	Expiring date 5/1/15 2:59 AM	500
Status 0	# License description 1 UCMDB-CM - Advanced Configuration Manager per OS Instance 2 Universal Discovery Inventory per OS Instance	License type TERM TERM	Expiring date 5/1/15 2:59 AM 5/1/15 2:59 AM	300
Status 0 0 0 0	# License description 1 UCMDB-CM - Advanced Configuration Manager per OS Instance 2 Universal Discovery Inventory per OS Instance 3 HP UCMDB Automated Service Modeling pack of 10	License type TERM TERM TERM	Expiring date 5/1/15 2:59 AM 5/1/15 2:59 AM 5/1/15 2:59 AM	500 300 2
Status 0 0 0 0 0 0 0 0 0 0 0 0 0	# License description 1 UCMDB-CM - Advanced Configuration Manager per OS Instance 2 Universal Discovery Inventory per OS Instance 3 HP UCMDB Automated Service Modeling pack of 10 4 Universal Discovery per OS Instance 5 UCMDB Third Party Integration per MDR	License type TERM TERM TERM TERM	Expiring date 5/1/15 2:59 AM 5/1/15 2:59 AM 5/1/15 2:59 AM 5/1/15 2:59 AM 5/1/15 2:59 AM 5/1/15 2:59 AM Starti Expire	500 300 2 200

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 Cls Third party license ASM Licen
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_n33333ode	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

ſ	Licensed OSIs1* X	4 ⊅ ⊞
E	🗈 🔞 🖂 🖏 🕶 🔹 🛃 🔹 🗵	
		Licensed Cls Third party license ASM License
S	how Cl instances of: Managed Object (0) 💌 🗶 🗐 💭 💵 🍳	
	Integration name	Adapter name
1	est1	Import_CSV
1	est2	Troux_To_UCMDB
1	est3	TrouxPushAdapter

Licensed OSIs1* X		⊲ Þ ⊑
🖺 🔊 📼 🗐 👄 • 👌 • 🔟		
	Licensed Cls Third party license ASM Licen	nse
Show Cl 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.

Vou	on-compliant ou have exceeded your permitted license usage. e summary ecovery - Inventory only: 0/300 - Usage: 0 % d by CM: 215/500 - Usage: 43 % ervice Modeling: 0/20 - Usage: 0 % oundation: Yes le licenses	Available 3 Automated	Discovery - Full: 212/ 3rd party integrations: I Service Modeling OC I days: 114	-
Image: Constraint of the second se	acovery - Inventory only: 0/300 - Usage: 0 % d by CM: 215/500 - Usage: 43 % ervice Modeling: 0/20 - Usage: 0 % oundation: Yes Ie licenses	Available 3 Automated	Brd party integrations:	3/15 - Usage: 20 %
Universal Disc OSs managed Automated Ser Is UCMDB Fo Availabl Status #	d by CM: 215/500 - Usage: 43 % ervice Modeling: 0/20 - Usage: 0 % oundation: Yes Ie licenses	Available 3 Automated	Brd party integrations:	3/15 - Usage: 20 %
Status # • 1				
• 1				
		License type	Expiring date	License capacity
· 2		TERM	5/1/15 2:59 AM	500
0 3		TERM	5/1/15 2:59 AM	300
• 3 • 4		TERM	5/1/15 2:59 AM 5/1/15 2:59 AM	2
• 4		TERM	5/1/15 2:59 AM	200
	icense is active. pription: UCMDB-CM - Advanced Configuration Manager per OS Instance : TERM		Expir	ing date: 1/7/15 2:00 AM ring date: 5/1/15 2:59 AM aining days: 114

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
Туре	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
	000000000000000000000000000000000000000

4. Launch License summary report again.

Now the UCMDB Server status is Compliant.

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

		Compliant			>
R		mpliant			
V	Alli	censes are compliant.			
Licon	~~	ourses of a			
_	_	summary			
😫 🗉 (шī.				
Iniversal I	Disc	overy - Inventory only: 0/300 - Usage: 0 %	Universal	Discovery - Full: 212/	300 - Usage: 70 %
)Ss mana	aged	by CM: 215/500 - Usage: 43 %	Available 3	Brd party integrations:	3/15 - Usage: 20 %
utomated	d Ser	vice Modeling: 0/20 - Usage: 0 %	Automated	Service Modeling OC	OTB: 3/10 - Usage: 30
S UCMDB	3 Fo	undation: Yes	Remaining	days: 114	
Avalla	api	e licenses			
Status	#	License description	License type	Expiring date	License capacity
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0	1	UCMDB-CM - Advanced Configuration Manager per OS Instance Universal Discovery Inventory per OS Instance	TERM TERM	5/1/15 2:59 AM 5/1/15 2:59 AM	500 300
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e e e Selecte tatus: Th icense de	1 2 3 4 5 6 ed iis lic escrit	UCMDB-CM - Advanced Configuration Manager per OS Instance Universal Discovery Inventory per OS Instance Universal Discovery per OS Instance HP UCMDB Automated Service Modeling pack of 10 Universal Discovery per OS Instance UCMDB Third Party Integration per MDR License ense is active. ption: UCMDB-CM - Advanced Configuration Manager per OS Instance TERM	TERM TERM TERM TERM TERM TERM	5/1/15 2:59 AM 5/1/15 2:59 AM 5/1/15 2:59 AM 5/1/15 2:59 AM 5/1/15 2:59 AM 5/1/15 2:59 AM 5/1/15 2:59 AM	500 300 100 2 200 15 ng date: 1/7/15 2:00 A ing date: 5/1/15 2:59 A
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O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O	1 2 3 4 5 6 ed iis lic escrit	UCMDB-CM - Advanced Configuration Manager per OS Instance Universal Discovery Inventory per OS Instance Universal Discovery per OS Instance HP UCMDB Automated Service Modeling pack of 10 Universal Discovery per OS Instance UCMDB Third Party Integration per MDR License ense is active. ption: UCMDB-CM - Advanced Configuration Manager per OS Instance TERM	TERM TERM TERM TERM TERM TERM	5/1/15 2:59 AM 5/1/15 2:59 AM 5/1/15 2:59 AM 5/1/15 2:59 AM 5/1/15 2:59 AM 5/1/15 2:59 AM 5/1/15 2:59 AM	300 100 2 200 15 Ing date: 1/7/15 2:00 A

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:

Step 1. Create a Dynamic Widget by using the Pattern View Editor	.16
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 New³, and then select Dynamic Widget.

The New Dynamic Widget window opens.

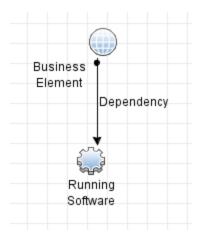
3. Select Create new query, and then click OK.

The Pattern View Editor opens.

 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*.

End-to-End Workflow Walkthrough Guide Step 1. Create a Dynamic Widget by using the Pattern View Editor



- 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

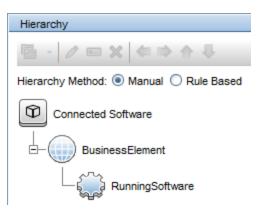
The Properties Mode displays attribute values from the nodes returned by the topology returned by the view that is created. All the other modes display a map of the topology.

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:

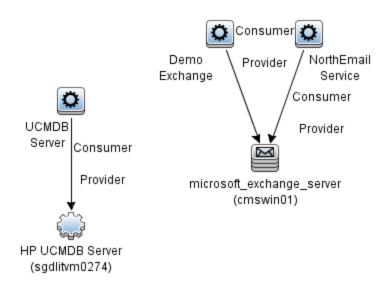
- 1. Go to Security > Roles Manager.
- 2. Select the role for which you want to enable the Dynamic Widget.
- 3. In the Resource tab, under Resource Types, select UCMDB Browser Widgets.

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.

UCMDB Browser	Search Reports Service Modeling Notifications
north Q All results (1)	Found 1 result
Special filters: Main CI Type No CI Type Selected Name: Name Attribute (optional) Related CI Type No CI Type Selected	NorthEmailService
Select Attributes for Report	

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 S	OFTWARE		^
Create Time: Vendor:	Fri Jan 16 09:30:40 GMT+200 2015 microsoft_corp	ProductName: Version:	microsoft_exchange_server 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.

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	
	microsoft_exchange_serve
ProductName:	microsoft_exchange_serve
ProductName: Vendor:	microsoft_corp

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

Connected Softwa	ire					×
			ms_e	exchange_server (1)		
Filter by CI Type	1	<	JMS	microsoft_exchange_server (cmswin0 Type: MicrosoftExchangeServer	1)	Ø
Group by CI Type on RunningS	1					

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						
	<pre>hange_server (cmswin01) ftExchangeServer</pre>					
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.

CONNE	CTED SOFTWARE	^
	Mail	1

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

End-to-End Workflow Walkthrough Guide Step 3. View the resulting widget in the UCMDB Browser

Connected	Softw	/are		
Textual 💽 Map	>	Topology 🦲	Grouped	
			BusinessApplication	
			NorthEmailService 💭	
			MicrosoftExchangeServer	
			microsoft_exchange_s	
	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*.

End-to-End Workflow Walkthrough Guide Step 2. Import the new CIs in UCMDB

Universal CMDB and	d Discov	very		User: admin Customer: Default Client (Actual) License status: Expiring in 11 days
Ma <u>n</u> agers → <u>C</u> ITypes → <u>E</u> dit •	• <u>V</u> iew •	Layout - Operations - To	ple + Heln +	
	CI Ty		🛃 Create Confi	guration Item Type - Details
	CI Ty	pes 💌 😹 🗙 🧭 🗎	General	Details
IT Universe Manager		Oracle AS Resou		
\frown		E- Oracle E-Busines	Name:	printer_3d
		E- Resource Pool (0	Display Name:	3D Printer
Modeling Studio		E-G SapResource (0)	Scope:	CMS
		SharePoint Service	Created By:	
		- 🛞 Siebel Application		
1h		《짉 Siebel Componen 	Description:	A revolutionary, new printer capable of creating actual objects.
Reports		Siebel Web Applic		
		- Siebel Web Serve		
		TibcoResource (
		Wware Resource	Identifica	ation
Impact Analysis Manager		Web Server Virtu WebService Reso		
		E- ApplicationSystem (0)	1	Select an identification method. In all methods, a CMDB ID and a global_id are also assigned.
		E CommunicationEndpo	Identification:	Inherited from parent
CI Type Manager		DatacenterResource		The CI identification is governed by the rule defined. Press Help for more details.
	4	NetworkEntity (7)		
				Nodes are identified using OS identifiers (e.g. IP addresses, Net Bios Name), hardware identifiers (e.g. MAC addresses, Serial
		ClusterResource		Number) or UD Unique identifier (i.e. UdUniqueId). Two nodes are considered to be the same node if they have the same
Enrichment Manager		Computer (1) E Net Device (0)		information for at least one of the following identifiers:
		NodeElement (2)		OS identifiers include:
		E 🖏 RunningSoftware		* Name
		BUDDI Registry (0)		
		- Discution (0)		View Help
		Monitor (0)	Base CI Type:	
		Contract (0)	base CI Type:	P → Node (2)
		Cost (0)		ClusterResourceGroup (0)
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Modeling		CostCenter (0)		E Bill Device (0) E Bill Device (0)
÷ -		Digital Certificate (0)		E-Q RunningSoftware
(i) Data Flow Management		History Change		B UDDI Registry (0)
Administration		InformationSecurityLevel (0)		
A Security		Change (0)		
Security		- Marcident		< Back Next > Finish Cancel
		- M Interaction (0)		
Madular Cl Trans Marcon		Jser: admin, Login time: 1/19/15 1		time: 1/19/15 12:23 PM 🛛 🖗 🞯 Connected to INDRIE4 📑 🖟 🚳 🧭 234M of 325M 🔋 🤶
Nodule: CI Type Manager	🛍 U	User: admin, Login time: 1/19/15 1	2:56 PM, Last login	time: 1/19/15 12:23 PM 🖗 🛇 Connected to INDRIE4 🚰 🖡 📾 💭 234M of 325 M 🔋 🤉

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

End-to-End Workflow Walkthrough Guide Step 3. Create the TQL query to see all the 3D Printer instances

Universal CMDB and		erre Taola – Hele –	User; admin Customer; Defaut Client (Actual) License status; Expring in 11 days
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IT Universe Manager	Searches:	 Image: Construction of the second seco	Top Layer
			Get Related CIs
	Simple	Advanced	
Modeling Studio	CI Name:	۹ 🗎	
	CI Type: 3D Printer;		Select scope: View @ CMDB
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Reports	Name	CI Type	e ago
	3d-printer-bucharest 3d-printer-chicago	3D Printer 3D Printer	Pilter Related CIS by CLType
	3d-printer-paris	3D Printer	
Impact Analysis Manager			
			3d-printer-pari
CI Type Manager			Apply Perspectives to CI
er rype manager	4		
	4		3d-printer-buch arest Description:
			aicst
Enrichment Manager			
			Legend: 1 Added 1 Candidate for Deletion Changed
			No Active Impact Rules O Change Timeframe is not set
			3d-printer-bucharest Properties History Discovery
			Name: 3d-printer-bucharest ID: 57e4f3dadbb980b568c2ae98bb40cd6f CI Type: 3D Printer
			E 🔛 i 🕏 🖈 🥒 Edit 🔮 Export 🔹 Quick filter: Q 🗸 Type here to filter properties
Modeling			Actual Deletion Period 40 🔺
(Allow CI Update True
-			BiosAssetTag
Administration			BiosDate BiosSerialNumber
Security		\odot	BiosSource
	Eind:		BiosUuid
	Search results count:3		
Module: IT Universe Manager	🗧 📲 User: admin, Login tin	ne: 1/19/15 12:56 PM, Last login tin	ne: 1/19/15 12:23 PM 🕅 🖗 🛇 Connected to INDRIE4 😭 Ŗ 📾 🜍 223M of 325M 🔋 ?

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** 3, 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 .

Universal CMDB and	d Discovery	User: admin Customer: Defautt Client (Actual) License status: Expiring in 11 days	Logout
Managers - <u>R</u> esource - <u>E</u> dit	✓ View ✓ Layout ✓ Operations ✓ Editor Item ✓ Tools ✓ H		
	* New - 🖺 🔛 🍽 🤍 🗖		
	Resources CI selector CI Types	S 3D Printers ×	∢ ▷ 🗉
IT Universe Manager	CI Types	Query Definition	
(👫 🎼 Tree View 🔹 🦈 🧭		
~~ .	E- Managed Object (16)		
Modeling Studio	ActivityLog (0)	8	
	E-@ Asset (1)	€	
1	Attachment (0) Budget (0)		
Reports	BudgetLine (0)		
	BusinessObjective (0)		
	CallHomeEvent (0)	Q	
	ConfigurationItem (15)	2	
Impact Analysis Manager	BusinessElement (0)		
	ECCollection (0)		
	InfrastructureElement (15) Application Resource (0)		
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CI Type Manager	CommunicationEndpoint (0)	(3)	
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	RetworkEntity (7)	ХТ — — — — — — — — — — — — — — — — — — —	
Enrichment Manager	D- Node (5)		
Entreminent Manager	3D Printer (3)	<u>명</u>	
	ClusterResourceGroup (0)		
	Computer (1)		
	E - € NodeElement (2)		
	E-S RunningSoftware (1)		
	B UDDI Registry (0)	Legend: 📓 Contact Node 🖻 External 🔍 Has Conditions 🗇 Has Identities 🗊 Hidden in Query Results 🕏 Model O	Dutput 🎽 🗙
	Location (0)		
	Monitor (0) Party (0)	3D Printer Attributes Cardinality * Element Type Element Layout * Data Sources Selected Identit	ties 🔹 🔹
G Modeling	- Cost (0)		
(Data Flow Management	CostCategory (0) CostCenter (0)	(i) There are no items in this view.	
Administration	Digital Certificate (0)		
	History Change (0)		
Security	InformationSecurityLevel (0)		Edit
	Eind:		
Module: Modeling Studio	🔒 User: admin, Login time: 1/19/15 12:56 PM, Last login time: 1/	/19/15 12:23 PM 🖗 🛇 Connected to INDRIE4 🚰 Ŗ 📾 🗳 271M of 385M	1 ?

- 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.

Query Node Properti	es				
Enables you to add attribute	s, cardinality, qualifiers and CI specific conditions				
ent name:	Element type:				
at and	3D Printer	•	Cho	ow element in query results	
(SD Printer	•	Sho	weiement in query results	Query Re
				Attributes Element Type Element Lay	out Identity
	s will be returned in the query result for this query node. behavior, where attributes are not returned in the query results or you can d	lefine the layo	ut to incl	ude or exclude attributes in the query result according to the CI Type.	
Select attributes for layout					
CI Types	Conditions				
🐮 號 📴 Tree View 🔹 🔯	Attributes condition Specific Attributes	-			
	Attributes with the following qualifiers:				
	Autorica marine following qualifiera.				
	Available Attributes			Specific Attributes	
	Enable Aging	-	(mba)	Name	
	Enable Aging ExtendedNodeFamily	•		Name Global Id	
	ExtendedNodeFamily ExtendedOsFamily	•	⇒ €		
	ExtendedNodeFamily ExtendedOsFamily External ID	•			
	ExtendedNodeFamily ExtendedOsFamily External ID FAMILY_ICON		\$		
	ExtendedNodeFamily ExtendedOoFamily ExtendedOoFamily External ID FAMILY_JCON global_ig_coope		\$		
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	ExtendedNodeFamily ExtendedOaFamily External ID FAMILY_ICON global_id_scope Has UDF License Has UDI License Internal Name of a Node Monitored by SiteScope Is Candidate For Deletion Language Last Access Time LastModifiedTime layer License Type			Global Id	
-egend: @ All €; Specific Att	ExtendedNodeFamily ExtendedOsFamily External ID FAMILY_ICON global_id_scope Has UDF License Has UDF License Internal Name of a Node Monitored by SiteScope Is Candidate For Deleton Language Last Access Time Last Access Time Last Access Type MemorySize		* *	Global Id	

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** 8.
- 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.

End-to-End Workflow Walkthrough Guide Step 4. Create the integration point to the Service Manager server

🛓 New Integration Point		
* New Integratio	n Point	
Integration Proper	ies	
* Integration Name	Service Manager	ן כ
Integration Description		ן כ
Adapter	ServiceManagerEnhancedAdapter9.x	
Is Integration Activated		
Adapter Properties	3	
* Hostname/IP	16.187.189.245	
* Port	13080	ן ב
URL Override		ן ב
* Credentials ID	Generic Protocol: sm	
Development Mode	False	•
* Data Flow Probe	INDRIE4	
Additional Probes		
* Mandatany Proportion	Test connection	
 Mandatory Properties 		•
	OK	

- 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 3, 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**.

End-to-End Workflow Walkthrough Guide

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

Add new node	×
1 4235	ew node st define a new node's properties for an external class
General	
* Name:	3DPrinter
Description:	A new type of printer.
Metadata	
table	
subtype	
	OK Cancel

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.

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

ServiceManagerEnhancedAdapter9-x/mappings/push/	SM 3D Printer Push.xml	
Mapping Tool - Push Scenario		
External Class Model	Visual Mapping	Local Query
	0. ⊎ <i>0 0 0 4</i> 1 × 1 1 1 1	Query: 3D Printers 🝸 🕞 🧭 😵 🌾
External Entity Class Model	[월급 Integration	30 Printers
mainframe		
Attributes	XML Editor	Attributes
	오 - # 🗎	\leftarrow
Status Displ Name Type Des	1 xml version="1.0" encoding="UTF-8" standalone="yes"?	Stat Dis Name Type Des
	2 <integration></integration>	Glob glob STR Agl
	3 <info></info>	Name name STR Shor
	4 <source name="Product Name" vendor="Product Vendor" version="</th"/> <th></th>	
	5 <target name="Product Name" vendor="Product Vendor" version="<br">6 </target>	
	7 <target entities=""></target>	
	8	
	9	
	·	

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.

Visual Mapping	Local Query
¶, ७, ८ ≪ ≪ △ ½ × ≈	Query: 3D Printers 💌 🗔 💋 😫 📽 🔄
3D Printers Root	3D Printers Root

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.

End-to-End Workflow Walkthrough Guide

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

External Class Model	Visual Mapping
	R. & C. 🕼 😪 😪 🖧 🔺 🗱 📽
External Entity Class Model	Content of the test of the test of the test of te
mainframe	

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.

External	Class Mod	el				Visual Mapping
G 🗟	11 II	>				9. ७ (C)
	3DPrinte cluster bizservic		el			
-@	furnishin printer	gs				Type Ignore on Null
	mainfram			-	11	
Attribute	S				Ĺ	XML Editor
0.50						Q
! ⊉ ⇒						
	Displ	Name	Туре]	1 xml version="1.0" encoding="UTF-8" standalone="yes"?
	Displ defaul	Name DefaultG	Type STRI			1 xml version="1.0" encoding="UTF-8" standalone="yes"? 2 <target_mapping <="" datatype="STRING" ignore-on-null="false" name="CIIde" td=""></target_mapping>
						1 xml version="1.0" encoding="UTF-8" standalone="yes"?
	defaul	DefaultG	STRI			1 xml version="1.0" encoding="UTF-8" standalone="yes"? 2 <target_mapping <="" datatype="STRING" ignore-on-null="false" name="CIIde" td=""></target_mapping>
	defaul floor	DefaultG Floor CIName AssetStat	STRI STRI STRI STRI			1 xml version="1.0" encoding="UTF-8" standalone="yes"? 2 <target_mapping <="" datatype="STRING" ignore-on-null="false" name="CIIde" td=""></target_mapping>
	defaul floor id	DefaultG Floor CIName AssetStat Location	STRI STRI STRI STRI STRI			1 xml version="1.0" encoding="UTF-8" standalone="yes"? 2 <target_mapping <="" datatype="STRING" ignore-on-null="false" name="CIIde" td=""></target_mapping>
	defaul floor id istatus	DefaultG Floor CIName AssetStat Location DNSName	STRI STRI STRI STRI STRI			1 xml version="1.0" encoding="UTF-8" standalone="yes"? 2 <target_mapping <="" datatype="STRING" ignore-on-null="false" name="CIIde" td=""></target_mapping>
	defaul floor id istatus location netwo opera	DefaultG Floor CIName AssetStat Location DNSName OS	STRI STRI STRI STRI STRI STRI			1 xml version="1.0" encoding="UTF-8" standalone="yes"? 2 <target_mapping <="" datatype="STRING" ignore-on-null="false" name="CIIde" td=""></target_mapping>
	defaul floor id istatus location netwo opera room	DefaultG Floor CIName AssetStat Location DNSName OS Room	STRI STRI STRI STRI STRI STRI STRI			1 xml version="1.0" encoding="UTF-8" standalone="yes"? 2 <target_mapping <="" datatype="STRING" ignore-on-null="false" name="CIIde" td=""></target_mapping>
	defaul floor id istatus location netwo opera room serial	DefaultG Floor CIName AssetStat Location DNSName OS Room SerialNo	STRI STRI STRI STRI STRI STRI STRI STRI			1 xml version="1.0" encoding="UTF-8" standalone="yes"? 2 <target_mapping <="" datatype="STRING" ignore-on-null="false" name="CIIde" td=""></target_mapping>
	defaul floor id istatus location netwo opera room serial subtype	DefaultG Floor CIName AssetStat Location DNSName OS Room SerialNo Subtype	STRI STRI STRI STRI STRI STRI STRI STRI STRI			1 xml version="1.0" encoding="UTF-8" standalone="yes"? 2 <target_mapping <="" datatype="STRING" ignore-on-null="false" name="CIIde" td=""></target_mapping>
	defaul floor id istatus location netwo opera room serial subtype type	DefaultG Floor CIName AssetStat Location DNSName OS Room SerialNo	STRI STRI STRI STRI STRI STRI STRI STRI			1 xml version="1.0" encoding="UTF-8" standalone="yes"? 2 <target_mapping <="" datatype="STRING" ignore-on-null="false" name="CIIde" td=""></target_mapping>

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

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

• **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.

• **Clidentifier**: 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.

ServiceManagerEnhancedAdapter9-x/mappings/push	SM 3D Printer Push.xml	
Mapping Tool - Push Scenario		
🛅 😳 😳		
External Class Model	Visual Mapping	Local Query
0 % % 13 ⇒	९. ७ ⊘ 🥵 🦪 🤹 🎊 💥 🕷 %	Query: 3D Printers 💌 🗔 💋 😫 🐕 🦛
External Entity Class Model		3D Printers
□ 3DPrinter ■	3D Printers Root	Root
the cluster	E-D 3DPrinter	
- bizservice	Clidentifier Root('name') + ' - ucmdb imported Ignore on Null	
networkcomponents	UCMDBId Root("global_id") Ignore on Null	
- 00 furnishings	Type '3dprinter' Ignore on Null	
printer		
mainframe	4	4
 Attributes	XML Editor	Attributes
		Althoutes
Status Displ Name Type	1 xml version="1.0" encoding="UTF-8" standalone="yes"?	Stat Dis Name Type Des
defaul DefaultG STRI	<pre>2<source_instance query-name="3D Printers" root-element-name="Root"></source_instance></pre>	Glob glob STR A gl
floor Floor STRI	<pre>3 <target_entity name="3DPrinter"></target_entity></pre>	Name name STR Shor
id CIName STRI	4 <target_mapping datatype="STRING" ignore-on-null="false" nam<="" td=""><td></td></target_mapping>	
istatus AssetStat STRI	<pre>5 <target_mapping datatype="STRING" ignore-on-null="false" nam<="" pre=""></target_mapping></pre>	
location Location STRI	<pre>6 <target_mapping datatype="STRING" ignore-on-null="false" nam<="" pre=""></target_mapping></pre>	
netwo DNSName STRI	7	
opera OS STRI	8	
room Room STRI =	3	
serial SerialNo STRI		
subtype Subtype STRI		
type Type STRI		
vendor Vendor STDI	V	

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 Ir	tegration Job	×
*	New Integration Job Define the Integration Job details and scheduling information	
Name S	M 3D Printer Push	
Job D	efinition	
+ ×	合 导 //	
	Query Name	Allow Deletion
3D Print	ers	
_	uler Definition	
C Sche	duler enabled	
Repeat:	Once Starts: Ends: Interval 1/20/15 14:10 Image: Control of the start of the	▼

- 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.

a 1.1								
egration Jobs 🧷 🗙 🔁 🖻 🖻								
Push job	Full Synchronization	 Runs the selected job Did not run 	, synchronizing all of the	data	None	st Synchron	hization Ty	/pe
3D Printer Push		 Did not run 			None			
tistics Query Status			۵⊽					
L			۵⊽					
L	Cre	ated	 Updated		Deleted		Failed	i
}	Cre 0	ated 0		0	Deleted	0	Failed	1

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			

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:

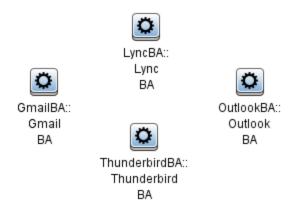
Step 1. Create BusinessApplications CIs	. 37
Step 2. Create a New Modeling Query	. 38
Step 3. Assign the MODELING_ENABLED Qualifier to BusinessFunction and BusinessService	39
Step 4. Organize Services by Using Assisted Modeling	40
Step 5. Verification	44

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

End-to-End Workflow Walkthrough Guide Step 2. Create a New Modeling Query



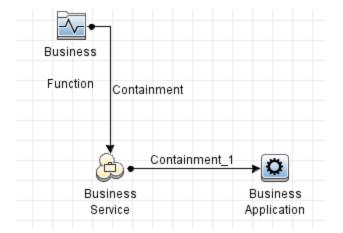
For more information about how to create a CI, refer to HPE Universal CMDB Modeling Guide> Modeling > IT Universe Manager > Working with CIs.

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.

Step 3. Assign the MODELING_ENABLED Qualifier to BusinessFunction and BusinessService

🛓 Query	Definition Properties		
	Query Definition Properties	실 Select	t Bundles
Туре:	S Integration		Select Bundles Select the bundles that will be as
Bundles:	modeling		
Scope:	CMS	□ labe	el2002 delina
Priority:	Medium	mui	-

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. End-to-End Workflow Walkthrough Guide Step 4. Organize Services by Using Assisted Modeling

CI Types	Dependencies Details Attributes G	ualifiers Icon Attache
CI Types 💌 \star 🗶 🗇 📄 👋	This page enables you to assign qualifiers to a	CI type definition.
ConfigurationItem (9155) ConfigurationItem (9155) BusinessElement (60) BusinessService View (BusinessApplication (54) BusinessFunction (1) BusinessFransaction (0) Datacenter (0) ConfigurationItem (9155) Datacenter (5) Datacente	Qualifiers ABSTRACT_CLASS BLE_LINK_CLASS CMS_BROWSER_SEARCH CONTAINER FILTER_ANALYSIS HANDLER HIDDEN_CLASS MAJOR_APP	Configuration Item Type Qualifiers MODELING_ENABLED

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.

UCMDBBrowser Search Reports Service Modeling Notifications Create Service Model + All Services (10) Draft Image: Start Assisted Modeling Draft Image: Start Assisted Modeling Image: Start Assisted Modeling

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

≡ Back		
ASSISTED MODELING	BusinessService	BusinessFunction
Select template		
ServiceHierarchy 💙	BusinessApplication	

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

	Assisted Modeling
	Edit Cl
BusinessFunction	COMPLEMENTARY
Communication	Location:
Type: Business Function	Owner:
	NAME
	* Name: 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.

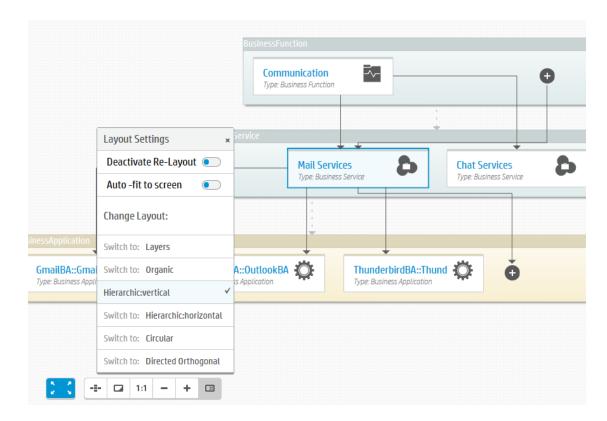
essService Chat Services Chat Service Type: Business Service	•		Communication Type: Business Function	~	
Aail Services Chat Service Type: Business Service	ssService		1		
	Mail Services		rvices		
BusinessApplication		· · · · · · · · · · · · · · · · · · ·	on		

- 7. Select Mail Services, click the **D** 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:

Ass	isted Modeling ×
Add exis	ting Cl
BA	
-	
٥	LyncBA::LyncBA
Ø	GmailBA::GmailBA
٥	1485871926-8bab17a7-fa64-412a-b85d-18acb9d6cd4b :: 1
Ø	OutlookBA::OutlookBA
*	ThunderbirdBA::ThunderbirdBA

- 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.

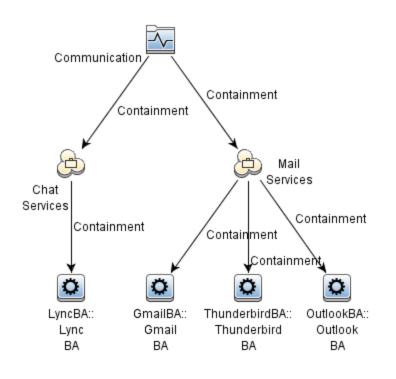


- 11. Add the LyncBA CI inside the BusinessApplication node and links to Chat Services. To do this, follow the similar procedure as Step 7 to 9.
- 12. Click the Save button. The following message appears at the top:

Topology saved successfully

Step 5. Verification

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



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.

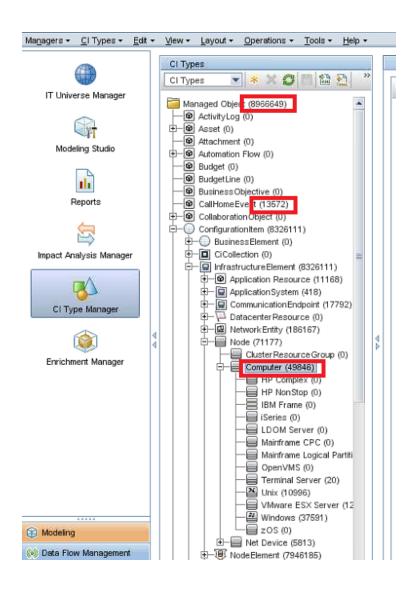
Domains and Probes	Domains and Probes					
*• X Q 🖸 🗈 🕸 🕅	Data Flow Probes					
🔯 Domains and Probes	Probe Name	IP	Status	Last	Access time	Probe Version
E-B DefaultDomain(Default)	DVCIUDDD1 SRV	10.19.213.21	Connected	04/28/2015	11:51:37 AM	10.11.CUP3.391
	DVCIUDSDIS1 SRV	10.19.213.22	Connected	04/28/2015	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
	ILRAUDDDIS1 SRV	10.232.63.46	Connected	04/28/2015	11:52:02 AM	10.11.CUP3.391
	ILRAUDDMZ1 SRV	10.102.1.90	Connected	04/28/2015	11:51:36 AM	10.11.CUP3.391
	ILRAUDSDIS1SRV	10.232.63.45	Connected	04/28/2015	11:51:42 AM	10.11.CUP3.391
	USSTLDDIS01	10.26.48.157	Connected	04/28/2015	11:51:51 AM	10.11.CUP3.391
	USSTLSDIS01	10.26.48.170	Connected	04/28/2015	11:52:00 AM	10.11.CUP3.391
	Job Execution Poli	cv				
A A	Job Execution Poli		#20000			100003
4	↑ ↓ * × ⊘ Tin	ie	Probes		None Antel Nackou	Jobs
4	↑ ↓ ★ X / Tim suspended		5000000000		None (total blackout All	
	↑ ↓ * × ⊘ Tin	e No	5000000000			
44	↑ ↓ ★ X / Tim suspended	e No	5000000000			
4	↑ ↓ ★ X / Tim suspended	e No	5000000000			
4	↑ ↓ ★ X / Tim suspended	e No	5000000000			
44	↑ ↓ ★ X / Tim suspended	e No	5000000000			
44	↑ ↓ ★ X / Tim suspended	e No	5000000000			
44	↑ ↓ ★ X / Tim suspended	e No	5000000000			
4	↑ ↓ ★ X / Tim suspended	e No	5000000000			
4	↑ ↓ ★ X / Tim suspended	e No	5000000000			
	↑ ↓ ★ X / Tim suspended	e No	5000000000			
4	↑ ↓ ★ X / Tim suspended	e No	5000000000			
	↑ ↓ ★ X / Tim suspended	e No	5000000000			
	↑ ↓ ★ X / Tim suspended	e No	5000000000			

- 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 HPE Support.
 - Sending queue should not be accumulating.

	Domains Browser	ILRAUDSDIS1 SRV							
2	C Domains	Refresh							
Integration Studio	- DefaultDomain			_					
-	-@ DVCIUDDD1SR	Last updated: 04/28/2015 1	1;54:32 AM	Running jobs: 19	Total Discovered C	Is in sending queue: 0			
(@)	-@ DVCIUDSDIS1S	Status: Connected		Scheduled Jobs: 18					
	-@ ILRAUDAG2SR\	Probe IP: 10.232.63.45	5	Threads: 39					
Universal Discovery		Progress							
	() ILRAUDSDIS1 SI								
(C)	-(iii) Integration Servic	⇒ Job	Progress	Next invocation	Previous invocation	Triggered Cls	Thread count	Discovered Cls	in Ser
ita Flow Probe Setup	-@ USSTLDDIS01	& MZ_DMZ_SERVE	905	05/08/2015 02:50:28 PM	State State of the State of the State		0	0	
arrise rest solup	- (ii) USSTLSDIS01	A MZ_DMZ_SERVE	74%	05/08/2015 02:58:50 PM	04/28/2015 07:08:08 AM		2	0	
\Diamond		A MZ_EMEA_DESK	Scheduled	04/28/2015 12:00:14 PM	04/28/2015 11:50:14 AM		0	0	
120		A MZ EMEA DESK	Scheduled	05/08/2015 02:58:51 PM	04/28/2015 05:03:31 AM		0	0	
conciliation Priority		A MZ_EMEA_DESK	80%	05/08/2015 02:58:51 PM			0	0	
		A MZ_EMEA_DESK	Scheduled	05/11/2015 03:15:35 PM	04/28/2015 04:59:32 AM		0	0	
6.3		A MZ EMEA DESK	Scheduled	04/28/2015 12:00:14 PM	04/28/2015 11:50:14 AM	1	0	0	
((*))-		A MZ EMEA DESK	50%	05/11/2015 03:02:26 PM	04/28/2015 05:01:17 AM	2	0	0	
apter Management		A MZ EMEA DESK	25%	05/11/2015 03:28:49 PM	04/28/2015 07:08:08 AM	4	0	0	
~		A MZ EMEA DESK	Scheduled	05/11/2015 03:11:23 PM	04/28/2015 05:07:16 AM	2	0	0	
(<u>)</u>		A MZ_EMEA_DESK	0%	05/11/2015 03:22:49 PM	04/28/2015 04:58:30 AM	2	0	0	
UD Community		A MZ_EMEA_SERV	Scheduled	05/08/2015 12:59:02 PM	04/28/2015 11:01:18 AM	16945	0	0	
OD Community		MZ_EMEA_SERV	12%	05/08/2015 12:40:03 PM	04/28/2015 11:52:47 AM	11354	15	0	
		MZ_EMEA_SERV	58%	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	
a Flow Probe Status		A 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	6959	0	0	
		A M7 EMEA VCEN	Scheduled	04/28/2015 12:30:24 BM	04/07/0016 12:30:24 PM	19	0	0	
1000									
Software Library		Discovery Results							
		0 T							
		Fifter: Time Range[All]							_
deling		СІТ		Created	Updated	Delete	d C	Discovered Cls	
		CalHomeEvent	14	5		460	479		2
ta Flow Management		Chassis	9	36		0	174		
ninistration		ClientServer	3757	0		0	5002		
2.20		Cluster Software	1	0		0	197		
curity		Composition	c03300	0		0	7720079		

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

End-to-End Workflow Walkthrough Guide Step 2. Check UCMDB Server



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.

End-to-End Workflow Walkthrough Guide Relate Two CIs by Using the Properties Widget

a <u>n</u> agers ▼ <u>V</u> iew ▼ <u>T</u> ools ▼	Help -				
<u></u>	Categories	[📄 🚰 🎧 Restore Default	Filter by colu	umn Name
nfrastructure Settings M	<all></all>	1.	. Name	Value	
	Action Limits		Local installation mode perm	True	Defines whether t
	Aging Settings		Show Location Details	True	Specifies whether
B	Class Model Settings		Switch between external an	False	The position of th
Package Manager	DAL Root Class Settings				
	GUI Settings				
	General Settings				
	General properties				
Scheduler	History Settings				
	Integration Settings	0			
	1 LDAP General	ŝ			
	LDAP General Authentication				
State Manager	LDAP Group Definition				
	LDAP Options for Classes an				
Modeling	Mail Settings Map Parameters				
) Data Flow Management	Model Settings	ш.			
g Data How Management	Monitor Settings	ш.			
Administration	Query Operations Settings	ш.			
	Quota Settings	ш.			
Security	Reconciliation Settings				
		-			

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

U	CMDB Browser	Sear	ch Reports Service N	Modeling Notifications	admin 阁 Set	tings 💮 I ?
	Data Flow Probe	⊡ ×	Properties			×
	OVERVIEW O NAVIGA	TION CONTEXT	VIEW MODE 🛑 ED	IT MODE		
	PROPERTIES	B 69 ^ _	CORE			~
	Running on: DiscoveredProductName: Application Category:	shclitvm0398 Data Flow Probe Configuration Mana Show All	DiscoveredProductName: Global Id: Vendor: COMPLEMENTARY	Data Flow Probe 4e46157996ac7966ad342c98 hewlett_packard_enterprise	1d6bf2dd	
	ENVIRONMENT		Application Category: LastModifiedTime:	Configuration Management Sof Monday, March 6, 2017 at 5:52		
	Infrastructure Network	2	Owner:		× +	
	IMPACT SIMULATION	1 	Location: Updated By:	 UCMDBDiscovery: Host Applica	ations by Shell	
	Severity trigger is set to none change severity trigger	e. Expand widger to	ADDITIONAL PROPER	TIES		\sim
	HISTORY	EL ^ V	Save changes	Cancel		

- 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.

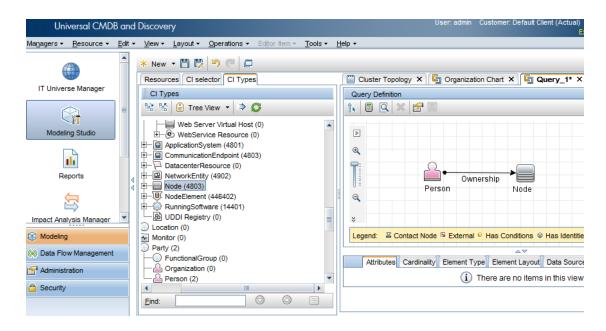
Through Assisted Modeling, you can relate any kind of CIs; you can relate two or more existing CIs, or even create new CIs related to existing CIs.

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.

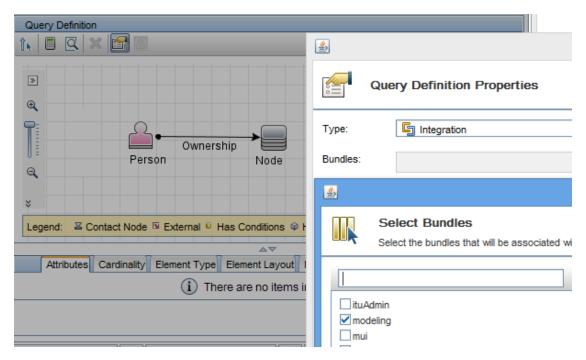
Step 1. Create the modeling query from the UCMDB UI

- 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" in the *HPE Universal CMDB Modeling Guide*.

 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.

CMDB Browser	Search Reports Service Modeling Notifications
Create Service Model	All Services (10)
Start Assisted Modeling	Draft
Find by service name Q	UntitledService_admin_1 BusiniessApplication
All	
Deployed at:	{+} Add Owner

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.

UCMDB Browser	Search	Reports	Service Modeling	Notifications
Start Assisted Modeling				
≡ Back				
ASSISTED MODELING				
Select template		Person Node	0	

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

Person	Assisted Modeling	×
O	Add existing Cl	
		0,
Node	owner1	
	owner2	
	Done	

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.

= Back	Person
ASSISTED MODELING	Person owner1
Select template	
owners_template	Node
Save	O
Clear Assisted Modeling	

7. Click the Plus ticon 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.

Start Assisted	Modeling
----------------	----------

≡ Back	Person
ASSISTED MODELING	Person 🕀
Select template	owner1
Save	
Clear Assisted Modeling	-1512251917 nt 4

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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Just add your feedback to the email and click send.

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