

CA UIM

CA UIM-CABI Jaspersoft Studio Getting Started

CA Services

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Change History

Date	Version	Author	Description of Change
02-05-2018	1.0	Rowan Collis	Initial Version

Abstract

The purpose of this document is to detail the steps to setup Jaspersoft Studio so that CABI dashboards can be edited and created.

It also describes the creation of a basic report which is displayed in UMP with the CABI portlet

Disclaimer

The UIM product doesn't currently promote the editing of CABI dashboards and therefore doesn't describe how this can be done in the UIM online documentation.

However, the Jaspersoft Studio tool is well established and will connect to any installation of UIM CABI in the same way that iReport works with Unified Reporter (which is based on an older version of Jaspersoft).

Users will accept responsibility for any problems created with existing OOTB CABI reports and dashboards as a result of this functionality.

The following information has been tested on version 8.5.1 of UIM.

Pre- Requisites

The desktop or server which Jaspersoft Studio is to be installed on must have direct access to the CABI server AND the CA_UIM database server.

You must have the required permissions to install the Jaspersoft Studio product.

Studio is quite a powerful product and therefore will consume a fair amount of memory and cpu cycles, so it isn't recommended to install this on a Primary Hub or any other hub which is particularly loaded.

Downloads

1. Jaspersoft

The following downloads were used for this instance of Jaspersoft Studio:

TIB_js-jss_6.4.2_windows_x86_64.exe

Which can be found here:

<http://www.jaspersoft.com/download>

Click on the Jaspersoft Studio Pro Edition tab

Click the “Get the download” button

Fill out the details (no activation emails)

Click the “Get the download” button

Select the platform

2. JDBC driver

Also, you will need the JDBC Driver for SQL Server (or Oracle)

Search for “Microsoft JDBC Driver 6.2 for SQL Server” if the following url doesn’t work:

<https://www.microsoft.com/en-us/download/details.aspx?id=55539>

the following EXE version will work for your windows desktop/laptop

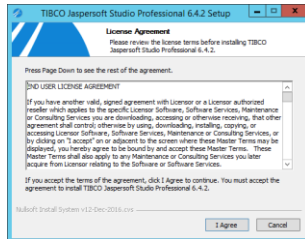
sqljdbc_6.2.1.0_enu.exe

Double click the EXE to unzip the contents to a location of choice.

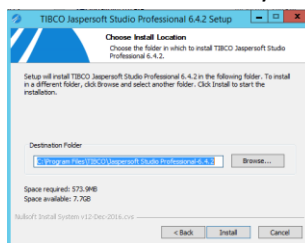
Suggest moving the jar file, mssql-jdbc-6.2.1.jre8.jar to the jaspersoftstudio directory to keep it with the product.

Install Jaspersoft Studio

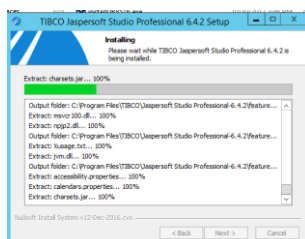
1. Execute the installer - TIB_js-jss_6.4.2_windows_x86_64.exe
2. Accept the license agreement



3. Check install directory



4. Install



5. Complete the install



6. Install the License:

On the CABI server, navigate to

C:\Program Files (x86)\Nimsoft\probes\service\cabi\cabi\jasperserver.license

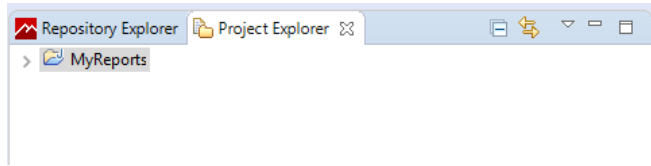
Copy this file to the install directory of Jaspersoft Studio, for example C:\Program files\Tibco

In Studio Go to Help -> License Manager

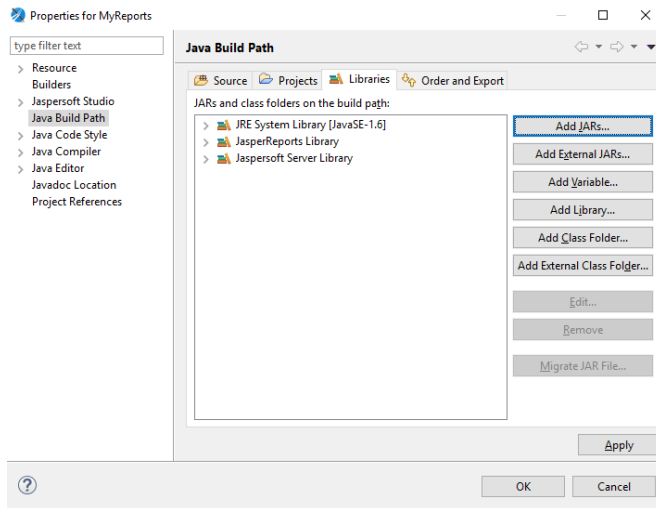
Click the 'Install new license' button and point to the file at the above location, then click Open.

Apply the JDBC driver

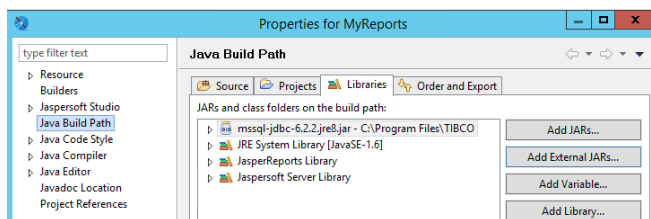
1. Go to the Project Explorer of Studio and select MyReports



2. Then select Project/Properties in the menu:



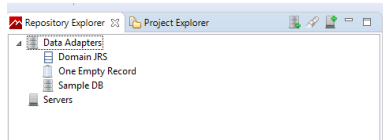
3. Go to Java Build Path and Libraries as above.
4. Click Add External JARs and select the jar file saved in the jaspersoftstudio directory.



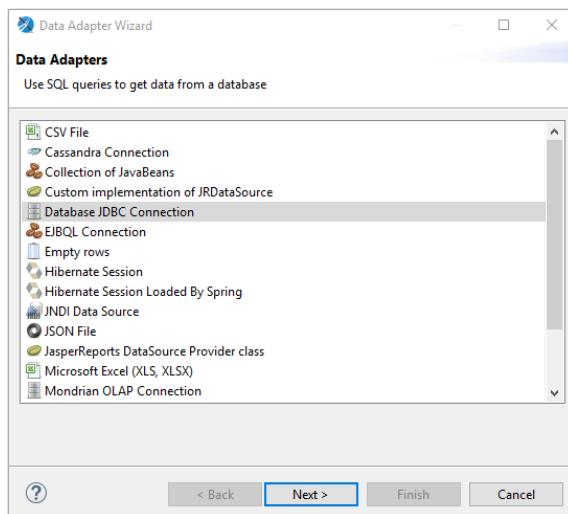
5. And then OK

Create Data Adapter

1. In the Repository Explorer of Studio you should see the following:



2. Right click the Data Adapter and Create Data Adapter:



3. Select Database JDBC Connection and then Next

4. Type the Database instance name and database name with SQL user and password:

Data Adapter Wizard

Database JDBC Connection

Name: CA UIM

JDBC Driver: com.microsoft.sqlserver.jdbc.SQLServerDriver

JDBC Url: jdbc:sqlserver://colro22-i147146:1433;databaseName=CA_UIM

Username: sa

Password:

Attention! Passwords are saved in clear text

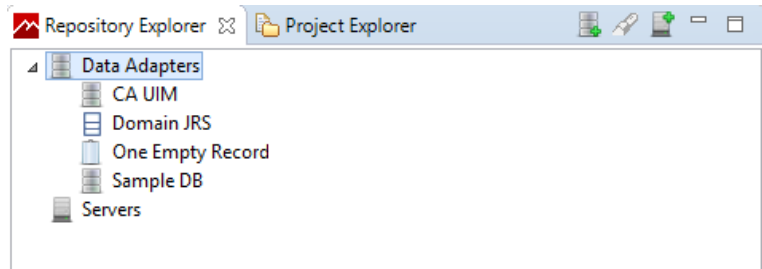
Database Location | Connection Properties | Driver Classpath

? Test < Back Next > Finish Cancel

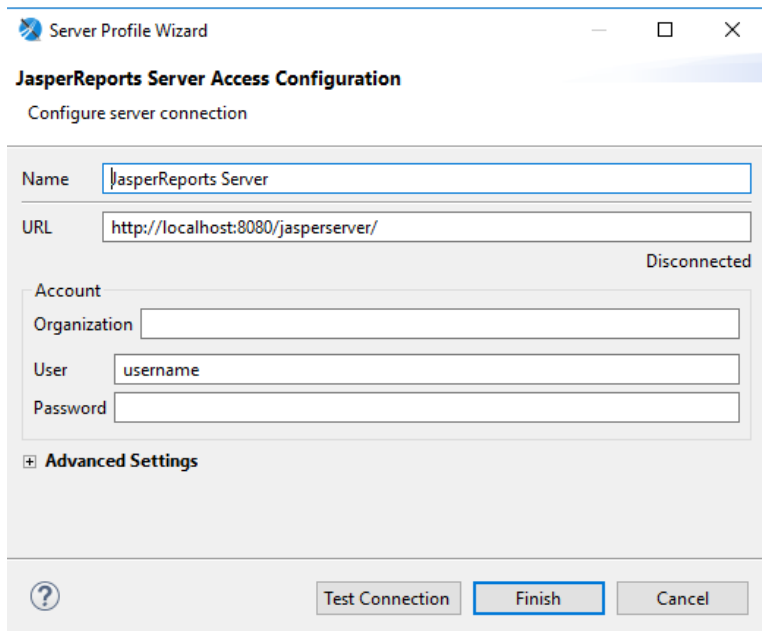
5. And hit the Test button - you should get a Successful message.

Create Server Connection

1. In the Repository Explorer of Studio you should see the following:



2. Right click the Servers to Add Jaspersoft Server Connection



3. Change Localhost to your CABI robot server name and change jasperserver to cabijs

4. And put in superuser and password of your CABI login

Server Profile Wizard

JasperReports Server Access Configuration

Configure server connection

Name:

URL: Connected

Account

Organization:

User:

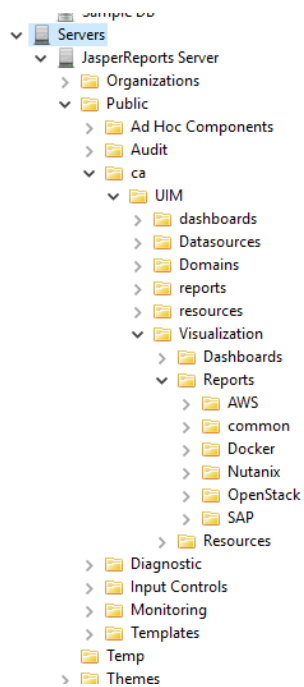
Password:

Advanced Settings

5. And then Test Connection

Et Voila !

After the successful connection message, click Finish and you are good to go.....



Create Basic CABI report

The following is an example of creating a basic report in Studio to demonstrate the techniques used to publish data from a user defined query accessing the UIM database.

Build the SQL query

One method to pull data into a CABI report is to use a SQL query to the CA_UIM database. This is the simplest way to drive a CABI report.

1. Develop the SQL query using SQL Studio similar.

For this example, the following query links some computer system OS data with basic metric data.

Note: this query uses views which are created by the qos_views script which can be found on the communities. (<https://communities.ca.com/docs/DOC-231164743>)

```
select  a.source
        , cs.dedicated
        , cs.os_description
        , cs.os_name
        , cs.os_type
        , cs.os_version
        , CONVERT(DECIMAL(10,2),a.cpu) as cpu
        , CONVERT(DECIMAL(10,2),b.mem) as memory
From (
SELECT cpu.source as source
      ,avg(cpu.samplevalue) as cpu
FROM [CA_UIM].[dbo].[V_QOS_CPU_USAGE] CPU
where cpu.sampletime > dateadd(hh,-1,getdate())
group by cpu.source,cpu.origin
) a
join (
SELECT mem.source as source
      ,avg(mem.samplevalue) as mem
FROM [CA_UIM].[dbo].[V_QOS_MEMORY_PHYSICAL_PERC] mem
where mem.sampletime > dateadd(hh,-1,getdate())
group by mem.source
) b on a.source = b.source
join [CA_UIM].[dbo].[S_QOS_DATA] sqd on sqd.source = b.source
join [CA_UIM].[dbo].[CM_CONFIGURATION_ITEM_METRIC] ccim on sqd.ci_metric_id =
ccim.ci_metric_id
join [CA_UIM].[dbo].[CM_CONFIGURATION_ITEM] cci on ccim.ci_id = cci.ci_id
join [CA_UIM].[dbo].[CM_DEVICE] cd on cci.dev_id = cd.dev_id
join [CA_UIM].[dbo].[CM_COMPUTER_SYSTEM] cs on cs.cs_id = cd.cs_id
where sqd.qos = 'QOS_CPU_USAGE'
AND sqd.source = sqd.target
```

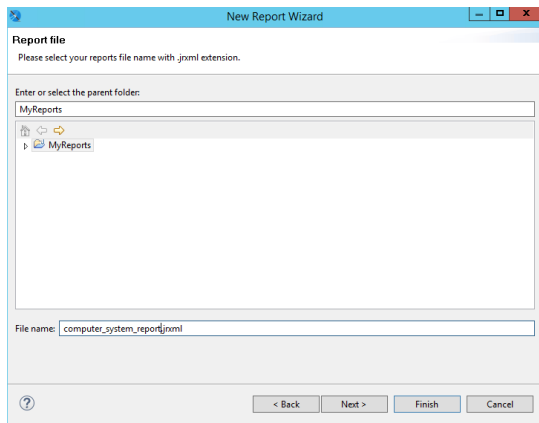
This query produces data like the following:

	source	dedicated	os_description	os_name	os_type	os_version	cpu	memory	
1	colro22	17365	VirtualMachine	Service Pack 0 Build 9600	WindowsServer-2012-R2	Windows	6.3.9600	5.27	50.93
2	colro2	7146	VirtualMachine	Service Pack 0 Build 9600	WindowsServer-2012-R2	Windows	6.3.9600	2.06	87.52
3	colro2	3911	Host	Service Pack 0 Build 9600	WindowsServer-2012-R2	Windows	6.3.9600	2.82	45.11
4	colro2	3103	Host	Service Pack 0 Build 9600	WindowsServer-2012-R2	Windows	6.3.9600	4.36	34.57
5	colro2	7918	VirtualMachine	Linux version 3.10.0-327.el7.x86_64 (mockbuild@x...	Linux	UNIX	3.10	6.86	87.03

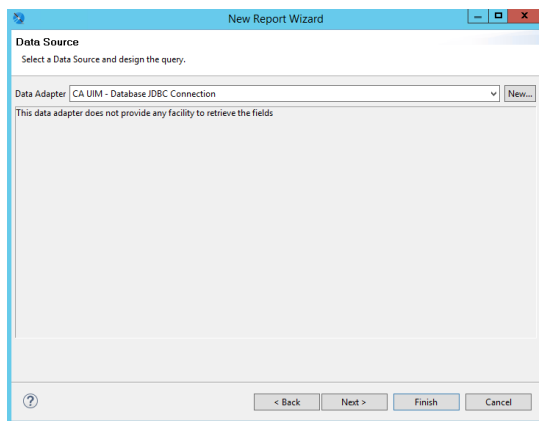
If you don't have the qos_views available to you then you can use the following query which is just the Computer System data:

```
SELECT [name],[origin],[ip],[dedicated],[dns_name],[os_type],[os_name],[os_version],[os_description]
FROM [CA_UIM].[dbo].[CM_COMPUTER_SYSTEM]
where nimbus_type > 0
```

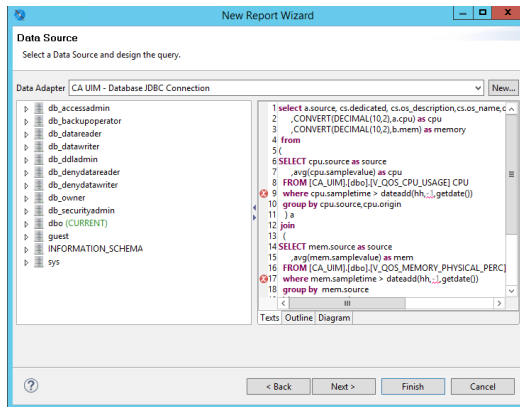
2. Open Jaspersoft studio
3. File/New/Jaspersoft Report
4. Select Blank A4 Landscape / Next
5. Name the jrxml / Next



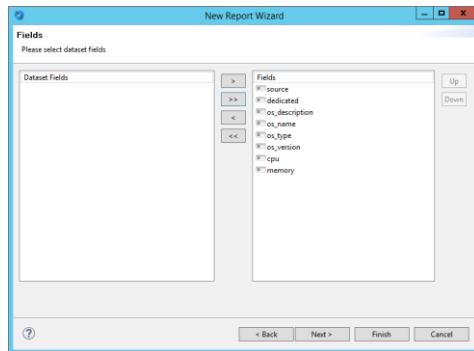
6. Select the Data Adapter that was created previously



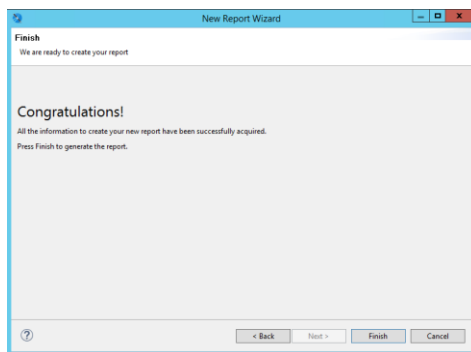
7. Paste the above query (or your own) in the Text Box / Next



8. Select all the fields from the query / Next /Next (no grouping)



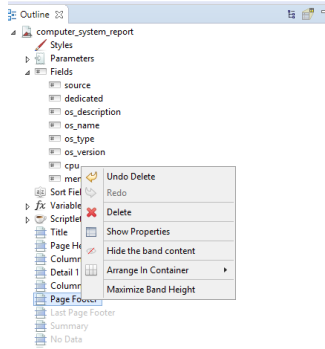
9. Finish



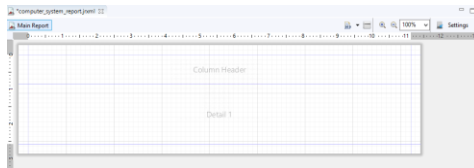
That has completed the data source setup and will present a blank canvas

Report Design

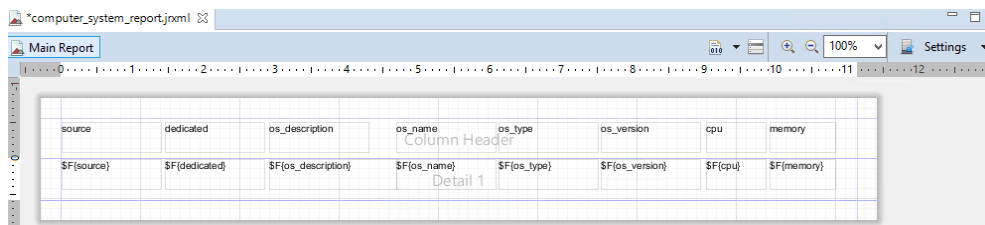
10. Left hand Outline pane – delete the unwanted Bands – all except Column Header and Detail 1 – right click/delete



11. The report now looks like this:



12. Select the Column Header and make the height about 40px (right hand pane – Band Properties)
13. Select the Detail 1 Band and make the height about 35px (right hand pane – Band Properties)
14. Drag each of the fields from the Outline pane to the Detail 1 Band on the Main report, making sure the fields are within the band and all aligned (use the X/Y location right pane)



15. File / Save

16. Preview the report in the centre pane

computer_system_report.xml

CA UIM

Java

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100%

source	dedicated	os_description	os_name	os_type	os_version	cpu	memory
colo2Z ' 7365	VirtualMachine	Service Pack 0 Build 9600	WindowsServer-2012- Windows R2		6.3.9600	5.34	50.99
colo2Z ' 146	VirtualMachine	Service Pack 0 Build 9600	WindowsServer-2012- Windows R2		6.3.9600	1.99	87.51
colo2Z ' 911	Host	Service Pack 0 Build 9600	WindowsServer-2012- Windows R2		6.3.9600	2.78	45.14
colo2Z ' 103	Host	Service Pack 0 Build 9600	WindowsServer-2012- Windows R2		6.3.9600	4.40	34.60
colo2Z ' 918	VirtualMachine	Linux version 3.10.0-327.el7.x86_64	Linux	UNIX	3.10	6.81	87.09

Design

Source

Preview

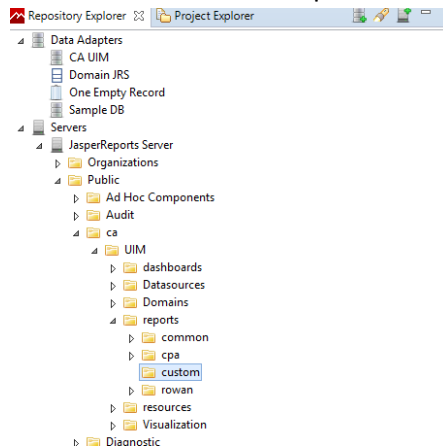
Report State

17. Ideally the Band's should be thinner and the text smaller but those are cosmetic changes which can be applied afterwards or you can go back to the Design tab to rework.

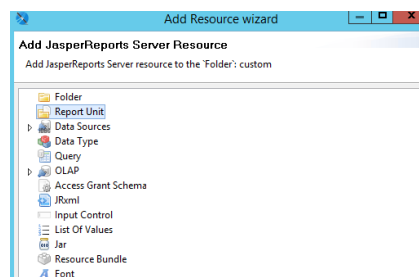
18. This is saved locally, under the user profile in JasperWorkspace/My Reports.

Upload to Repository

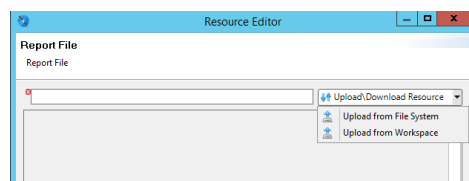
19. Navigate to the Repository Explorer to upload to the repository
20. Create a new folder in Report folder called “custom”



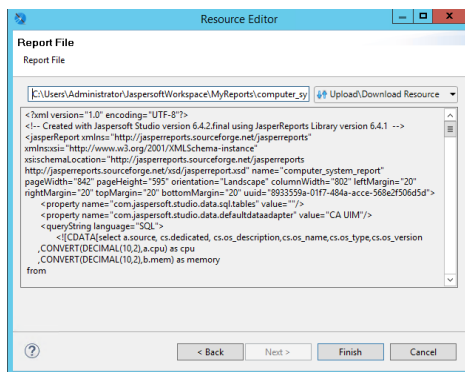
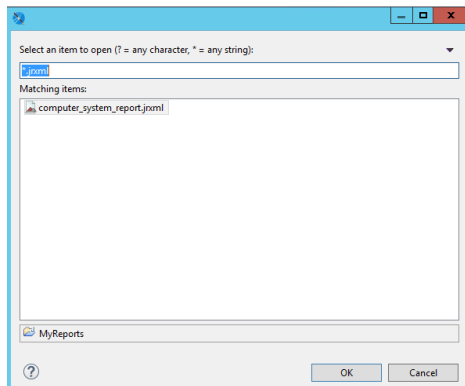
21. Right click/New on the folder and select Report Unit



22. Give the report a name “Computer System”, then Next
23. Click “Upload from Workspace”

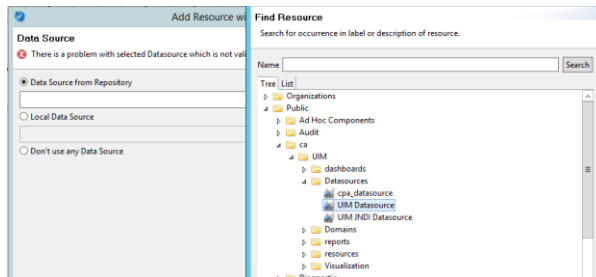


24. Select your saved report



25. Then Finish

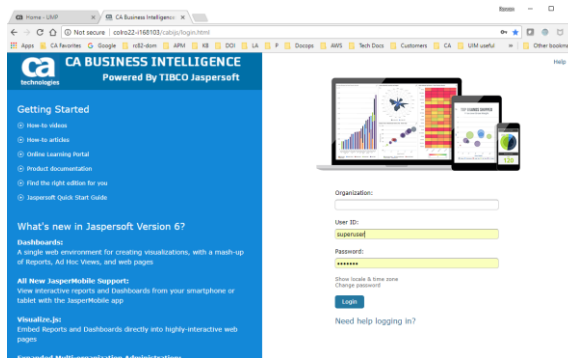
26. Select datasource from repository



27. Then Finish

Display the report in CABI

28. Login to CABI



29. Click Library

30. Locate your report “Computer System”

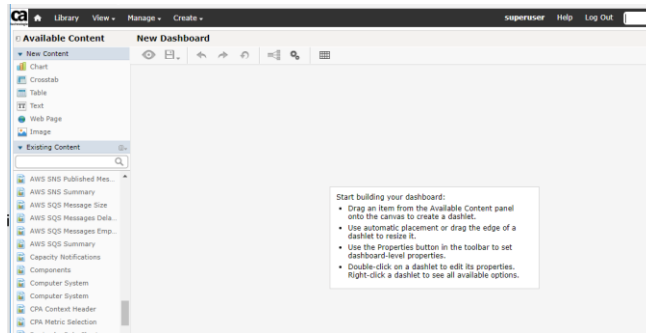
31. Click on the report to run the report.

source	dedicated	os_description	os_name	os_type	os_version	cpu	memory
osro22-1285	VirtualMachine	Service Pack 0 Build 9500	WindowsServer-2012- Windows R2		6.3.9500	5.84	58.04
osro22-146	VirtualMachine	Service Pack 0 Build 9500	WindowsServer-2012- Windows R2		6.3.9500	2.09	87.51
osro22-1811	Host	Service Pack 0 Build 9500	WindowsServer-2012- Windows R2		6.3.9500	2.80	45.85
osro22-123	Host	Service Pack 0 Build 9500	WindowsServer-2012- Windows R2		6.3.9500	5.85	35.56
osro22-11818	VirtualMachine	Linux version 3.10.0-327.el7.x86_64	Linux	UNIX	3.10	10.54	91.80

Create CABI dashboard

To display the report in the CABI UMP portlet, the report needs to be contained inside a dashboard. This does mean you can put multiple reports in one dashboard.

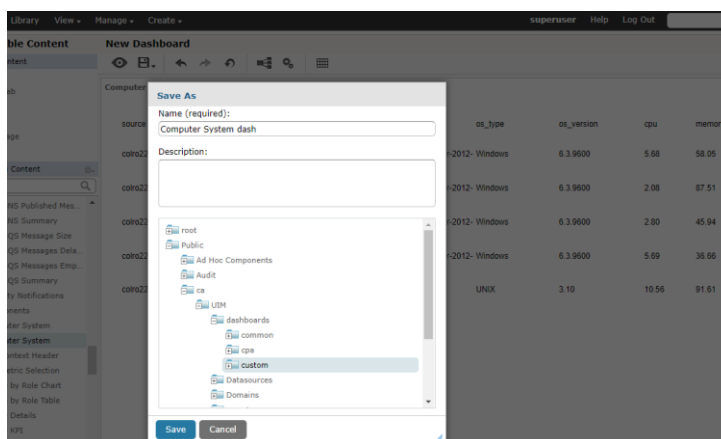
32. Within CABI, Create Dashboard



33. Locate your report in the bottom left pane (check with mouseover to reveal location)

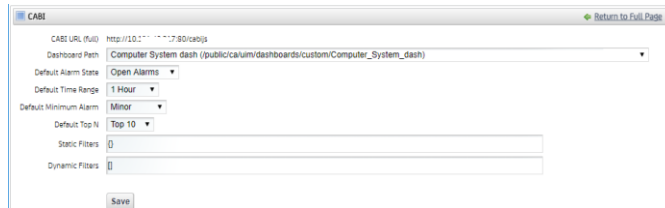
34. Drag to right pane

35. Save Dashboard (create a custom folder in the repository explorer in Studio)



Display in UMP

36. Logon to UMP
37. Create a new page and deploy the CABI portlet
38. Go to the Properties (spanner icon) on the top right of the portlet
39. Select the dashboard in the dropdown, save.



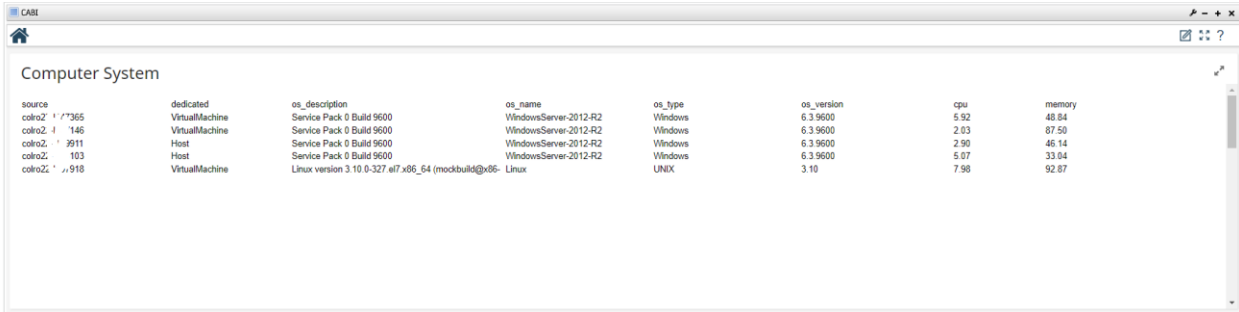
The screenshot shows the 'CABI' configuration window. At the top, there is a 'Return to Full Page' link. Below it, the 'CABI URL (Full)' is set to 'http://10.1.1.1:780/cabijs'. The 'Dashboard Path' is set to 'Computer System dash (public/um/dashboards/custom/Computer_System_dash)'. The 'Default Alarm State' is 'Open Alarms', 'Default Time Range' is '1 Hour', 'Default Minimum Alarm' is 'Minor', and 'Default Top N' is 'Top 10'. There are fields for 'Static Filters' (set to 0) and 'Dynamic Filters' (set to 1). A 'Save' button is at the bottom.

40. Display the dashboard

Now go back to Studio to improve the presentation!

How to Edit a Report and Upload to Repository

1. Open Studio
2. Expand Project Explorer
3. Edit the original jrxml not the one which has been placed in the hierarchy by the original upload, which is called Main_Jrxml.
4. Double click <report_name>.jrxml (must be a jrxml suffix).
5. Make your changes to the Report.
Try changing the field text sizes (eg 6px) and report properties:page format (to reduce the border size to 5px)
6. Hit the “X” for the Main Report window and it will invite you to Save, click Yes
7. Open Repository Explorer and navigate to the Report Unit.
8. Right click Report Unit/Properties
9. Change the local Resource with the 3 dots ...
10. Upload from Workspace
11. Select the Jrxml which has just been edited.
12. Finish
13. Finish
14. View updates in UMP



The screenshot shows the CABI application window with a table titled "Computer System". The table has 8 columns: source, dedicated, os_description, os_name, os_type, os_version, cpu, and memory. The data is as follows:

source	dedicated	os_description	os_name	os_type	os_version	cpu	memory
colro2: * / 7365	VirtualMachine	Service Pack 0 Build 9600	WindowsServer-2012-R2	Windows	6.3.9600	5.92	48.84
colro2: * / 146	VirtualMachine	Service Pack 0 Build 9600	WindowsServer-2012-R2	Windows	6.3.9600	2.03	87.50
colro2: * / 9911	Host	Service Pack 0 Build 9600	WindowsServer-2012-R2	Windows	6.3.9600	2.90	46.14
colro2: * / 103	Host	Service Pack 0 Build 9600	WindowsServer-2012-R2	Windows	6.3.9600	5.07	33.04
colro2: * / 918	VirtualMachine	Linux version 3.10.0-327.el7.x86_64 (mockbuild@x86-	Linux	UNIX	3.10	7.98	92.87