

Camstar Connection Module

The Camstar Connection Module is a Mendix module developed to help speed up the process of connecting to a Camstar instance from a Mendix application. After a connection is made, an app developer can then use pre-configured Camstar Services to pull data from the Camstar instance. Sample json, mappings, domain, microflows and pages are included in the module and can be wired directly into an existing Mendix Application.

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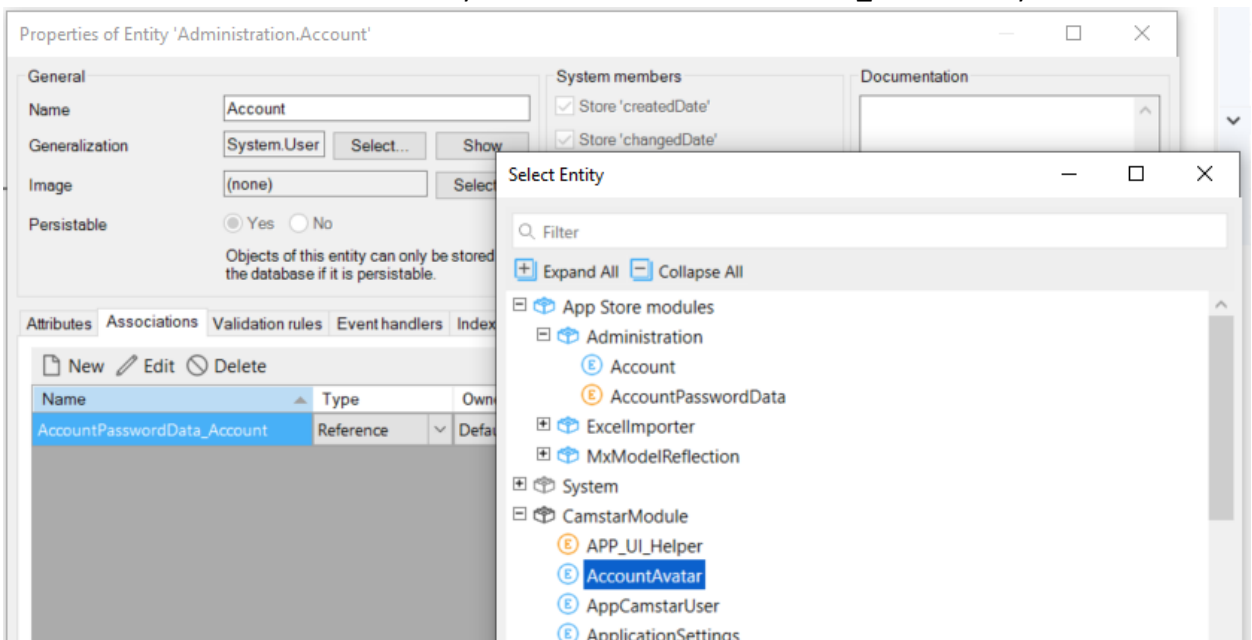
Install Steps

1. Start with an existing App or with a Blank App
2. Add the MxModelReflection module, and ExcellImport module to the app via the App Store
3. Import the CamstarModule.mpk

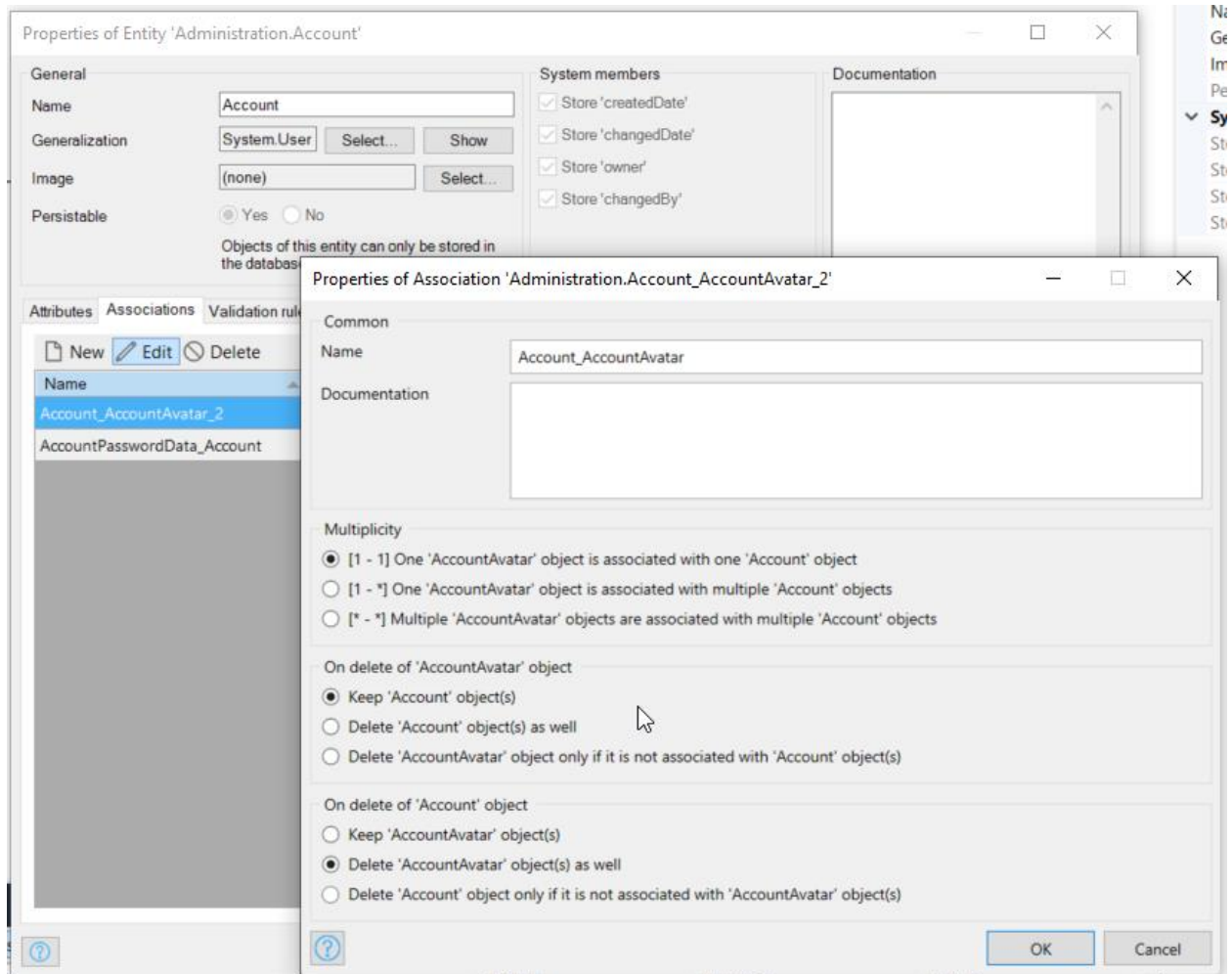
Note. The project will display some errors after the CamstarModule is imported... these errors will be fixed in the next step.

Error Code	Message	Element	Document	Module
1	The selected association 'Administration.Account_AccountAvatar' no longer exists.	Property 'Association' of acc...	Domain model	CamstarModule
2	The selected association 'Administration.Account_AccountAvatar' no longer exists.	Property 'Association' of acc...	Domain model	CamstarModule
3	The selected association 'Administration.Account_AccountAvatar' no longer exists.	Property 'XPath constraint' o...	Domain model	CamstarModule
4	The selected association 'Administration.Account_AccountAvatar' no longer exists.	Property 'Association' of acc...	Domain model	CamstarModule

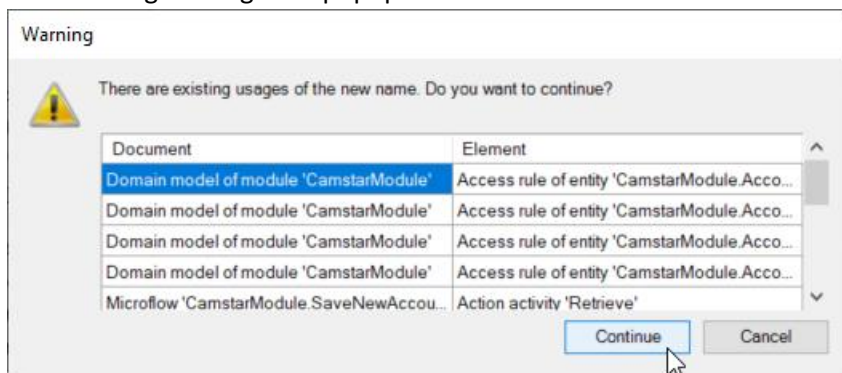
4. Wire the Administration **Account** entity to the CamstarModule **Account_Avatar** entity.



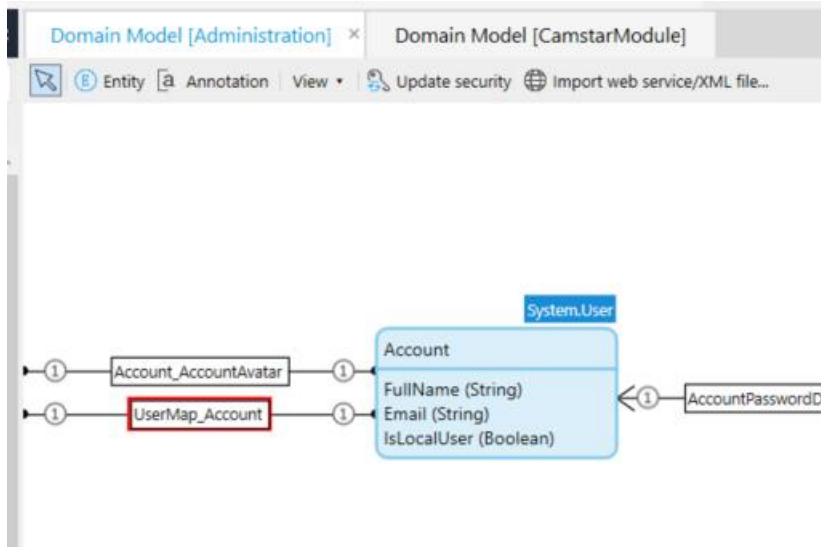
The relation name should be **Account_AccountAvatar**.



This warning message will popup.... Just click on the **Continue** button.



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Note: All the Errors in the project will be resolved once the **Account_AccountAvatar** relation has been configured...

5. If security has been enabled for your project, verify that the Account entity security is set properly with the addition of the **Account_AccountAvatar** and **UserMap_Account** relations.

Module Security Type 'Security'

Note: Changes you make here modify the domain model.

Entity	Module roles	Create	Delete	Member access	XPath constraint
Account	Administrator	Yes	Yes	Full Read, Limited Write	
Account	User	No	No	Full Read, No Write	
Account	User	No	No	Full Read, Full Write	[id='[%CurrentUser%]']
AccountPasswordData	Administrator, User	No	No	Full Read, Limited Write	

Edit Access Rule of Entity 'Administration.Account'

Documentation

Rule applies to the following module roles

☒ Administrator
☐ User

☒ Select / deselect all

Access rights XPath constraint

Create and delete rights

☒ Allow creating new objects ☒ Allow deleting existing objects

Member read and write rights

Default rights for new members ☐ None ☐ Read ☒ Read, Write

Member	Access rights
FullName (String (200))	Read, Write
Email (String (200))	Read, Write
IsLocalUser (Boolean)	Read
CamstarModule.UserMap_Account (CamstarModule.IntegrationUserMap)	Read, Write
Administration.Account_AccountAvatar (CamstarModule.AccountAvatar)	Read, Write

Set all to

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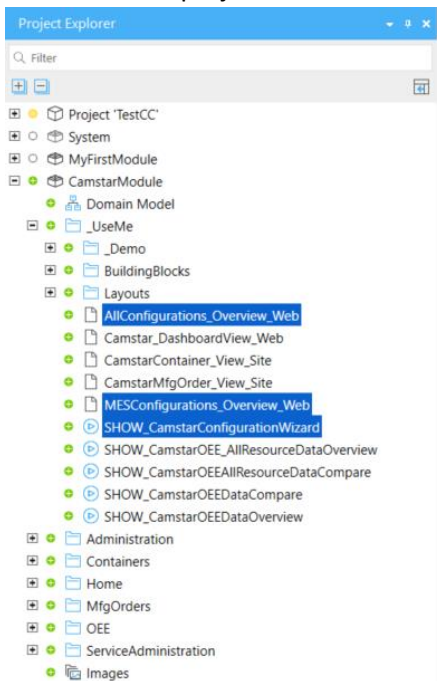
6. Three administration menu items need to be wired into the existing app as shown below.

Menu

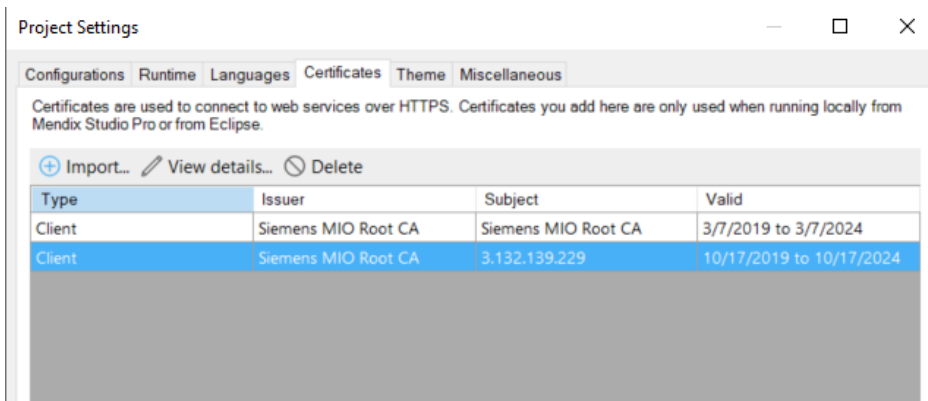
New item New subitem Edit Delete Go to target Expand all Collapse all Role-based view

Caption	Action	User Roles
Administration		
App Configurations	Open page 'CamstarModule.AllConfigurations_Overview_Web'	Administrator
MES Configurations	Open page 'CamstarModule.MESConfigurations_Overview_Web'	Administrator
MES Connection Wizard	Call microflow 'CamstarModule.SHOW_CamstarConfigurationWizard'	Administrator

The two pages and one microflow are located in the **_UseMe** folder inside the **CamstarModule** module of the project.



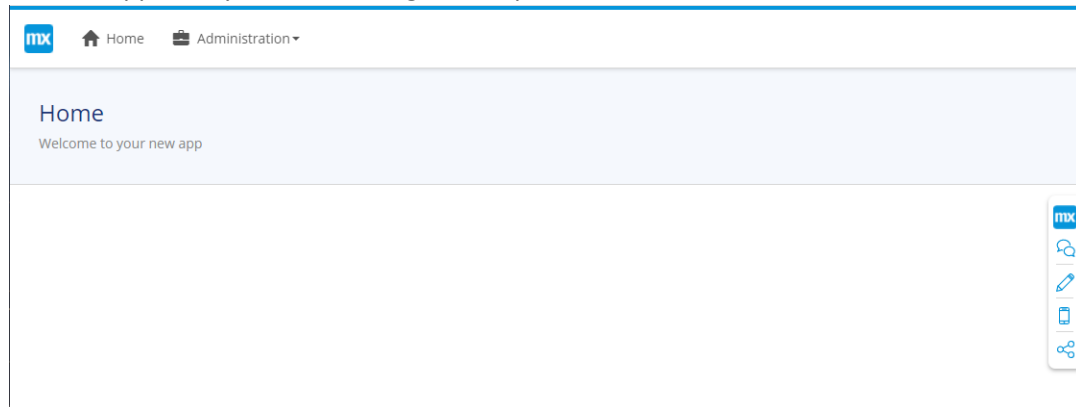
7. Add the Certificate for the Camstar Sites...



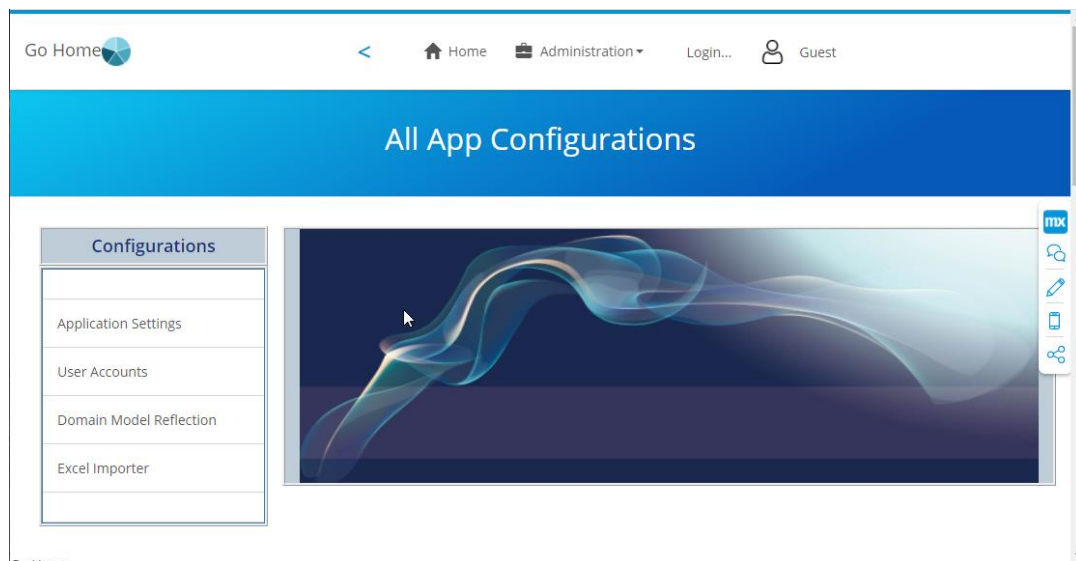
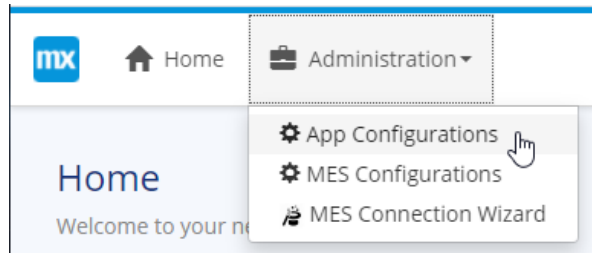
Note: At this point, the **CamstarModule** module has been successfully installed into your existing application... this would be a good time to commit all the changes into the TeamServer.

Configuration Steps

1. Run the app locally and view using the Responsive Browser...

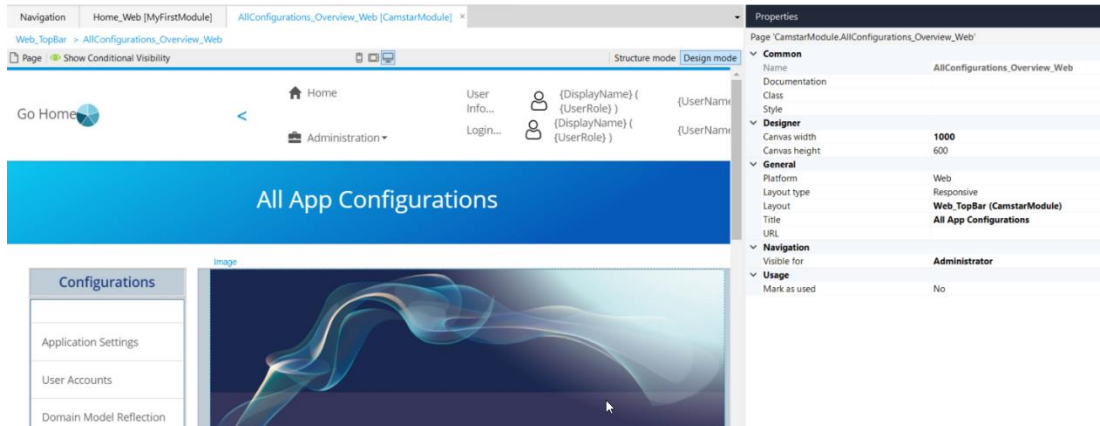


2. Go to the **App Configurations** page.



Notes:

- Notice that the Top Menu Bar and Footer of the page seem a bit off... that is because all the pages that come with the CamstarModule use a custom Layout (Web-TopBar) which uses custom styling.



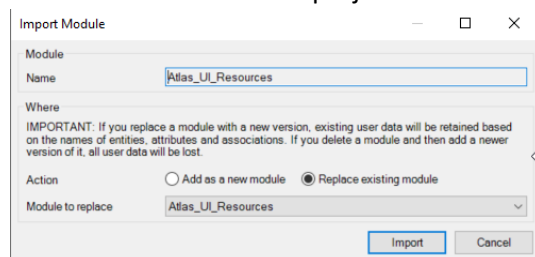
- If your Application already has custom styling applied, then simply replace the **Web_TopBar** Layout on any of the **CamstarModule** module pages with the Layout of choice from your Application.
- If portions of the **CamstarModule** module custom SASS need to be pulled into your application, then those pieces will have to be manually copied from the **UI_Resources** folder provided with the CamstarModule resource pack.

Camstar Connector > CamstarConnectionModule

Name

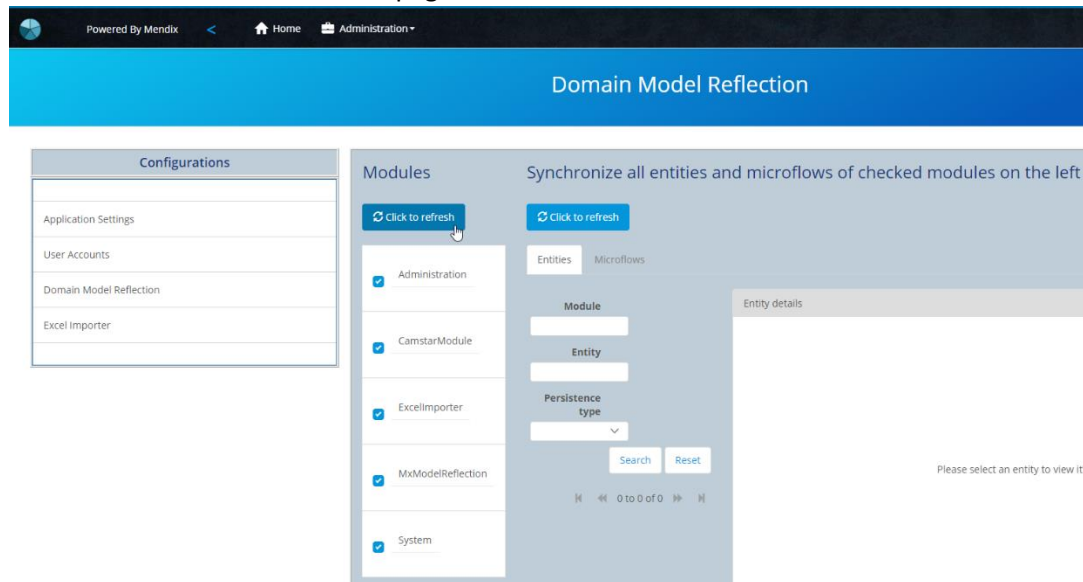
- UI_Resources
- acme_manufacturing_cert_A.pfx
- acme_manufacturing_cert_B.pfx
- acme_manufacturing_cert_C.pfx
- Atlas_UI_Resources.mpk
- Camstar Connection Module.docx
- CamstarModule.mpk
- CamstarServices.xls
- ExcelTemplate_Load CamstarService.xml

- If the Application does not have any custom styling applied and you would like to use the custom styling that comes with the CamstarModule, then simply Import the **Atlas_UI_Resources.mpk** into the project... overwriting the original **Atlas_UI_Resources** module that exists in the project.

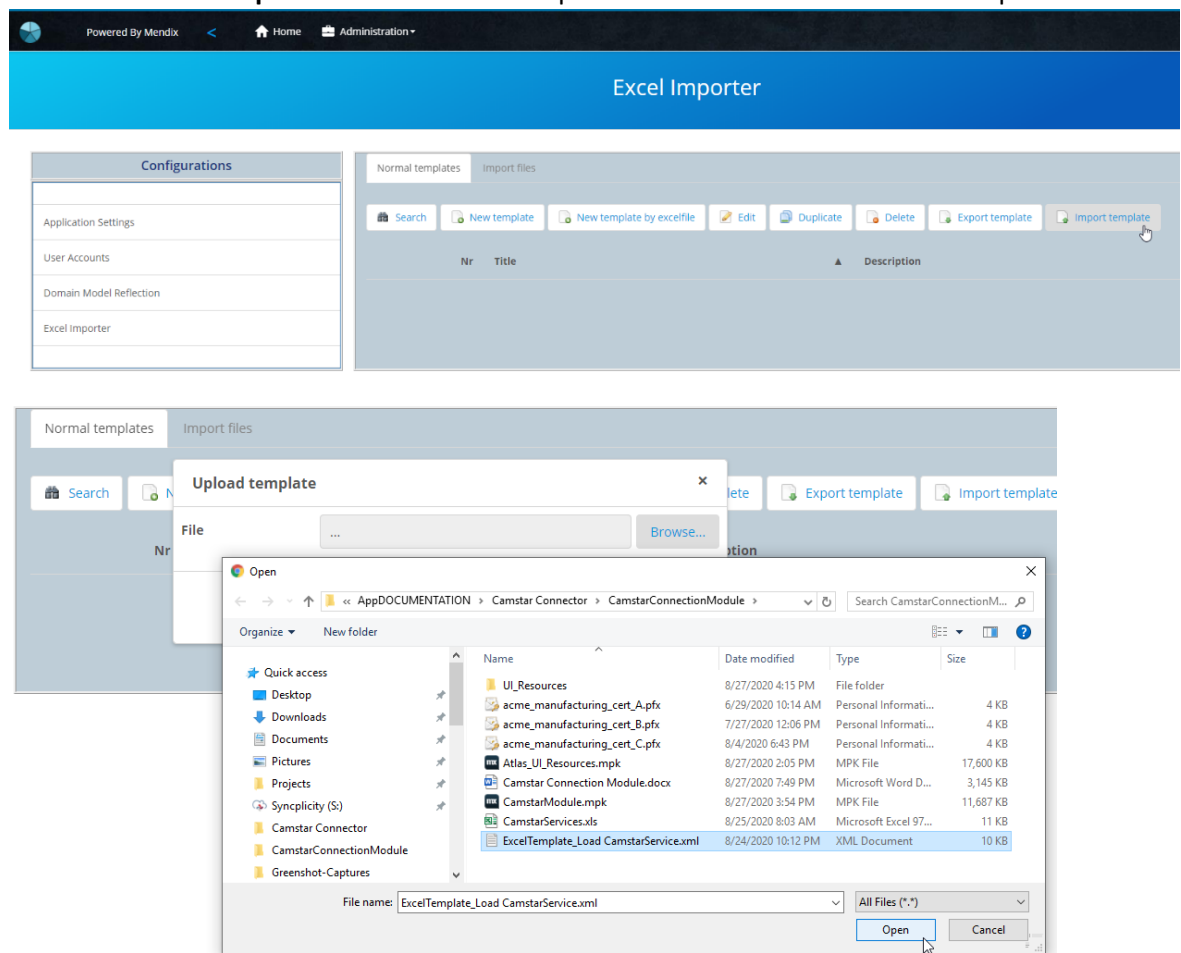


- All screenshots in the rest of this document were taken after the custom **Atlas_UI_Resources.mpk** was imported into the project. If you do not use the custom Atlas_UI_Resources.mpk then your screens from this point forward will look different!

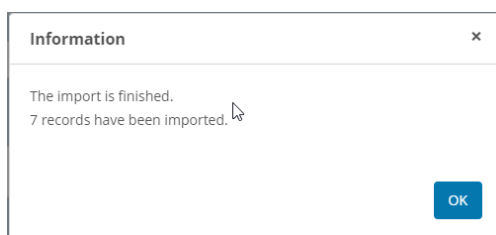
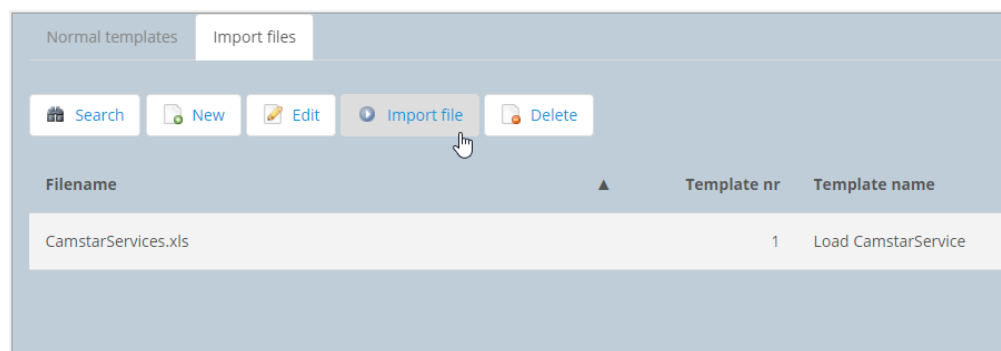
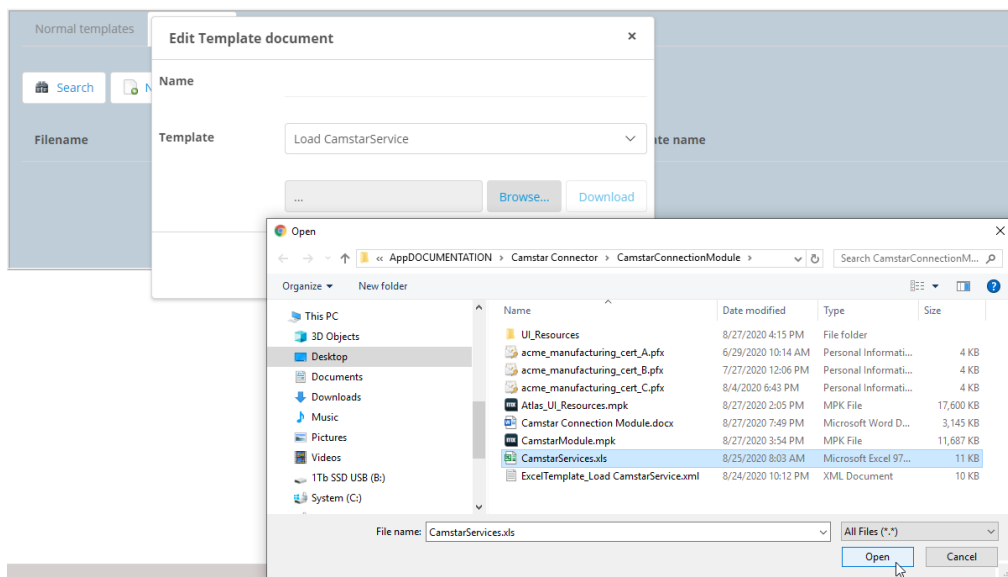
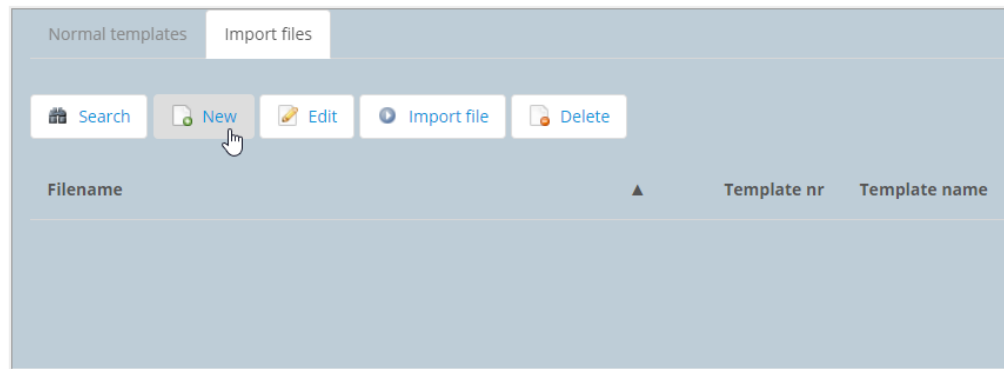
3. Click on the **Domain Model Reflection** menu item, then proceed to refresh all the Modules in the Domain Model Reflection page.



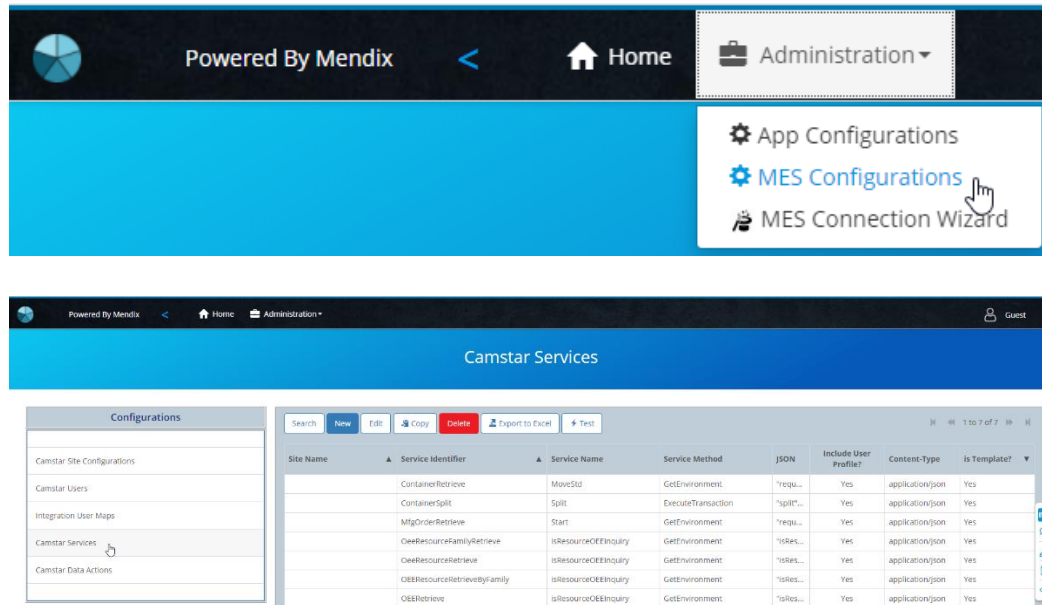
4. Click on the **Excel Importer** menu item and Import in the **Load CamstarService** template.



5. Go to the **Import files** tab and import the **CamstarService.xls** file that comes with the CamstarModule resource pack.

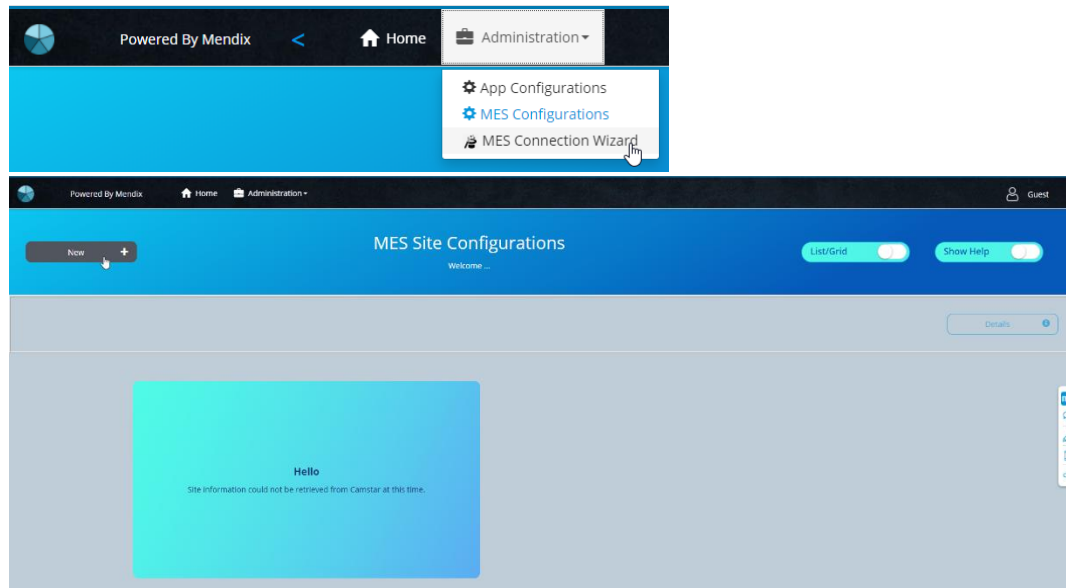


Note: The imported Camstar Services can be found in the **Administration/MES Configurations/Camstar Services** page...



The final step of the configuration is to configure the app to a Camstar instance or site that can be accessed via the Cloud.

- Click on the **Administration/MES Connection Wizard/New +** button to walk through the process of connecting to a Camstar Site.



- Enter the Site Name of the Camstar instance you would like to connect to.

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Camstar Configuration Wizard

Setup this Application to connect to a Camstar Instance...

Start > Creating Configuration > Adding Services > Complete

1. Enter a Site Name below.
2. Click on the Start > button to begin configuration of a new Site...

Site Name

My MES Site

8. Enter in the Site Protocol, Domain, Default User Profile Name and Password.

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Camstar Configuration Wizard

Start > Creating Configuration > Adding Services > Complete

1. Enter the Site Protocol and Domain.
2. Enter the Default User Profile Name and Password.

Note: Request information for 1 and 2 above from the Camstar Site administrator.

3. Click on the Next > button to continue configuration of new Site "My MES Site"...

Site Name

My MES Site

Opcenter Core Title

Opcenter CORE Application - My MES Site

Site Protocol and Domain

https://ec2-3-132-139-225-us-east-2.compute.amazonaws.com

--- Default REST call authentication ---

Default User Profile Name

CamstarAdmin

Default User Profile Password

9. Add the required Camstar Services you will be using in your app to pull out Camstar data for display inside your application.

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Camstar Configuration Wizard

Start > Creating Configuration > Adding Services > Complete

2. Click on the Next > button to finalize adding Site Services to Site "My MES Site"...

--- Add from available Service templates ---

✓ Add Service

Template Service Identifier	Service Name	Service Method	Include User Profile?	Content-Type
ContainerRetrieve	MoveStd	GetEnvironment	Yes	application/json
ContainerSplit	Split	ExecuteTransaction	Yes	application/json
MfgOrderRetrieve	Start	GetEnvironment	Yes	application/json

+ New Edit Copy Delete Test

Service Identifier	Service Name	Service Method	Include User Profile?	Content-Type
OeeResourceFamilyRetrieve	IsResourceOEEInquiry	GetEnvironment	Yes	application/json
OeeResourceRetrieve	IsResourceOEEInquiry	GetEnvironment	Yes	application/json
OEEResourceRetrieveByFamily	IsResourceOEEInquiry	GetEnvironment	Yes	application/json
OEERetrieve	IsResourceOEEInquiry	GetEnvironment	Yes	application/json

10. Each Service can be tested to make sure the service has been exposed in the Camstar site you are trying to connect to.

Site Services
Route the Service as a REST call.

New Edit Copy Delete Test

Service Identifier	Service Name	Service Method	Include User Profile?	Content-Type
OeeResourceFamilyRetrieve	IsResourceOEInquiry	GetEnvironment	Yes	application/json
OeeResourceRetrieve	IsResourceOEInquiry	GetEnvironment	Yes	application/json
OeeResourceRetrieveByFamily	IsResourceOEInquiry	GetEnvironment	Yes	application/json
OeeRetrieve	IsResourceOEInquiry	GetEnvironment	Yes	application/json

Close

The result of the service call can be seen in the REST Result popup as shown below.

REST Result

Service

https://ec2-3-132-139-229.us-east-2.compute.amazonaws.com/CamstarWCFServices/IsResourceOEInquiryService.svc/web/GetEnvironment

JSON Request

Tree Text

```
{
  "userProfile": {
    "Name": "CamstarAdmin",
    "Password": {
      "Value": "Cam1star",
      "IsEncrypted": false
    }
  },
  "IsResourceOEInquiry": {
    "request": {
      "Info": {
        "IsResourceOEInquiry_Info_IsResourceFamily": {
          "RequestSelectionValues": true
        }
      }
    }
  }
}
```

Content-Type

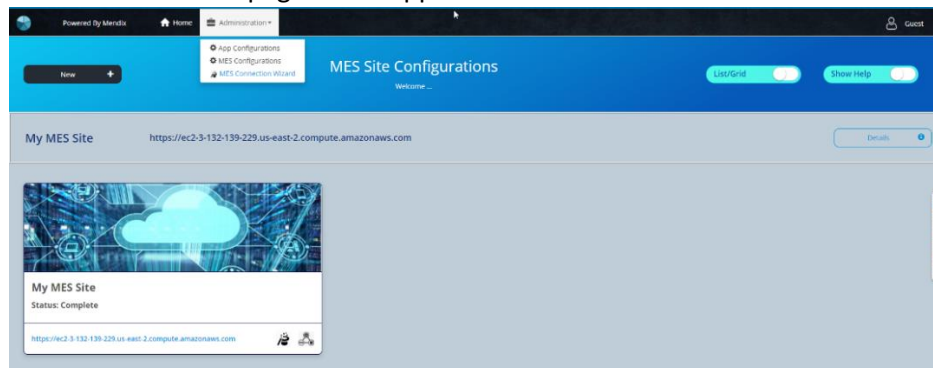
application/json

JSON Response

Tree Text

```
{
  "Name": "LastRetrieveBy",
  "TypeCode": 18
}, {
  "Rows": [
    {
      "Values": [
        "3G Lens Lines",
        "false",
        "001edc800000007f",
        "",
        "2019-12-04T16:42:43.967+00:00",
        "2019-12-04T21:42:43.967+00:00",
        "CamstarAdmin"
      ]
    }, {
      "Values": [
        "Assy Machines",
        "false",
        "001edc8000000002",
        "",
        "2019-10-10T13:46:13.787+00:00",
        "2019-10-10T13:46:13.787+00:00",
        "CamstarAdmin"
      ]
    }, {
      "Values": [
        "Formulation Rooms",
        "false",
        "001edc8000000004",
        "",
        "2019-10-10T13:46:13.977+00:00",
        "2019-10-10T13:46:13.977+00:00",
        "CamstarAdmin"
      ]
    }
  ]
}
```

- Once the wizard is finished, the configured site shows up in the **Administration/MES Connection Wizard** page of the application.



Congratulations, you have successfully configured a connection from your application to a Camstar instance.

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Using the sample Camstar Module MES Pages

1. The Camstar Module has a special microflow that can be used to take a user(after logging in) directly to a page where all configured Camstar instances are displayed. It is not necessary to use this microflow as the Default home page, but if that behavior is desired for your application, then simply wire in the **Default Home page** to microflow **ACT_EnterHome_Web** for your project's navigation profile.

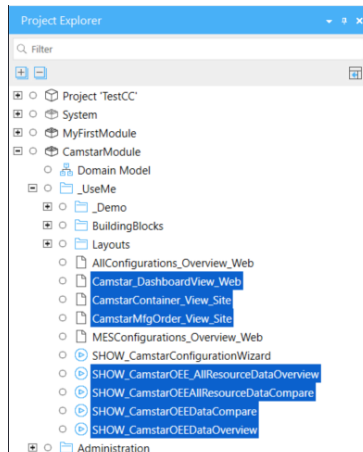
The screenshot shows the 'Navigation' window with the 'Profiles' tab selected. Under the 'Responsive' section, the 'Hybrid phone app online' profile is active. The 'General' section shows the 'Application title' as 'Camstar Connection Module' and the 'Application icon' as 'Atlas_UI_Resources.Content.Mendix'. The 'Home pages' section shows the 'Default home page' as 'CamstarModule.ACT_EnterHome_Web'. The 'Authentication' section shows the 'Sign-in page' as '(none)' and the 'Page title' as 'Override page title'.

2. Follow this step to utilize some or all of the sample MES pages that pull and show different types of Camstar data in your Mendix application. Wire in the MES Menu & Sub Menu items as shown below.

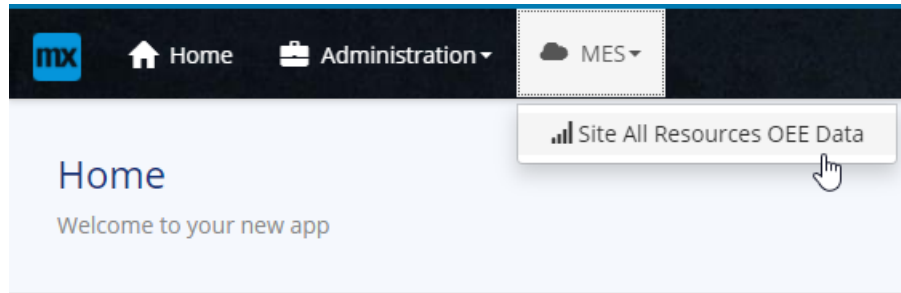
The screenshot shows the 'Menu' configuration window. The 'Caption' column lists the menu items, and the 'Action' column lists the corresponding microflows. The 'User Roles' column lists the roles that can access each item.

Caption	Action	User Roles
Administration		
MES		
Dashboard	Open page 'CamstarModule.Camstar_DashboardView_Web'	Administrator, User
Site Containers	Open page 'CamstarModule.CamstarContainer_View_Site'	Administrator, User
Site Mfg Orders	Open page 'CamstarModule.CamstarMfgOrder_View_Site'	Administrator, User
Site OEE Data	Call microflow 'CamstarModule.SHOW_CamstarOEEDataOverview'	Administrator, User
Site All Resources OEE Data	Call microflow 'CamstarModule.SHOW_CamstarOEE_AllResourceDataOverview'	Administrator, User
Site OEE Compare	Call microflow 'CamstarModule.SHOW_CamstarOEEDataCompare'	Administrator, User
Site All Resources OEE Compare	Call microflow 'CamstarModule.SHOW_CamstarOEEAllResourceDataCompare'	Administrator, User

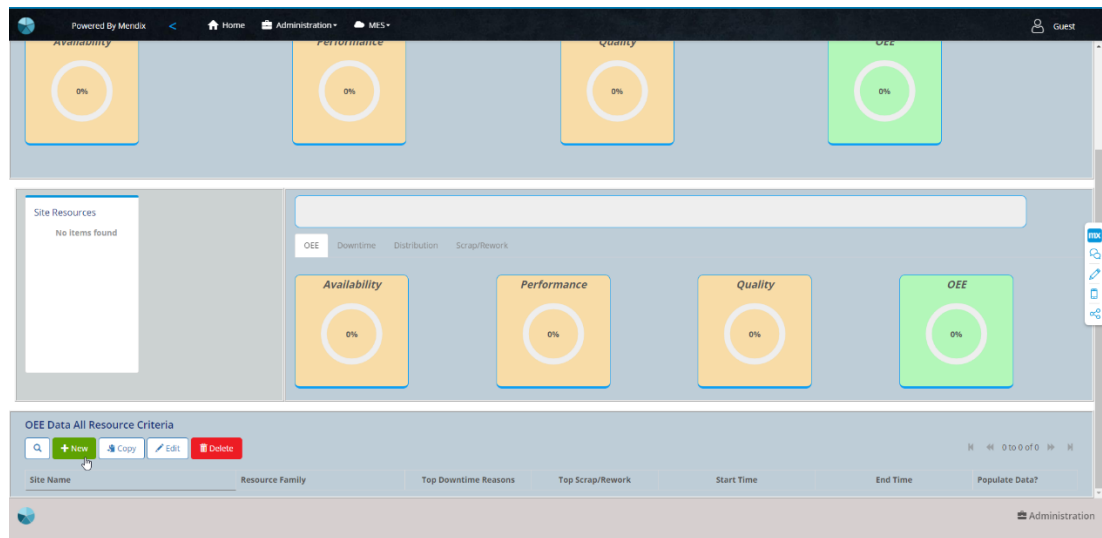
The three pages and four microflows are located in the **_UseMe** folder inside the **CamstarModule** module of the project.



3. After wiring in the sample pages and/or microflows in the MES menu, save and run your application locally. Click on the MES/<xxx> sample menu item you wired in...



4. For the OEE data, you will have to configure Resource Criteria in your app before actually pulling any data from the configured Camstar instance. Click on the +New button as shown below...

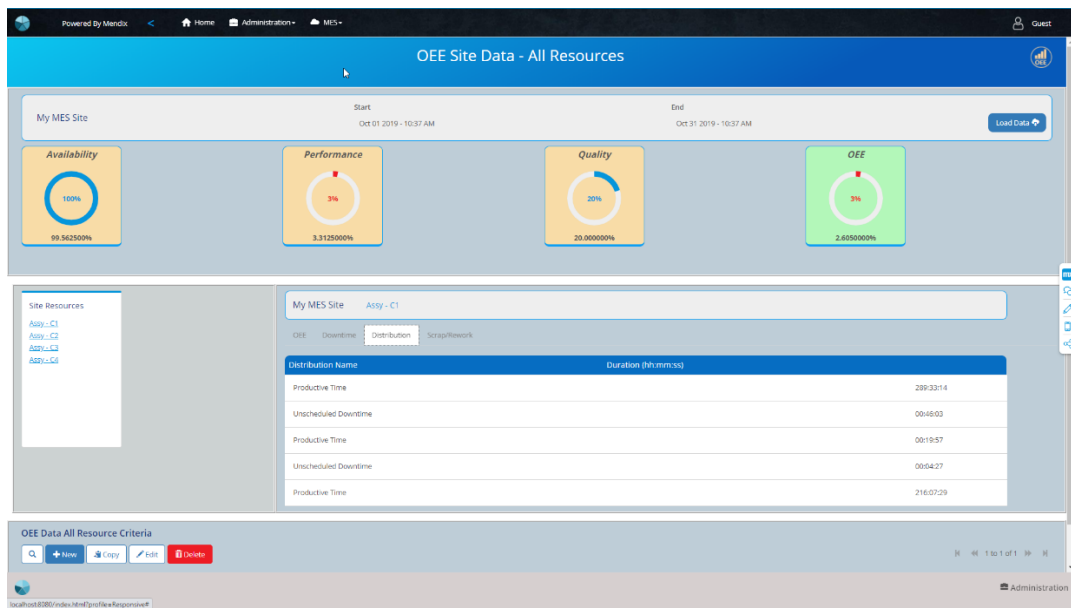
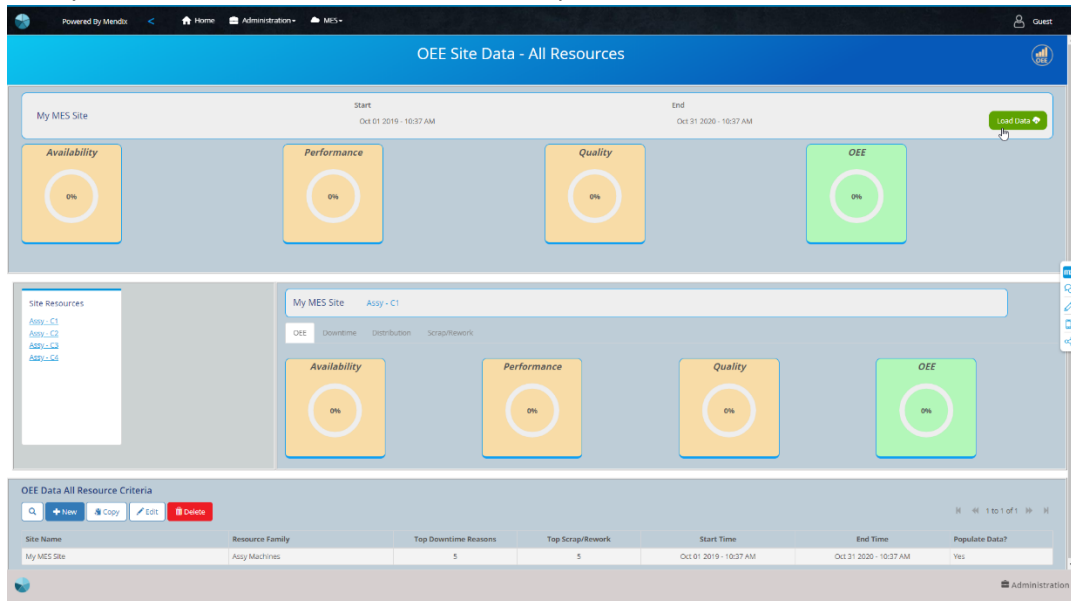


Fill out the Resource Criteria popup and click on Save...

A screenshot of the 'New Camstar OEE Resource Criteria' popup form. The form contains the following fields: 'Camstar Site' (dropdown menu with 'My MES Site' selected), 'Resource Family' (text input with 'Assy Machines' and a search icon), 'Top Downtime Reasons' (text input with '5'), 'Top Scrap/Rework' (text input with '5'), 'Start Time' (date-time picker with 'Oct 01 2019 - 10:37 AM'), 'End Time' (date-time picker with 'Oct 31 2020 - 10:37 AM'), and a checked checkbox for 'Populate New Data?'. At the bottom, there are 'Save' and 'Cancel' buttons.

Note: You will need to know your Camstar data when creating/updating resource criteria for the Camstar instance.

Now you can click on the Load Data button to pull data from Camstar...



5. Wire in some of the other sample pages/microflows to see different ways of showing Camstar data in your Mendix application.

Turning on Security for the Camstar Module

The Camstar Module has been developed using Production level security. An Anonymous user role can also be used with the Camstar Module if that is the type of behavior your application will need.

1. Turn Production Security on with the Anonymous User Role.

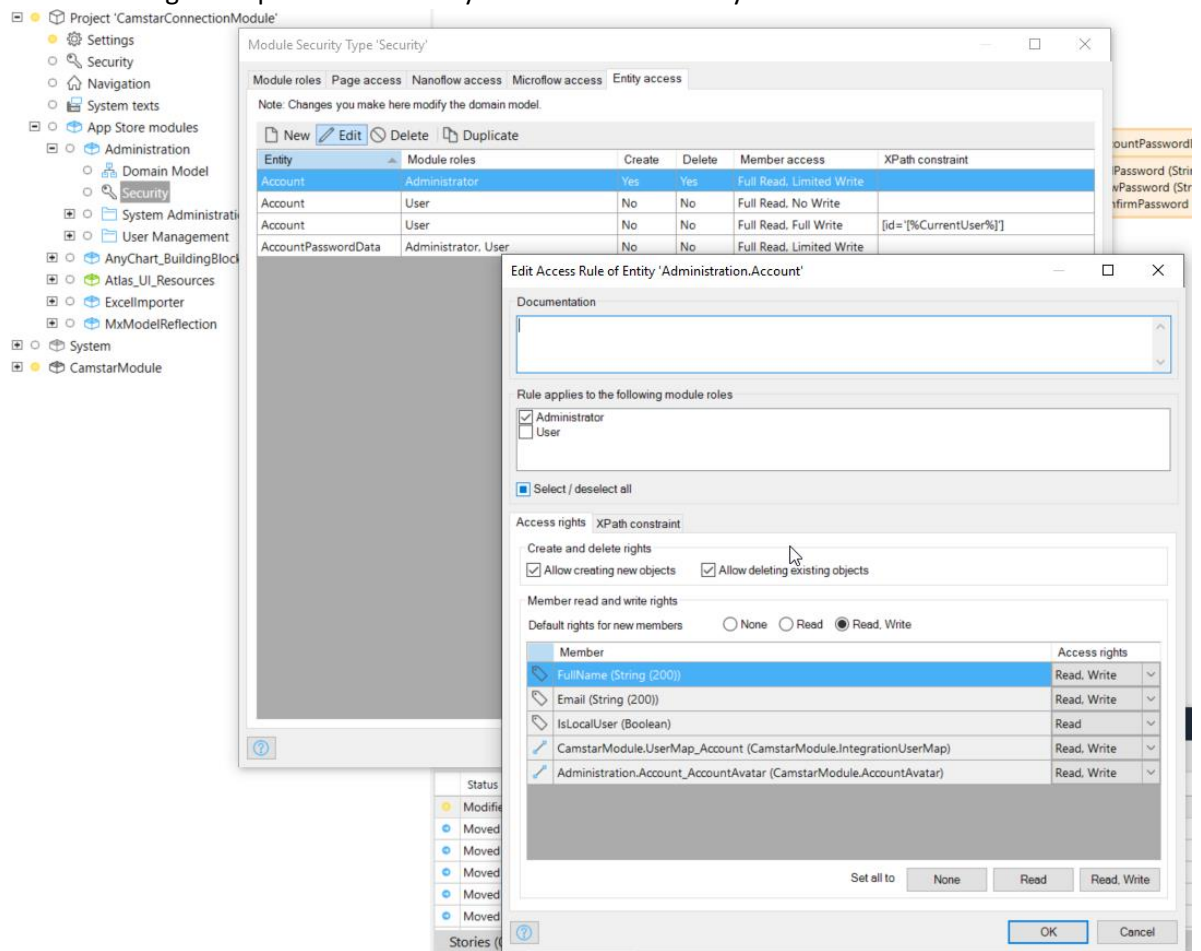
The screenshot shows the 'Project Security' dialog box. The 'Security level' section has three radio buttons: 'Off', 'Prototype / demo', and 'Production' (which is selected). Below this, there is a text box explaining that full security is applied when 'Production' is selected. The 'Check security' section has two radio buttons: 'Yes' (selected) and 'No'. Below this, there is a text box explaining that Mendix Studio Pro checks per user role whether forms are accessible. The 'Project status' section shows a green circle and the word 'Complete'. The 'Module status' section has tabs for 'User roles', 'Administrator', 'Demo users', 'Anonymous users', and 'Password policy'. The 'Allow anonymous users' section has two radio buttons: 'Yes' (selected) and 'No'. Below this, there is a text box explaining that if anonymous users are enabled, signing in is not necessary. The 'Anonymous user role' section has a dropdown menu with 'Anonymous' selected.

2. Update each user role in the Project Security screens of your Mendix project...

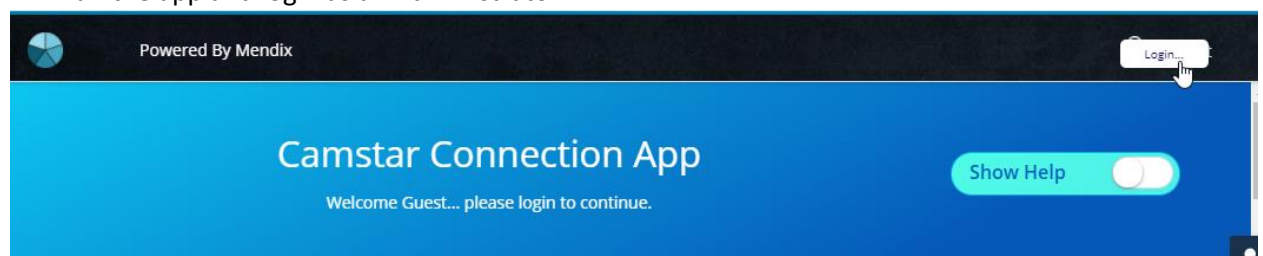
The screenshot shows the 'Project Security' dialog box with the 'User Role 'Administrator'' sub-dialog open. The 'User Role 'Administrator'' dialog has a 'General' tab with a 'Name' field containing 'Administrator' and a 'Documentation' text area. The 'Module roles' section has an 'Edit' button and a list of roles: 'Administration.Administrator', 'CamstarModule.Administrator', 'ExcellImporter.Configurator', 'MxModelReflection.ModelAdmin', 'MyFirstModule.User', and 'System.Administrator'. The 'Check security' section has a checkbox labeled '(for example, roles used for web)' which is checked. The 'User management' section has a text box 'Users with this user role can manage users with at most' and two radio buttons: 'All' (selected) and 'Selected'. Below the 'Selected' radio button is a list of roles: 'Administrator', 'User', 'Anonymous', and '(No user roles)'. The 'Select Module Roles' dialog is also open, showing a tree view of modules and their roles. The 'App Store modules' section is expanded, showing 'Administration' with roles 'Administrator' and 'User', 'Atlas_UI_Resources', 'ExcellImporter', 'Configurator', 'Readonly', 'MxModelReflection', 'ModelAdministrator', 'Readonly', and 'TokenUser'. The 'System' section is also expanded, showing 'Administrator', 'User', 'MyFirstModule', 'User', 'CamstarModule', 'Administrator', 'Anonymous', and 'User'. The 'OK' and 'Cancel' buttons are at the bottom right of the 'Select Module Roles' dialog.

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3. Don't forget to update the Security for the Account entity as shown below...




4. Run the app and login as an Administrator...



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Guest



Sign in

Username

Adam

Password

.....

Sign in

Cancel

Camstar Connection App

Welcome... please sign in with a valid username and password.

MDX

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Home Administration MES

demo_administrator

New

MES Site Configurations

Welcome ...


List/Grid

Show Help

My MES Site

https://ec2-3-132-139-229.us-east-2.compute.amazonaws.com

Details



My MES Site

Status: Complete

https://ec2-3-132-139-229.us-east-2.compute.amazonaws.com

Note: You may need to log in as the demo_administrator and add a local admin user.

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Home Administration MES

User Accounts

Configurations

Application Settings

User Accounts

Domain Model Reflection

Excel Importer

Search

New Local User

ADD

DELETE

Full Name

New User Account

Upload Image

Broose...

Login Name

Full Name

Email Address

User Role

Blocked

Active

Language

Time Zone

New Password

Confirm Password

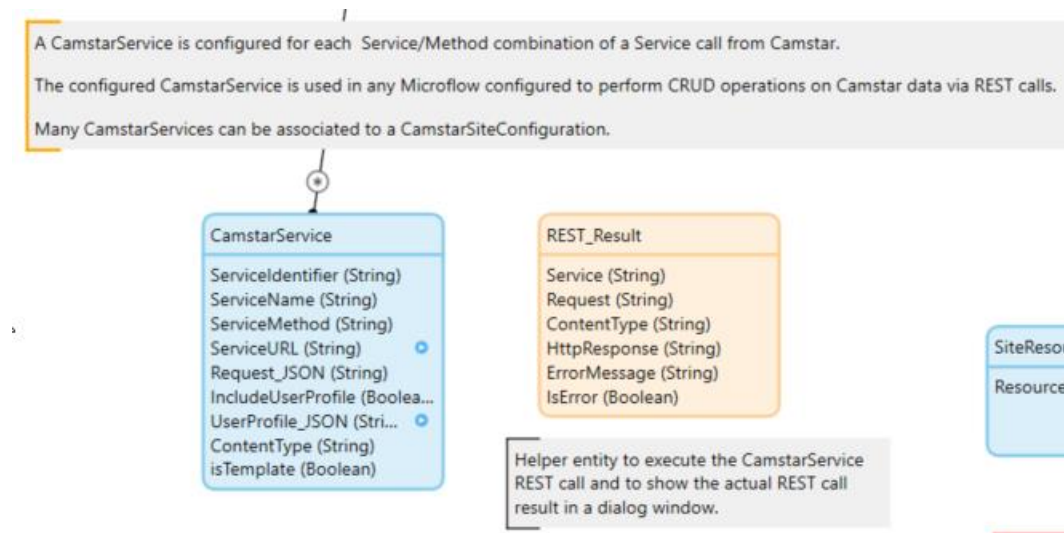
Save

Cancel

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Working with the Camstar Module Services

A Camstar Service is configured for each Service/Method combination that has been exposed in the Camstar instance. The configured Camstar Service is used in Microflows that perform CRUD operations on Camstar data via REST calls in the Microflows.



Camstar Services can be created/modified/tested in the **Administration/MES Configurations/Camstar Services** menu item as shown below.

The screenshot shows the 'Camstar Services' configuration page. On the left is a 'Configurations' sidebar with a tree view containing: Camstar Site Configurations, Camstar Users, Integration User Maps, Camstar Services (highlighted), and Camstar Data Actions. The main area displays a table of configured services.

Site Name	Service Identifier	Service Name	Service Method	JSON	Include User Profile?	Content-Type	Is Template?
	ContainerRetrieve	MoveStd	GetEnvironment	"requ...	Yes	application/json	Yes
	ContainerSplit	Split	ExecuteTransaction	"spli..."	Yes	application/json	Yes
	MfgOrderRetrieve	Start	GetEnvironment	"requ...	Yes	application/json	Yes
	OeeResourceRetrieve	isResourceOeeInquiry	GetEnvironment	"isReso...	Yes	application/json	Yes
	OeeResourceRetrieve	isResourceOeeInquiry	GetEnvironment	"isReso...	Yes	application/json	Yes
	OeeResourceRetrieveByFamily	isResourceOeeInquiry	GetEnvironment	"isReso...	Yes	application/json	Yes
	OeeRetrieve	isResourceOeeInquiry	GetEnvironment	"isReso...	Yes	application/json	Yes
My MES Site	ContainerRetrieve	MoveStd	GetEnvironment	"requ...	Yes	application/json	No
My MES Site	OeeResourceFamilyRetrieve	isResourceOeeInquiry	GetEnvironment	"isReso...	Yes	application/json	No
My MES Site	OeeResourceRetrieve	isResourceOeeInquiry	GetEnvironment	"isReso...	Yes	application/json	No
My MES Site	OeeResourceRetrieveByFamily	isResourceOeeInquiry	GetEnvironment	"isReso...	Yes	application/json	No
My MES Site	OeeRetrieve	isResourceOeeInquiry	GetEnvironment	"isReso...	Yes	application/json	No

When configuring the Camstar Service for use in the application, and Administrator will need to know the following about the specific Camstar Service being called:

1. Service Name
2. Service Method
3. The service request in JSON format
4. Does the UserProfile in JSON format need to be used with the service
5. The default Content-Type which should be **application/json**.

- a. If a different Content-Type is required for the service, then the application will need to be extended to support that specific use case.

Note: Before a Camstar Services can be used in a Mendix application, that service will have to be exposed from Camstar. See the section [Exposing a Camstar WCF Service for use in a Mendix Application](#) below for more information on the subject.

Below is a screen shot of the MoveStd service configured to pull Container data from the Camstar instance.

Edit Camstar Service

☐ is Template?

Site Name
My MES Site

Service Identifier: ContainerRetrieve Service Name: MoveStd Service Method: GetEnvironment

Service URL
https://ec2-3-132-139-229.us-east-2.compute.amazonaws.com/CamstarWCFServices/MoveStdService.svc/web/GetEnvironment

Request JSON

```
"request": {
  "info": {
    "MoveTxn_Info_Container": {
      "RequestSelectionValues": true,
      "RequestSelectionValuesInfo": {
        "Parameters": [
          {
            "Name": "NameFilter",
            "Value": "%"
          },
          {
            "Name": "SpecificTypeOnly",
            "Value": 0
          }
        ]
      }
    }
  }
}
```

Content-Type
application/json

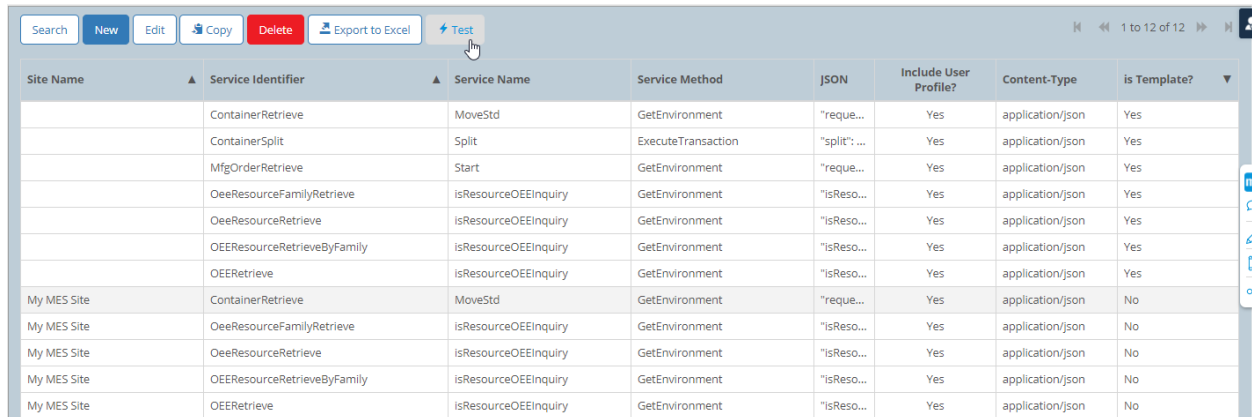
☒ Include User Profile?

User profile JSON

```
"userProfile": {
  "Name": "CamstarAdmin",
  "Password": {
    "Value": "Cam1star",
    "IsEncrypted": false
  }
}
```

Save Cancel

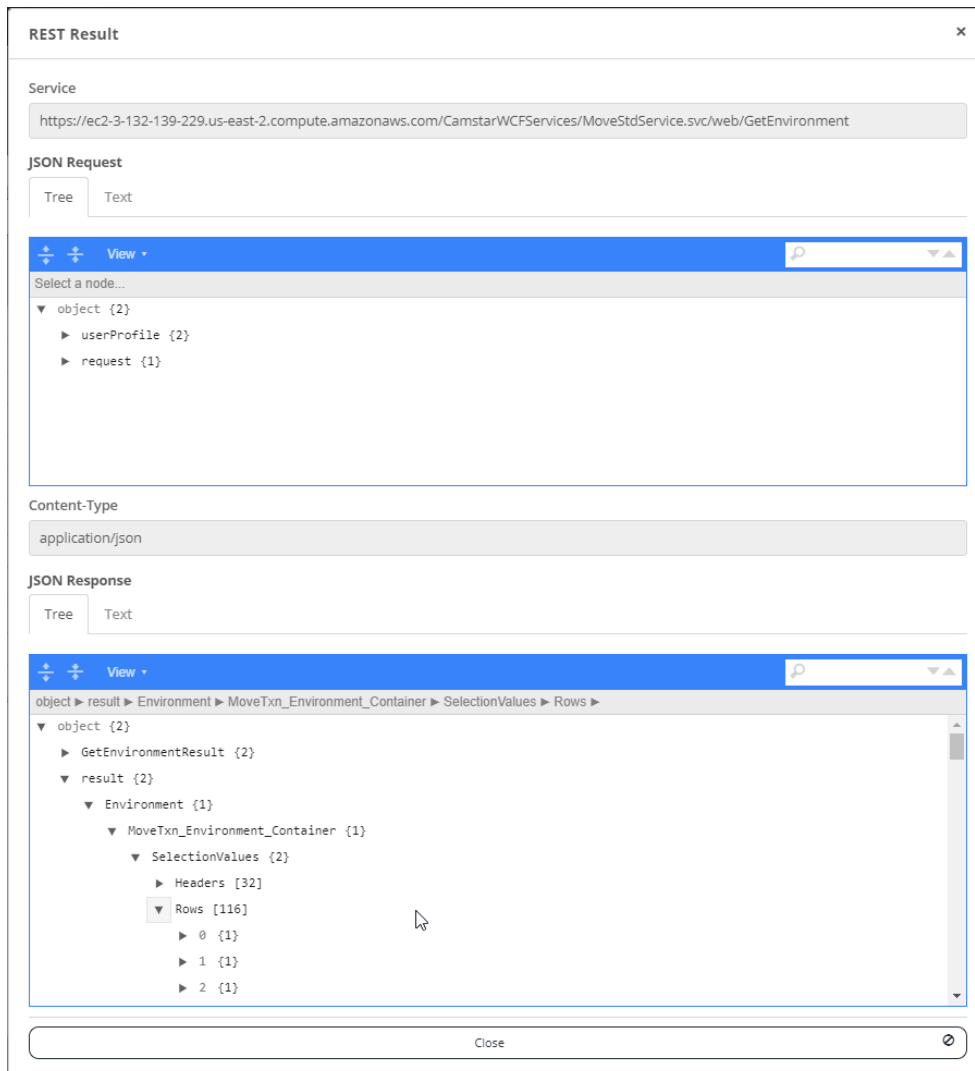
Once the Camstar Service has been configured in the application, it can be tested to make sure it works. Simply highlight the Camstar Service and click on the **Test** button in the UI.



The screenshot shows a table with 8 columns: Site Name, Service Identifier, Service Name, Service Method, JSON, Include User Profile?, Content-Type, and is Template?. The 'Test' button in the top toolbar is highlighted with a mouse cursor. The table contains several rows of service configurations, including 'ContainerRetrieve', 'ContainerSplit', 'MfgOrderRetrieve', 'OeeResourceFamilyRetrieve', 'OeeResourceRetrieve', 'OEEResourceRetrieveByFamily', and 'OEERetrieve'.

Site Name	Service Identifier	Service Name	Service Method	JSON	Include User Profile?	Content-Type	is Template?
	ContainerRetrieve	MoveStd	GetEnvironment	"reque...	Yes	application/json	Yes
	ContainerSplit	Split	ExecuteTransaction	"split": ...	Yes	application/json	Yes
	MfgOrderRetrieve	Start	GetEnvironment	"reque...	Yes	application/json	Yes
	OeeResourceFamilyRetrieve	IsResourceOEEInquiry	GetEnvironment	"isReso...	Yes	application/json	Yes
	OeeResourceRetrieve	IsResourceOEEInquiry	GetEnvironment	"isReso...	Yes	application/json	Yes
	OEEResourceRetrieveByFamily	IsResourceOEEInquiry	GetEnvironment	"isReso...	Yes	application/json	Yes
	OEERetrieve	IsResourceOEEInquiry	GetEnvironment	"isReso...	Yes	application/json	Yes
My MES Site	ContainerRetrieve	MoveStd	GetEnvironment	"reque...	Yes	application/json	No
My MES Site	OeeResourceFamilyRetrieve	IsResourceOEEInquiry	GetEnvironment	"isReso...	Yes	application/json	No
My MES Site	OeeResourceRetrieve	IsResourceOEEInquiry	GetEnvironment	"isReso...	Yes	application/json	No
My MES Site	OEEResourceRetrieveByFamily	IsResourceOEEInquiry	GetEnvironment	"isReso...	Yes	application/json	No
My MES Site	OEERetrieve	IsResourceOEEInquiry	GetEnvironment	"isReso...	Yes	application/json	No

Below is a screenshot of testing the configured ContainerRetrieve Camstar Service which uses the MoveStd service and GetEnvironment method of that service.



The screenshot shows the 'REST Result' dialog box. The 'Service' field displays the URL: `https://ec2-3-132-139-229.us-east-2.compute.amazonaws.com/CamstarWCFServices/MoveStdService.svc/web/GetEnvironment`. The 'JSON Request' section shows a tree view with 'object {2}' containing 'userProfile {2}' and 'request {1}'. The 'Content-Type' field displays 'application/json'. The 'JSON Response' section shows a tree view with 'object {2}' containing 'GetEnvironmentResult {2}' and 'result {2}'. The 'result {2}' object contains an 'Environment {1}' object, which contains a 'MoveTxn_Environment_Container {1}' object. This object contains 'SelectionValues {2}', which contains 'Headers {32}' and 'Rows {116}'. The 'Rows {116}' array contains three elements: '0 {1}', '1 {1}', and '2 {1}'.

```
object {2}
  result {2}
    Environment {1}
      MoveTxn_Environment_Container {1}
        SelectionValues {2}
          Headers {32}
          Rows {116}
            0 {1}
            1 {1}
            2 {1}
```

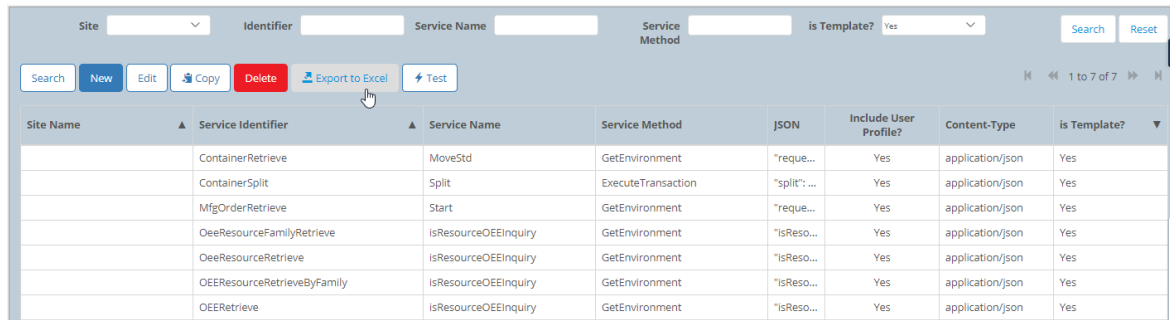
Unrestricted

Templates

Once a **Camstar Service** has been configured for a Site Instance and passes testing in the Camstar Services admin page, that service can be copied and specified as a Template. Templates are used by the **MES Connection Wizard** when configuring a connection to a new Site Instance.

Templates can be shared between Mendix Applications by exporting the templates to Excel, and then importing them into another Mendix Application using the Excel Importer.

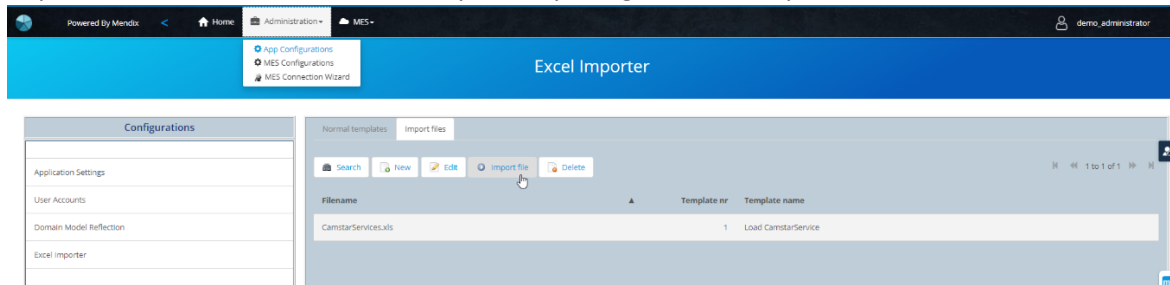
1. Export only the Camstar Services that are Templates



The screenshot shows the Camstar Services admin page. At the top, there are filters for Site, Identifier, Service Name, Service Method, and is Template? (set to Yes). Below the filters are buttons for Search, New, Edit, Copy, Delete, Export to Excel (highlighted), and Test. The main table lists services with columns: Site Name, Service Identifier, Service Name, Service Method, JSON, Include User Profile?, Content-Type, and is Template?.

Site Name	Service Identifier	Service Name	Service Method	JSON	Include User Profile?	Content-Type	is Template?
	ContainerRetrieve	MoveStd	GetEnvironment	*reque...	Yes	application/json	Yes
	ContainerSplit	Split	ExecuteTransaction	*split': ...	Yes	application/json	Yes
	MfgOrderRetrieve	Start	GetEnvironment	*reque...	Yes	application/json	Yes
	OeeResourceFamilyRetrieve	IsResourceOEEInquiry	GetEnvironment	*isReso...	Yes	application/json	Yes
	OeeResourceRetrieve	IsResourceOEEInquiry	GetEnvironment	*isReso...	Yes	application/json	Yes
	OeeResourceRetrieveByFamily	IsResourceOEEInquiry	GetEnvironment	*isReso...	Yes	application/json	Yes
	OEERetrieve	IsResourceOEEInquiry	GetEnvironment	*isReso...	Yes	application/json	Yes

2. Import Camstar Services that are Templates by using the Excel Importer

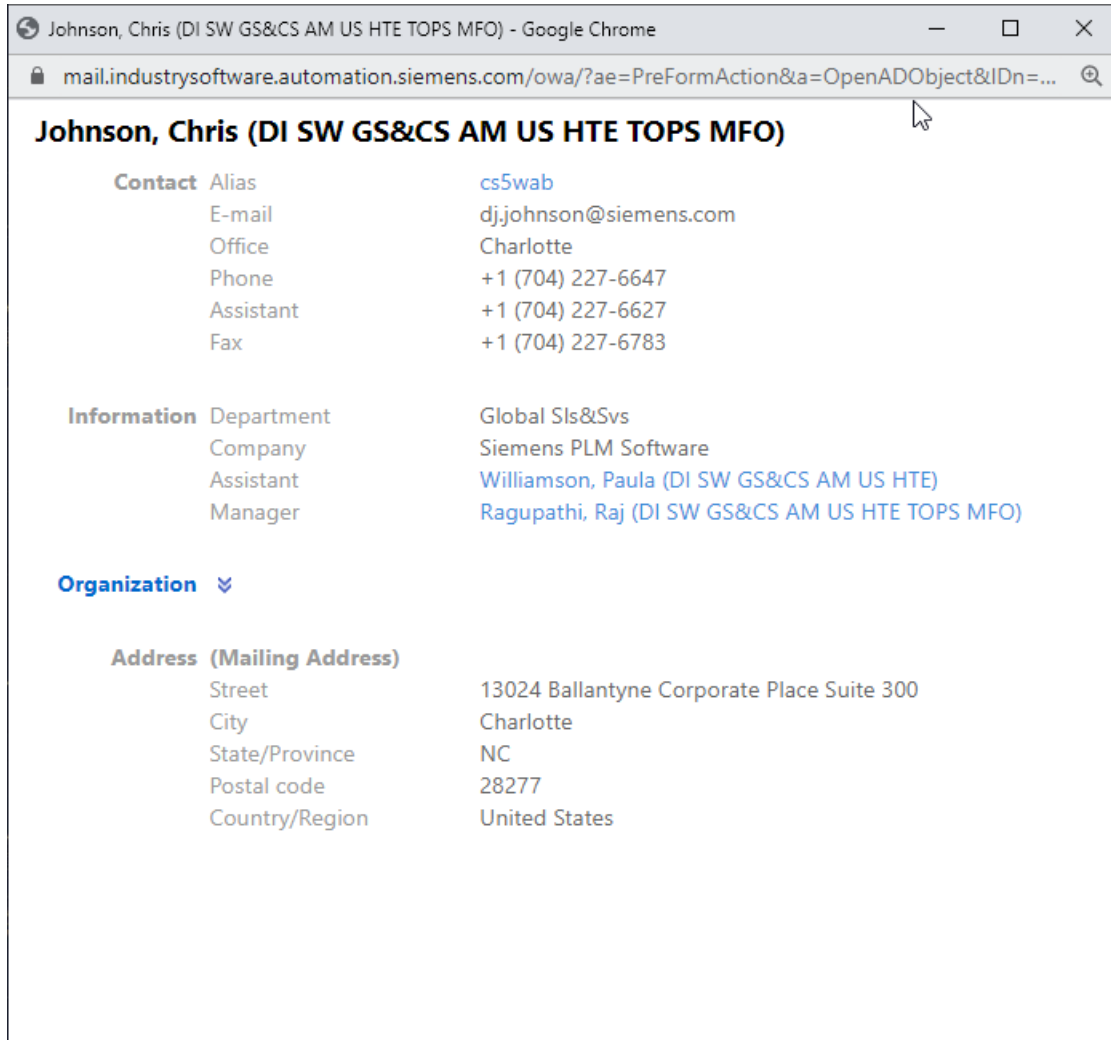


The screenshot shows the Excel Importer interface. On the left is a 'Configurations' sidebar with links to Application Settings, User Accounts, Domain Model Reflection, and Excel importer. The main area is titled 'Excel Importer' and has tabs for 'Normal templates' and 'Import files'. Below the tabs are buttons for Search, New, Edit, Import file (highlighted), and Delete. A table shows the imported templates with columns: Filename, Template nr, and Template name.

Filename	Template nr	Template name
CamstarServices.xls	1	Load CamstarService

Exposing a Camstar WCF Service for use in a Mendix Application

Before a WCF Service can be used in a Mendix Application, that service must be exposed for use as an Endpoint. Please contact Chris Johnson for detailed information on this subject.



The screenshot shows a web browser window with the title "Johnson, Chris (DI SW GS&CS AM US HTE TOPS MFO) - Google Chrome". The address bar displays the URL "mail.industrysoftware.automation.siemens.com/owa/?ae=PreFormAction&a=OpenADObject&IDn=...". The main content area is titled "Johnson, Chris (DI SW GS&CS AM US HTE TOPS MFO)" and contains three sections: "Contact", "Information", and "Organization".

Contact

Alias	cs5wab
E-mail	dj.johnson@siemens.com
Office	Charlotte
Phone	+1 (704) 227-6647
Assistant	+1 (704) 227-6627
Fax	+1 (704) 227-6783

Information

Department	Global Sls&Svs
Company	Siemens PLM Software
Assistant	Williamson, Paula (DI SW GS&CS AM US HTE)
Manager	Ragupathi, Raj (DI SW GS&CS AM US HTE TOPS MFO)

Organization ▼

Address (Mailing Address)

Street	13024 Ballantyne Corporate Place Suite 300
City	Charlotte
State/Province	NC
Postal code	28277
Country/Region	United States

Camstar Connection Application

The **Camstar Connection Application** is an implementation of the **Camstar Connection Module** and can be used across all Industries that want to show Mendix-Camstar integration use cases. This Application can demonstrate how Mendix can connect to Camstar and display Camstar data.

Responsive WEB URL on the Mendix Cloud

The Camstar Connection Application is a production deployment and can be accessed via the following URL:

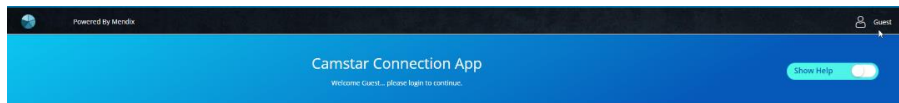
<https://camstarconnectiona100.mendixcloud.com/>

Logging into the App

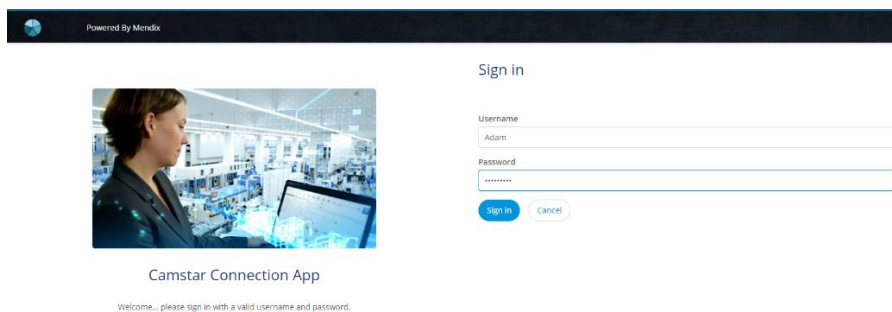
The following Mendix users are provided with the Application. The **password** for every user is **Mendix123** and currently can only be change by an Administrator.

User Name	Full Name	Role
Adam	Adam Admin	Administrator
Brycen	Brycen Spencer	User
Jeff	Jeff Spencer	User
Luke	Luke Seiler	User
Chris	Chris Johnson	User
Rob	Rob Myers	User
Peter	Peter De Moerloose	User

From the Application's home page, simply click on the Guest icon in the upper right corner of the UI to initiate the login process for the App.



Enter a valid Username and Password, and click on the **Sign in** button...



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