Roles

Overview

The Roles product integration allows the customer to have RoleSync functionality.

For more information on using Roles in campusM app manager, see Managing App Roles.

For more information, watch:

- Roles and RoleSync (8 min)
- Roles Integration (7:52 min)

Vendors

Roles can be retrieved with a RESTful API service, with Microsoft Graph API services, the adAS SSO and OKTA Groups, and Alma, which are configured as part of the Roles product integration configuration.

User Experience

The following section describes information relating to the user experience for the Roles PI.

User Activities

Users view tiles according to the roles to which they are assigned.

Authentication

Users do not need to enter their authentication credentials at any stage. See the User Flow Diagram for a description of the authentication workflow.

Offline Support

campusM checks the user's roles when the user logs in. If the user works offline when logged in, the role functionality continues to operate.

Technical Overview

The following section describes technical information for the Roles PI.

Prerequisites

- The list of roles per user can be provided by a RESTful API service or by Microsoft Graph API, which returns a list of roles in JSON format.
- For Microsoft Graph API vendor, you need to configure Microsoft Azure. For more information, see Configuring Microsoft Azure (Graph) for the Roles Product Integration.

Required Format

Select one of the following links for the required format for that vendor:

- Required Format for RESTful API Vendor
- Required Format for Microsoft Graph API Vendor
- Required Format for adAS SSO Vendor
- Required Format for Okta Vendor

RESTful API Vendor

The following is the required JSON format for **RESTful API service**:

Note

The API service must be configured using the HTTP **GET** request method.

```
{
   "roles": [
         "student",
         "lecturer",
         "other"
    ]
}
```

Microsoft Graph API Vendor

The following is the required JSON format for **Microsoft Graph API**:

Note

The list of roles returned in the `displayName` field can be returned separated by a delimiter that can be configured in the Roles PI configuration.

For example, in the following response, the delimiter is a hyphen (-).

```
{
    "@odata.context": "https://graph.microsoft.com/v1.0/$metadata#directoryObjects(displayName)",
    "value": [
        {
            "@odata.type": "#microsoft.graph.group",
            "displayName": "US-DC-FAC"
        }
    ]
}
```


The list of roles provided by the Microsoft Graph API will be acquired by using the following Microsoft Graph API services:

- https://login.microsoftonline.com/{tenant}/oauth2/v2.0/token (in order to generate the token that will be used in the second service)
- https://graph.microsoft.com/v1.0/users/<username>/memberOf (in order to get the response which contains the roles list from above)

adAS SSO Vendor

The following is the required JSON format for **adAS SSO**:

```
[
  {
    "roles": [
      "role1"
    ]
  }
]
```

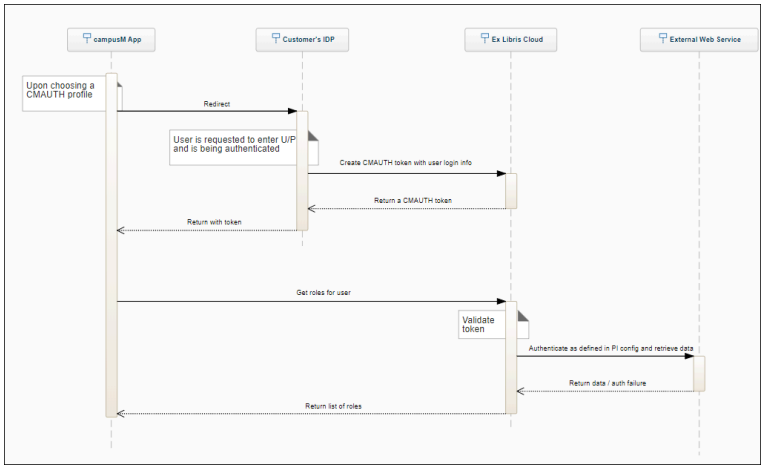
Okta

For the Okta vendor, campusM uses the /userinfo endpoint. The /userinfo endpoint should configured to return the groups claim for the user if it does not do so already, and this API attribute should be called "groups".

For further documentation please see Okta documentation: https://developer.okta.com/docs/api/...erinfoCustomAS

Technical Flow Diagram

The following is the technical flow diagram for the Roles product integration:



Roles Technical Flow Diagram

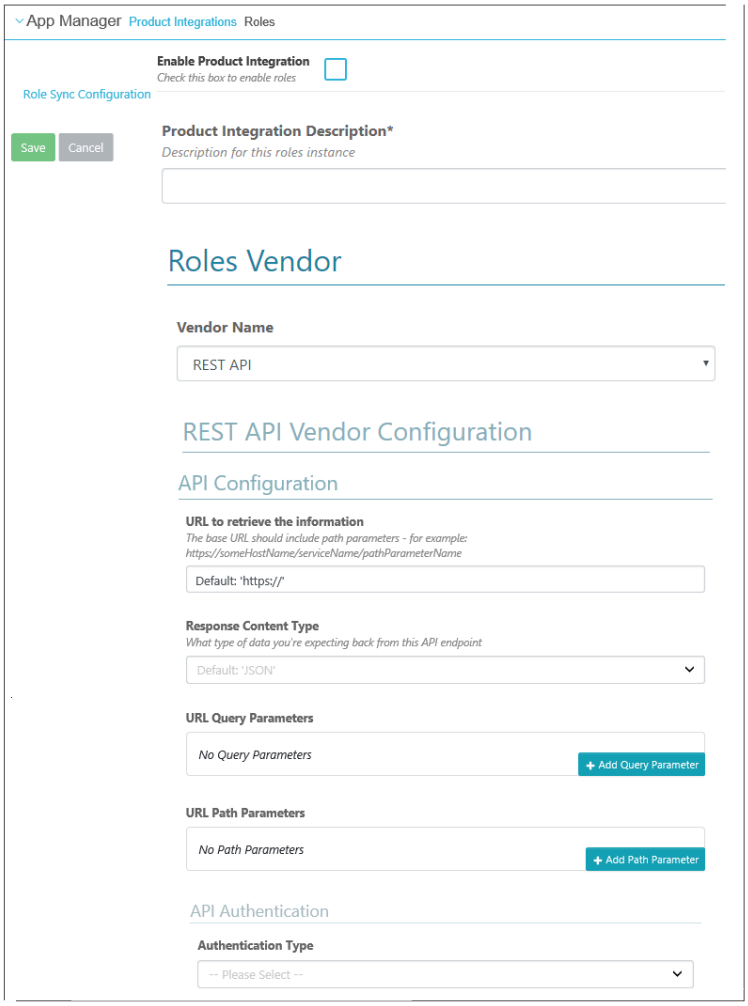
Configuration

To use the Roles product integration, you must configure the following components:

- Customer roles and App roles according to Managing App Roles.
- A Roles product integration instance as described below.
- To be done by Ex Libris – Application Server, Authentication Access, and Profile Registration Authentication.

To configure the Roles product integration, select **Add Product Integration Instance** from the **Product Integrations** main menu option, and select **Roles**.

The Roles configuration page appears.



Roles Configuration

Select one of the following links to see the configuration options for that vendor:

- Configurations for RESTful API and adAS SSO Vendors

- Configurations for the Okta Vendor
- Configurations for the Microsoft Graph API Vendor
- Configurations for the Alma Vendor

Configurations for RESTful API and adAS SSO Vendors

The following table describes the configuration options available for RESTful API and adAS SSO vendors:

Configuration Option	Description	Mandatory	Data Type	Default	Example
Enable Product Integration	Select to enable the product integration on the user's campusM app	No			
Product Integration Description	A description of the PI for internal use	Yes	String		
Vendor Name	Select **RESTful API** or **adAS SSO**.	Yes	Drop down list		
API Configuration					
URL to retrieve the information	URL to retrieve the roles list	Yes	URL address	none	https://yrv80x694e.execute-api.eu-we.../Prod/rolesync
Response Content Type	For Roles PI, this should be **JSON.**	No	Drop down list	JSON	
URL Query Parameters	Parameters on the URL	No	An array of query parameter object information	No query parameters	
URL Path Parameters	Parameters on the URL	No	An array of path parameter object information	No path parameters	
API Authentication					
Authentication Type	Select one of the following options: • No Auth • Basic Auth • API Key • Bearer token • OAuth Using User App Authentication – select an OAuth integration profile (from the	Yes	Drop-down list		

Configuration Option	Description	Mandatory	Data Type	Default	Example
	Integration Profiles configured in App Settings) and choose where the access token should be added, Header or URL. • OAUTH Using Client Credentials – select this if you are using a preliminary token call to get the access token.				

Configurations for the Okta Vendor

The following table describes the configuration options available for the Okta API vendor:

Configuration Option	Description	Mandatory	Data Type	Default	Example
Enable Product Integration	Select to enable the product integration on the user's campusM app	No			
Product Integration Description	A description of the PI for internal use	Yes	String		
Vendor Name	Select **Okta**.	Yes	Drop down list		
API Configuration					
Base URL to retrieve the information	Base URL for the API	Yes	URL address	-	*https://myDomain.com*
API Authentication					
Authentication Type	Select one of the following options: • OAuth Using User App Authentication – select an OAuth integration profile (from the Integration Profiles configured in App Settings) and choose where the access token should be added, Header or URL. • OAUTH Using Client Credentials – select this if you are using a preliminary token call to get the access token.	Yes	Drop-down list	-	
Okta Auth Server Details					
Use Custom Auth Server ID	Depending on your Okta setup, the API endpoints used for this PI could require the auth ID to be included. Enable this to pass the "Custom Auth ID", below, into all relevant endpoints.	No	Checkbox	Unchecked (false)	
Custom Auth	Appears if "Use Custom Auth Server ID" is checked.	No	String	-	

Configuration Option	Description	Mandatory	Data Type	Default	Example
ID					

Configurations for the Microsoft Graph API Vendor

The following table describes the configuration options available for the Microsoft Graph API vendor:

Configuration Option	Description	Mandatory	Data Type	Default	Example
Enable Product Integration	Select to enable the product integration on the user's campusM app.	No			
Product Integration Description	A description of the product integration for internal use	Yes			
Vendor Name	Select MS Graph APIs	Yes			
Microsoft Graph APIs Configuration					
Delimiter	The separator between the different roles returned in the `displayName` field. For example, in the following response, the delimiter is a hyphen (-): `displayName: US-DC-FAC`	No	One of the following: • - • / • ; • , • No delimiter	No delimiter	
Tenant	The tenant value in the path of the request can be used to control who can sign into the application. The allowed values are common for both Microsoft accounts and work or school accounts, organizations for work or school accounts only, consumers for Microsoft accounts only, and tenant identifiers such as the tenant ID	Yes	String		
Client ID	The Application ID that the registration portal assigned your app	Yes	String		`6731..-..6914391e`
Client Secret	The application secret that you created in the app registration portal for your app. It should not be used in a native app, because client secrets cannot be reliably stored on devices. It is required for Web apps and Web APIs that have the ability to store the client secret securely on the server side	Yes	String		
Grant Type	This value must be the string `client_credentials`.	Yes	String		client_credentials

Configuration Option	Description	Mandatory	Data Type	Default	Example
Scope	The scopes requested in this leg must be equivalent to or a subset of the scopes requested in the first (authorization) leg. If the scopes specified in this request span multiple resource servers, then the v2.0 endpoint returns a token for the resource specified in the first scope	Yes	String		https://graph.microsoft.com/.default
User Input Identifier					
Parameter Input Option	User input identifier for MemberOf API	Yes	Input options		username
Constant Value	Enter the constant value				

Configurations for the Alma Vendor

The following table describes the configuration options available for the Alma vendor:

Configuration Option	Description	Mandatory	Data Type	Default	Example
Enable Product Integration	Select this to enable the product integration on the user's campusM app.	No			
Product Integration Description	A description of the product integration for internal use	Yes			
Vendor Name	Select **Alma**.	Yes			
Alma API Configuration					
API Configuration					
Base URL to retrieve the information	The URL of the enterprise server from which to retrieve the role information	Yes	URL	https://myDomain.com	https://myDomain.com
User Input Identifier					
Parameter Input Option	User input identifier for MemberOf API: **Username**, **Token Property** (from CMAuth), or **Constant** (for a static value)	Yes	Input options	Username	Username
Token Property Name	The name of the token property to be used when the value selected for **Parameter Input Option** is **Token Property**	No	String		USERNAME

Configuration Option	Description	Mandatory	Data Type	Default	Example
Constant Value	The constant value to be used when the value selected for **Parameter Input Option** is **Constant**	No	String		
Alma Authentication					
API Key	The API key to use for authentication when retrieving data from Alma	Yes	String		123456789asdfg
Edit / Cancel editing	Select **Edit** to edit the **API Key** field. While editing, select **Cancel editing** to revert to the value that was in the field initially.				

Adding Roles When Using Alma as a Vendor

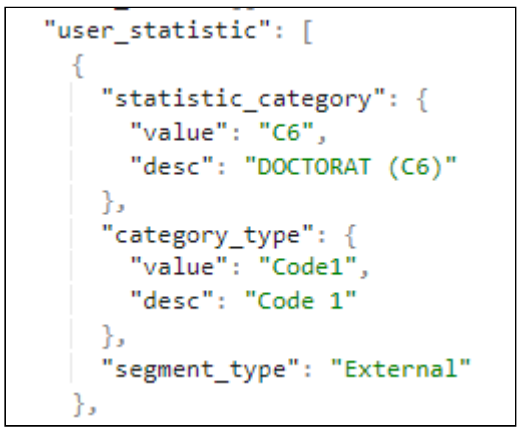
Alma returns data about users in JSON format. The fields that contain role information are:

- **user_statistic** – This field contains an array of **statistic_category** objects, each of which is parsed by campusM as a role. A user can have multiple statistical categories, or none at all.
- **user_group** – This field contains the user group of the user. Each user has one user group. campusM parses this as a role.

Once you have configured the Alma vendor PI, as described above, you can select **Test API Connection** to retrieve a sample JSON object for a user. This object contains, among other user fields, all the **statistic_category** and **user_group** objects currently defined in your institution's Alma system. You can add Customer Roles to your campusM system based on the data that appears in this object and the following information about how campusM parses this data:

- **statistic_category** objects – This type of object is parsed in the format `desc_value_desc_value`, where the first `desc_value` pair is taken from the `category_type` and the second `desc_value` pair is taken from the `statistic_category` type. Thus, in the example below, the Customer Role that would be identified by campusM would be:

  `Code 1_Code1_DOCTORAT (C6)_C6.`



- **user_group** objects – This type of object is parsed in the format `desc_value`. Thus, in the example below, the

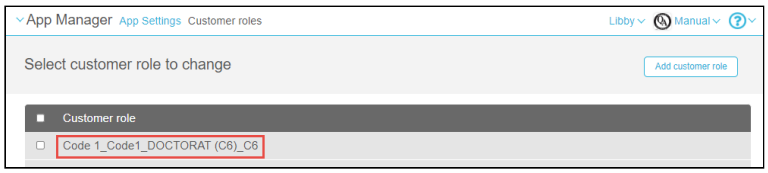
Customer Role that would be identified by campusM would be:

```
DOCTORANT_DOC
```

```
"user_group": {
  "value": "DOC",
  "desc": "DOCTORANT"
},
```

.

Once you have this information, you can create Customer Roles in campusM for each of the parsed Alma roles. You can do this in the App Manager at **App Settings > Enterprise Roles > Customer Roles**; see Managing App Roles: Configuring Customer Roles.



Customer Role Added

Finally, you can create mappings in campusM between the Customer Roles and their campusM App Roles at **App Settings > Enterprise Roles > App Roles**; see Managing App Roles: Managing App Roles.

Updating User Roles

When a user logs into campusM, the RoleSync web service retrieves the user's roles from the enterprise system and assigns them to the user. Because users can remain logged into campusM for many days at a time, when roles have changed, it may be necessary to refresh them even when users are logged in. This can be done in one of two ways:

- A scheduled role-refresh process (see Scheduling Automatic Role Refreshes from the App Settings, below)
- Using the campusM setRolesUpdated API (see Updating Roles Via the campusM API, below)

When one of these processes is employed, users whose roles have changed are tagged, and the following occurs when the user next launches the app:

1. The app calls the startup service on campusM, which informs the app that the roles of this user require an update.
2. The app calls the configured Roles service to retrieve the user's new roles. (For information about the Roles product-integration options and how to configure them, see Configuration, above.)
3. The app presents the content and tiles according to the new user roles.

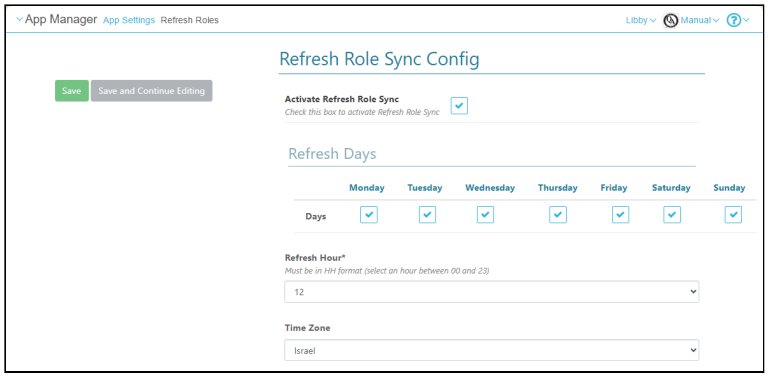
Scheduling Automatic Role Refreshes from the App Settings

The Refresh RoleSync process checks which users had role changes since they last logged into campusM and flags them for RoleSync the next time they open the app. This RoleSync takes place even if they were already logged into the app when they opened it.

Refreshing the RoleSync is an automated process that must be scheduled to take place on a weekly basis. It can be scheduled to run as much as once a day. We recommend only running it once a week, because it refreshes all users.

To schedule the Role Refresh process:

1. Navigate to **App Settings > Enterprise Roles > Refresh Roles**. The Refresh Role Sync Config page opens.



2. Select **Activate Refresh Role Sync**.
3. Select the days of the week on which to run the process, the time of day, and the time zone.
4. Select **Save**.

Updating Roles via the campusM API

When user roles have changed – for example, a new role was added, or an existing role removed – the institution can call the campusM setRolesUpdated API service to update specific users' roles accordingly. The API call must include the emails of the users whose roles need to be updated. The users' roles are updated even if they are currently logged into campusM. For information about this API, see Refresh User Roles in the Developer Network.