
Resource Booking

Overview

The Resource Booking product integration allows students to reserve any type of resource (rooms, PCs, pods, etc.).

Vendors

The Resource Booking product integration is currently supported by the RESTful API (generic) vendor.

User Experience

The following section describes information relating to the user experience for the Resource Booking product integration.

User Activities

Students can create, cancel, and view existing reservations.

Authentication

There is no need for additional user authentication. Authentication with your system should be based on the API authentication. For more information, see [Authentication Type](#).

Offline Support

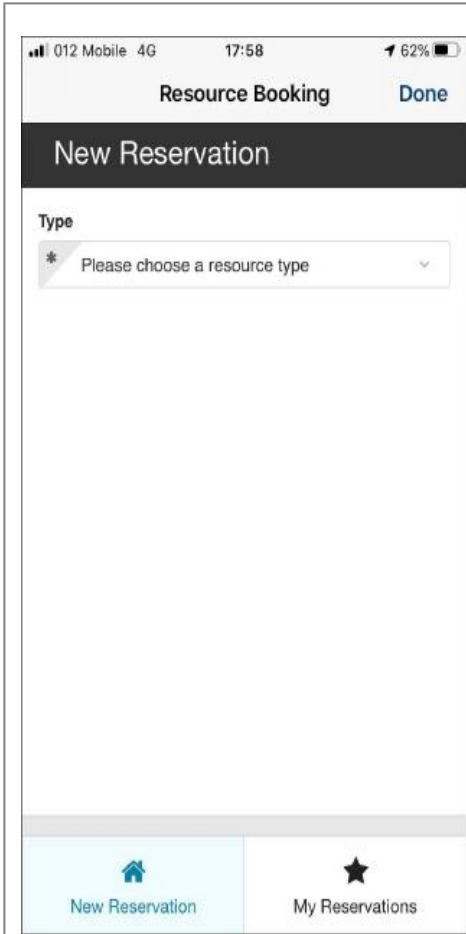
Offline functionality is supported for the My Reservations tab, but not for the New Reservation tab.

Main Workflows and Screenshots

The Resource Booking product integration contains the following two menu options:

- New Reservation
- My Reservations

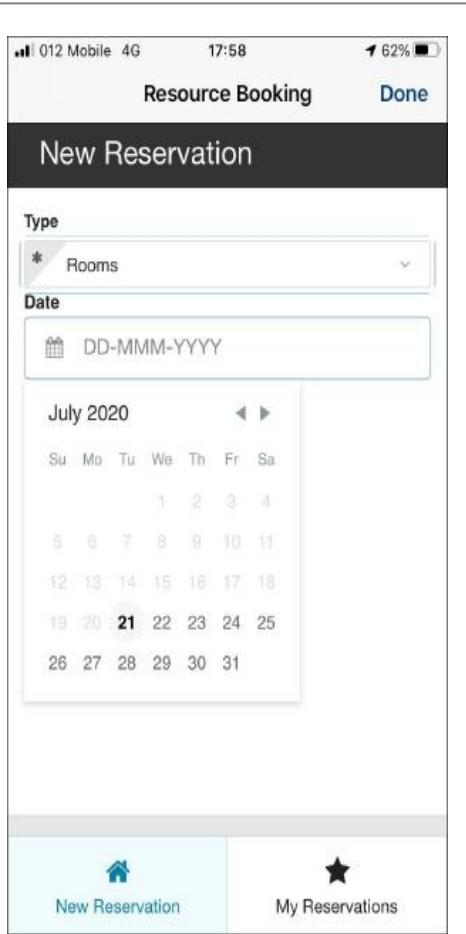
By default, after selecting the Resource Booking product integration tile, the New Reservation tab opens:	If there is only one resource type configured, the Date drop-down list is displayed after selecting the Resource Booking product integration tile:	Only relevant dates according to the configuration of the Max days for booking in advance parameter are available:
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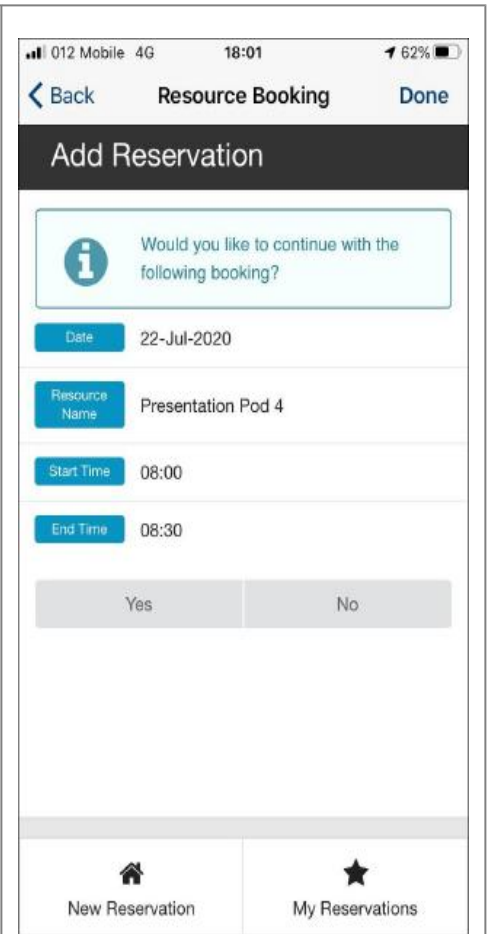
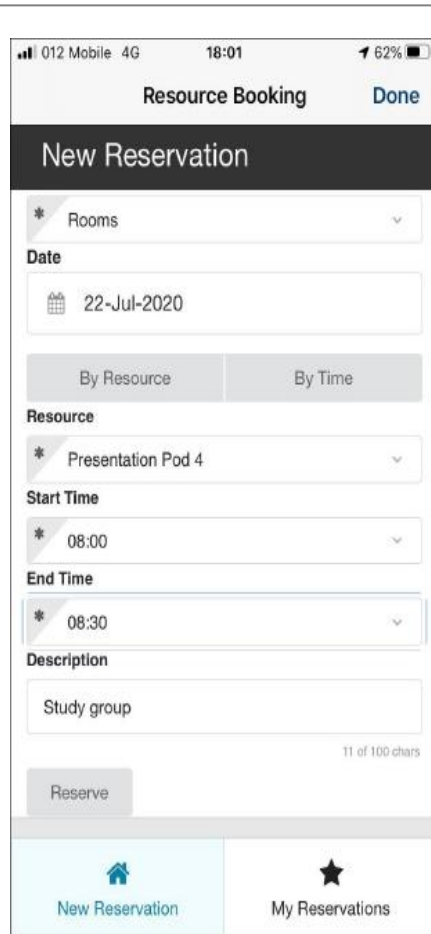
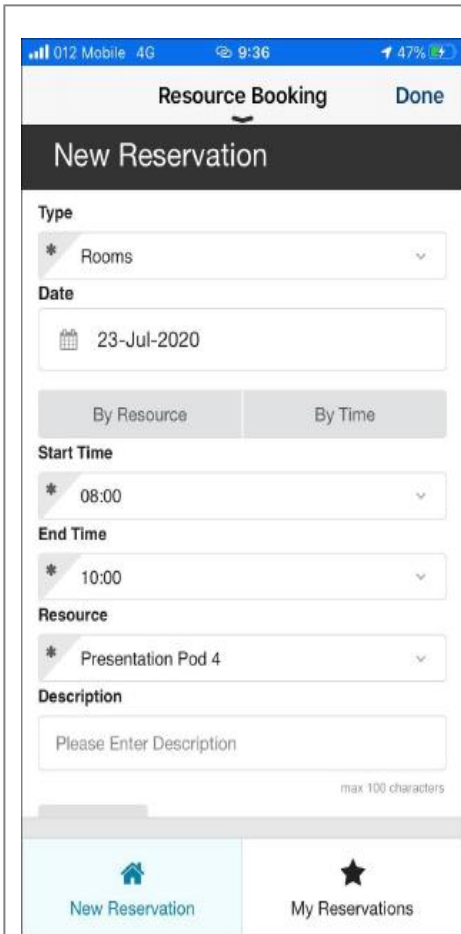
You can search by start time:



You can search by a specific resource:

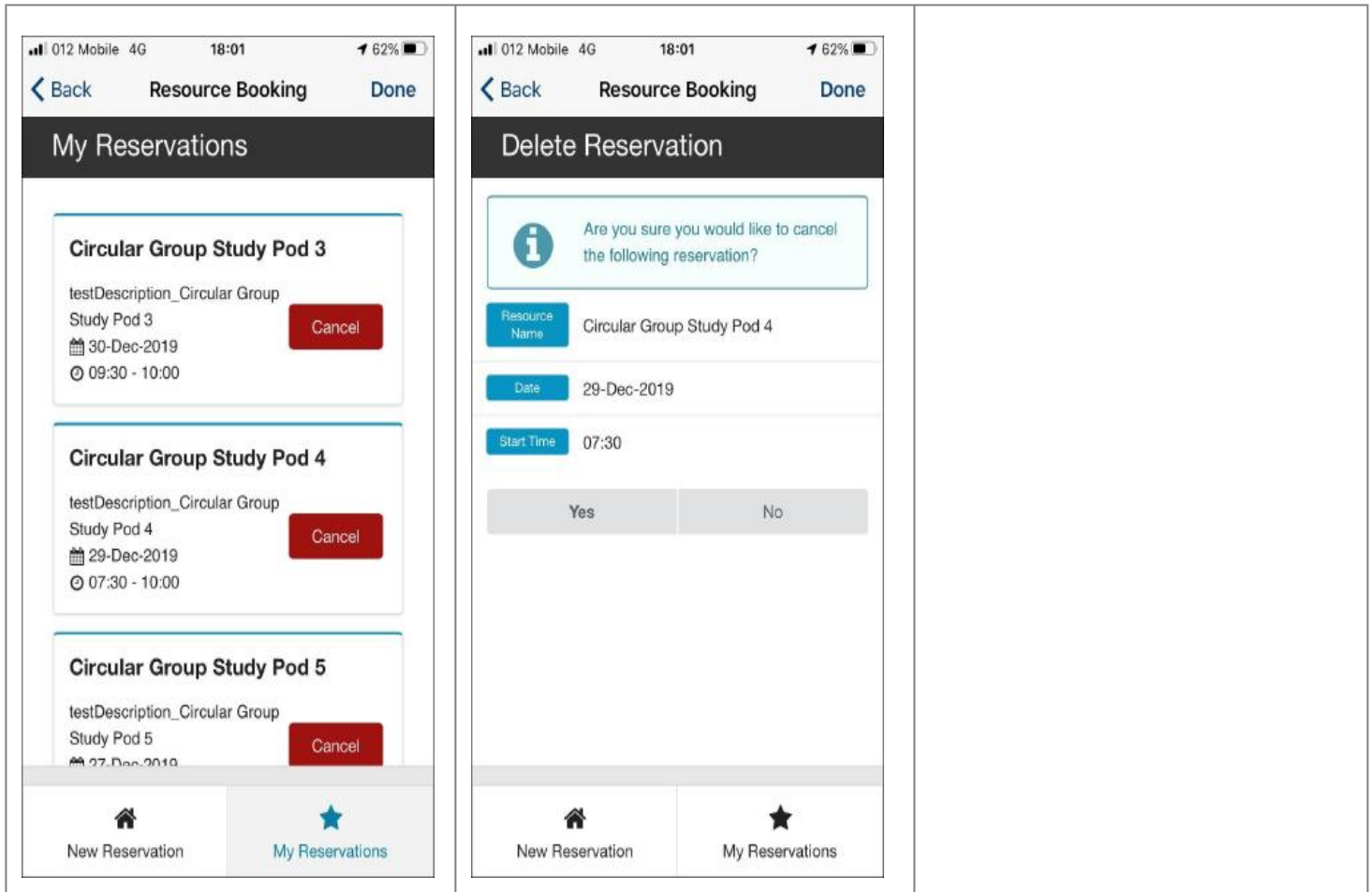


After clicking **Reserve**, the following confirmation screen is displayed:



You can view your reservations/bookings in the My Reservations tab:

When selecting **Cancel**, the following confirmation message is displayed:



The start time is calculated according to the selected date, time, type, and resource (if selected).

The end time is calculated according to the following logic:

- `minSlotLength` from the API (the Get User's Reservations API, the Get Available Resources API, etc.) defines the first option for End Time (see [Get Available Resources API](#)).
- `maxSlotLength` from the API (the Get User's Reservations API, the Get Available Resources API, etc.) defines the last option for End Time (see [Get Available Resources API](#)).
- The slots between them are currently defined according to the `minSlotLength`. For example, if `minSlotLength=30` and `maxSlotLength=120` and the user selected 8:00 as the start time, the possible end times are: 8:30, 9:00, 9:30, 10:00.

Technical Overview

The following section describes technical information for the Resource Booking product integration.

Prerequisites

The following prerequisites are required for the Resource Booking product integration.

- Resource Booking data should be sent based on the `userID` from IDP, so `campusM userID` must be mapped in the customer's system.

- The CMAuth `userID` (which is returned by a response from either SAML, OAuth or LDAP as one of the IDP attributes) must be mapped in the CMAuth integration profile (Additional Mappings). Otherwise, `userID` must be returned by a response as one of the LDAP attributes.
- This attribute needs to be added as a path or query parameter. For more information, see [API Configuration](#).
- The parameter can be named `userID` or any other name.
- Generating the Reservation ID should be done in your system.

API Information

Resource Booking product integration will use the following APIs:

Get User's Reservations API

- Request:

```
https://{Base URL}/getUserReservations?userid={userID}
```

Note

- Base URL is the URL to retrieve as defined in the product integration configuration.
- `userID` is the user identifier as defined in the Query Parameters.

- Expected Response

The response should be similar to the following:

```
{
  "userReservationsList": {
    "Reservation": [
      {
        "resourceType": "Circular Group",
        "resourceName": "Circular Group Study Pod 11",
        "description": "testDescription_Circular Group Study Pod 3",
        "startTime": "2019-12-30T09:30:15+0200",
        "endTime": "2019-12-30T10:00:00+0200",
        "reservationID": "5e0498469ae7b6433847020",
        "resourceID": "125",
        "userID": "16933"
      },
      {
        "resourceType": "Circular Group",
        "resourceName": "Circular Group Study Pod 4",
        "description": "testDescription_Circular Group Study Pod 4",
        "startTime": "2019-12-29T07:30:00+0200",
        "endTime": "2019-12-29T09:00:00+0200",
        "reservationID": "5e0498469ae7b6433847021",
        "resourceID": "125",
        "userID": "16933"
      }
    ]
  }
}
```

```

    },
    {
        "resourceType": "Circular Group",
        "resourceName": "Circular Group Study Pod 5",
        "description": "testDescription_Circular Group Study Pod 5",
        "startTime": "2019-12-27T19:30:00+0200",
        "endTime": "2019-12-27T20:00:00+0200",
        "reservationID": "5e0498469ae7b6433847022",
        "resourceID": "125",
        "userID": "16933"
    },
    {
        "resourceType": "Circular Group",
        "resourceName": "Circular Group Study Pod 6",
        "description": "testDescription_Circular Group Study Pod 6",
        "startTime": "2019-12-16T09:00:00+0200",
        "endTime": "2019-12-16T10:00:00+0200",
        "reservationID": "5e0498469ae7b6433847023",
        "resourceID": "125",
        "userID": "16933"
    }
}
]
}
}

```

Attributes Mapping

External Field Name	Description	Mandatory Yes/No	Data Type	Default	Example
resourceType	Resource type	No	String		Conference Room
resourceName	Resource name	Yes	String		Conference Room 1
description	Reservation description	No	String		
startTime	Booking start time	Yes	String according to the following format: yyyy-MM-ddTHH:mm:ss'Z'		2019-12-29T07:30:00+0200
endTime	Booking end time	Yes	String according to the following format: yyyy-MM-ddTHH:mm:ss'Z'		2019-
reservationID	Reservation ID	Yes	String		
esrouceID	Resource ID	No	String		
userID	User identifier that will match equivalent attribute on IDP (see	Yes	String		

External Field Name	Description	Mandatory Yes/No	Data Type	Default	Example
	Prerequisites).				

Get Available Resources API

- Request:

```
https://{
BASE_URL}/getResourceBookingAvailability?userid={userID}&date={Date}&resource={resourceCode}
```

The request if an additional filter is enabled (the Enable additional filter checkbox is selected in Resource Booking configuration):

```
https://{
BASE_URL}/getResourceBookingAvailability?userid={userID}&date={Date}&resource={resourceCode}%&
```

Note

- Base URL – the URL to retrieve as defined in the product integration configuration
- userID – the user identifier as defined in the Query Parameters
- Date – the selected date using the following date format: yyyy-MM-ddTHH:mm:ss'Z'
- resourceCode – the the resource code as defined in the configuration
- filterTypeCode – according to the code defined in the Resource Booking configuration (Filter Code)
- FilterOptionCode – according to the define code in the Resource Booking configuration (Filter Option Code) of the selected value by the user

-
- Expected Response:

The response should be similar to the following:

```
{
  "slotsForResourcesList": [{
    "maxSlotLength": "120",
    "minSlotLength": "30",
    "resourceId": "10",
    "resourceName": "Presentation Pod 4",
    "slotList": [{
      "endTime": "2019-12-30T08:30:00+0200",
      "isAvailable": "true",
      "startTime": "2019-12-30T08:00:00+0200"
```

```

    },
    {
      "endTime": "2019-12-30T09:00:00+0200",
      "isAvailable": "true",
      "startTime": "2019-12-30T08:30:00+0200"
    },
    {
      "endTime": "2019-12-30T09:30:00+0200",
      "isAvailable": "true",
      "startTime": "2019-12-30T09:00:00+0200"
    }
  ]
},
{
  "maxSlotLength": "180",
  "minSlotLength": "60",
  "resourceId": "11",
  "resourceName": "Presentation Pod 7",
  "slotList": [{
    "endTime": "2019-12-30T09:00:00+0200",
    "isAvailable": "true",
    "startTime": "2019-12-30T08:00:00+0200"
  },
  {
    "endTime": "2019-12-30T10:00:00+0200",
    "isAvailable": "true",
    "startTime": "2019-12-30T09:00:00+0200"
  },
  {

```

```

        "endTime": "2019-12-30T11:00:00+0200",

        "isAvailable": "true",

        "startTime": "2019-12-30T10:00:00+0200"

    }

]

}

]

}

```

Attributes Mapping

External Field Name	Description	Mandatory Yes/No	Data Type	Default	Example
maxSlotLength	Maximum duration of this resource in minutes	Yes	String		120
minSlotLength	Minimum duration of this resource in minutes (must be more than 0).	Yes	String		30, 60
resourceID	Resource ID	No	String		
resourceName	Resource Name	Yes	String		
startTime	Start time	Yes	String according to the following format: yyyy-MM-ddTHH:mm:ss'Z'		2019-12-29T07:30:00+0200
endTime	End time	Yes	String according to the following format: yyyy-MM-ddTHH:mm:ss'Z'		2019-12-29T07:30:00+0200
isAvailable	Whether the resource is available in this specific time slot. True/False	Yes	String		True False

Note

slotList should include all slots (both available and unavailable), according to the minSlotLength.

Send User's Reservation API (POST)

- Request:

`https://{BASE URL}/updateUserReservation`

The following is the body of the request:

```

{
  "userid" : "12345",
  "resourceName": "Presentation Pod 5"
  "resourceId":"a1234",
  "startTime": "2019-12-30T11:00:00+0200"
  "endTime": "2019-12-30T11:30:00+0200"
  "description": "fgfdg"
}

```

Attributes Mapping

External Field Name	Description	Mandatory Yes/ No	Data Type	Default	Example
userid		Yes	String		Conference Room 1
ResourceName		Yes	String		Presentation Pod 5
ResourceId		Yes	String		a1234
Description		Yes	String		
startTime		Yes	String according to the following format: yyyy-MM-ddTHH:mm:ss'Z'		2019-12-29T07:30:00+0200
endTime		Yes	String according to the following format: yyyy-MM-ddTHH:mm:ss'Z'		2019-12-29T07:30:00+0200

- Expected Response:

The response should include a failure/success indication and a reservationID (should be generated in your system) in the following format:

```

{
  "userid" : "12345",
  "reservationid" : "1234567",
  "response": "Reservation successfully added!" //if failure: "Reservation failed"
}

```

Cancel User's Reservation API (POST)

- Request:

campusM should send the following web service:

https://{BASE URL}/cancelUserReservation

The following is the body of the request:

```
{
  "userid": "a@google.com",
  "reservationid": "12345",
}
```

- Expected Response:

The response should include a failure/success indication in the following format:

```
{
  "userid" : "12345",
  "reservationid" : "1234567",
  "response": "Reservation successfully deleted!" //if failure: "Reservation failed"
}
```

Authentication of all APIs is included in the headers (according to the product integration configuration - General Headers and/or API Authentication).

Configuration

To configure the Resource Booking product integration, select **Add Product Integration** from the **Product Integrations** main menu option and Select **Resource Booking**.

The following table describes the configuration options available on this page.

Configuration Option	Description	Mandatory	Data Type	Default	Example
Manage Integration					
Enable Product Integration	Select to enable the product integration on the user's campusM app.	No	Checkbox	Unselected	
Product Integration Description	A description of the product integration for internal use	Yes	String		
Screen Title	The title that appears in the top header of the service	No	String	Resource Booking	
Vendor – This section defines the structure of the APIs used in this product integration.					
Vendor Name	Defines to which vendor the integration connects. The resource Booking product integration is currently supported by the RESTful API (generic) vendor.	Yes	Drop-down list		API

Configuration Option	Description	Mandatory	Data Type	Default	Example
API Configuration					
This section contains the API details to define the API structure. You can test the API configuration. See Testing API Product Integration Configuration .					
Base URL to retrieve the information	The URL for the API	Yes	URL		https:// {HOST}
Parameter Input Option	The parameter input option. Possible values: Username, Token Property, and Constant. It is sent as the path parameter	.	Yes	Drop-Down list	Token Property
Token Property Name	Enter the property name to be retrieved from the token ({ USERNAME, MAIL, GIVEN_NAME, SURNAME, FULL_NAME } or as named in the integration profile)	No	String		USERNAME
Constant Value	The value when the User Identifier is set to Constant	No	String		
Authentication Type	<p>Authentication type against the web service. The options are the following:</p> <ul style="list-style-type: none"> No Auth Basic - username and password for Base64 basic authentication. API Key - can be added to a Header or to the URL (Query Param) or both. Bearer token 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. 	No	Object		No Auth
Look and Feel		No			
Primary Theme Color	Select a color for the main elements on the page	No	Color Picker	#444444	
Secondary Theme Color	Select a color for the secondary elements on the page	No	Color Picker	#6f8ea4	
Text / Labels	Enter replacement text for the default titles and labels	No	String		
General					
Resource Types	The available resource types in your institution, for example, rooms and PCs. If you have only one available resource type, it is not necessary to fill in this field.		List		
Max days for booking in advance	The maximum number of days that a booking can be done in advance.		String		

Configuration Option	Description	Mandatory	Data Type	Default	Example
Reservation Date Format	The format in which to display dates in the product integration.		String	DD-MMM-YYYYY	
Enable additional filter checkbox	Select to enable the additional filter to add an additional filter in the main Resource Booking page	No	Checkbox	Unselected	
Filter Code	The code of the filter to be used in the API	Yes (if filter is enabled)	String		LOCATION
Filter Description	The description of the additional filter to be displayed in the app	Yes (if filter is enabled)	String		Location
Filter Option Code	The code of the filter's value to be used in the API	Yes (if filter is enabled)	String		LONDON
Filter Option Description	The description of the filter's value to be displayed in the app	Yes (if filter is enabled)	String		London
General Error Message	The general error message if the page fails to load		String	Please try again later	
Import/ Export Configuration You can configure product integration and then export it to another campusM environment, for example, from sandbox to production or from preview to production.					
Export	Create a JSON file with all product integration configuration	No			
Import	Use this option in order to load configuration from JSON of an exported product integration	No			