

PowerApp - README

- The PowerApp sample solution includes the following components
 - PowerOperator4IoTEdge – Canvas App
 - PowerAutomate2IoTEdgeCTL – PowerAutomate to call REST API
 - Entities(Tables) – to hold module, device, edge and deployment information
- PowerApp uses the Dataverse (formerly known as Common Data Service) to store information regarding modules, devices, edges, etc.
- In its current version the data for module names is not integrated between Dataverse and CosmosDB, hence will need to be manually added to the Dataverse

Environment

- An *environment* is a space to store, manage, and share your organization's business data, apps, and flows. ([About Environments](#))
- For the installation you could using an existing environment or start with a new environment
- This documentation assumes new environment

[+ New](#) [Refresh](#)

IoTEdgeCTL2 is deleted. Administrators of the environment can recover it for the next 7 days by going to the [deleted environments page](#). It may take several minutes before the environment appears there.

Environments

Environment	Type	State	Region	Created on ↓
CRM272370	Trial (subscription-based)	Ready	United States	12/04/2020 9:11 PM
Contoso (default)	Default	Ready	United States	12/04/2020 9:11 PM

New environment

Name *

PowerTools4IoTEdge

Type ⓘ *

Trial

Region *

Local environments can provide quicker data access.

United States - Default

Purpose

Describe the environment purpose

Create a database for this environment? ⓘ

 Yes

This example starts with creating a new Environment, you can start in an existing environment as well. Here is [instructions](#) to create a new PowerApp environment.

[Next](#)[Cancel](#)

Power Apps

Home

Learn

Apps

Create

Data

Flows

Chatbots

AI Builder

Solutions

Build business apps, fast

Create apps that connect to your data and work across web and mobile. [Learn about Power Apps](#)

Start from data



SharePoint



Excel Online



SQL Server

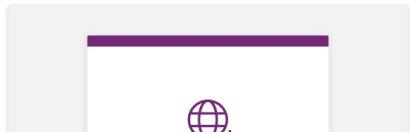


Common Data Service

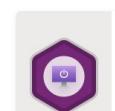


Other data sources

Make your own app



After creating the environment, navigate to make.powerapps.com and select your environment



Get started with Power Apps

Beginner

51 mins



Author a basic formula to change properties in a...

Beginner

42 mins



Work with external data in a Power Apps canvas app

Intermediate

43 mins



Manage Power Apps

Beginner

Environments

Search

CRM738317

✓ Contoso (default)

PowerTools4IoTEdge

2

Power Apps Power Platform admin center https://make.powerapps.com/environments/bdb2c23a-36aa-450f-bfdc-effa22d12c1d/solutions

Power Apps

- Home
- Learn
- Apps
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- Chatbots
- AI Builder

Solutions

Display name	Name	Created	Vers
Power Apps Checker Base	msdyn_PowerAppsC...	12/19/2020	1.2.0
Power Apps Checker	msdyn_PowerAppsC...	12/19/2020	1.2.0
Contextual Help Base	msdyn_ContextualH...	12/19/2020	1.0.0
Contextual Help	msdyn_ContextualH...	12/19/2020	1.0.0
Common Data Services Default Solution	Crb4d19	12/19/2020	1.0.0
Default Solution	Default	12/19/2020	1.0

Import

2

Import a solution

Select a file

Drag and drop or browse for the solution file to import.

Browse

PowerTools4IoTEdge_1_0_0_3.zip

Navigate to Solutions and select import

Next

Cancel

Power Apps



Home

Learn

Apps

Create

Data

Flows

Chatbots

AI Builder

Solutions

[+ New solution](#) [Import](#) [Open AppSource](#) [Publish all customizations](#) [Switch to classic](#) [See history](#)

Solutions

Display name	Name	Created ↓	Vers
Power Apps Checker Base	msdyn_PowerAppsC...	12/19/2020	1.2.0.
Power Apps Checker	msdyn_PowerAppsC...	12/19/2020	1.2.0.
Contextual Help Base	msdyn_ContextualH...	12/19/2020	1.0.0.
Contextual Help	msdyn_ContextualH...	12/19/2020	1.0.0.
Common Data Services Default Solution	Crb4d19	12/19/2020	1.0.0.
Default Solution	Default	12/19/2020	1.0

Import a solution

[Refresh](#)

Connections

Re-establish connections to activate your solution. If you create a connection you must Refresh. You will not lose your import progress.

2 updates needed

Common Data Service (current enviro... new_sharedcommondataserviceforapps_...	Select a connection
Common Data Service * new_sharedcommondataservice_e3c58	Select a connection

Create Connections for PowerApp and PowerAutomate to connect to
Dataverse

Import

Cancel



Connections > New connection

Name

SharePoint
MicrosoftOneDrive for Business
MicrosoftDynamics 365 (deprecated)
Microsoft PremiumSalesforce
Microsoft PremiumOneDrive
MicrosoftAzure Container Instance
Microsoft Premium

Common Data Service (cur...)

Microsoft Premium

Provides access to the org-based database on Microsoft Common Data Service in current environment.

Cancel

Create

Create Connections for PowerApp and PowerAutomate to connect to Dataverse

Power Apps

+ New solution Import Open AppSource Publish all customizations Switch to classic See history

Solutions

Display name	Name	Created ↓	Vers
Power Apps Checker Base	msdyn_PowerAppsC...	12/19/2020	1.2.0
Power Apps Checker	msdyn_PowerAppsC...	12/19/2020	1.2.0
Contextual Help Base	msdyn_ContextualH...	12/19/2020	1.0.0
Contextual Help			
Common Data Services Default Solution			
Default Solution			

Import a solution

Refresh

Connections

Re-establish connections to activate your solution. If you create a connection you must Refresh. You will not lose your import progress.

2 updates needed

Common Data Service (current environment)	Select a connection
Common Data Service *	Select a connection

Apply changes

If you've created any new connections, Refresh to add them to the connection list. You will not lose your progress.

Refresh Cancel

Click on Refresh

Import Cancel

Power Apps Power Apps Power Apps Power Platform admin center

https://make.powerapps.com/environments/bdb2c23a-36aa-450f-bfdc-effa22d12c1d/solutions

Power Apps Environment MythicaloT

1 + New solution Import Open AppSource Publish all customizations Switch to classic See history All Search

Home Learn Apps Create Data Flows Chatbots AI Builder Solutions

Currently importing solution "PowerTools4IoTEdge".

Display name	Name	Created	Version	Managed externally?	Solution check
Power Apps Checker Base	msdyn_PowerAppsC...	12/19/2020	1.2.0.34	🔓	Checked by publisher
Power Apps Checker	msdyn_PowerAppsC...	12/19/2020	1.2.0.34	🔓	Checked by publisher
Contextual Help Base	msdyn_ContextualH...	12/19/2020	1.0.0.12	🔓	Checked by publisher
Contextual Help	msdyn_ContextualH...	12/19/2020	1.0.0.12	🔓	Checked by publisher
Common Data Services Default Solution	Crb4d19	12/19/2020	1.0.0.0	🔓	Hasn't been run
Default Solution	Default	12/19/2020	1.0	🔓	Not supported for analysis

After going through the steps for import, the service will start importing the Solution into environment.

https://make.powerapps.com/environments/bdb2c23a-36aa-450f-bfdc-effa22d12c1d/solutions

 New solution Edit Delete Export Solution checker Show dependencies

 Solution "PowerTools4IoTEdge" imported successfully

Solutions

Display name	Name	Created ↓	Version	Managed externally?	Solution check
PowerTools4IoTEdge	PowerTools4IoTEdge	1/2/2021	1.0.0.7	🔒	Hasn't been run
Power Apps Checker Base	 Edit	12/19/2020	1.2.0.34	🔒	Checked by publisher
Power Apps Checker	 Delete	12/19/2020	1.2.0.34	🔒	Checked by publisher
Contextual Help Base	 Solution checker >	12/19/2020	1.0.0.12	🔒	Checked by publisher
Contextual Help	 Show dependencies	12/19/2020	1.0.0.12	🔒	Checked by publisher
Common Data Services Default Solution	 See history	12/19/2020	1.0.0.0	🔒	Hasn't been run
Default Solution	 Clone >	12/19/2020	1.0	🔒	Not supported for analysis
	 Apply upgrade				
	 Translations >				
	 Settings				

On successful import, the solution will show all the components it includes – Connection References, Tables, PowerApp and PowerAutomate.

The screenshot shows the Power Apps Solutions page. The URL in the address bar is <https://make.powerapps.com/environments/bdb2c23a-36aa-450f-bfdc-effa22d12c1d/solutions/53eaffd4-7a39-4b3c-9d04-1cf9ef1a52c0#>. The environment is set to 'MythicalloT'. A red box highlights the 'Solutions > PowerTools4IoTEdge' section. A yellow circle with the number '1' is positioned to the left of the navigation menu.

	Display name	Name	Type	Managed...	Modified	Owner	Status
	Common Data Service	Common Data Service	Connection Reference (previ	Open	4 min ago	MOD Administr	Off
	Common Data Service (current environment)	Common Data Service (current environment)	Connection Reference (previ	Open	4 min ago	MOD Administr	Off
	Device	cr865_device	Table	Open	4 min ago	-	-
	Edge	cr865_edge	Table	Open	4 min ago	-	-
	EdgeDeployments	cr865_edgedeployments	Table	Open	4 min ago	-	-
	EdgeModule	cr865_edgemodule	Table	Open	4 min ago	-	-
	EdgeRoute	cr865_edgeroute	Table	Open	4 min ago	-	-
	Module	cr865_module	Table	Open	4 min ago	-	-
	PowerAppOperator4IoTEdge	new_powerappoperator4iotedge_a884d	Canvas app	Open	-	MOD Administr	-
	PowerAutomate2IoTEdgeCTL	PowerAutomate2IoTEdgeCTL	Flow	Open	4 min ago	MOD Administr	Off

On successful import, the solution will show all the components it includes – Connection References, Tables, PowerApp and PowerAutomate.

The screenshot shows the Power Platform admin center interface. The left sidebar has sections for Home, Learn, Apps, Create, Data, Flows, Chatbots, AI Builder, and Solutions. The Solutions section is currently selected. The main area displays a list of solutions under 'PowerTools4IoTEdge'. One solution, 'PowerAutomate2IoTEdgeCTL', is highlighted with a red box and circled with a yellow circle labeled '1'. Its details card is also highlighted with a red box and circled with a yellow circle labeled '2'. A context menu is open over this card, with the 'Edit' option highlighted with a red box and circled with a yellow circle labeled '3'. The menu includes options like Remove, See Analytics, Details, Turn on, Add required components, Managed properties, Show dependencies, and See solution layers.

Select the PowerAutomate2IoTEdgeCTL and click on the ellipsis. From the menu click on Edit



Search for helpful resources

Environments
PowerApp4IoTEdge

- Home
- Action items
- My flows
- Create
- Templates
- Connectors
- Data
- Monitor
- AI Builder
- Process advisor (preview)
- Solutions
- Learn

← PowerAutomate2IoTEdgeCTL

1

2

When a record is created

* Environment: c24f89f7f0174828950ff74103e55bc0.crm

* Entity Name: cr865_edgedeploymentses

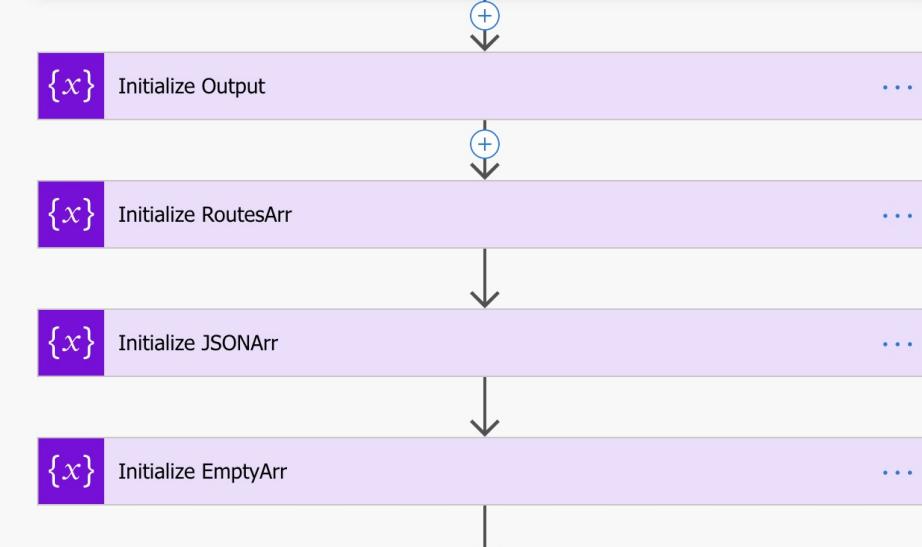
* Scope: Organization

3

Save

Flow checker

Test



Click on the first activity in PowerAutomate and update the following
Environment : the newly created environment name
Entity Name : edgedeployments

When a record is created

* Environment: PowerApp4IoTEdge (iotedgect)

* Entity Name: EdgeDeployments

* Scope: Organization

Microsoft Edge File Edit View History Favorites Tools Profiles Tab Window Help

Power Apps Edit your flow | Power Automat Edit your flow | Power Automat PowerAppOperator4IoTEdge - Power Platform admin center Export and import your apps a +

https://us.flow.microsoft.com/manage/environments/0cce16fd-1214-443a-aaa2-f69db3eb699e/solutions/646bf39f-f245-eb11-a813-0022480900d8/flows/22795f47-f7a4-4860-ab44-245c2...     ...

Power Apps

Search for helpful resources

Environments PowerApp4IoTEdge  ? 

Home Action items My flows Create Templates Connectors Data Monitor AI Builder Process advisor (preview) Solutions Learn

PowerAutomate2IoTEdgeCTL  Your flow is ready to go. We recommend you test it

Get Edge Information → Get Edge Modules → For Each EdgeModule → HTTP

HTTP Step Configuration:

- * Method: POST
- * URI: https://iotedgectl.azurewebsites.net/api/GenerateApplyIoTEdgeManifest?code=wZ/AKD7s7sBwcP5Rfx3PbLWigmII0JUQOxAbnbeaOL4znAJP4LJ4jA==&deviceid= 
- Headers: Enter key | Enter value
- Queries: Enter key | Enter value
- Body: 

Navigate to the bottom of the PowerAutomate flow and select the step named "HTTP". This is the step that makes a call to thee REST API that we deployed to Azure. Update this with the appropriate Function URL from deployment into Azure (Navigate to Azure Portal and copy the function url for

Home > ioTEdgeCTL > GenerateApplyIoTEdgeManifest     

Function Overview Developer    

Get Function Url default (function key) https://iotedgectl.azurewebsites.net/api/GenerateApplyIoTEdgeManifest?code=wZ/AKD7s7sBwcP5Rfx3PbLWigmII0JUQOxAbnbeaOL4znAJP4LJ4jA==&deviceid= 

Subscription ID : 881ac365-d417-4791-b2a9-48789acbb88d

Screenshot of the Power Platform admin center showing the Solutions list for the environment PowerApp4IoTEdge.

The sidebar on the left shows the following navigation:

- Home
- Learn
- Apps
- Create
- Data
- Flows
- Chatbots
- AI Builder
- Solutions**

The main content area displays the following table:

Display name	Name	Type	Managed...	Modified	Owner	Status
Common Data Service	Common Data Service	Connection Reference (previ)	Open	11 min ago	MOD Administr	Off
Common Data Service (current environment)	Common Data Service (current environment)	Connection Reference (previ)	Open	11 min ago	MOD Administr	Off
Device	Device	Table	Open	12 min ago	-	-
Edge	Edge	Table	Open	12 min ago	-	-
EdgeDeployments	EdgeDeployments	Table	Open	12 min ago	-	-
EdgeModule	EdgeModule	Table	Open	12 min ago	-	-
EdgeRoute	EdgeRoute	Table	Open	12 min ago	-	-
Module	Module	Table	Open	12 min ago	-	-
PowerAppOperator4IoTEdge	4iotedge_a884d	Canvas app	Open	-	MOD Administr	-
PowerAutomate2IoTEdgeCTL	PowerAutomate2IoTEdgeCTL	Flow	Open	11 min ago	MOD Administr	Off

A context menu is open for the row containing "PowerAutomate2IoTEdgeCTL". The menu items are:

- Remove
- Edit
- See Analytics
- Details
- Turn on** (highlighted with a red box and circled with yellow number 3)
- Add required components
- Managed properties
- Show dependencies
- See solution layers

Annotations with numbers 1, 2, and 3 are overlaid on the screenshot:

- Red box around the "PowerAutomate2IoTEdgeCTL" row.
- Red box around the three dots icon in the row header.
- Yellow circle with the number 3 highlighting the "Turn on" button in the context menu.

A large yellow box at the bottom contains the text:

Go back to Solutions and Turn on PowerAutomate2IoTEdgeCTL

Microsoft Edge File Edit View History Favorites Tools Profiles Tab Window Help

Power Apps Power Platform admin center Export and import your apps

https://make.powerapps.com/environments/0cce16fd-1214-443a-aaa2-f69db3eb699e/apps#

Power Apps Environment PowerApp4IoTEdge

Org apps Search

Apps

Apps Component libraries (preview)

Name

More Commands Modified

Owner

Type

Solution Health Hub

... 1 wk ago

SYSTEM

Model-driven

Apps

Create

Data

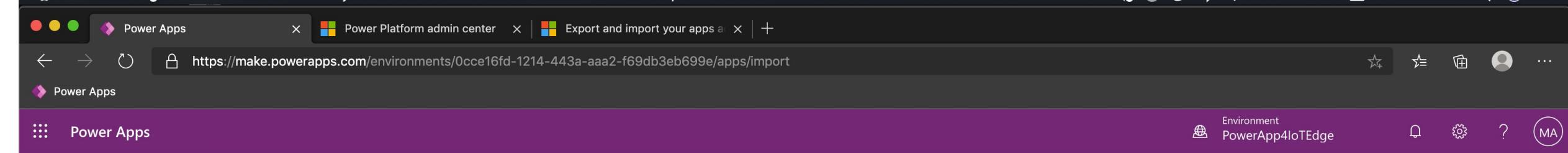
Flows

Chatbots

AI Builder

Solutions

Navigate to “Apps” and then select Import Canvas App



Import package

Import canvas app created outside of a solution into this environment. Apps created in a solution can be imported under Solutions. [Learn more](#)

Choose the package file to import

PowerAppOperator4IoTEdge_1_0_0_7.zip

Uploading...

Select “PowerAppOperator4IoTEdge_1_0_0_7.zip”

Upload

Import

Cancel

Import package

Import canvas app created outside of a solution into this environment. Apps created in a solution can be imported under Solutions. [Learn more](#)

Package details

Created by System Administrator on 01/02/2021

Name: PowerApps4IoTEdge

Environment: PowerTools4IoTEdge

Description: N/A

Review Package Content

Choose your import options.

NAME	RESOURCE TYPE	IMPORT SETUP	ACTION
PowerAppOperator4IoTEdge	App	Create as new	

Related resources

NAM

ACTION

1

Select Import

Import Cancel



Home

Learn

Apps

Create

Data

Flows

Chatbots

AI Builder

Solutions

PowerApps4IoTEdge

✓ All package resources were successfully imported.

1

Next steps ...

- Open and test your app in the Power Apps Studio. [Open app](#)
- If the app is working, [share](#) your app with your organization.

Package details

Created by System Administrator on 01/02/2021

Name

PowerApps4IoTEdge

Environment

PowerTools4IoTEdge

Description

N/A

Review Package Content

Ch

R

Select Open App

ACTION



New screen

Theme

B

U

A

Fill

Border

Reorder

Align

Group

Fill

=

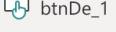
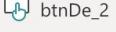
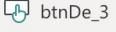
fx RGBA(255, 255, 255, 1)

Tree view

Screens Components



HOME



> f1AddModules

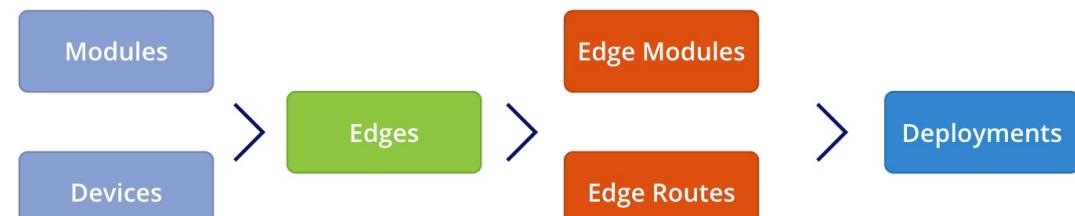
> f1AddDevices

> f2AddEdge

> f3AddEdgeModule

> f4AddEdgeRoute

> f5AddEdgeDeployment



The App is now ready to use. Click on Play to run the app.

SCREEN

HOME

Properties

Advanced

Fill

Background image

None

Image position

Fit

1

Modules**Devices****Edges****Edge Modules****Edge Routes****Deployments**

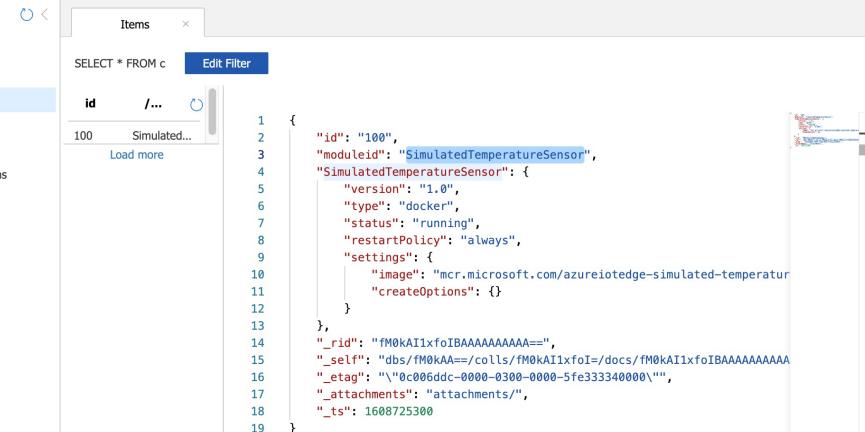
Select Modules to create a module

Add Module

SimulatedTemperatur >

SimulatedTemperatureSensor

Module Name

A screenshot of the Power Apps studio interface. It shows the "SQL API" section for the "SimulatedTemperatureSensor" module. Under "Items", there is a table with one row, ID 100, labeled "Simulated...". A tooltip for "Load more" is visible.

```
1 {  
2   "id": "100",  
3   "moduleId": "SimulatedTemperatureSensor",  
4   "SimulatedTemperatureSensor": {  
5     "version": "1.0",  
6     "type": "docker",  
7     "status": "running",  
8     "restartPolicy": "always",  
9     "settings": {  
10       "image": "mcr.microsoft.com/azureiotedge-simulated-temperature",  
11       "createOptions": {}  
12     }  
13   },  
14   "_rid": "fM0kAI1xfoIBAAAAAAA=",  
15   "_self": "dbs/fM0kAI1xfoI/colls/fM0kAI1xfoI/docs/fM0kAI1xfoIBAAAAAAA",  
16   "_etag": "\"0c006ddc-0000-0300-0000-5fe33340000\"",  
17   "_attachments": "attachments/",  
18   "_ts": 1608725300  
19 }
```

Add sample module that match with what is in CosmosDB. The installation script adds a module “[SimulatedTemperatureSensor](#)” in CosmosDB. For every new module added in CosmosDB, the corresponding module name will need to be added to PowerApp module entity

Add Edge Deployment



Module Instance Name	Module	Desired Properties			
NUC >	A	SimulatedTemperatureSensor {"name": "A"}			
Alpha >	B	SimulatedTemperatureSensor {"name": "B"}			
	C	SimulatedTemperatureSensor			
Route Name	From Module	From Channel	To Module	To Channel	To IoTHub
A2Cloud	A	*			Yes
A2B	A	*	B	input	No
B2Cloud	A	*			Yes
Deployment Name	Deployment Description				
<input type="text"/>	<input type="text"/>				
Deployment.... Need to build in Deployment Lifecycle Management					<button>Deploy</button>