

## Presenter



# Greg Degruy

Partner Software Engineer

@gregdegruy

[github.com/gregdegruy](https://github.com/gregdegruy)



Dynamics 365 for  
Field Service



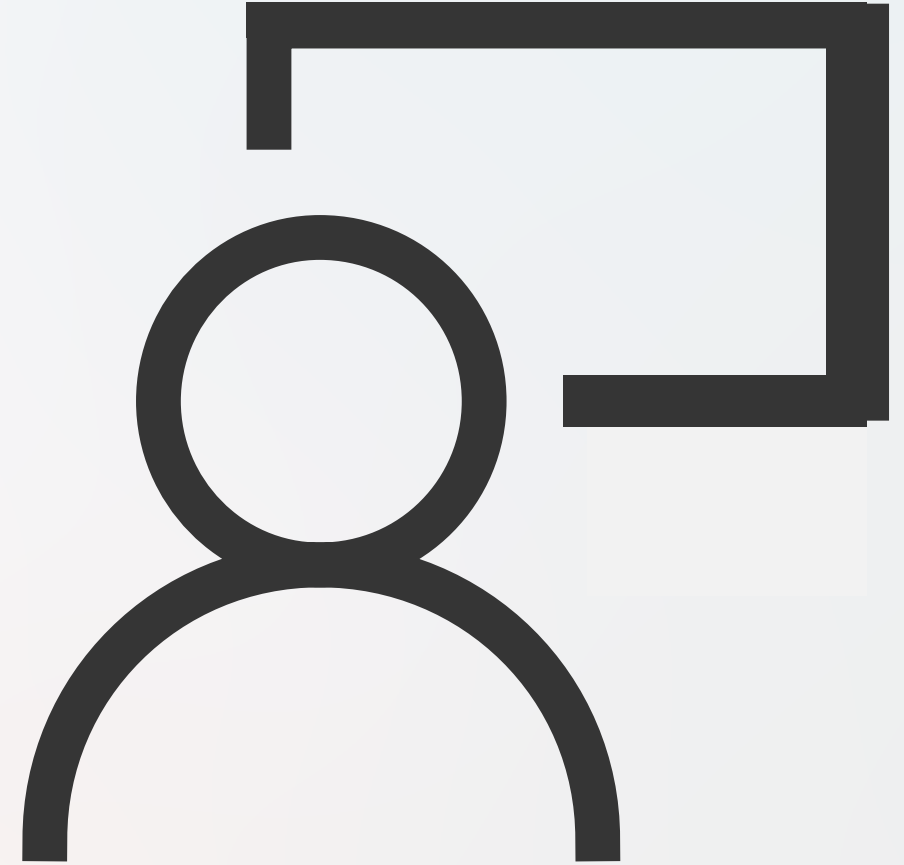
Azure IoT Central

# **Capture anomaly and other data in Dynamics 365**




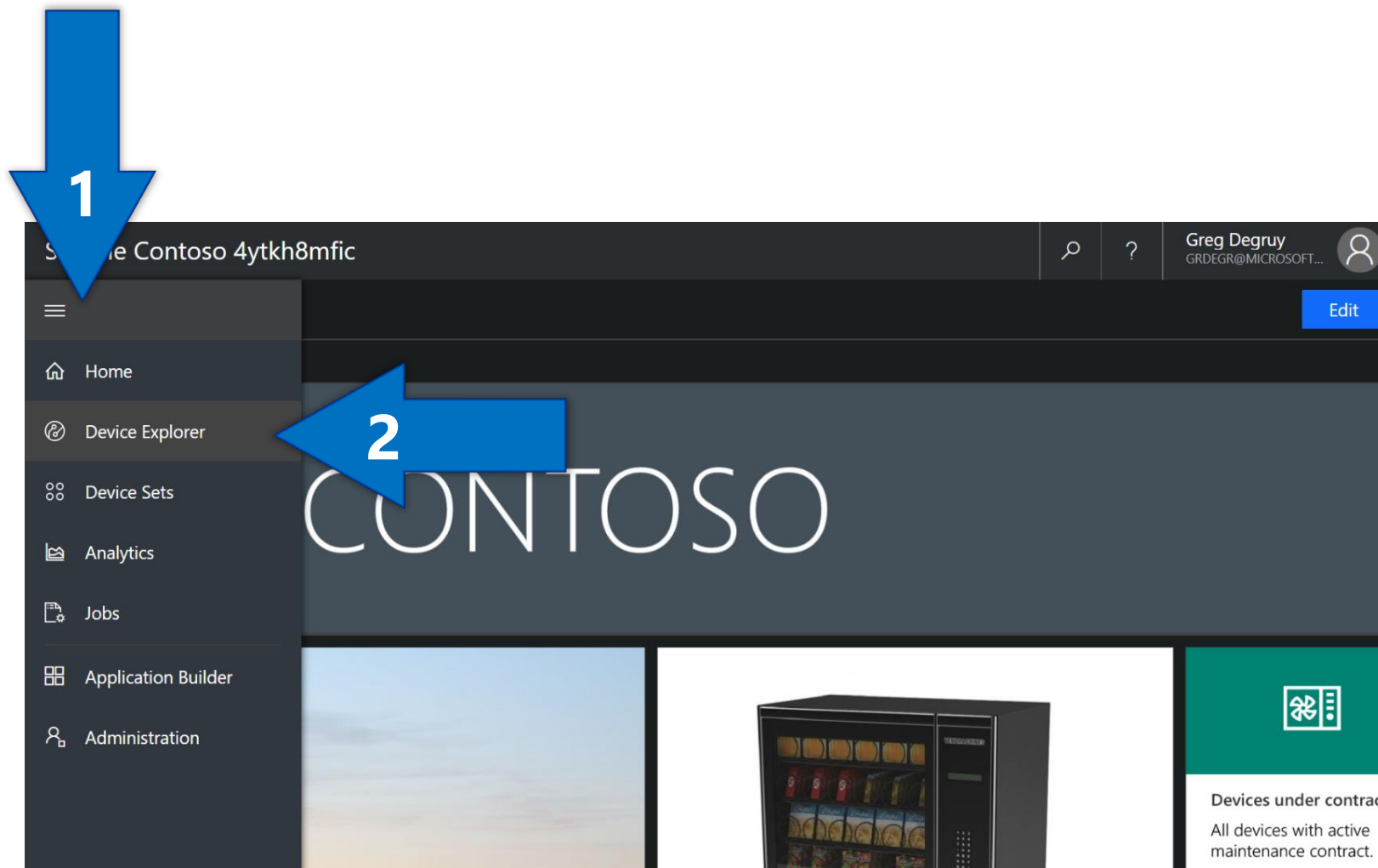
# Content Overview

- 10 minutes
- You'll learn how to:
  - Add a new Telemetry rule
  - Create a Microsoft Flow that sends anomaly data to Dynamics 365



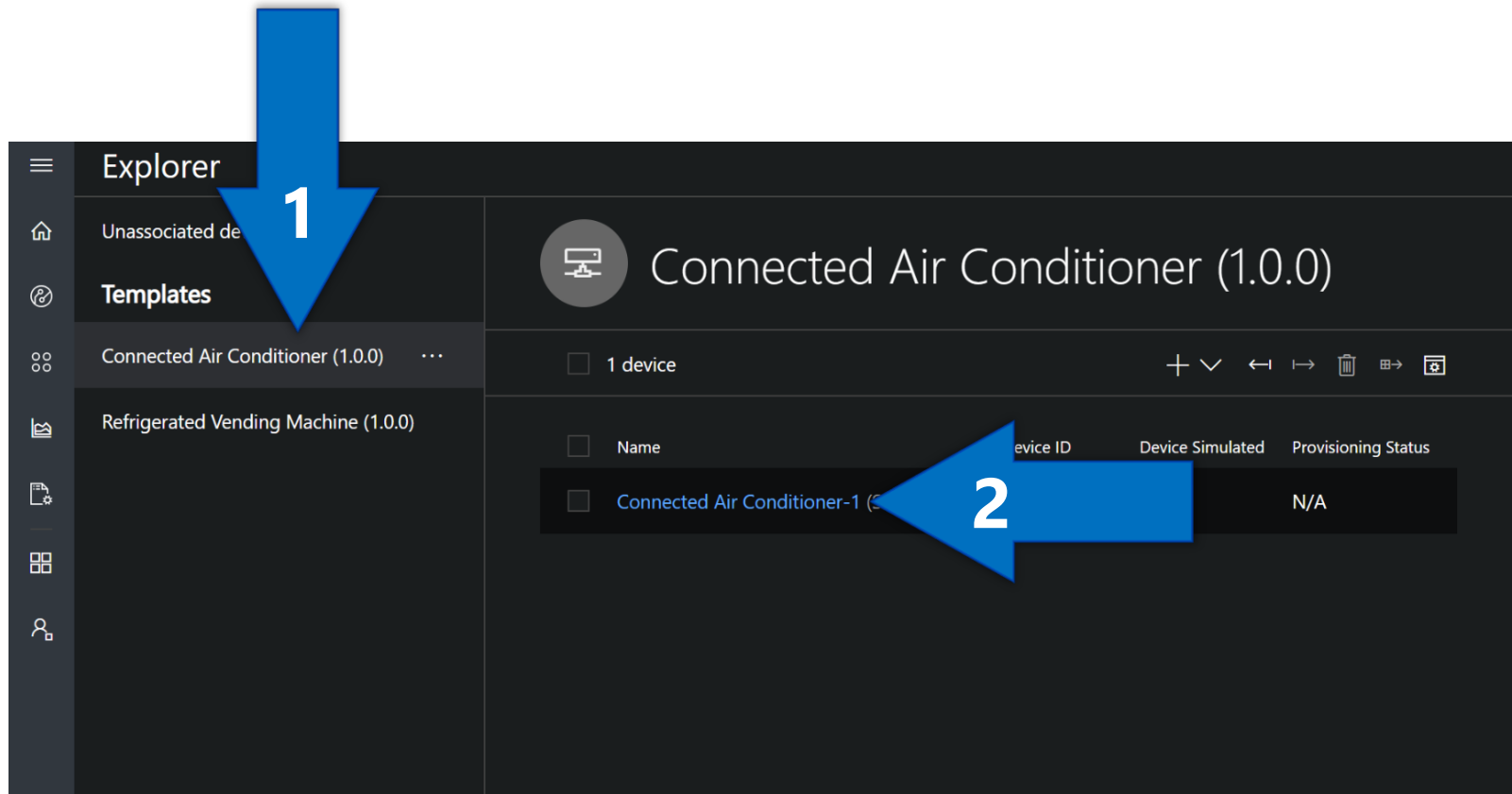
# Dynamics 365

1. From anywhere Select the hamburger menu button 
2. Select Device Explorer



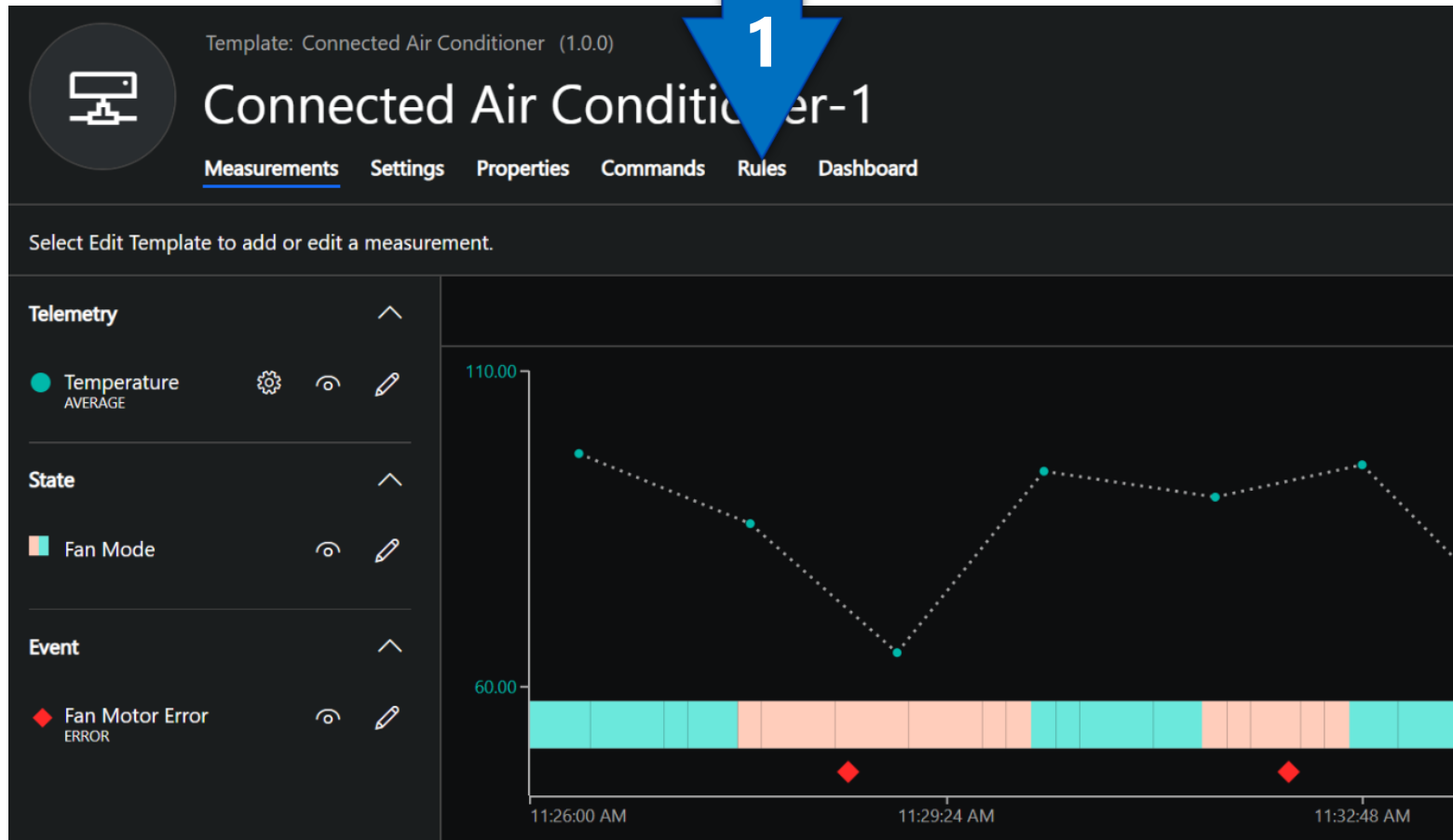
# Dynamics 365

1. Select the Connected Air Conditioner template we've been using if not selected already
2. Select the Connected Air Conditioner from the device list



# Dynamics 365

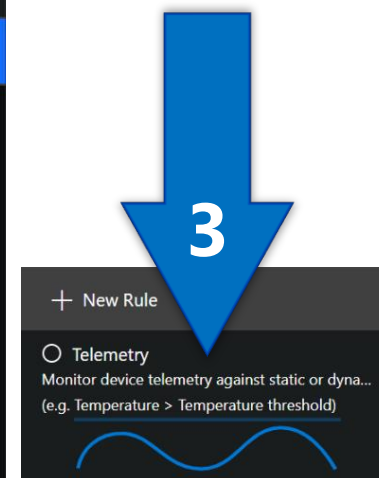
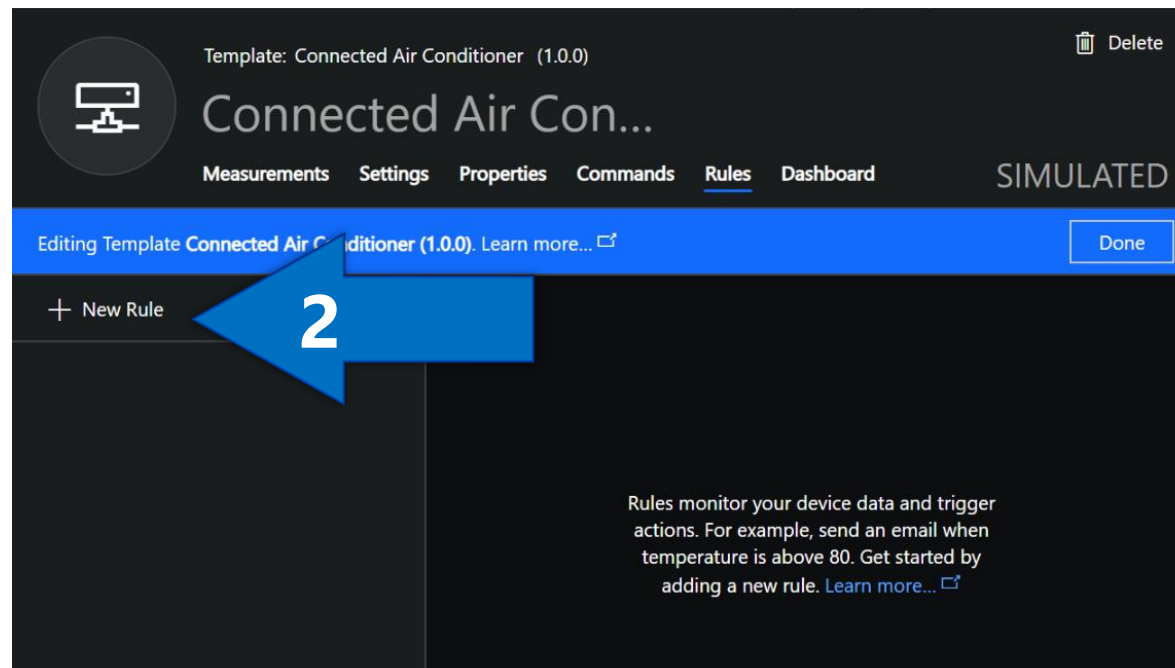
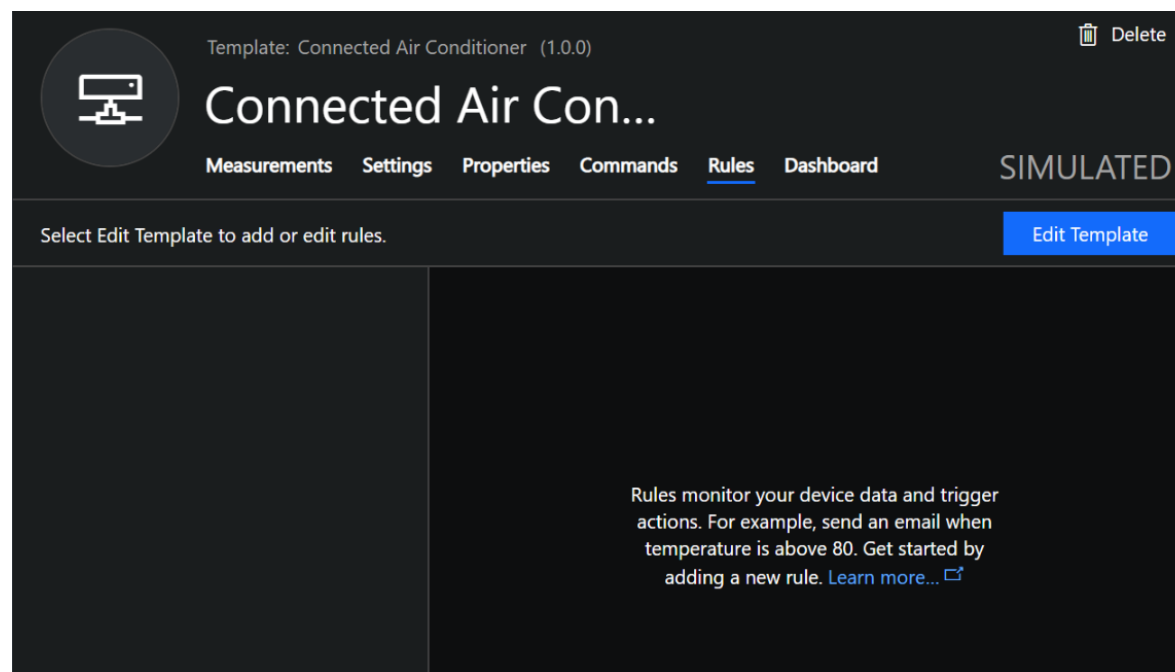
1. Select Rules




## EXERCISE 3

# Dynamics 365

1. Select Edit Template
2. Select New Rule
3. Select Telemetry

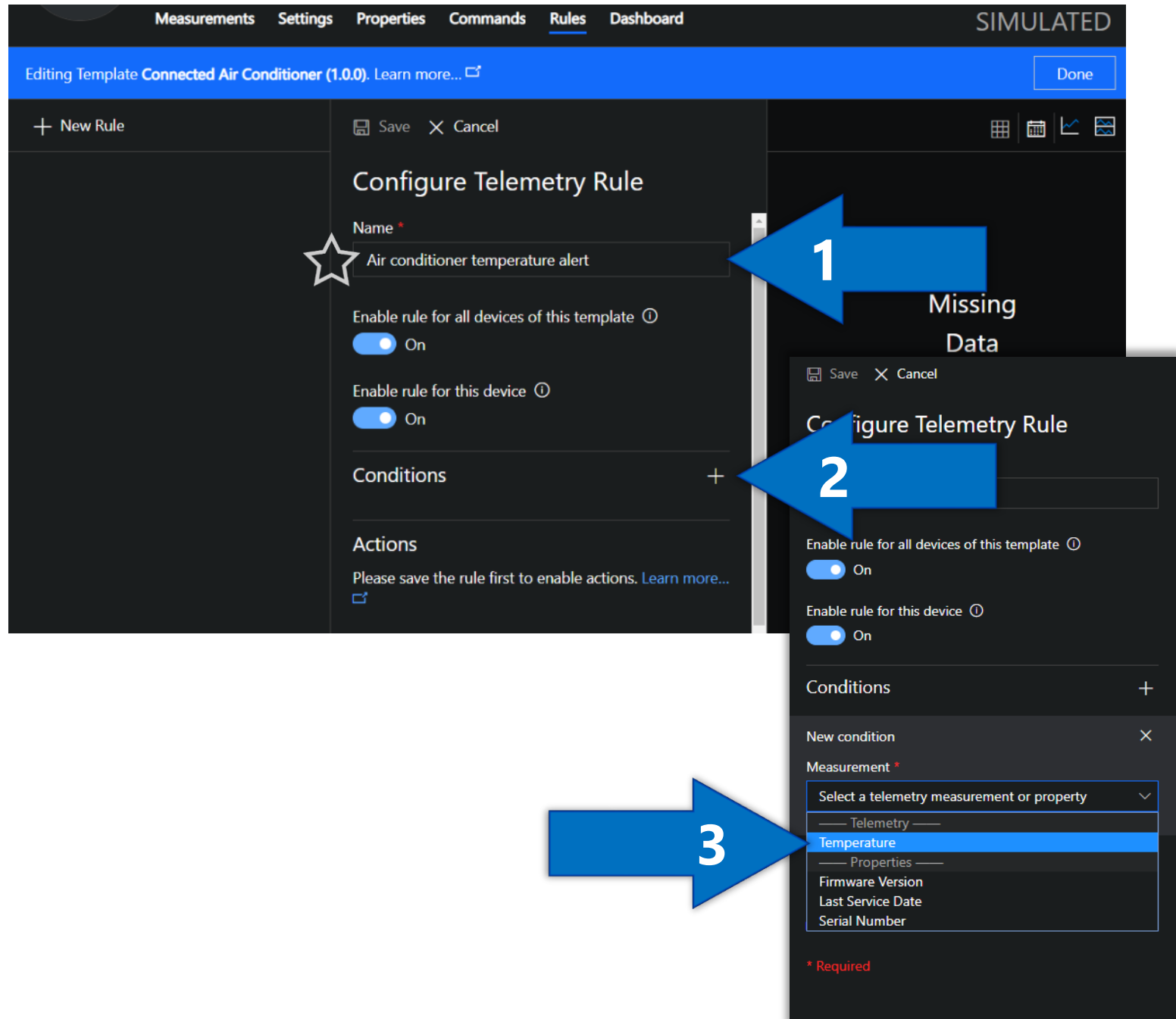


# Dynamics 365

1. Add the Name *Air conditioner temperature alert* and leave the switches set on 


★ As you move closer to production and add many more rules, please make the names as unique as possible. This will make managing rules in Microsoft Flow and other Actions much easier in the future.

2. Add a new Condition
3. From the Measurement drop down select Temperature



The screenshot shows the 'Configure Telemetry Rule' dialog in the Dynamics 365 interface. The dialog is titled 'Configure Telemetry Rule' and has a 'Name' field, two toggle switches for enabling the rule, and sections for 'Conditions' and 'Actions'. A blue arrow labeled '1' points to the 'Name' field, which contains the text 'Air conditioner temperature alert'. A blue arrow labeled '2' points to the 'Conditions' section, which has a '+' button to add a new condition. A blue arrow labeled '3' points to the 'Measurement' dropdown menu in the 'New condition' section, which is open and shows a list of options including 'Temperature'.

Measurements Settings Properties Commands Rules Dashboard

Editing Template **Connected Air Conditioner (1.0.0)**. Learn more... 

Done

+ New Rule

Save X Cancel

### Configure Telemetry Rule

Name \*

Air conditioner temperature alert

Enable rule for all devices of this template ⓘ


☒ On

Enable rule for this device ⓘ

☒ On

Conditions +

Actions

Please save the rule first to enable actions. [Learn more...](#) 

Missing Data

Save X Cancel

### Configure Telemetry Rule

Enable rule for all devices of this template ⓘ

☒ On

Enable rule for this device ⓘ

☒ On

Conditions +

New condition X

Measurement \*

Select a telemetry measurement or property

Telemetry

Temperature

Properties

Firmware Version

Last Service Date

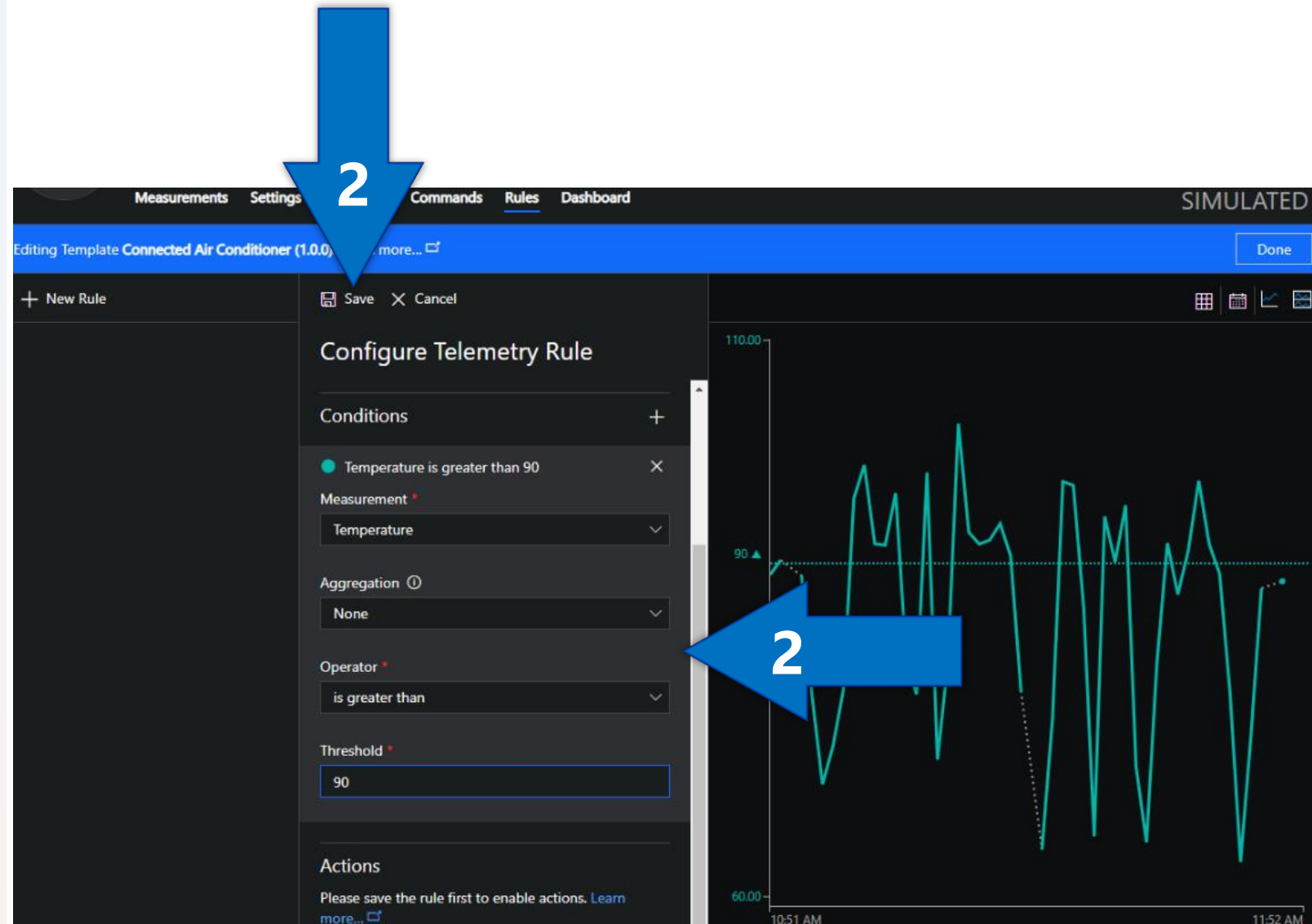
Serial Number

\* Required



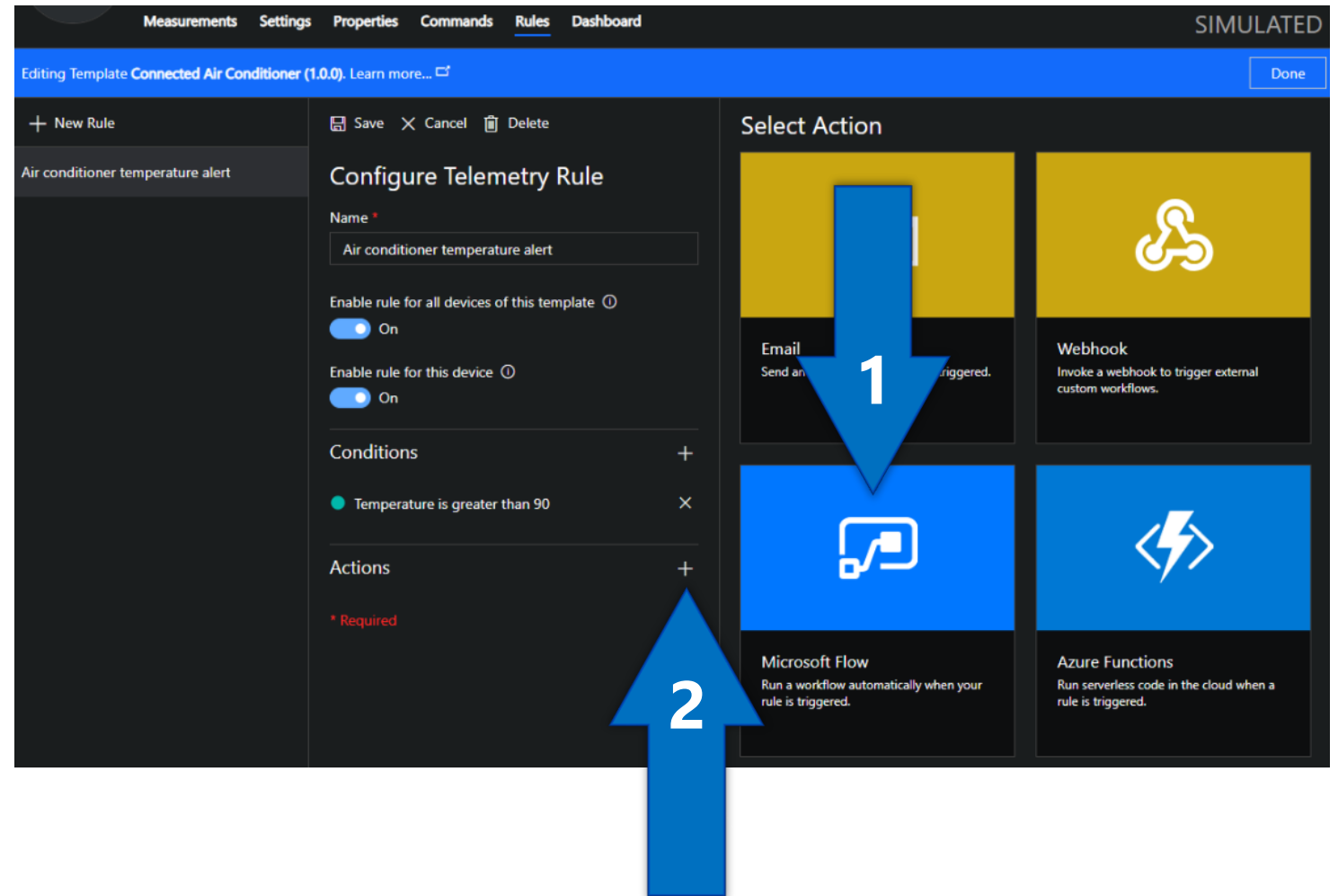
# Dynamics 365

1. Configure the Temperature threshold to be at 90 degrees by adding the following to the condition
  - Aggregation None
  - Operator is greater than 90
  - Threshold 90
2. Save



# Dynamics 365

1. Add a new Action
2. Select Microsoft Flow, a new window will open



## EXERCISE 3

# Dynamics 365

1. Sign in first, this will transport us to the full portal experience



The screenshot shows the Microsoft Flow interface. At the top, there's a navigation bar with 'Microsoft', 'Flow', 'Templates', 'Connectors', and 'Learn'. A search bar labeled 'Search templates ...' is on the right, along with 'Sign in' and 'Sign up free' buttons. The main content area has the title 'Run a custom action when an IoT Central rule is fired'. Below the title is a visual representation of the flow: a blue box with the Azure IoT Central logo (a white hexagon with a stylized 'C') is connected by a right-pointing arrow to a black box with a white gear icon. Below these boxes are the labels 'Azure IoT Central' and 'Custom action'. Underneath the flow diagram, the text 'Runs a custom action when an Azure IoT Central rule fires' is displayed. At the bottom center, there is a blue button labeled 'Use this template'.



## EXERCISE 3

# Dynamics 365

We're going to use a different template than the one presented to us when we first sign in

1. Select Templates
2. Search for *IoT Central*
3. Select *Create CFS alerts from IoT Central*

The image shows a two-part screenshot of the Microsoft Flow console interface. The top part shows the 'My flows' view with a search bar and a list of templates. A blue arrow labeled '1' points to the 'Templates' button in the left sidebar. Another blue arrow labeled '2' points to the search bar where 'IoT Central' is entered. The bottom part shows the search results for 'IoT Central', with a blue arrow labeled '3' pointing to the 'Create CFS alerts from IoT Central' template. The interface includes a sidebar with navigation options like Home, Approvals, My flows, Templates, Connectors, Data, Solutions, and Learn. The main area displays a grid of templates, including 'Run a custom action when an IoT Central rule is fired' and 'Create CFS alerts from IoT Central'.

Run a custom action when an IoT Central rule is fired

1

2

3

IoT Central

Sorted by popularity

All flows Featured Approval Button Data collection Email Events and calendar Mobile Notification

Run a custom action when an IoT Central rule is fired

Create CFS alerts from IoT Central

[Sample Contoso] - When a technician is booked in CFS, update IoT Central

[Sample Contoso] - When a device is created in CFS, update IoT Central

Post a message to your team when IoT Central is triggered

# Dynamics 365

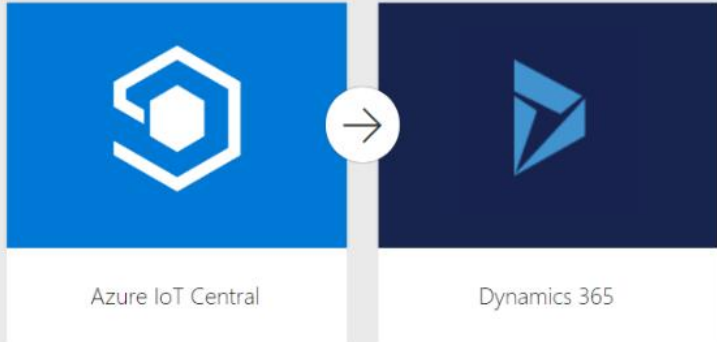
## Optional Account fix

1. Select Continue



If you don't have a valid connection to IoT Central or Dynamics 365 I show you how to fix them on the next two slide. Skip those slides if you have green check marks for both.

### Create CFS alerts from IoT Central



Azure IoT Central      Dynamics 365

When a rule is triggered in IoT Central, send the alert to CFS in Dynamics 365 to further process and mitigate the alert.

This flow will connect to:

	Dynamics 365 <a href="#">View permissions</a>	✓ grdegr@grdegr.onmicros...	...
	Azure IoT Central	✓ grdegr@microsoft.com	...



Continue

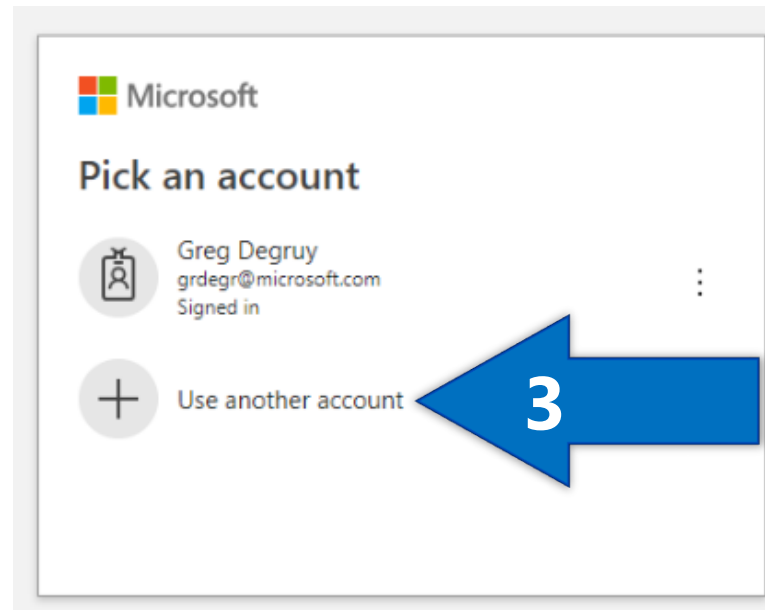
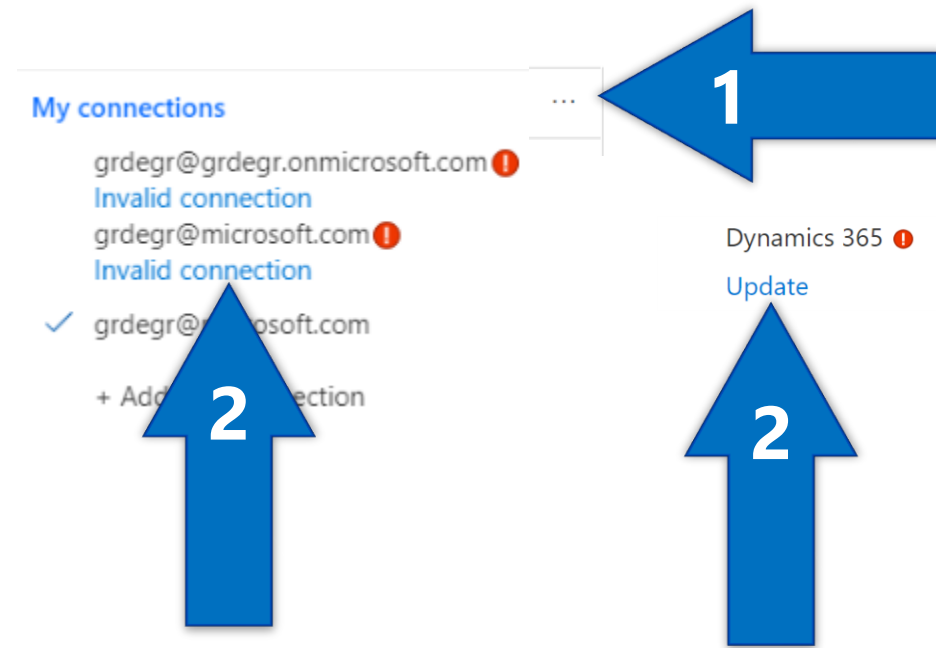
2

# Dynamics 365

## Optional Account fix

You can skip this if you have valid connections to IoT Central and Dynamics

1. Select the ellipse ...
2. Select *Invalid connection* or *Update* the connection associated with your Dynamics 365 instance
3. Select Use another account and sign in with your Dynamics 365 credentials



# Dynamics 365

## Optional Account fix

If you still see issues once we get to the flow step creation

1. Select the ellipse ●●●
2. Select *Invalid Connection* under the connection associated with your Dynamics 365 instance
3. Select Use another account and sign in with your Dynamics 365 credentials

The screenshot illustrates the steps to resolve a connection issue in Dynamics 365. The top panel shows the 'Create a new record' form with fields for 'Organization Name' and 'Entity Name'. Below the form is a '+ New step' button. To the right, a dropdown menu is open, showing options like 'Rename', 'Add a comment', 'Settings', 'Connect to run after', and 'My connections'. A blue arrow labeled '1' points to the three-dot menu icon in the top right corner of the dropdown. Another blue arrow labeled '3' points to the 'Invalid connection' status under the 'My connections' section. A third blue arrow labeled '3' points to the 'Use another account' option in the 'Pick an account' dialog box at the bottom.

**Create a new record**

\*Organization Name  
Name of Dynamics 365 organization like Contoso  
Include a Organization Name.

\*Entity Name  
Name of the entity  
Include a Entity Name.

+ New step

**My connections**

- grdegr@grdegr.onmicrosoft.com Invalid connection
- grdegr@microsoft.com Invalid connection
- ✓ grdegr@microsoft.com
- + Add new connection

**Microsoft**

**Pick an account**

- Greg Degruy  
grdegr@microsoft.com  
Signed in
- + Use another account

# Dynamics 365

If you don't have issues on either of the two slides you should see the template flow that creates out IoT alerts for us

1. Our flow template has prefilled the steps for us to listen for a fired rule and then create a Dynamics record
2. Use the drop downs to select our **Application** *Sample Constoso* (your unique id numbers may be different than mine) called and **Rule** called *Air conditioner temperature alert* we created in IoT Central
3. Use the drop down to select your Dynamics 365 organization that you've installed Connected Field Service in
4. Save and go back to your IoT Central tab

The image displays two screenshots of the Microsoft Power Automate interface, showing a flow template for creating Dynamics 365 records from IoT Central alerts. The flow is titled "Create CFS alerts from IoT Central".

**Step 1: When a rule is fired (Preview)**

- Application:** Unique ID of the application.
- Rule:** Unique ID of the rule that is tied to the action.

**Step 2: Create a new record (Preview) (Preview)**

- Organization Name:** Name of Dynamics 365 organization like Contoso
- Description:** Using the default values for the parameters. [Edit](#)

The second screenshot shows the flow template with specific values selected:

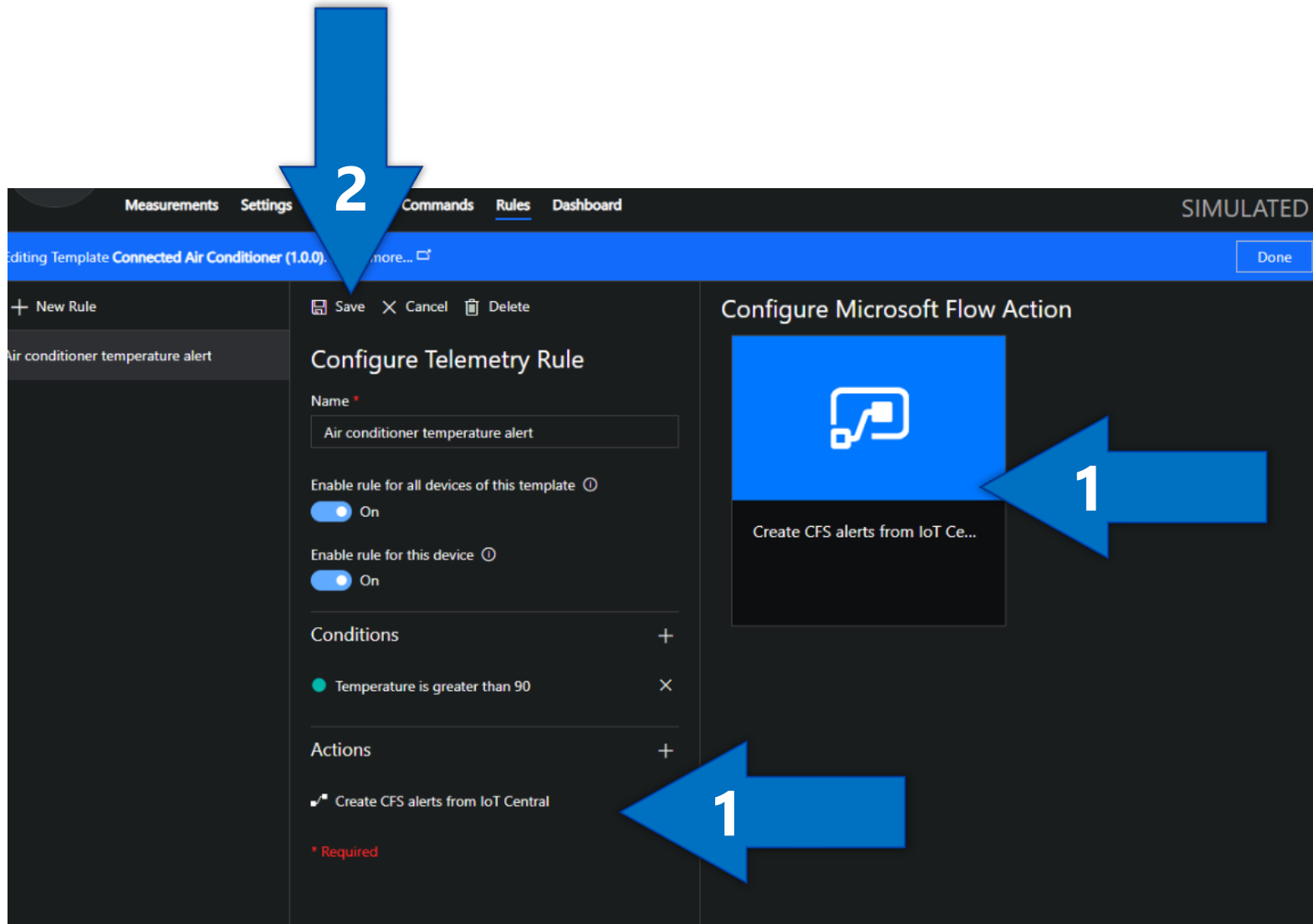
- Application:** Sample Contoso 4ytkh8mfic
- Rule:** Air conditioner temperature alert
- Organization Name:** IoT Central
- Description:** Rule Name x from IoT Central application: Application Na... x

Blue arrows with numbers 1 through 4 point to the steps and fields corresponding to the numbered list on the left.



# Dynamics 365

1. Once back on the IoT Central portal after a few moments from hitting Save in the last slide, you'll your action has been successfully connected to your IoT Central to Dynamics 365 Flow. We're almost done!
2. Save



# Dynamics 365

1. Log into your Dynamics 365 Instance that you've been using throughout this exercise and select the Connected Field Service Unified Interface App
2. Select IoT Alerts from the CFS app
3. Almost instantly our Flow is doing the hard work for us and populating our Dynamics 365 IoT Alert table with Anomalies that we can assign a Work Order to!

The screenshot displays the Dynamics 365 user interface. The left sidebar shows the navigation menu with 'Connected Field Service' highlighted by a blue arrow labeled '1'. The top navigation bar shows 'My Work' with 'IoT Alerts' highlighted by a blue arrow labeled '2'. The main content area shows the 'Active IoT Alerts' table, which is highlighted by a blue arrow labeled '3'.

Description	Alert Type	Alert Time	Alert Status	Device	Customer Asset	Account (Custo
Air conditioner temperature alert from IoT Central applic	Anomaly	11/30/2018 4:46 PM	Active	Connected Air Conditioner-1	---	---
Air conditioner temperature alert from IoT Central applic	Anomaly	11/30/2018 4:46 PM	Active	Connected Air Conditioner-1	---	---
Air conditioner temperature alert from IoT Central applic	Anomaly	11/30/2018 4:43 PM	Active	Connected Air Conditioner-1	---	---
Air conditioner temperature alert from IoT Central applic	Anomaly	11/30/2018 4:43 PM	Active	Connected Air Conditioner-1	---	---
Air conditioner temperature alert from IoT Central applic	Anomaly	11/30/2018 4:36 PM	Active	Connected Air Conditioner-1	---	---
Air conditioner temperature alert from IoT Central applic	Anomaly	11/30/2018 4:36 PM	Active	Connected Air Conditioner-1	---	---
Air conditioner temperature alert from IoT Central applic	Anomaly	11/30/2018 4:30 PM	Active	Connected Air Conditioner-1	---	---
Air conditioner temperature alert from IoT Central applic	Anomaly	11/30/2018 4:30 PM	Active	Connected Air Conditioner-1	---	---
Air conditioner temperature alert from IoT Central applic	Anomaly	11/30/2018 4:25 PM	Active	Connected Air Conditioner-1	---	---
Air conditioner temperature alert from IoT Central applic	Anomaly	11/30/2018 4:25 PM	Active	Connected Air Conditioner-1	---	---
Air conditioner temperature alert from IoT Central applic	Anomaly	11/30/2018 4:23 PM	Active	Connected Air Conditioner-1	---	---
Air conditioner temperature alert from IoT Central applic	Anomaly	11/30/2018 4:23 PM	Active	Connected Air Conditioner-1	---	---

1 - 35 of 35 (0 selected)

# Dynamics 365

1. Our data arrived safely 😊
2. There are many more rich data points as you scroll down the General tab of this IoT alert
3. You can create a Work Order directly from this IoT Alert

**IoT ALERT**  
Air conditioner temperature alert fr...

**CFS - IoT Alert Process Fl...**  
Active for 9 minutes

Created (9 Min)

Create Case

Create Work Order

General Commands Related

Description \* **Air conditioner temperature alert from IoT Centr ...**

Alert Type **Anomaly**

Alert Token **465387ad-2c9a-4378-a253-2dc85dda0ffb**

Alert Time 11/30/2018 4:46 PM

Alert Status **Active**

Alert URL **https://sample-contoso-4ytkh8mfic.azureiotc...**

Alert Data

SWITCH TO JSON VIEW

id  
**465387ad-2c9a-4378-a253-2dc85dda0ffb**

timestamp  
**11/30/2018 4:46 PM**

rule

id  
**6f78050e-f299-4fa8-a77e-3508ff1128e2**

**Timeline**

Enter a note...

No records to show.

Active for 9 minutes

General Commands Related

1.0.0

measurements

telemetry

temperature  
**92.19950312796152**

application

id  
**e5d01a05-819b-4a19-9a97-ebbb504503ae**

name  
**Sample Contoso 4ytkh8mfic**

subdomain  
**sample-contoso-4ytkh8mfic**

**CUSTOMER ASSET**

Customer Asset ---

Device **Connected Air Conditioner-1**

Device ID **jisyzh**

# Dynamics 365



That's it! We've successfully been able to automatically capture and move data our data to Dynamics 365.

Almost of all of our data has come using this template. There's one last optional exercise that you can go through to learn how to add all of our data points from the device properties and settings to our Dynamics 365 IoT alert.

Maybe you're thinking, but what if I want code an application or service to make a solution that scales beyond what IoT Central can handle? That's where connected Field Service for IoT Hub comes in 😊. Check out that lab buddy.

```
{
  "id": "465387ad-2c9a-4378-a253-2dc85dda0ffb",
  "timestamp": "2018-12-01T00:46:20.471Z",
  "rule": {
    "id": "6f78050c-f299-4fa8-a77e-3508ff1128e2",
    "name": "Air conditioner temperature alert",
    "enabled": true,
    "deviceTemplate": {
      "id": "1hp2g7x",
      "version": "1.0.0"
    }
  },
  "device": {
    "id": "jisyzh",
    "name": "Connected Air Conditioner-1",
    "simulated": true,
    "deviceId": "jisyzh",
    "deviceTemplate": {
      "id": "1hp2g7x",
      "version": "1.0.0"
    },
    "measurements": {
      "telemetry": {
        "temperature": 92.199503127962
      }
    }
  },
  "application": {
    "id": "e5d01a05-819b-4a19-9a97-ebbb504503ae",
    "name": "Sample Contoso 4ytkh8mfic",
    "subdomain": "sample-contoso-4ytkh8mfic"
  }
}
```