

Presenter



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Dynamics 365 for
Field Service



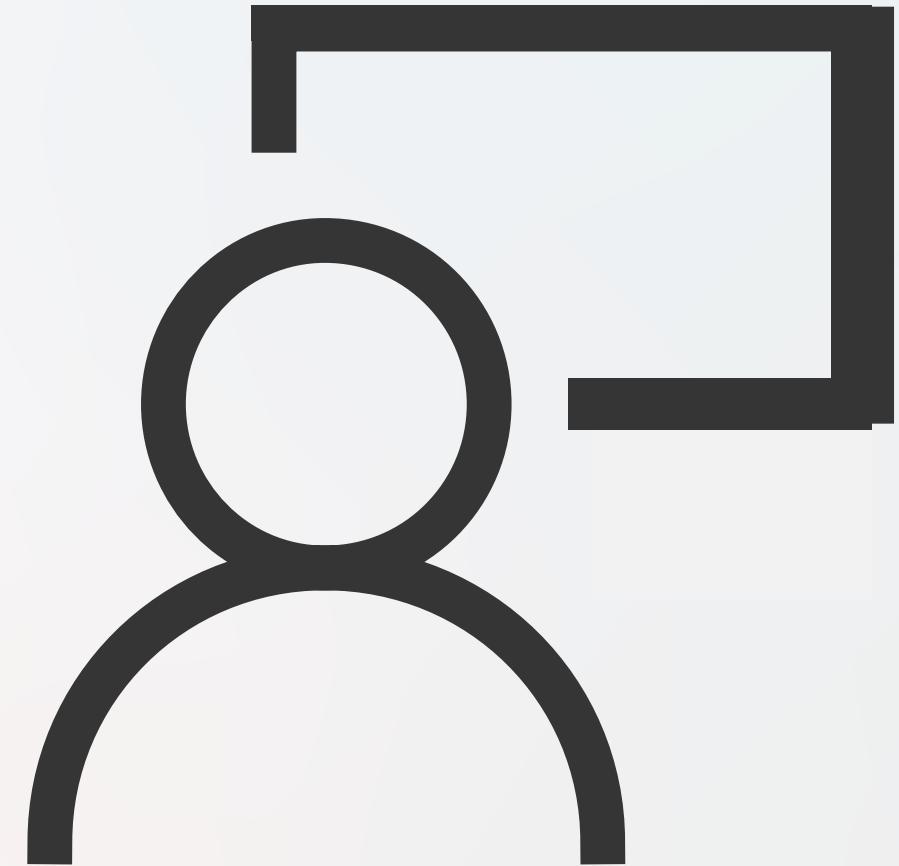
Azure IoT Central

Setup Connected Field Service with IoT Central



Content Overview

- 15 minutes
- You'll learn how to:
 - Create a device template
 - Define custom fields
 - View simulated telemetry
 - Create a Service Information model that will map to Dynamics 365



CFS IoT Central Home page

On your computer, and browse to Azure IoT Central Website

<https://azure.microsoft.com/en-us/services/iot-central/> use Chrome, Edge or whatever you want. I don't play favorites.

1. Select Get started
2. Select the new application button you can get back to your apps at any time from

<https://apps.azureiotcentral.com/>



You may need to log in if you don't see your account name from the Azure provisioning section. If you skipped that section and have an Azure account even better!

The screenshot shows the Azure IoT Central home page. At the top, there's a navigation bar with 'Home' / 'IoT' / 'Azure IoT Central'. Below it, the title 'Azure IoT Central' is displayed, followed by a descriptive paragraph about the service. A large green 'Get started >' button is prominent. To the right, there's a graphic of a cloud connected to various buildings and a play button icon, with the URL 'www.AzureIoTCentral.com' below it. A large blue arrow labeled '1' points to the 'Get started' button. The bottom part of the screenshot shows the 'Application Manager' page, which includes a 'New Application' button with a plus sign, a search bar, and user information like 'Portal Greg'. A large blue arrow labeled '2' points to the 'New Application' button on this page.

CFS IoT Central Create Application

1. The Create Application form should have everything auto completed for you, so don't need to modify anything. Unless you want to choose Pay-As-You-Go, this will incur cost in Azure.



If you want to use Pay-As-You-Go, move onto, the next slide and skip step 2 here.

2. Select Create

Create Application

We just need a few things from you, so we can create your application

Choose payment plan

Trial
Free trial for 7 days. No subscription required.

Pay-As-You-Go
Price is based on the number of devices you use. Free for the first 5 devices. Subscription required. [Learn more](#)

Select an application template

Sample Contoso
Get started with a predefined application for a connected device.

Sample Devkits
Want to connect a Raspberry PI or MXChip IoT DevKit? Start with this predefined app and get them connected in minutes.

Custom Application
Start with a blank template and define your application from scratch.

Application Name * ⓘ
Sample Contoso 20fu02hbr0j

URL * ⓘ
sample-contoso-20fu02hbr0j .azureiotcentral.com

By clicking "Create" you agree to the [Subscription Agreement](#) and [Privacy Statement](#). Provisions in the agreement with respect to pricing, cancellation fees, payment, and data retention do not apply to "Trial". "Pay-As-You-Go" requires an Azure subscription, and you acknowledge that this service is licensed to you under the terms applicable to your Azure Subscription.

Create

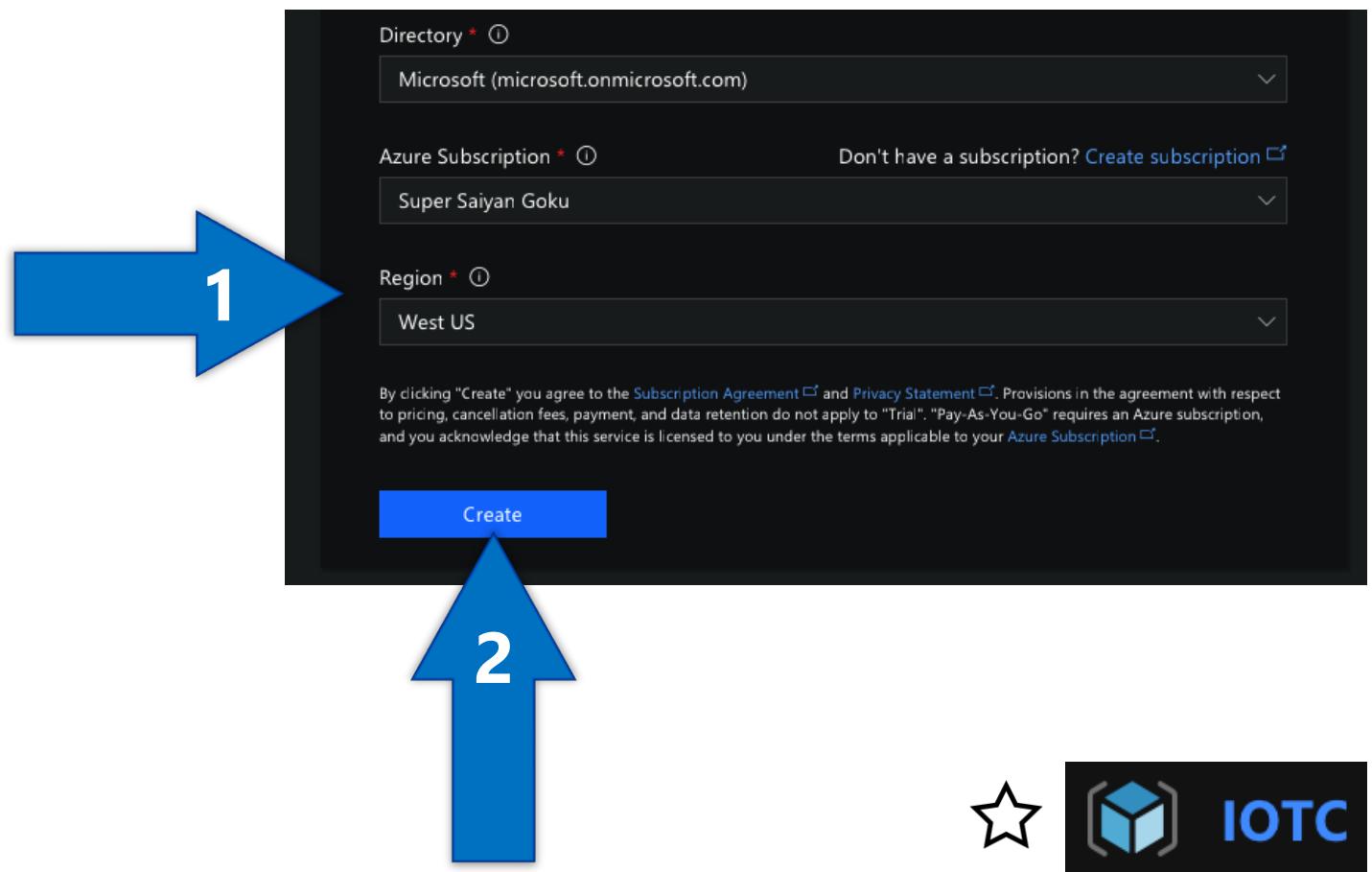
CFS IoT Central

Pay-As-You-Go

1. The Create Application for Pay-As-You-Go should have everything auto completed for you too, so don't need to modify anything. Just take note of the Directory, Subscription, and Region that you want to deploy IoT Central too.
2. Select Create.



For the curious, if you visit your Azure resource groups you'll see an IOTC resource group containing your IoT Central application.



CFS IoT Central Home Dashboard

1. You should be directed to the IoT Central Home Dashboard. All of the widgets are completely customizable. We want to add some simulated devices from our left hand menu.
2. Specifically select Application Builder so we can create the simulated device.

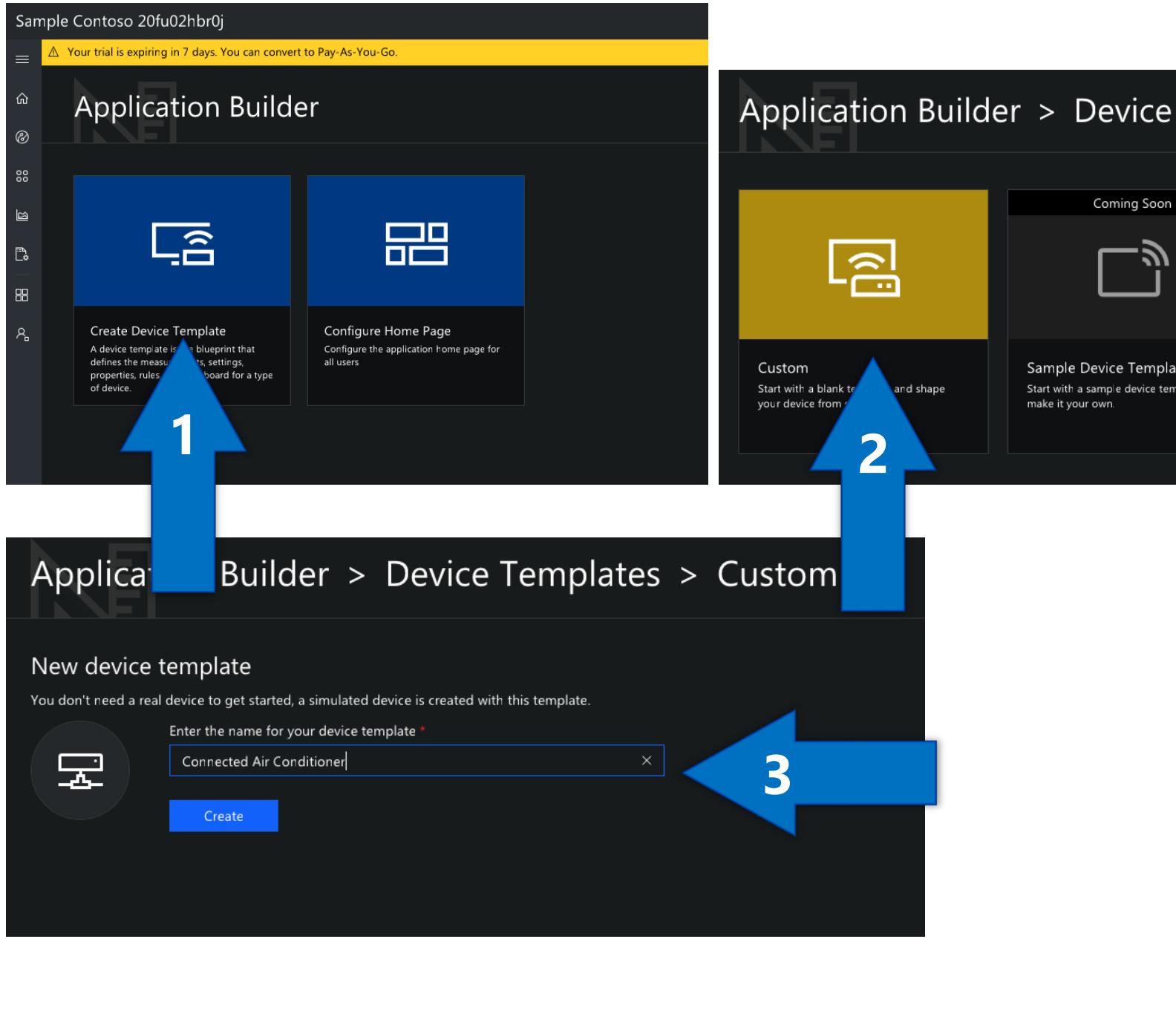
The screenshot shows the Azure IoT Central Home Dashboard. At the top, there's a yellow banner with the text "Sample Contoso 20fu02hbr0j" and a warning: "⚠ Your trial is expiring in 7 days. You can convert to Pay-As-You-Go." On the right side of the banner, there's a link "Click here to learn more about". Below the banner, the dashboard has a dark header with the word "CONTOSO" and a large blue arrow pointing towards it. The main content area features several cards: a Seattle skyline card, a vending machine card, and three smaller cards for "Quick Start Demo", "Tutorials", and "Documentation". To the right of these cards is a sidebar with a list of navigation items:

- Home
- Device Explorer
- Device Sets
- Analytics
- Jobs
- Application Builder
- Administration

A large blue arrow labeled "1" points to the "Home" item in the sidebar. A second large blue arrow labeled "2" points to the "Application Builder" item in the sidebar.

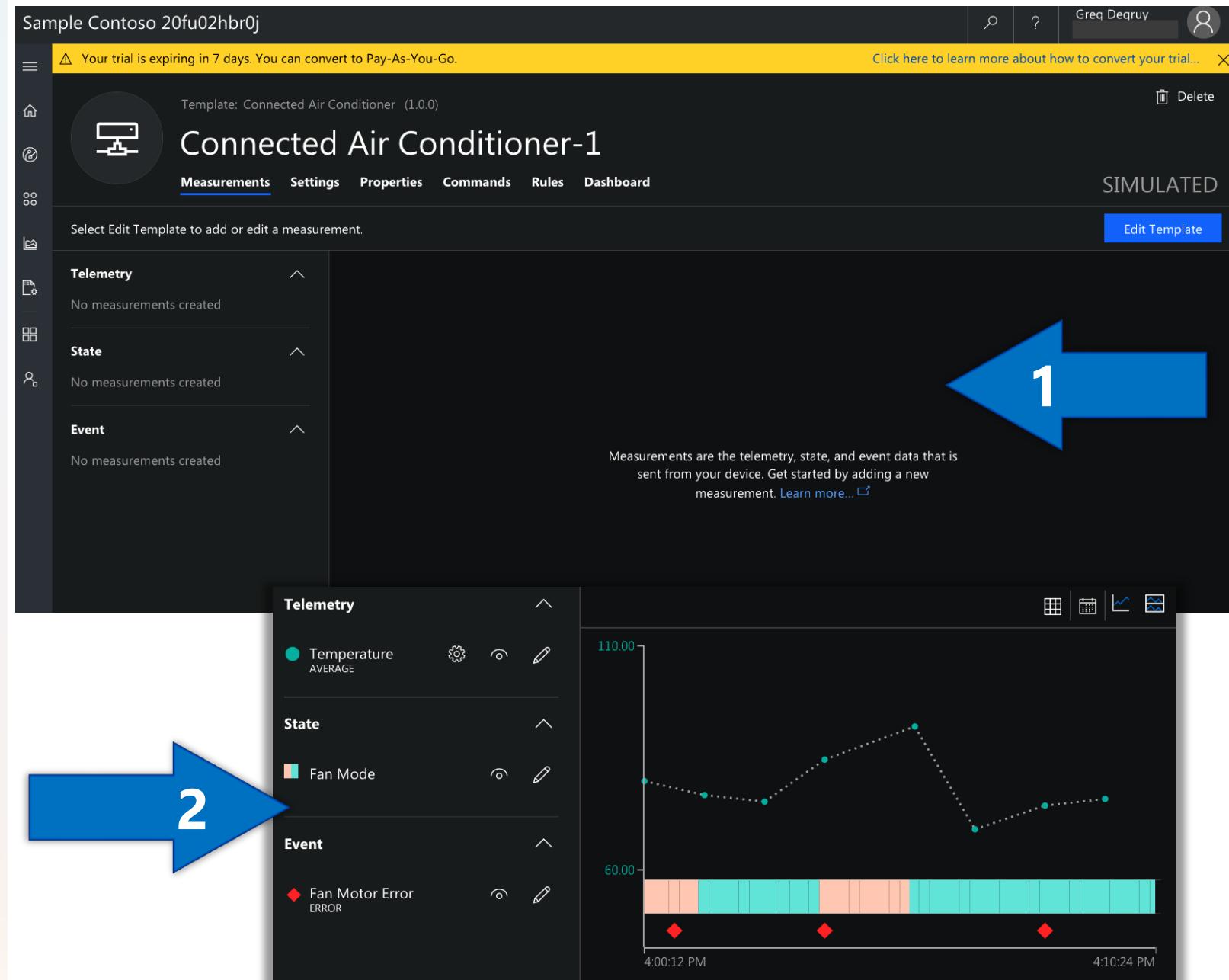
CFS IoT Central App Builder

1. You should be directed to the Application Builder. Select Create Device Template.
2. Select Custom.
3. Give you're simulated device a name that best first your scenario or follow along with the Ai Conditioner example we're using and select Create.



CFS IoT Central Measurements

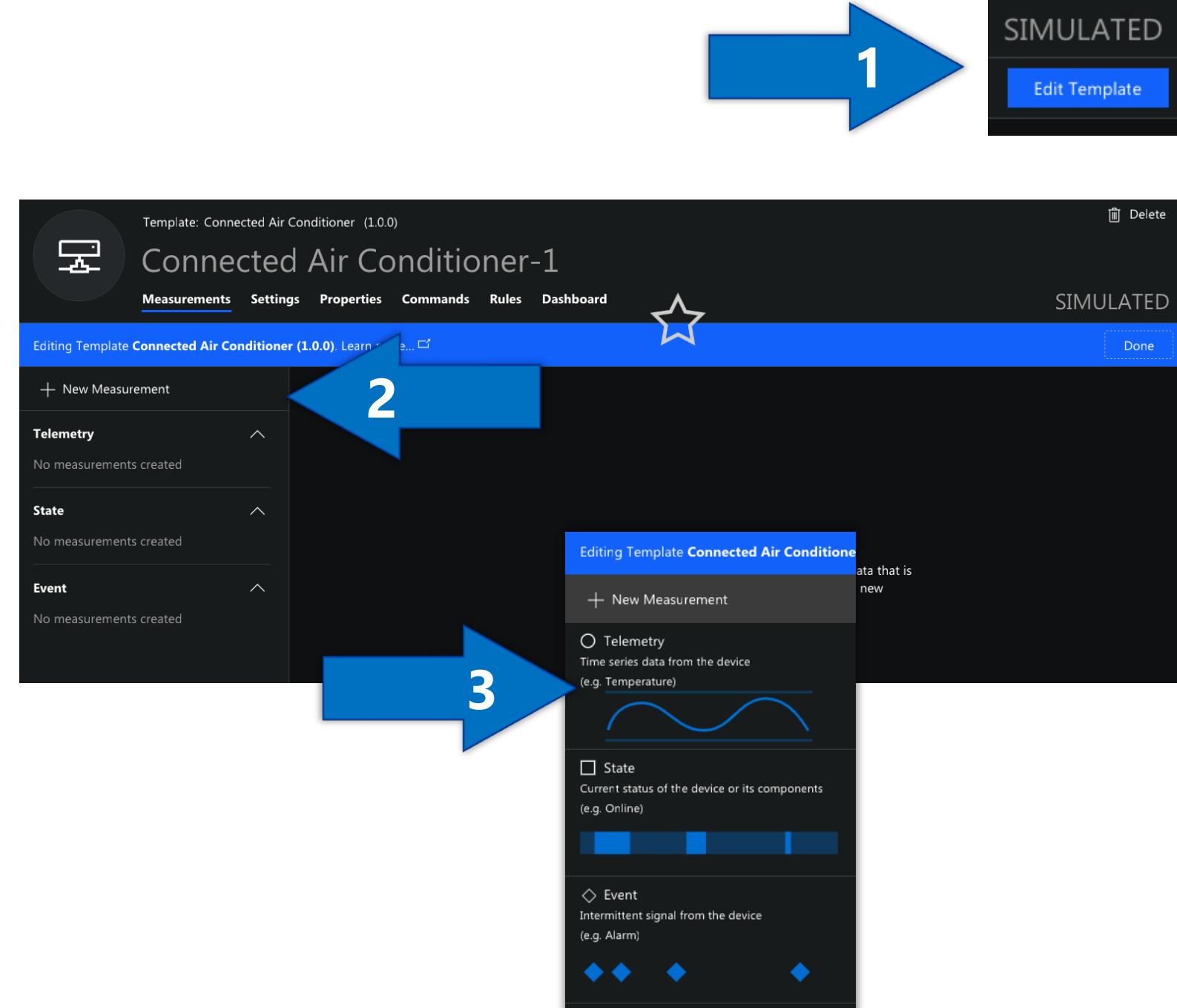
1. You should be directed to your simulated devices measurement page. We're going to add some telemetry, state, and event measurements for our device before closing out with how we can connect this to Dynamics 365.
2. When we're done this dashboard is going to look so good you can literally eat it.



CFS IoT Central Telemetry

On your computer, browse to

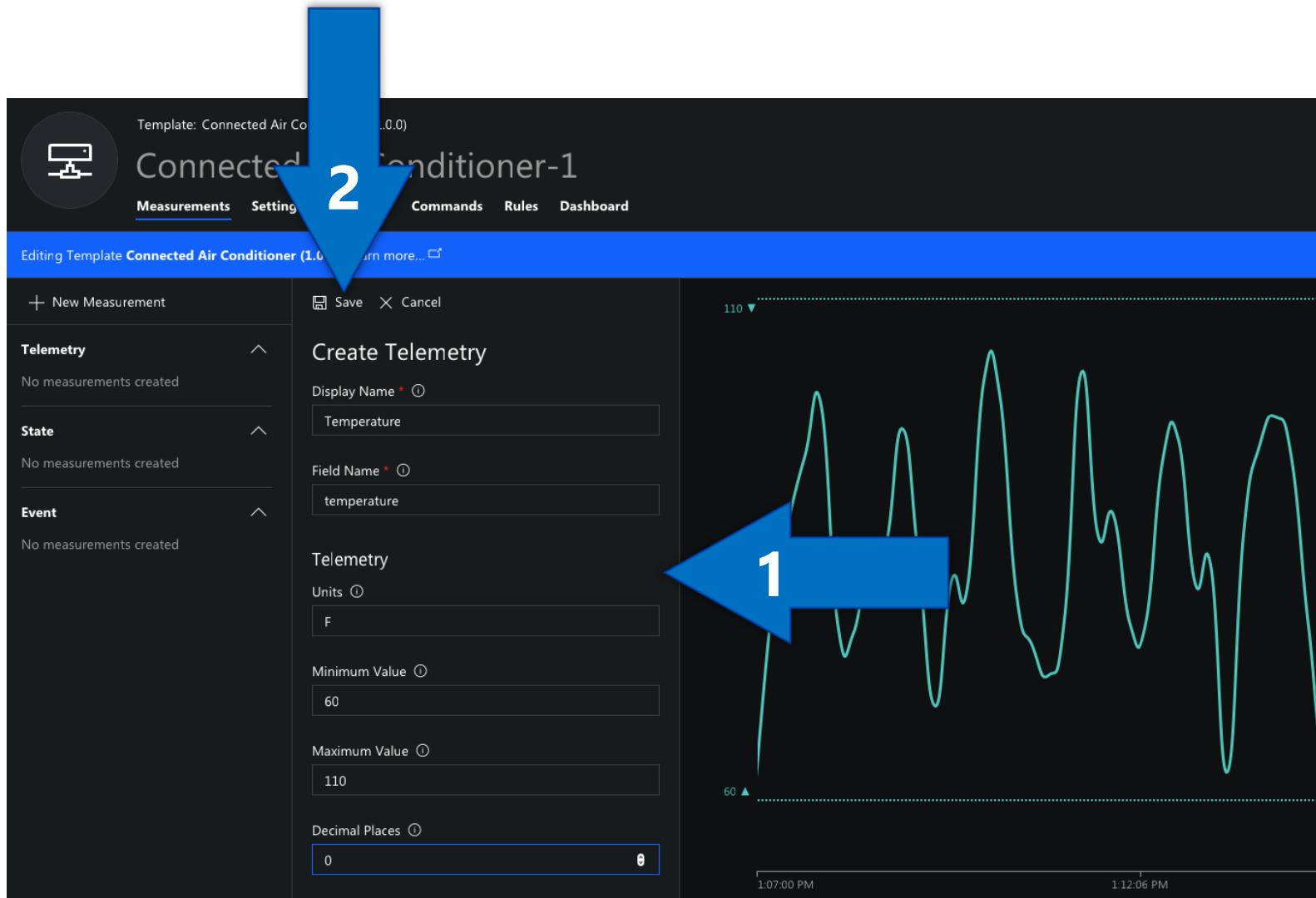
1. Select Edit Template, we'll be doing this step a lot by the way. You'll know you're in edit mode when you see the **blue banner** across your dashboard. 
2. Select New Measurement.
3. Three measurement options will then be presented to you and you. Select Telemetry.



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Create Telemetry

1. Add these four telemetry fields
 - Display Name Temperature
 - Field Name temperature
 - Units F
 - Min 60
 - Max 110
 - Decimal places 0
2. Select Save from the Create Telemetry blade.
3. At the top right of the dashboard
Select Done to exit editing mode.



SIMULATED

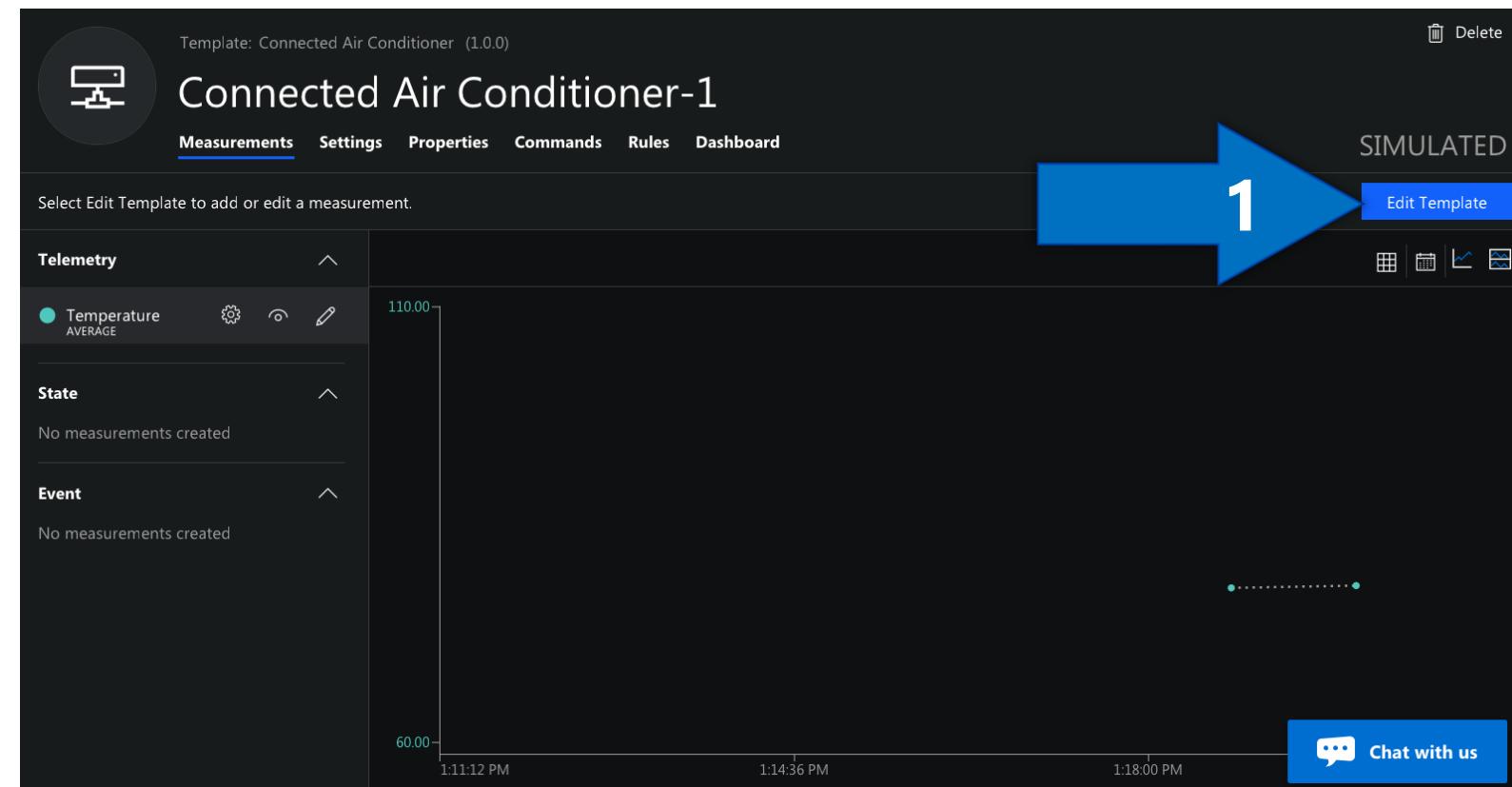
Done

CFS IoT Central

Telemetry incoming

Random system generated sample data based on our temperature telemetry range from the last slide will start coming in slowly, took under a minute for the first data point to come in my instance.

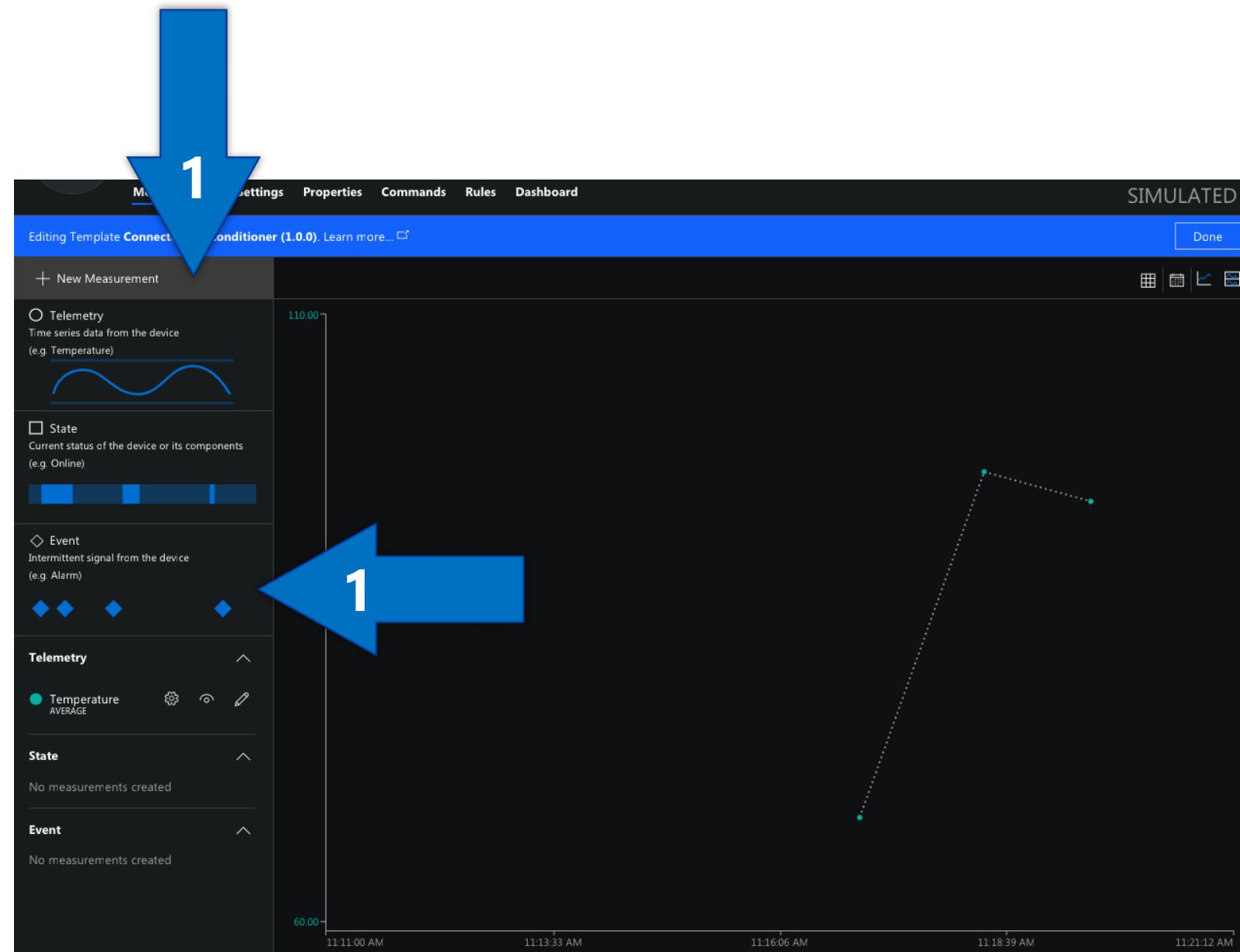
1. We can add some very arbitrary anomaly detection using the Event measurements too. Select Edit Template.



CFS IoT Central

New Measurement

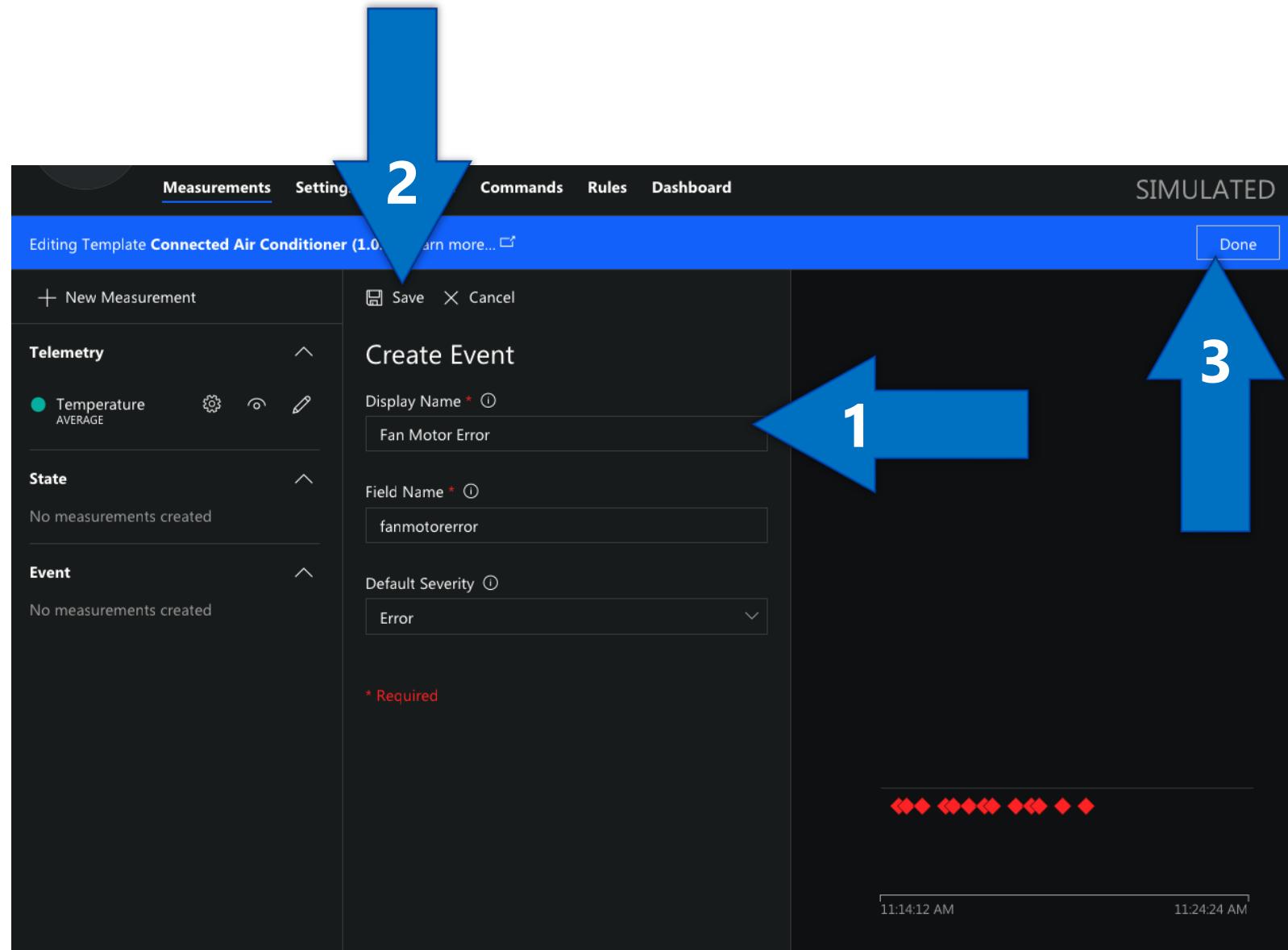
1. Select new measurement.
2. Select Event.



CFS IoT Central

Event fields

1. Add the event fields
 - Display Name Fan Motor Error.
 - Field Name fanmotorerror.
 - Default Severity Error.
2. Select Save.
3. Select Done.

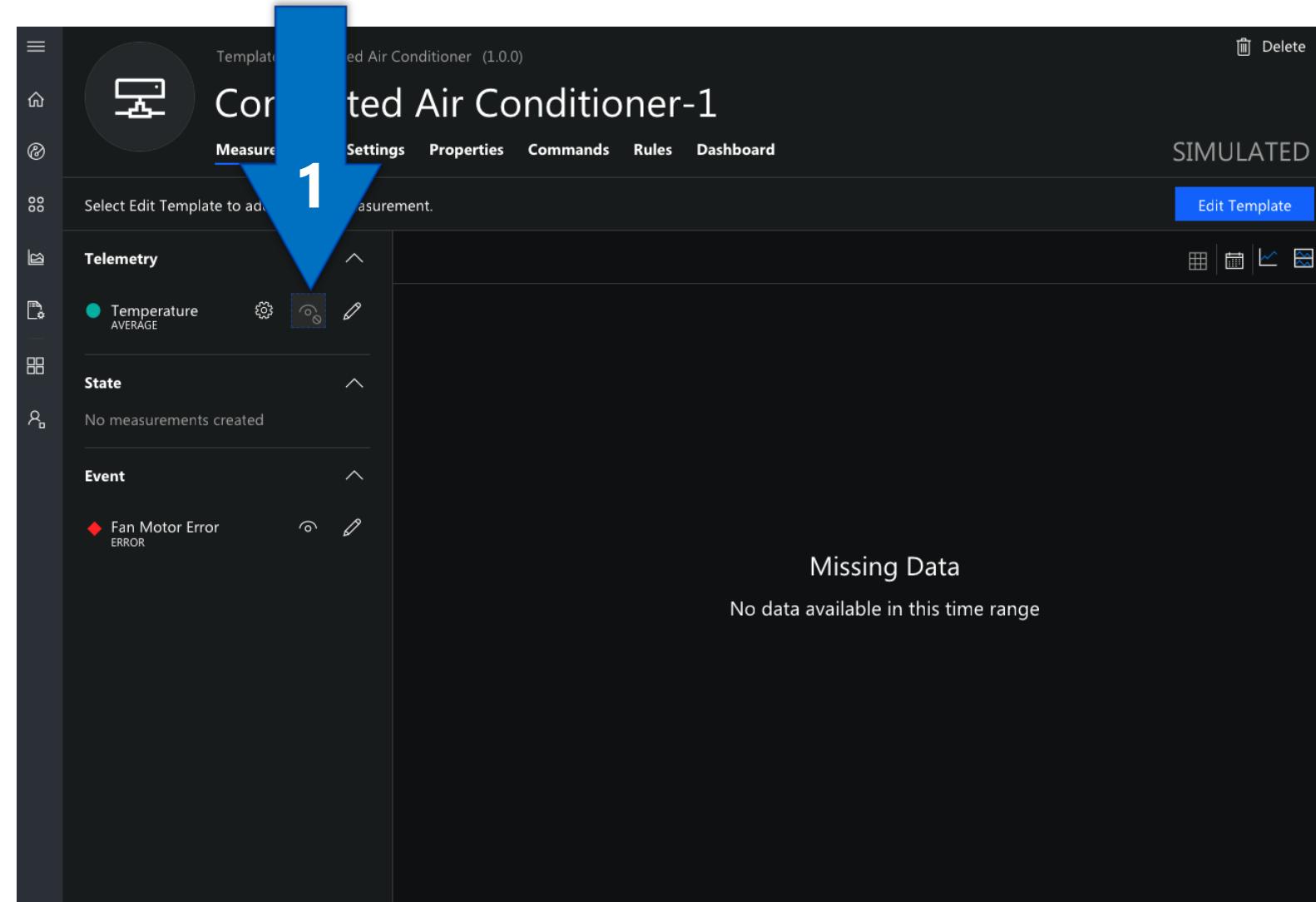


CFS IoT Central

Event Measurement

You'll be navigated back to the main dashboard for your device. It will take some time for the randomly generated event date to come in... took a while for this, about 4mins to get my first error

1. You can select the eyecon to hide the temperature data and focus on the error data that's soon to come in.



CFS IoT Central

Error Data

Random sample event measurements for the anomalies should start coming in.

1. You can hover over the error diamond to see quick details and select it to open up a more detailed pop up window.
2. Select Close to remove this window

The screenshot shows the 'Measurements' tab selected in the top navigation bar. The main area displays a list of measurements under three categories: Telemetry, State, and Event. Under 'Event', there is one entry: 'Fan Motor Error' with a status of 'ERROR'. A large blue arrow labeled '1' points down to this error entry. Below the list is a timeline with three time markers: 11:31:36 AM, 11:36:42 AM, and 11:41:48 AM. A small red diamond icon is positioned near the 11:41:48 AM marker. A modal window titled 'Events' is overlaid at the bottom, showing a single row of data: Time (11/29/2018, 11:40:06 AM), Event (Fan Motor Error), Category (ERROR), and Value (occurred). A large blue arrow labeled '2' points to the 'Close' button in the bottom right corner of the modal.

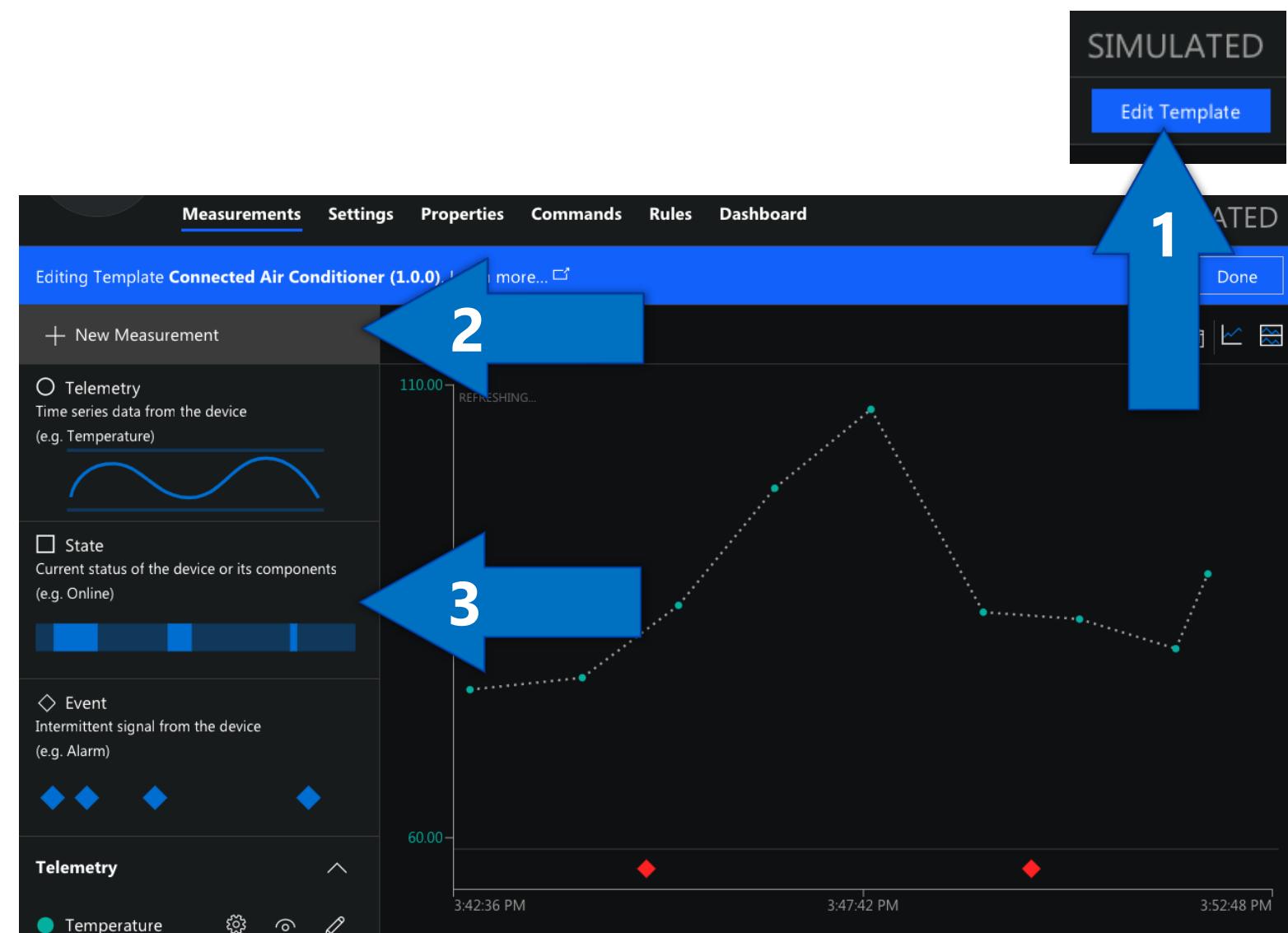
Time	Event	Category	Value
11/29/2018, 11:40:06 AM	Fan Motor Error	ERROR	occurred

CFS IoT Central

State Measurement

State is the last measurement type we'll add. It's common for IoT devices to have state, air conditioners can be placed in a normal or low power state for example. IoT Central enables us to capture this.

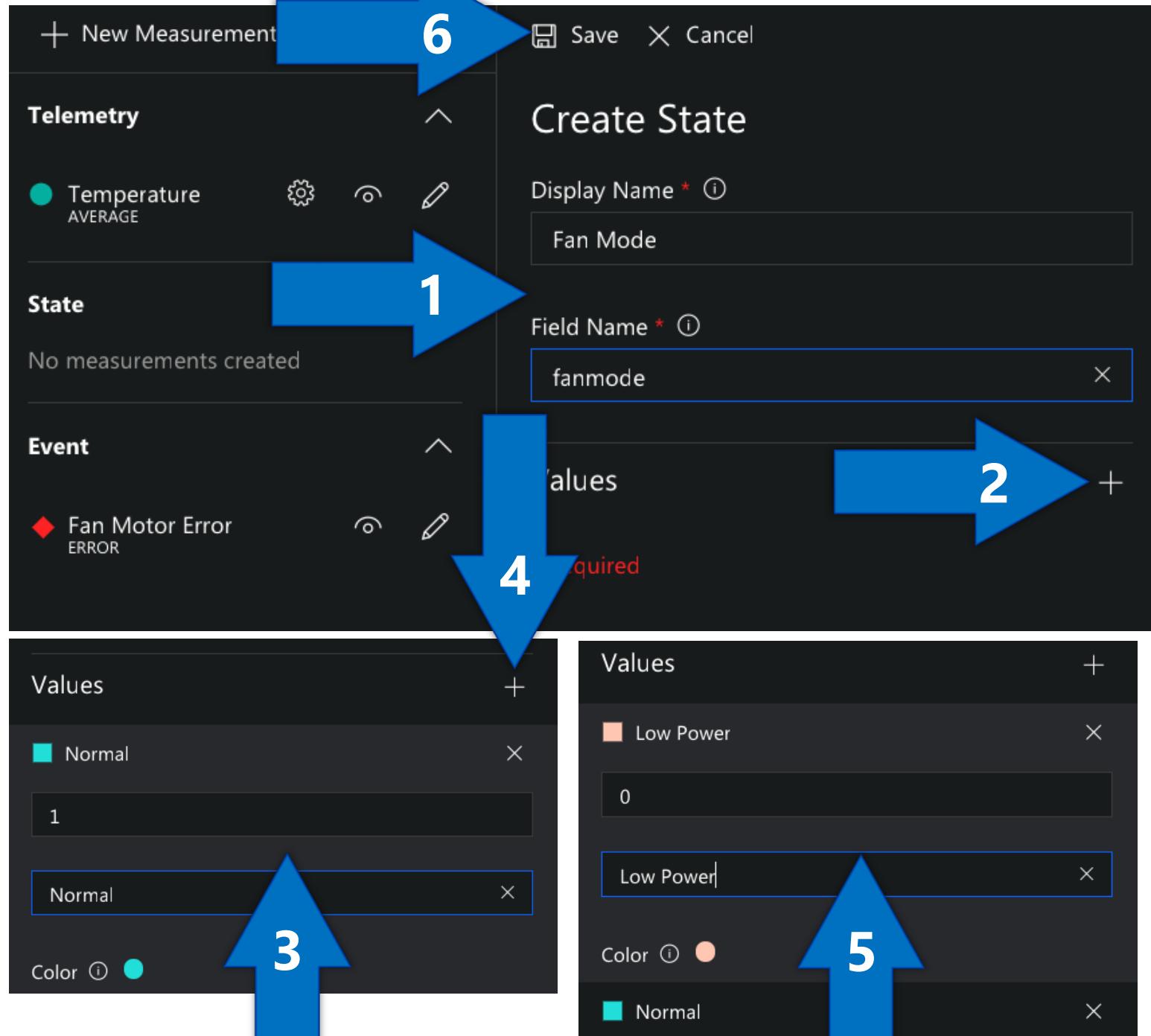
1. Select Edit Template on the right under Simulated.
2. Select New Measurement.
3. Select State.



CFS IoT Central

Create State

1. Add our basic State data
 - Display Name Fan Mode.
 - Field Name fanmode.
2. Click + to add our first state value.
3. Add the On state values
 - Value 1.
 - Display label On.
4. Click + to add our second state value.
5. Add the Off state values
 - Value 0.
 - Display label Off.
6. Select Save.



CFS IoT Central

State should start flowing in! The state will randomly go swap between normal and low power states for our air conditioner.

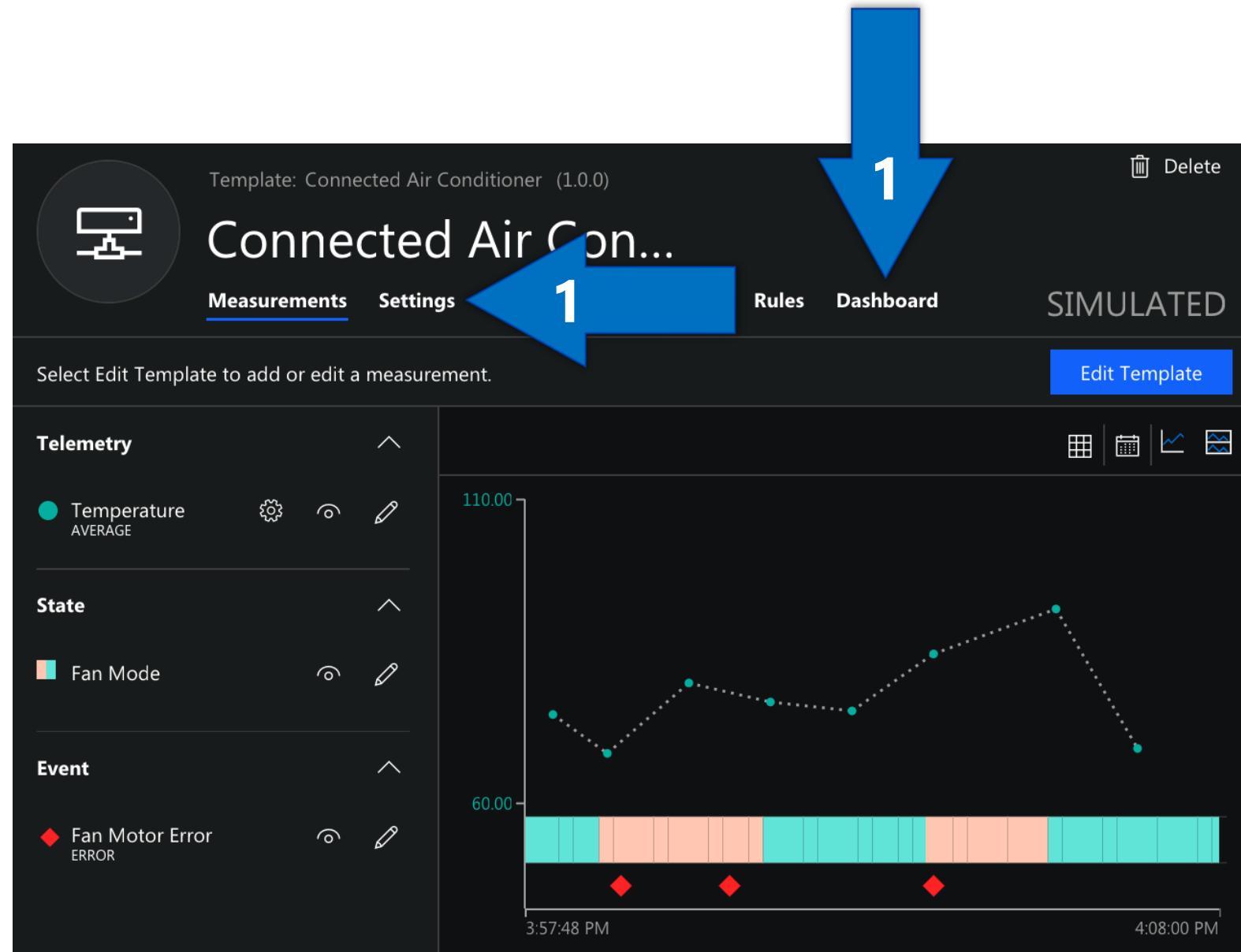
That pretty much covers it!



At this point feel free to skip to Exercise 4 and go right into how these 3 data points can be captured in Dynamics 365.

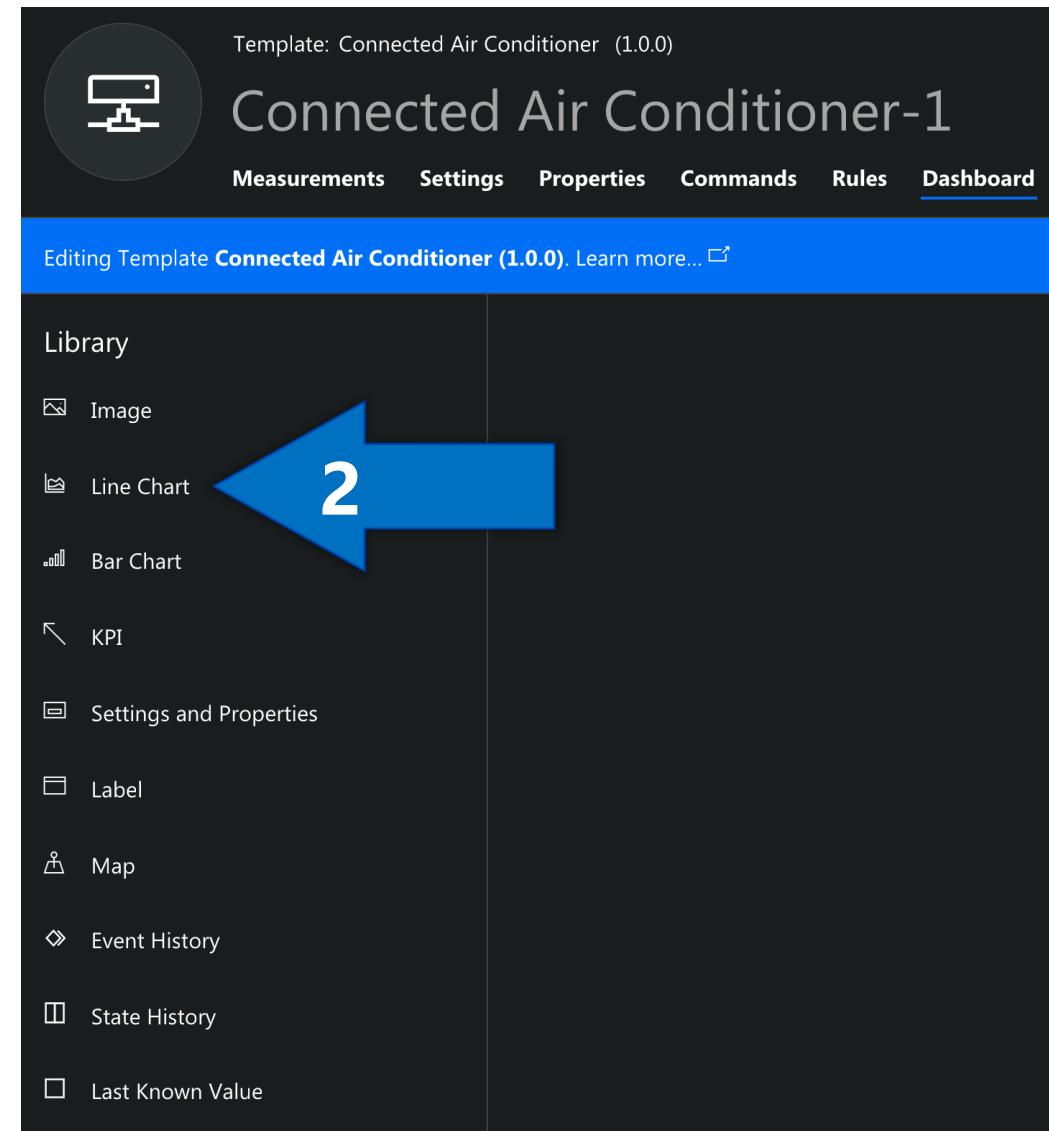
If you want to go deeper into the capabilities of IoT Central, please continue on with this exercise.

1. Select Settings.
2. Select Dashboard



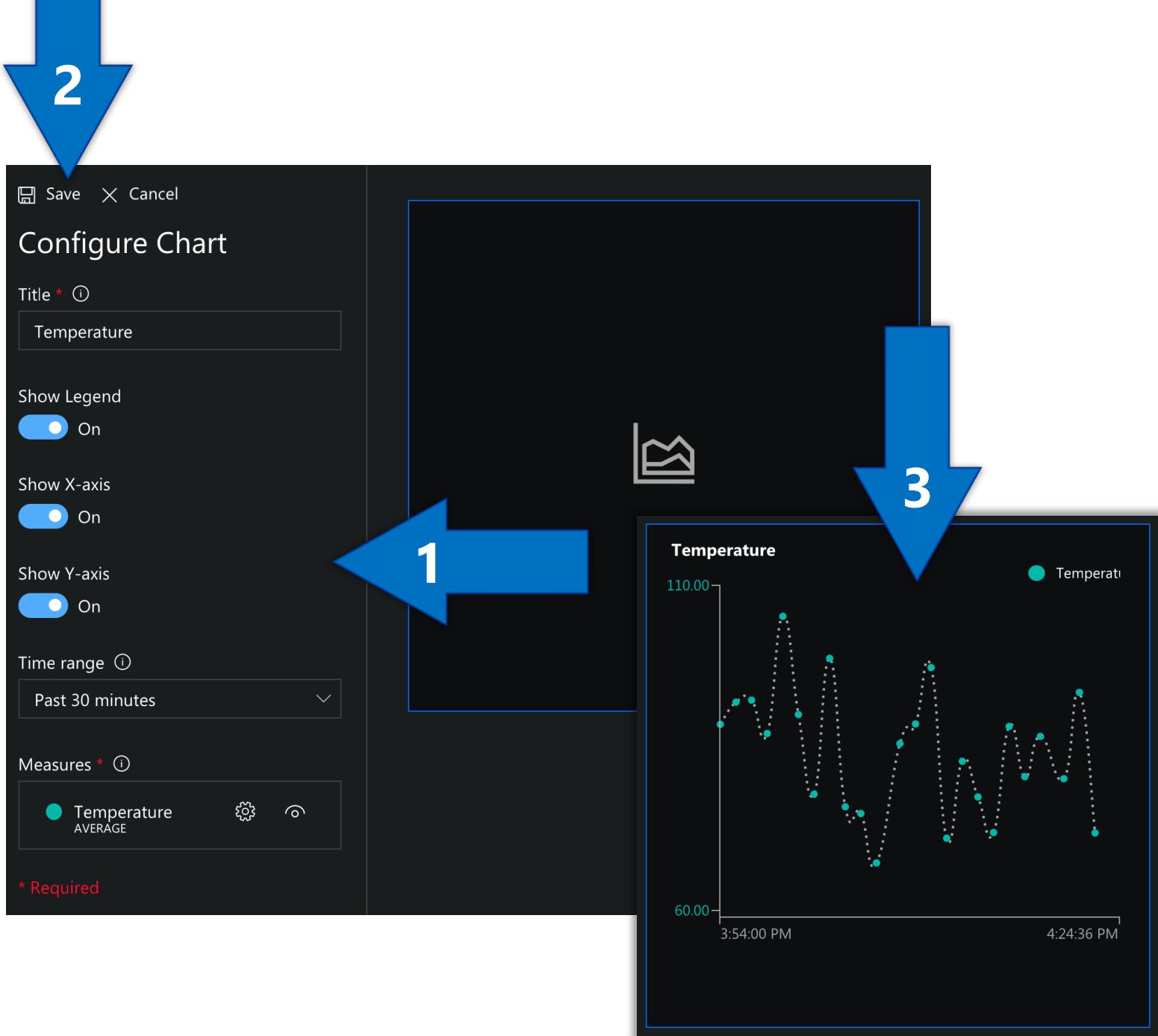
CFS IoT Central

1. Select Edit Template
2. Select Line Cart



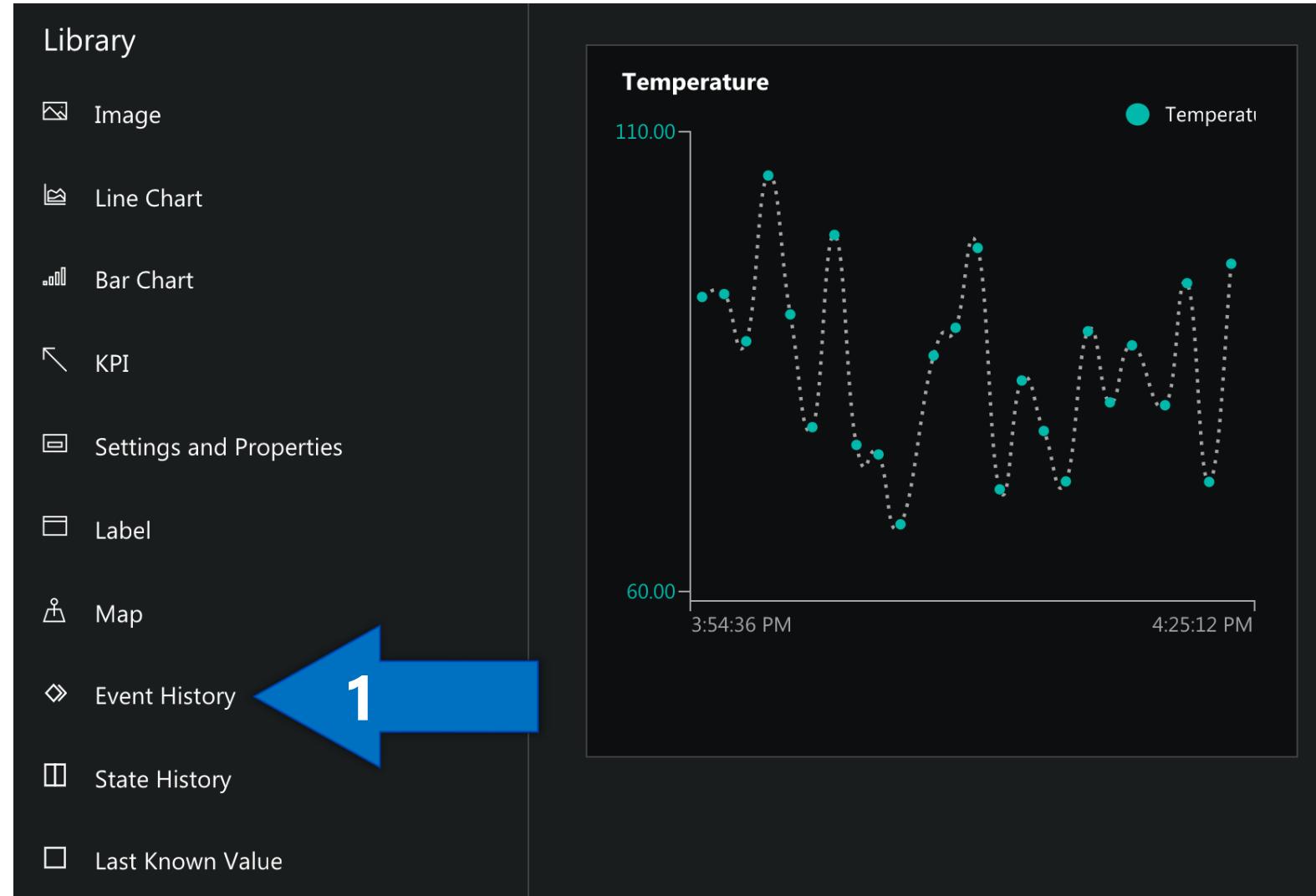
CFS IoT Central

1. Completed the configure chart form with the same information I've added for:
 - Title Temperature
 - Time Range Past 30 minutes
 - Measures Temperature AVERAGE (choose Visibility icon next to Fan Motor Error) ☰
2. Save
3. After you save you'll soon see your temperature line chart on your dashboard



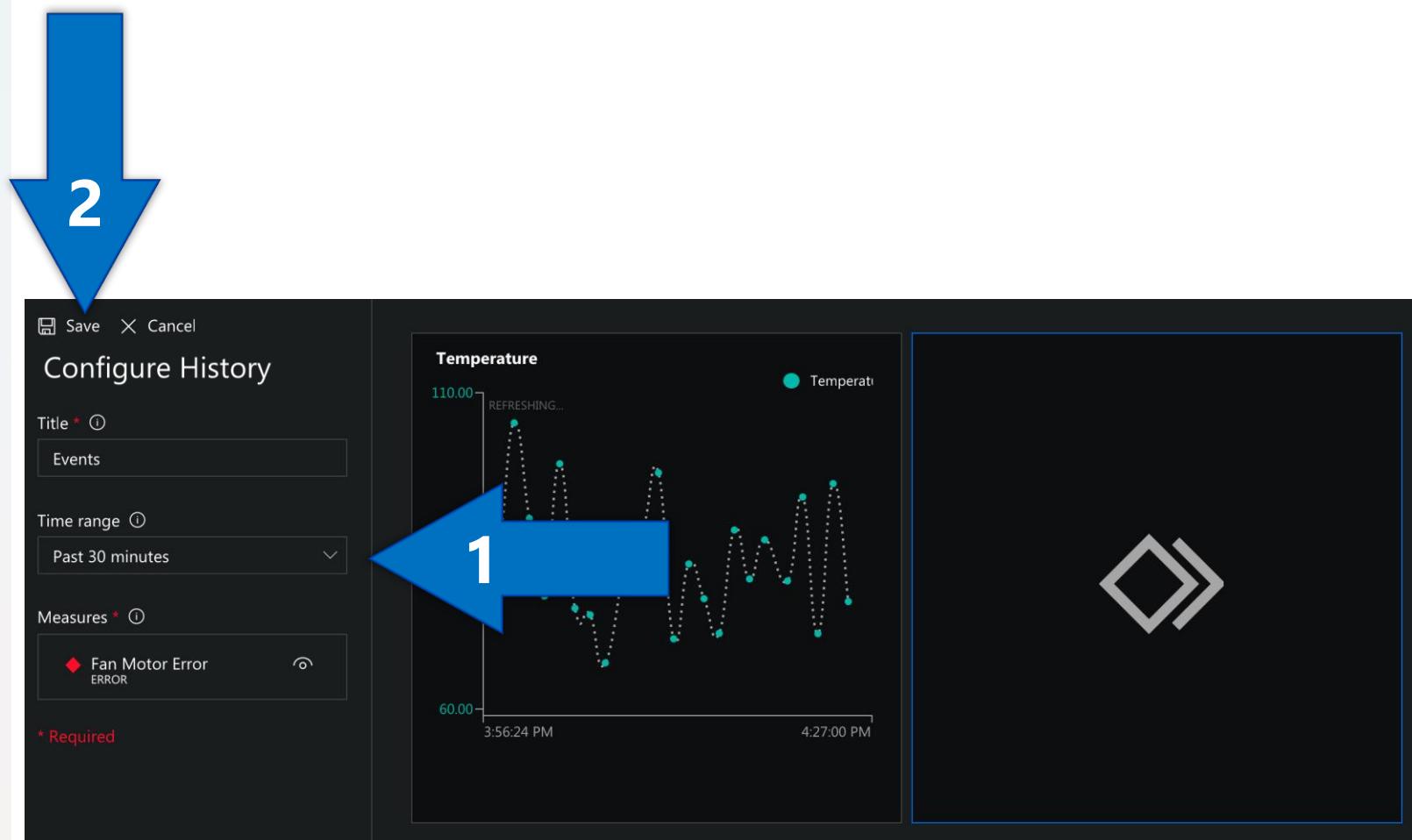
CFS IoT Central

1. Select Event History



CFS IoT Central

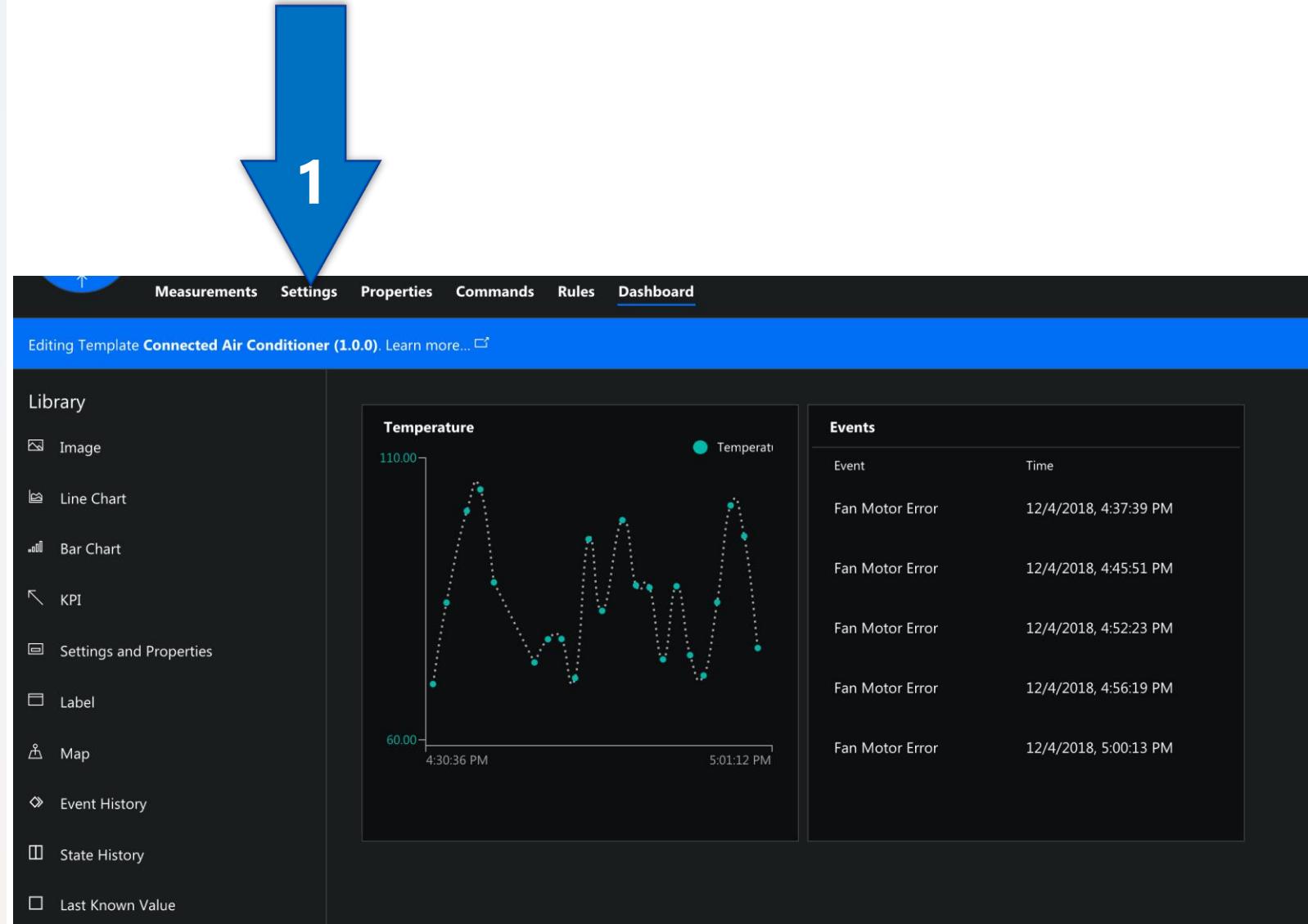
1. Complete the configure history form with this information:
 - Title Events
 - Time Range Past 30 minutes
 - Measures Fan Motor ERROR (choose Visibility icon next to Fan Motor Error)
2. Save



CFS IoT Central

You should now see your Temperature line chart and Event history side by side in your dashboard. This becoming a very useful operator view, but there's one more component we can add that'll will make it even more impactful.

1. Select Settings

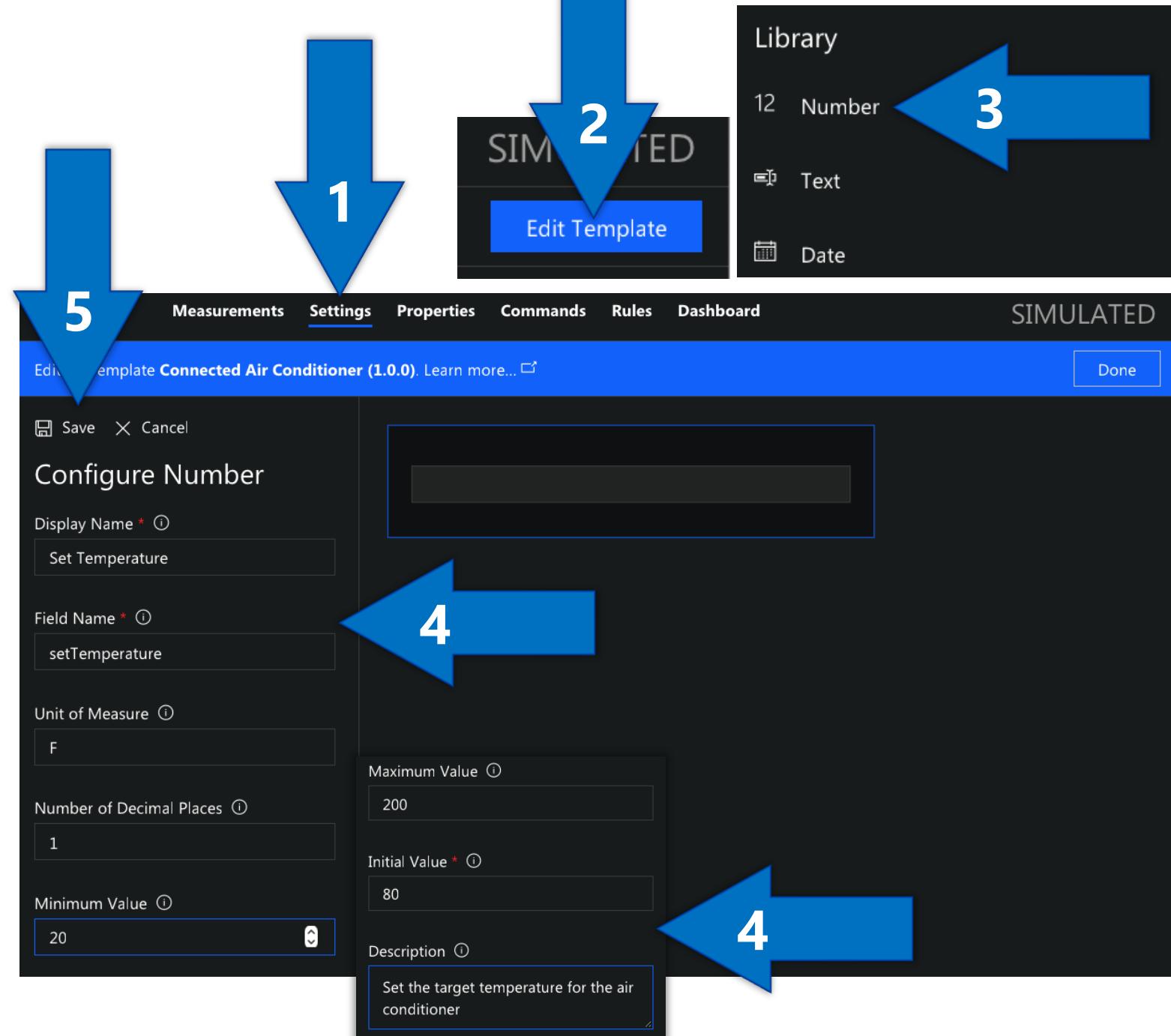


A screenshot of the CFS IoT Central interface. At the top, a navigation bar includes tabs for Measurements, Settings, Properties, Commands, Rules, and Dashboard. The 'Dashboard' tab is currently selected. A large blue arrow points downwards from the top of the page towards the 'Settings' tab. Below the navigation bar, a message says 'Editing Template Connected Air Conditioner (1.0.0). Learn more...'. On the left, a 'Library' sidebar lists components: Image, Line Chart, Bar Chart, KPI, Settings and Properties (which is expanded to show sub-options like Label, Map, Event History, State History, and Last Known Value), and a collapsed section for Event History. The main area features a 'Temperature' line chart with a dotted line and circular markers. The chart has a y-axis from 60.00 to 110.00 and an x-axis from 4:30:36 PM to 5:01:12 PM. To the right of the chart is a 'Events' section showing a list of five 'Fan Motor Error' events with their respective times: 12/4/2018, 4:37:39 PM; 12/4/2018, 4:45:51 PM; 12/4/2018, 4:52:23 PM; 12/4/2018, 4:56:19 PM; and 12/4/2018, 5:00:13 PM.

CFS IoT Central Settings

Settings send configuration data to a device. An operator could use settings to change the device's telemetry interval from two seconds to five seconds.

1. Select the Settings tab
2. Select Edit Template
3. Select Number from the Library menu
4. Fill in this data into the Number form
 - Display Name Set Temperature
 - Field Name setTemperature
 - Unit of Measure F
 - Decimal Places 1
 - Minimum Value 20
 - Maximum Value 200
 - Initial Value 80
 - Description Set the target temperature for the air conditioner
5. Save



CFS IoT Central Settings

1. When the device acknowledges a setting change, the status of the setting changes to synced in green.
2. While in the edit template mode you can drag your Set Temperature Setting to any position you'd like on the screen.



While I was not in edit mode I changed my Set Temperature value to different numbers to see there effects.

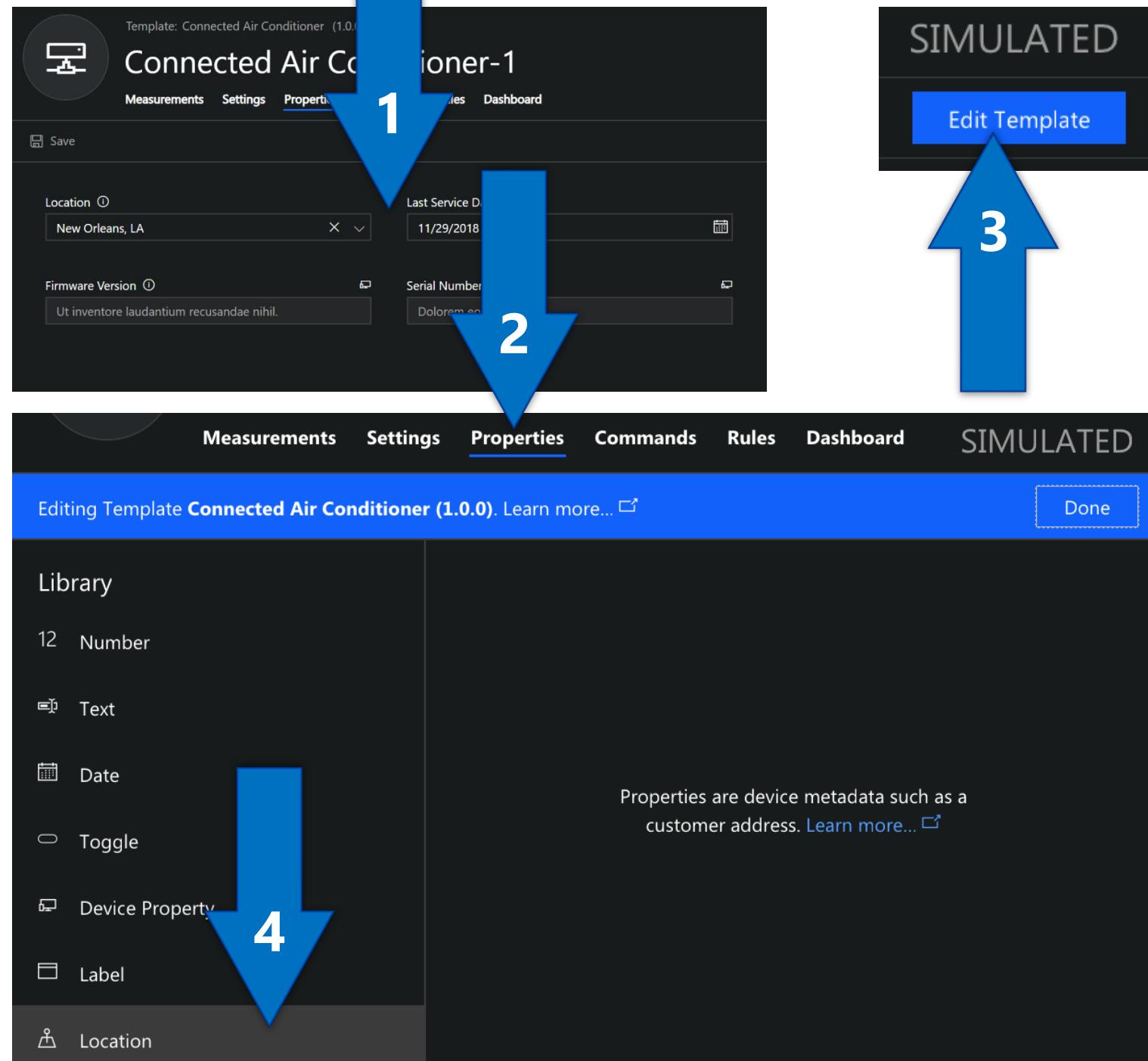
The screenshot shows the CFS IoT Central interface with the following details:

- Header:** Measurements, **Settings**, Properties, Commands, Rules, Dashboard, SIM
- Title:** Editing Template **Connected Air Conditioner (1.0.0)**. Learn more... ↗
- Library:** A sidebar listing data types: Number (12), Text, Date, Toggle, Label.
- Setting:** Set Temperature (F) is set to 80. It includes a green checkmark and the text "synced since 1 minute ago".
- Bottom Panel:** Shows the Set Temperature (F) setting with a value of 20. It also includes a green checkmark and the text "synced since 462 minutes ago".

Two large blue arrows point downwards from the top right towards the bottom panel, labeled 1 and 2 respectively, indicating the movement of the setting from its original position to the bottom panel.

CFS IoT Central Properties

- Properties store information about your device in the application. They can be editable properties or read-only device properties reported by the device that cannot be changed such as the device serial number and firmware version. We'll be adding these 4 properties you see here.
- Select the Properties tab
- Select Edit Template if you're not in edit mode already and don't see the Library menu, you'll know you're in edit mode when you see the **blue banner** across your dashboard.
- Select Location from the library



CFS IoT Central

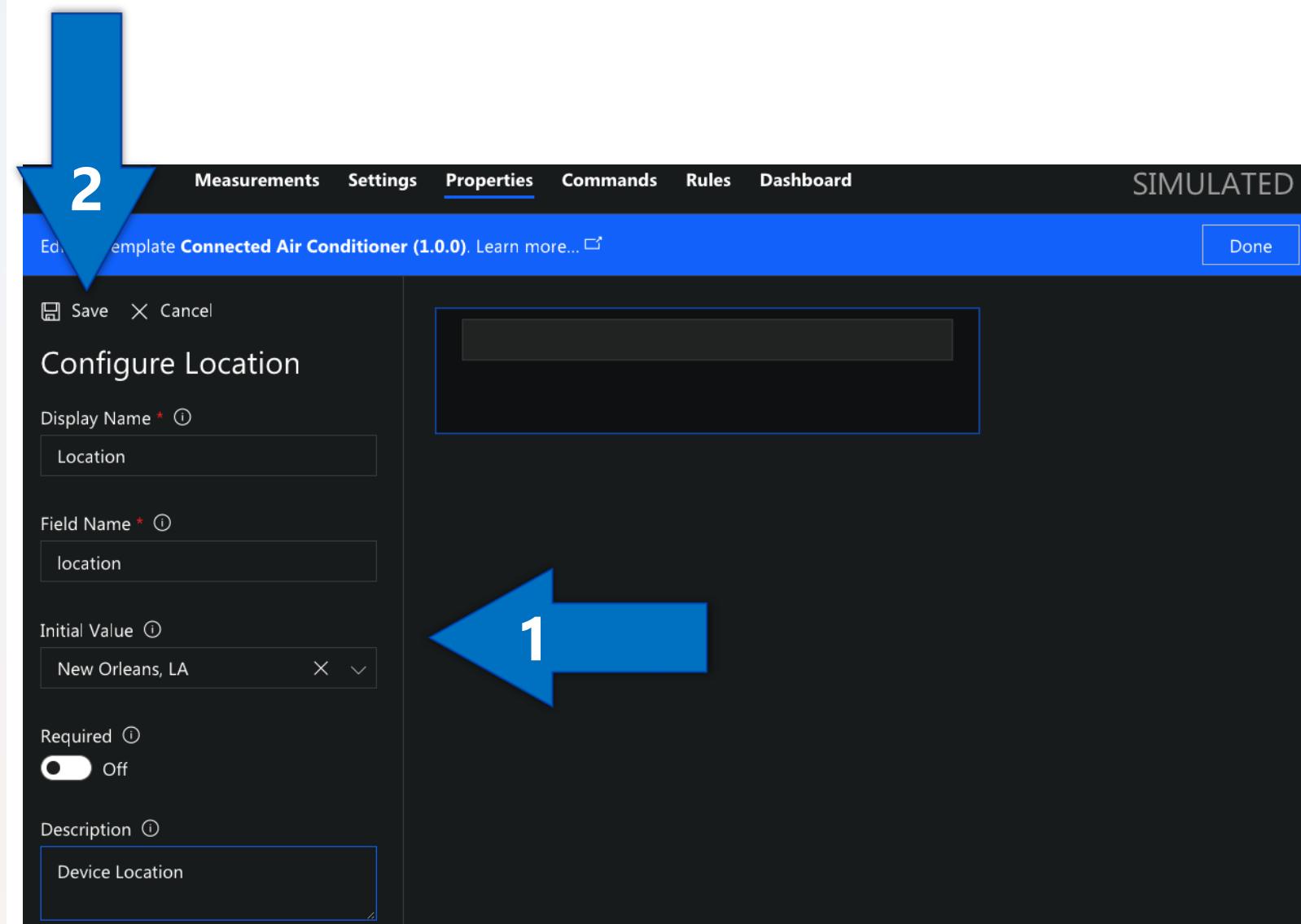
Location properties

This is the first editable field we'll create.

1. Fill out the location fields

- Display Name Location
- Field Name location
- Initial Value New Orleans, LA
- Description Device location

2. Save



CFS IoT Central

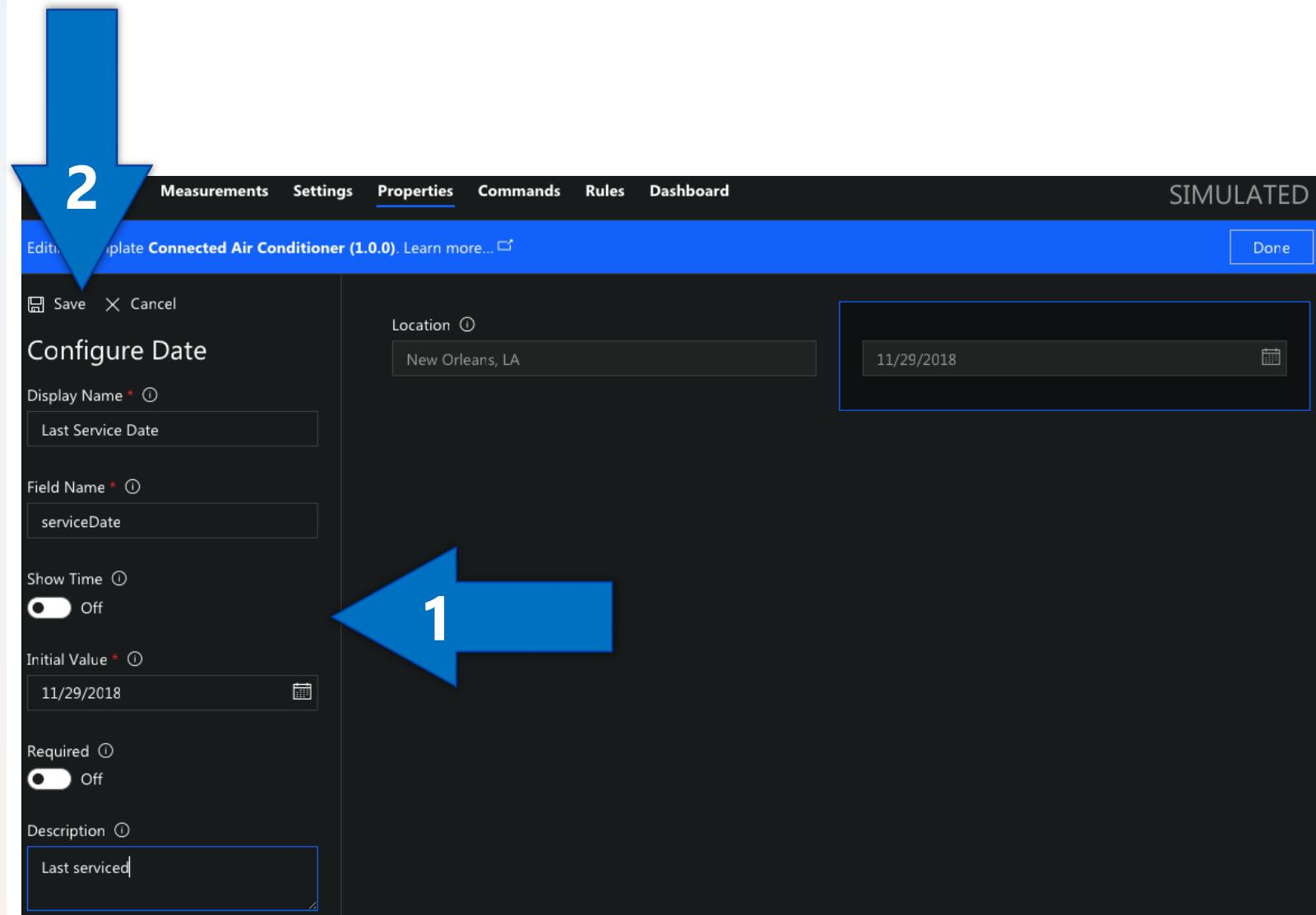
This is the second editable field we'll create.

1. Select Date

The screenshot shows the CFS IoT Central interface. At the top, there is a navigation bar with tabs: Measurements, Settings, **Properties**, Commands, Rules, and Dashboard. To the right of the tabs, it says "SIMULATED". Below the navigation bar, a blue header bar displays the text "Editing Template **Connected Air Conditioner (1.0.0)**. Learn more...". On the right side of the screen, there is a "Done" button. In the center, there is a "Library" section containing several items: Number (with the value 12), Text, Date (which is highlighted with a large blue arrow pointing to it and the number 1), Toggle, Device Property, Label, and Location. To the right of the library, there is a "Location" input field with the value "New Orleans, LA".

CFS IoT Central

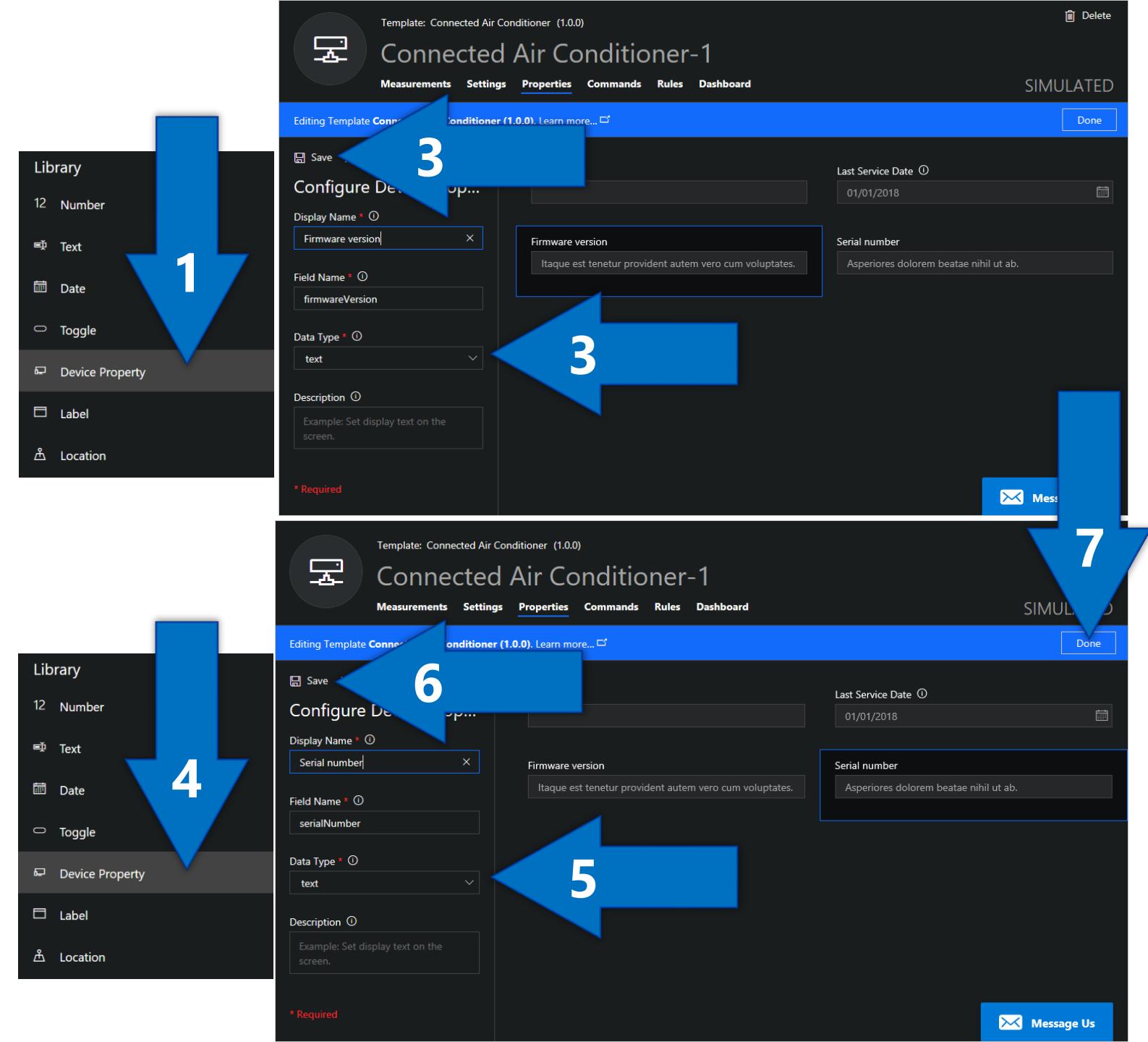
1. Fill out the Date fields
 - Display Name Last Service Date
 - Field Name serviceDate
 - Initial Value 1/1/2018
 - Description Last serviced
2. Save



CFS IoT Central

Create Device properties for our two properties, these are both reads only

1. Select Device Property from the Library
2. Add Firmware version data
 - Display Name Firmware version
 - Field Name firmwareVersion
 - Data Type text
 - Description The firmware version of the air conditioner
3. Save 
4. Select Device Property from the list
5. Add Serial Number data
 - Display Name Serial number
 - Field Name serialNumber
 - Data Type text
 - Description The serial number of the air conditioner
6. Save 
7. Select Done



The screenshot shows the CFS IoT Central interface for editing a template named "Connected Air Conditioner-1". The "Properties" tab is selected.

Step 1: A large blue arrow points down to the "Library" sidebar on the left, highlighting the "Device Property" option under the "Text" category.

Step 3: Two blue arrows point to the configuration screen for the first property. The "Display Name" is set to "Firmware version", "Field Name" is "firmwareVersion", "Data Type" is "text", and "Description" is "The firmware version of the air conditioner". The "Required" field is checked.

Step 4: A large blue arrow points down to the "Library" sidebar on the left, highlighting the "Device Property" option under the "Text" category.

Step 5: A blue arrow points to the configuration screen for the second property. The "Display Name" is set to "Serial number", "Field Name" is "serialNumber", "Data Type" is "text", and "Description" is "The serial number of the air conditioner". The "Required" field is checked.

Step 6: A large blue arrow points up to the top right corner of the screen, where the "Done" button is located.

Step 7: A large blue arrow points down to the bottom right corner of the screen, where the "Message Us" button is located.

CFS IoT Central

Commands

Commands enable an operator to run commands directly on the device. In this section, you add a command to your Connected Air Conditioner device template that enables an operator to echo a certain message on the connected air conditioner.

1. Select Commands
2. Select Edit Template
3. Select New Command

The screenshot shows two views of the CFS IoT Central 'Connected Air Conditioner-1' device template. The top view is in 'Edit' mode, and the bottom view is in 'Preview' mode.

Top View (Edit Mode):

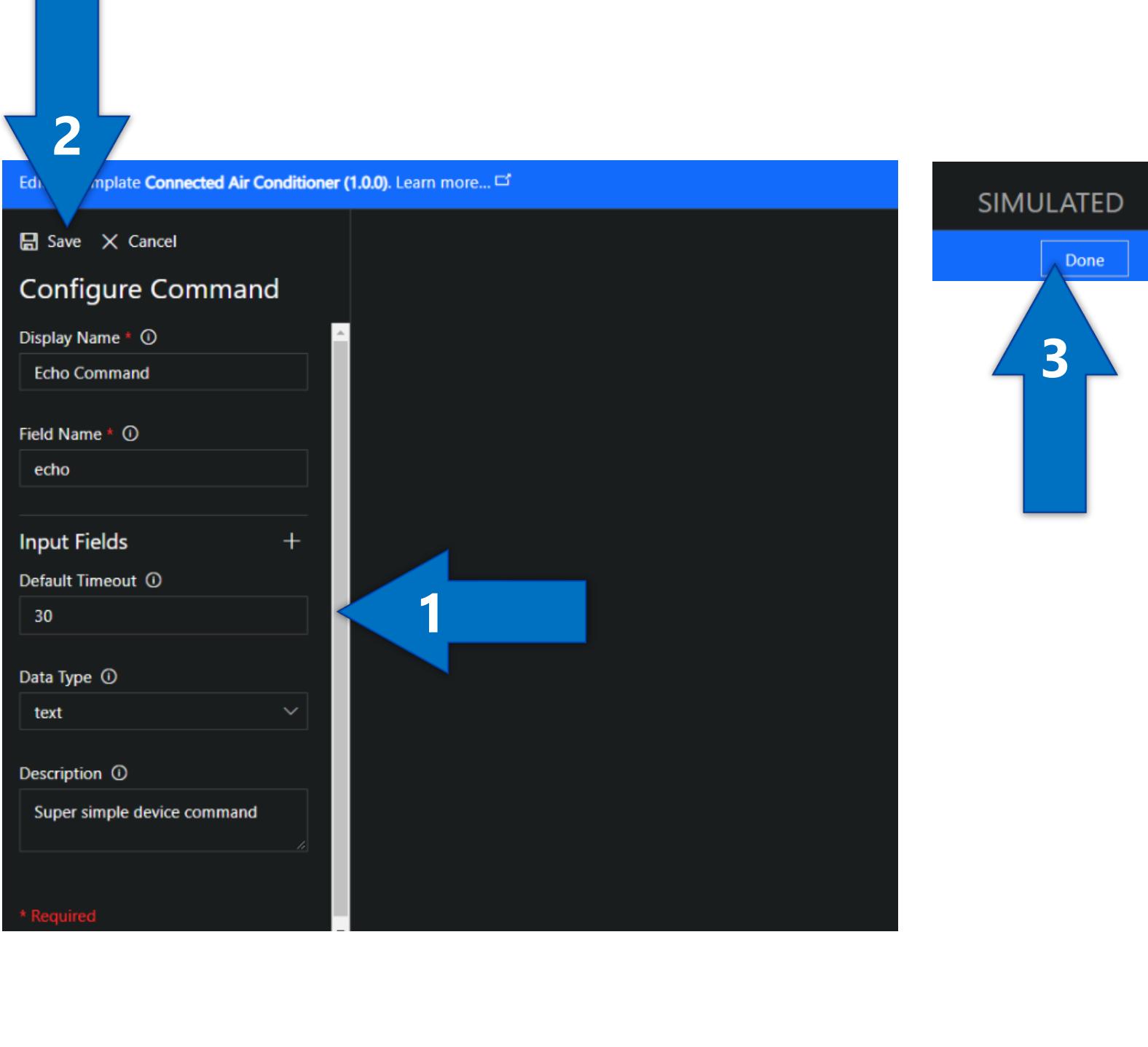
- Step 1:** A large blue arrow points upwards from the 'Edit Template' button at the bottom right of the main content area to the 'Properties' tab in the navigation bar.
- Step 2:** A large blue arrow points downwards from the 'Edit Template' button to the same button, indicating the action of clicking it.
- Step 3:** A large blue arrow points from the bottom right towards the 'New Command' button in the bottom right corner of the main content area.

Bottom View (Preview Mode):

- The page title is 'Template: Connected Air Conditioner (1.0.0)'.
- The device name is 'Connected Air Conditioner-1'.
- The status is 'SIMULATED'.
- The navigation bar includes 'Measurements', 'Settings', 'Properties' (underlined), 'Commands', 'Rules', and 'Dashboard'.
- A 'Save' button is located in the top left.
- The 'Edit Template' button is located in the top right.
- The main content area displays device properties:
 - Location:** New Orleans, LA
 - Last Service Date:** 11/29/2018
 - Firmware Version:** Autem reprehenderit iste similique delectus.
 - Serial Number:** Quaerat est dolorem hic ullam laboriosam et et ipsam.
- A message at the bottom says: 'Select Edit Template to add or edit commands.'
- An instruction below it says: 'You can use commands to remotely manage your device, such as reboot the device. Get started by adding a new command.'
- A 'Learn more' link is provided.
- A blue bar at the bottom right says: 'Editing Template Connected Air Conditioner (1.0.0). Learn more...'. A blue arrow points to the 'New Command' button.
- The 'New Command' button is located in the bottom right corner of the main content area.

CFS IoT Central

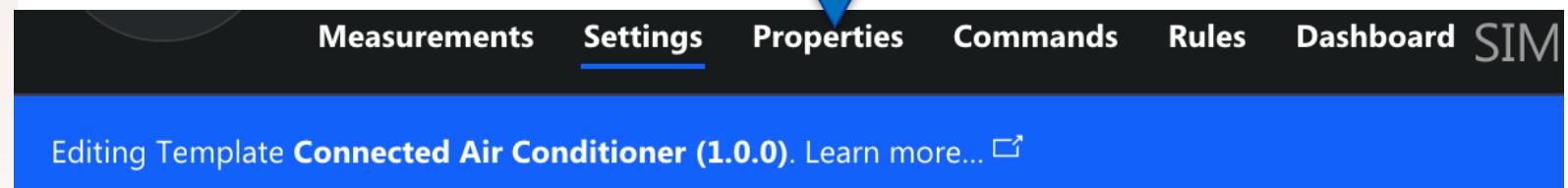
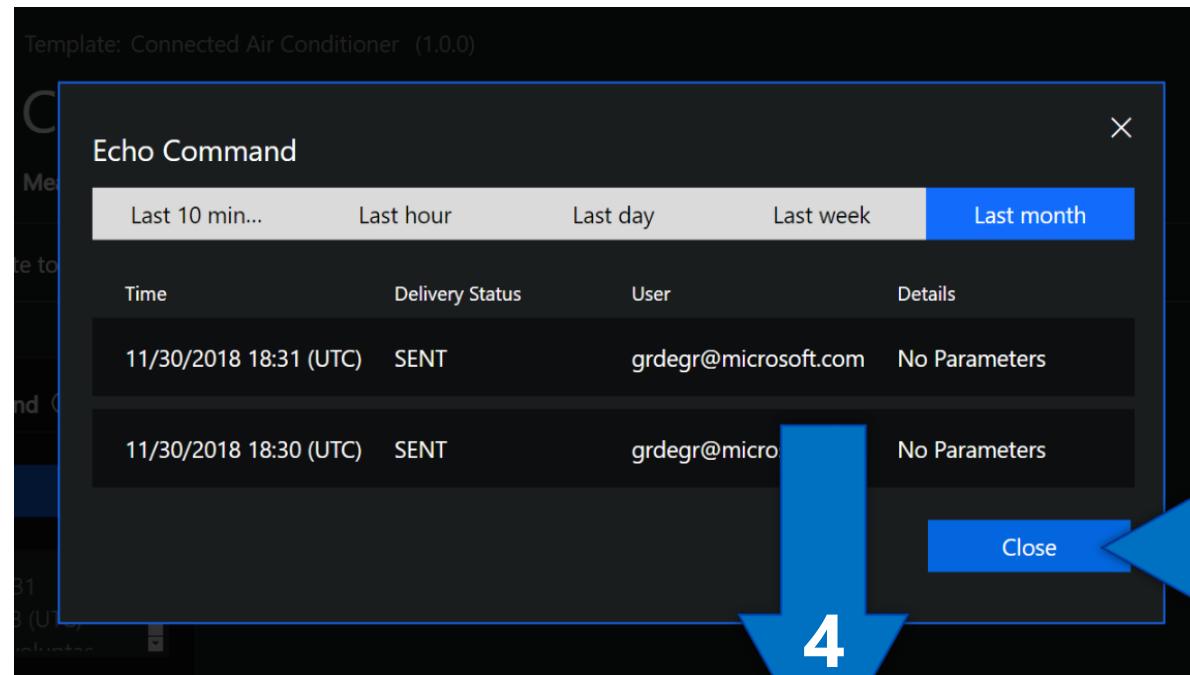
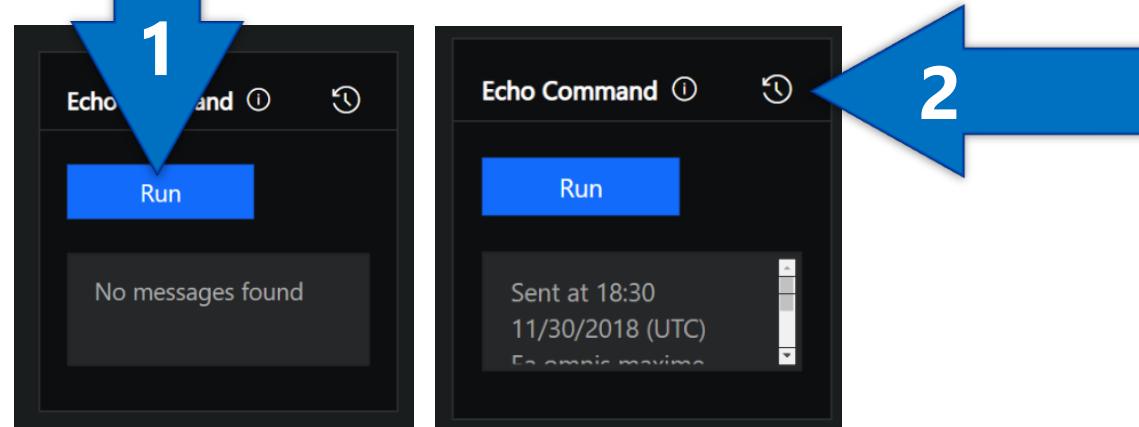
1. Completed the command fields
 - Display Name Echo Command
 - Field Name echo
 - Default Timeout 30
 - Display Type text
 - Description Super simple device command
2. Save
3. Select Done



CFS IoT Central

Once our of edit mode you can send your command to your simulated device!

1. Select Run to fire a command to your simulated device
2. Select command history to see command runs for various time intervals
3. Close the window
4. Select Properties





Edit Template

CFS IoT Central

This Service Information that will add along with it's properties will be important in the data mapping and Flows we'll create later between Dynamics 365 and Azure IoT Central.



Quick reminder to enter edit mode if you're not in it already

1. Select Label
2. Complete the configure label form with
 - Text Service Information
 - Text Size large
3. Save

The screenshot shows two views of the Azure IoT Central interface. The top view is a list item with a blue arrow labeled '1' pointing to the 'Label' option. The bottom view is a configuration form with a blue arrow labeled '2' pointing to the 'Text' field containing 'Service Information'. A large blue arrow labeled '3' points from the configuration form to the save button at the top left of the screen.

Configure Label

Text * ⓘ
Service Information

Text Size * ⓘ
large

* Required

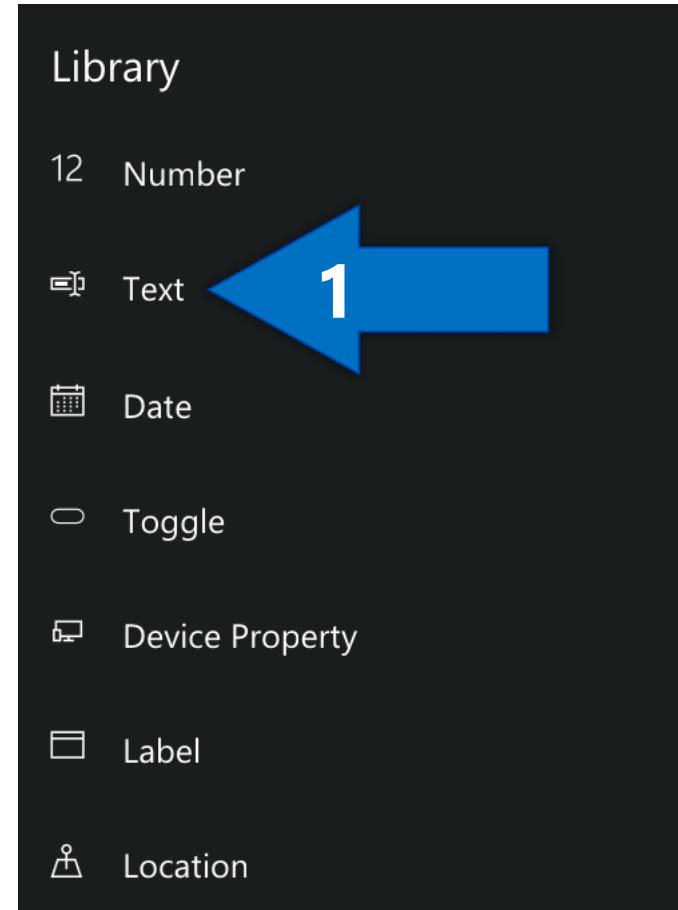
Location ⓘ New Orleans, LA
Last Service Date ⓘ 11/29/2018
Firmware Version ⓘ Mollitia sit quasi.
Serial Number ⓘ Repellat reiciendis provident.

CFS IoT Central Map Fields

Now we'll add 6 data points for Service Information that we can capture from work order information sent from Dynamics 365 to IoT Central. These are our data columns.

Goal is ingest Work Order data
<https://docs.microsoft.com/en-us/dynamics365/customer-engagement/field-service/cfs-iot-central-work-orders>

1. Select Text



CFS IoT Central Map Fields

1. Complete the configure text form with the information I have in the entire column pointed to by arrow 1
2. Save
3. Drag the Work Order Number text under the Service Information label
4. Select Text
5. Complete the configure text form with the information I have in the entire column pointed to by arrow 5
6. Save

Configure Text

Display Name * ⓘ
Work Order Number

Field Name * ⓘ
workOrderNumber

Trim Leading Spaces ⓘ
 Off

Trim Trailing Spaces ⓘ
 Off

Case Sensitivity In Comparison ⓘ
 Off

Case Sensitivity In Data Entry ⓘ
mixed

Minimum Length ⓘ
0

Maximum Length ⓘ
100

Initial Value ⓘ
Example: 1000

Required ⓘ
 Off

Description ⓘ
Example: Set display text on the screen.

* Required

1.0.0) Learn more... ⓘ

Location ⓘ
New Orleans, LA

Last Service Date ⓘ
11/29/2018

Firmware Version ⓘ
Provident aut deleniti ut quo occaecati assumenda natus v

Serial Number ⓘ
Ut voluptatem consequatur possimus cupiditate sit doloril

Work Order Number

Service Information

Work Order Number

Text

Date

Toggle

Device Property

Label

Location

Configure Text

Display Name * ⓘ
Work Order Status

Field Name * ⓘ
workOrderStatus

Trim Leading Spaces ⓘ
 Off

Trim Trailing Spaces ⓘ
 Off

Case Sensitivity In Comparison ⓘ
 Off

Case Sensitivity In Data Entry ⓘ
mixed

Minimum Length ⓘ
0

Maximum Length ⓘ
100

Initial Value ⓘ
Example: 1000

Required ⓘ
 Off

Description ⓘ
Example: Set display text on the screen.

* Required

CFS IoT Central

Incident Technician

1. Select text from the Library
2. Complete the configure text form with the information I have in the entire column pointed to by arrow 2
3. Save
4. Select text from the Library
5. Complete the configure text form with the information I have in the entire column pointed to by arrow 2
6. Save

Step 1: Library → Text

Step 2: Configure Text (Incident Description) → Field Name: incidentDescription

Step 3: Configure Text (Incident Description) (Completed)

Step 4: Library → Text

Step 5: Configure Text (Work Order Owner Id) → Field Name: workOrderOwnerId

Step 6: Configure Text (Work Order Owner Id) (Completed)

CFS IoT Central

Service Times

1. Select text from the Library
2. Complete the configure text form with the information I have in the entire column pointed to by arrow 2
3. Save
4. Select text from the Library
5. Complete the configure text form with the information I have in the entire column pointed to by arrow 2
6. Save



1

2

3

4

5

6

CFS IoT Central

Let's of data entry later and now this! We have all the important fields we need to ingest data from Dynamics 365.

You're completed Service Information in your properties page should now look like this. No we need to add these properties to our dashboard.

1. Select Dashboard

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

Library

- 12 Number
- Text
- Date
- Toggle
- Device Property
- Label
- Location

Location ⓘ

Last Service Date ⓘ

Firmware Version ⓘ

Serial Number ⓘ

Service Information

Work Order Number

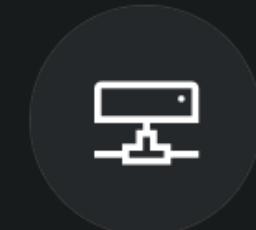
Work Order Status

Incident Description

Work Order Owner Id

Estimated Arrival Time

Estimated Service Duration (hours)



Template: Connected Air Conditioner (1.0.0)

Connected Air Conditioner-1

Measurements
Settings
Properties
Commands
Rules
Dashboard

1



Edit Template

CFS IoT Central



Enter edit mode if you're not in it already

1. Select Settings and Properties

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

Done

Library

- Image
- Line Chart
- Bar Chart
- KPI
- Settings and Properties**
- Label
- Map
- Event History
- State History
- Last Known Value

1

Temperature

110.00

60.00

9:04:48 AM 9:35:24 AM

Events

Event	Time
Fan Motor Error	12/6/2018, 9:06:30 AM
Fan Motor Error	12/6/2018, 9:09:22 AM
Fan Motor Error	12/6/2018, 9:13:59 AM
Fan Motor Error	12/6/2018, 9:20:37 AM
Fan Motor Error	12/6/2018, 9:27:55 AM
Fan Motor Error	12/6/2018, 9:31:41 AM

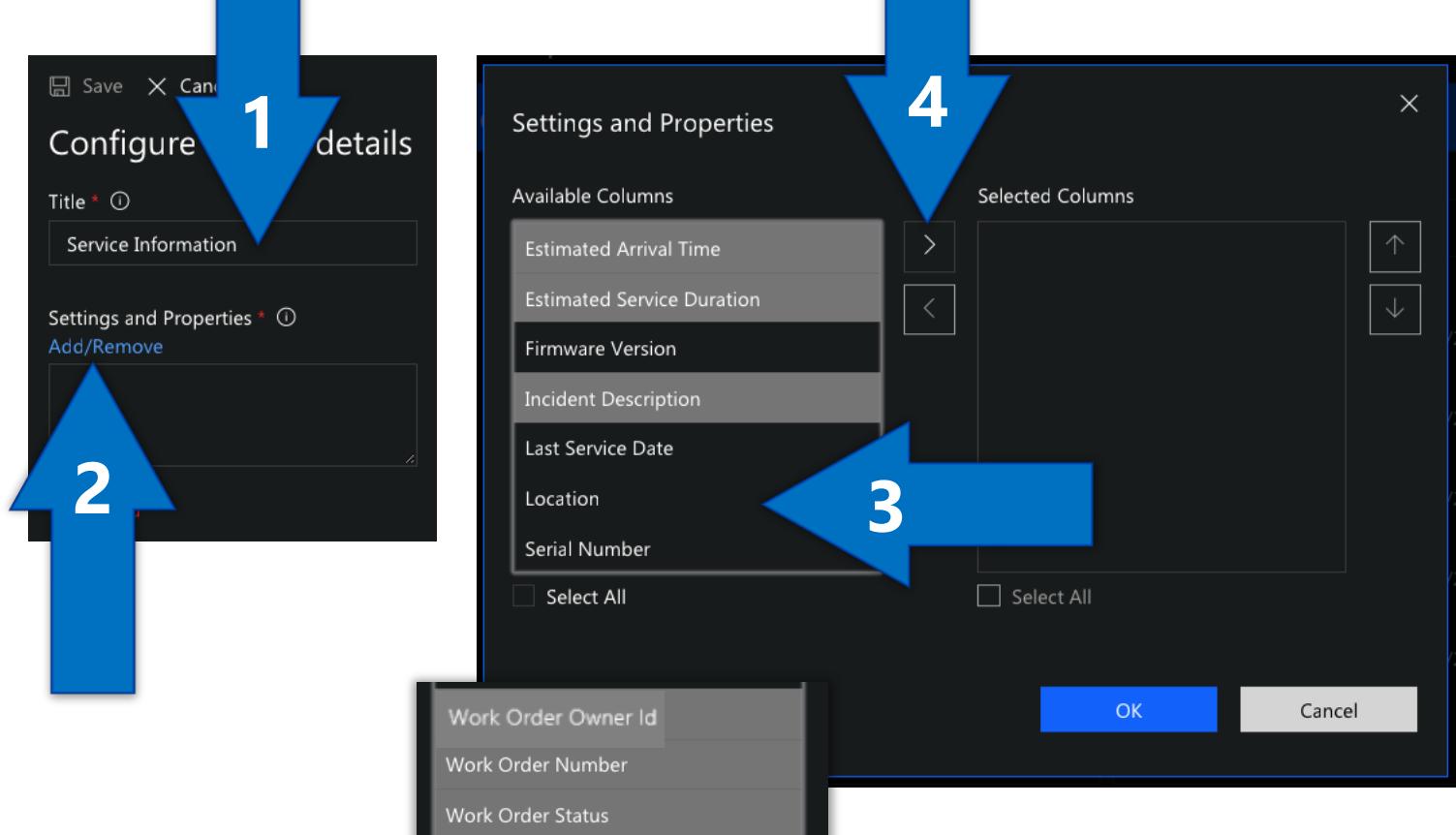
CFS IoT Central

1. Add the Title Service Information
2. Select Add/Remove
3. This opens a window that lists all our available columns/properties that we can place on the dashboard. Select our Service Information Properties:
 - Estimated Arrival Time
 - Estimated Service Duration
 - Incident Description
 - Technician Name
 - Work Order Number
 - Work Order Status



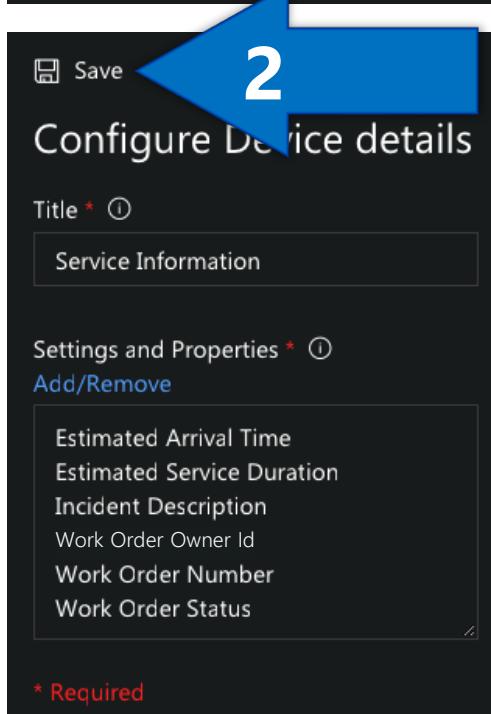
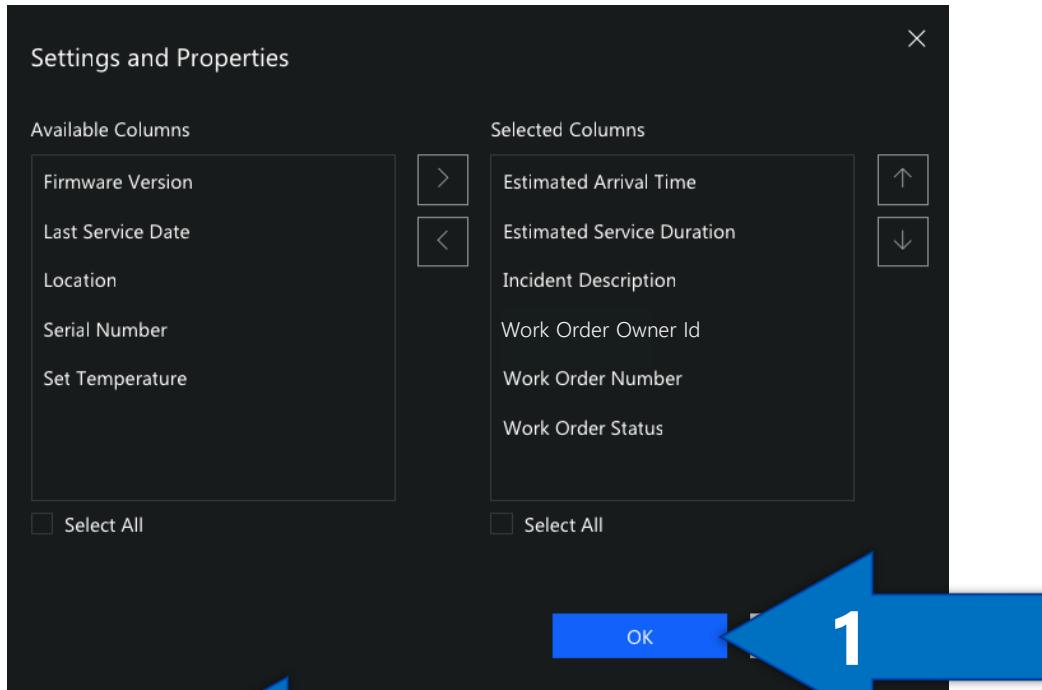
You may need to scroll down as I have to select each one

4. Select the Arrow > to complete our column selection



CFS IoT Central

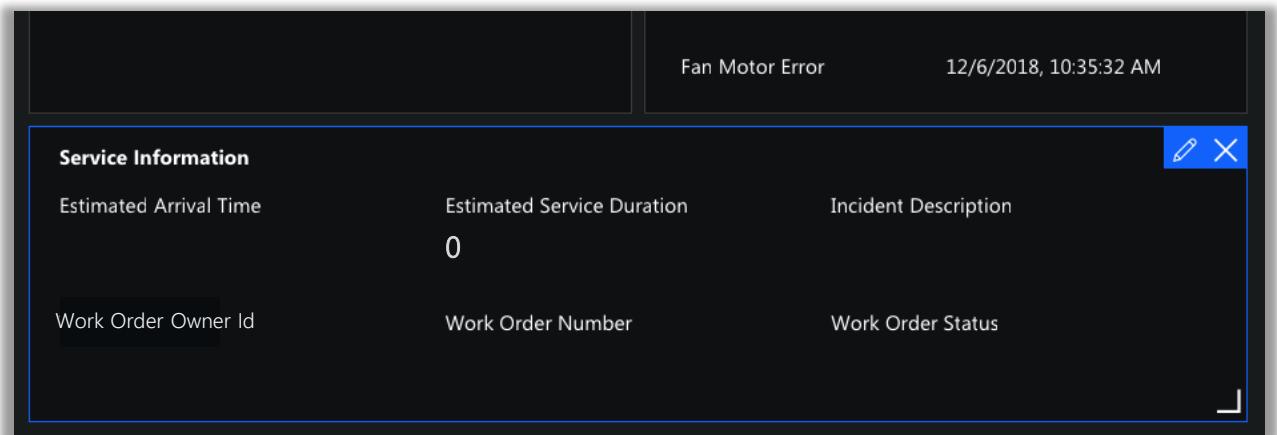
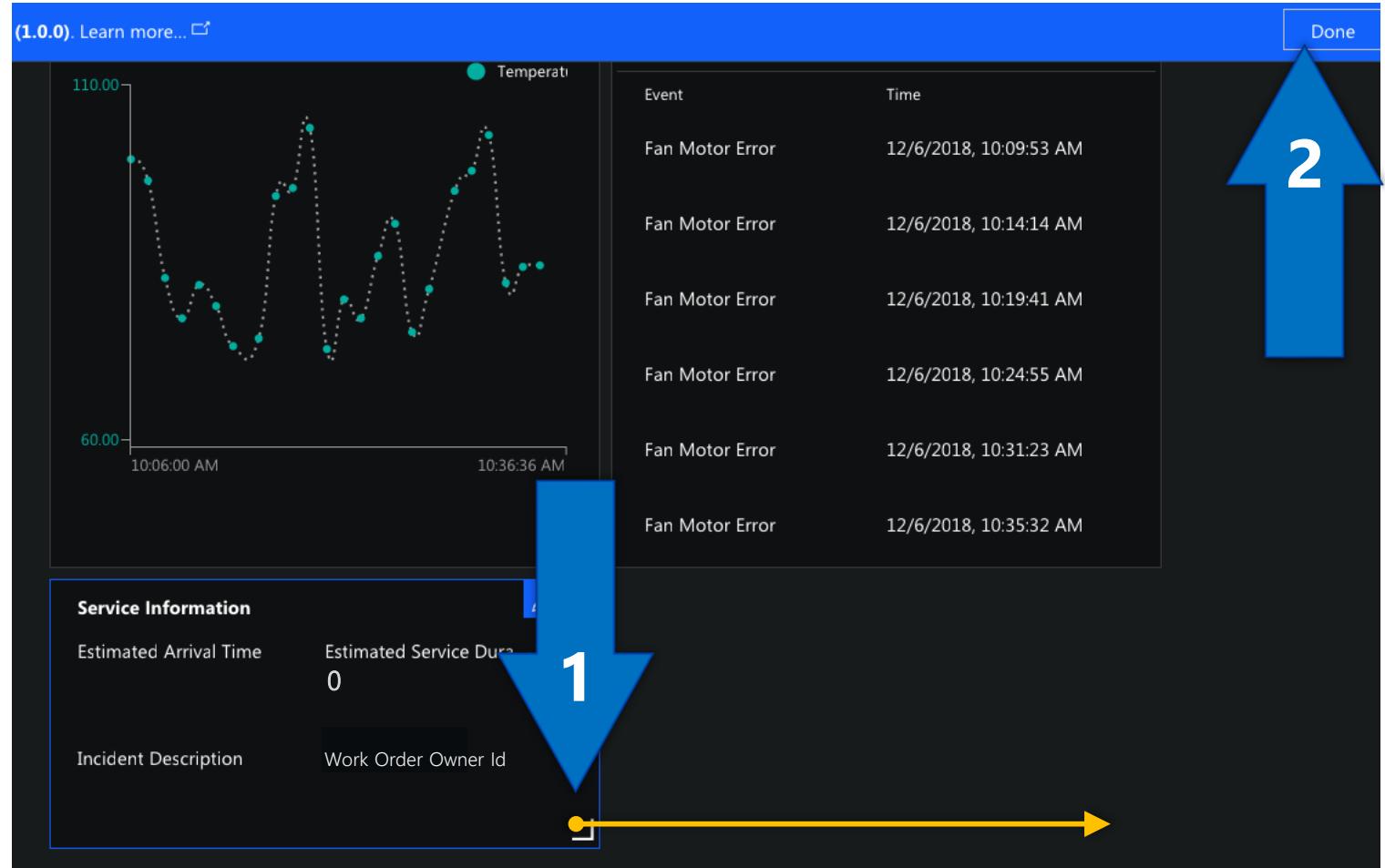
1. All of our required Service Information Columns should now be moved. Select OK
2. Save



CFS IoT Central

Your complete Service Information properties should now be on your Dashboard

1. While still in edit mode drag the Service Information window to reveal all the properties
2. Select Done



CFS IoT Central

Dashboard complete!



Now in a future exercise when we prepare a Flow from Dynamics 365 to capture this Work Order Service Information data and send it in IoT Central. We'll have a component in our operator dashboard that can ingest our data and display it in realtime.

Template: Connected Air Conditioner (1.0.0)

Connected Air Conditioner-1

Measurements Settings Properties Commands Rules **Dashboard**

Select Edit Template to add or edit information tiles about your device.

Temperature

110.00
60.00

10:45:36 AM 11:16:12 AM

Temperat

Events

Event	Time
Fan Motor Error	12/6/2018, 10:49:55 AM
Fan Motor Error	12/6/2018, 10:55:50 AM
Fan Motor Error	12/6/2018, 10:59:26 AM
Fan Motor Error	12/6/2018, 11:06:08 AM
Fan Motor Error	12/6/2018, 11:10:29 AM

Service Information

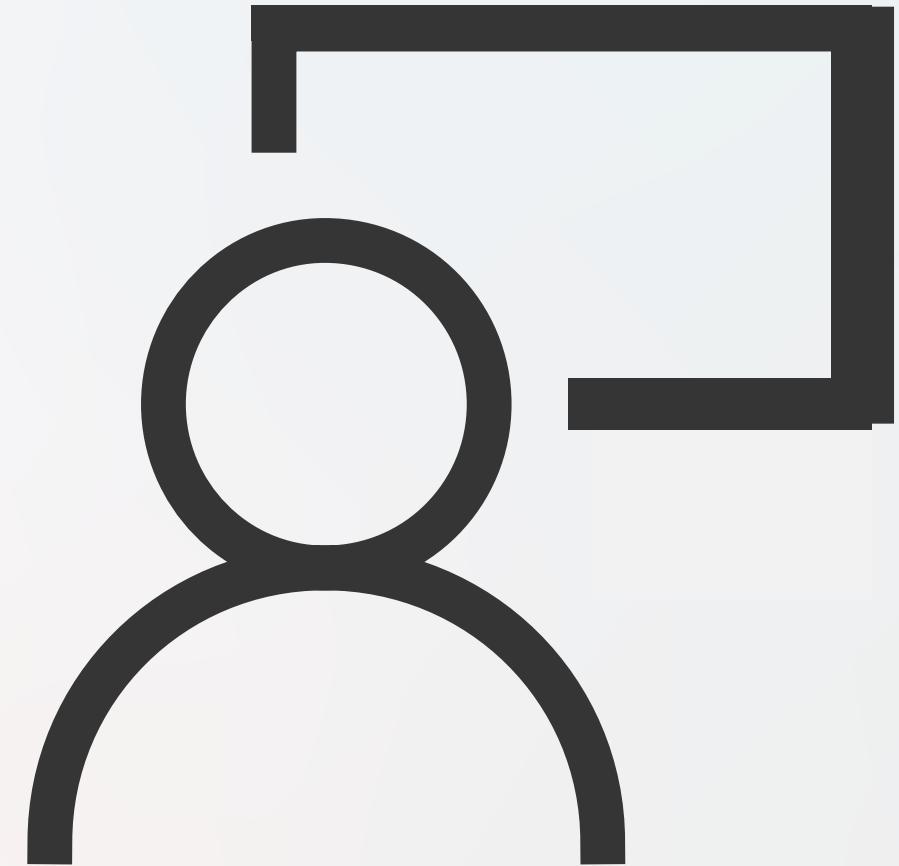
Estimated Arrival Time	Estimated Service Duration	Incident Description
0		
Work Order Owner Id	Work Order Number	Work Order Status

Capture anomaly and other data in Dynamics 365



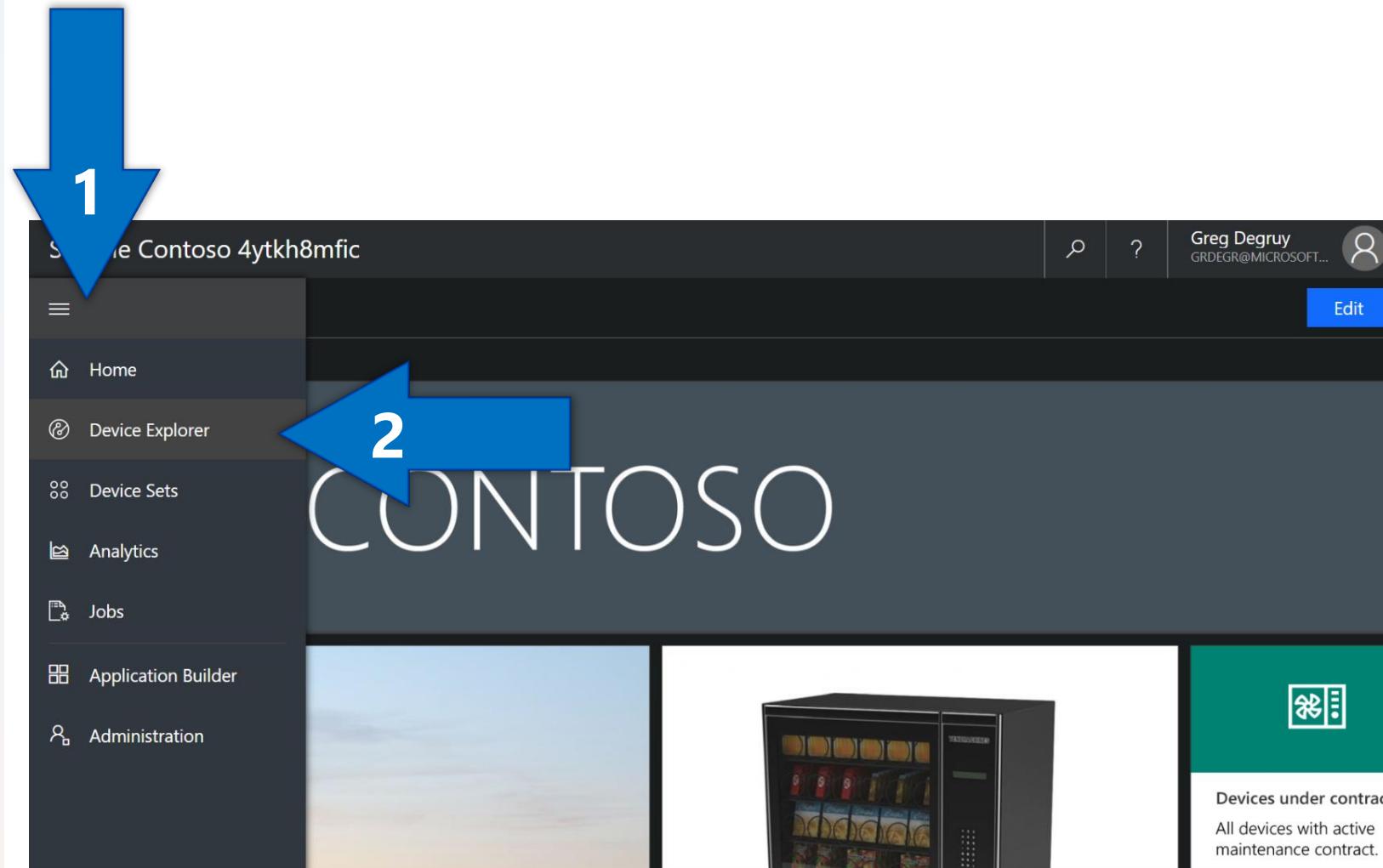
Content Overview

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



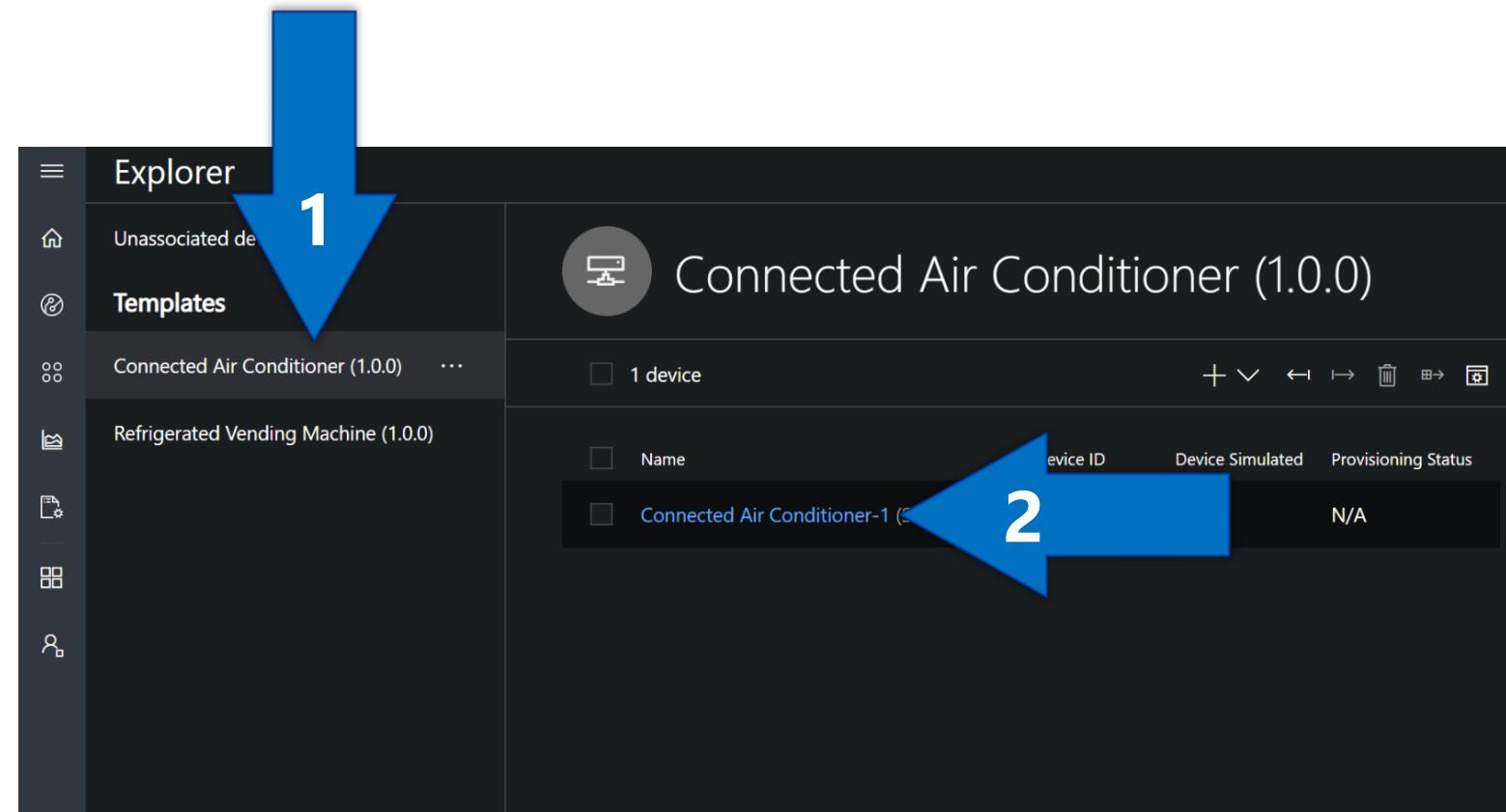
Dynamics 365

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



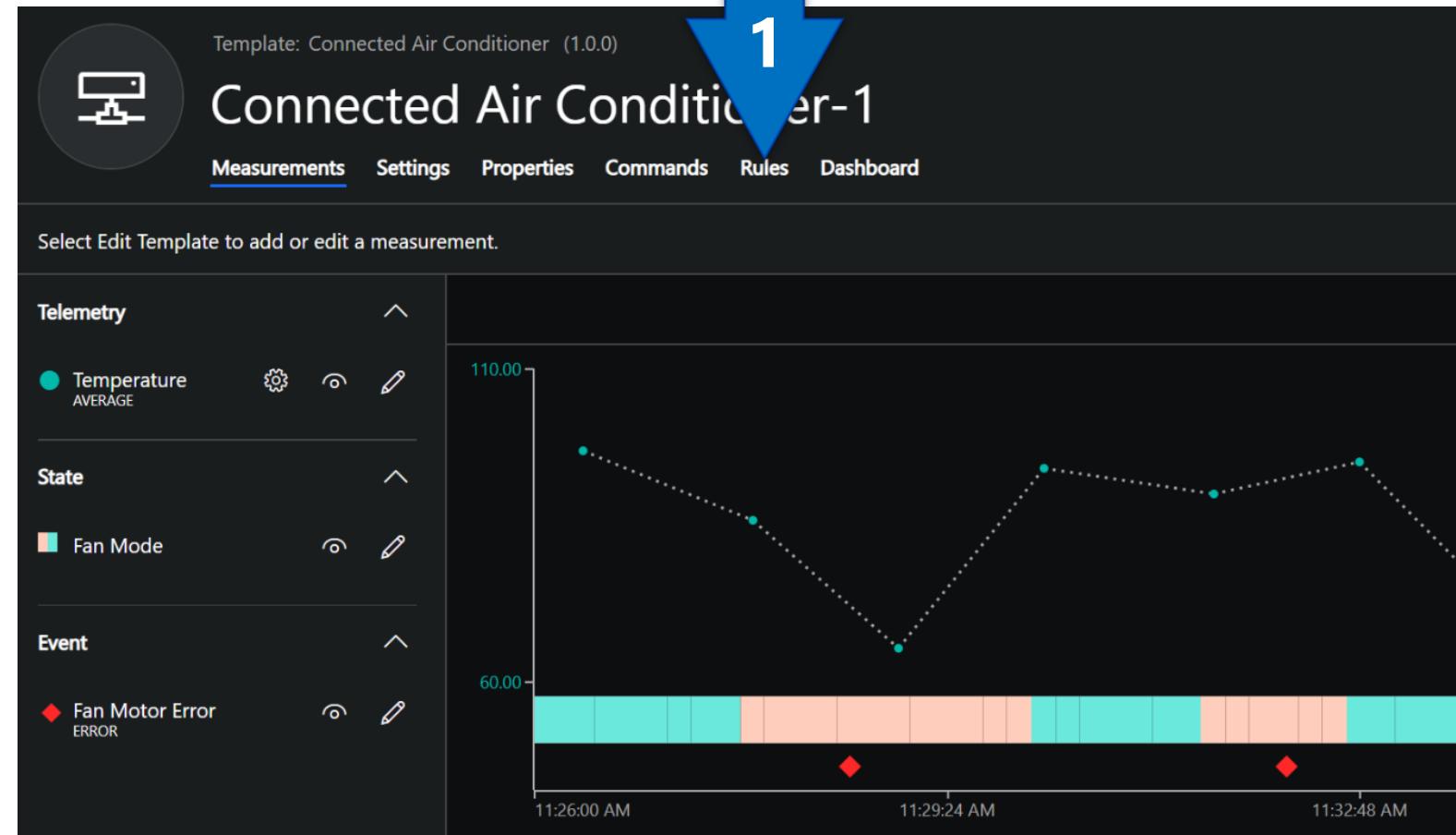
Dynamics 365

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



Dynamics 365

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

Template: Connected Air Conditioner (1.0.0)

Connected Air Con...

Measurements Settings Properties Commands Rules Dashboard SIMULATED

Select Edit Template to add or edit rules.

Edit Template

Rules monitor your device data and trigger actions. For example, send an email when temperature is above 80. Get started by adding a new rule. [Learn more...](#)

Template: Connected Air Conditioner (1.0.0)

Connected Air Con...

Measurements Settings Properties Commands Rules Dashboard SIMULATED

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

+ New Rule Done

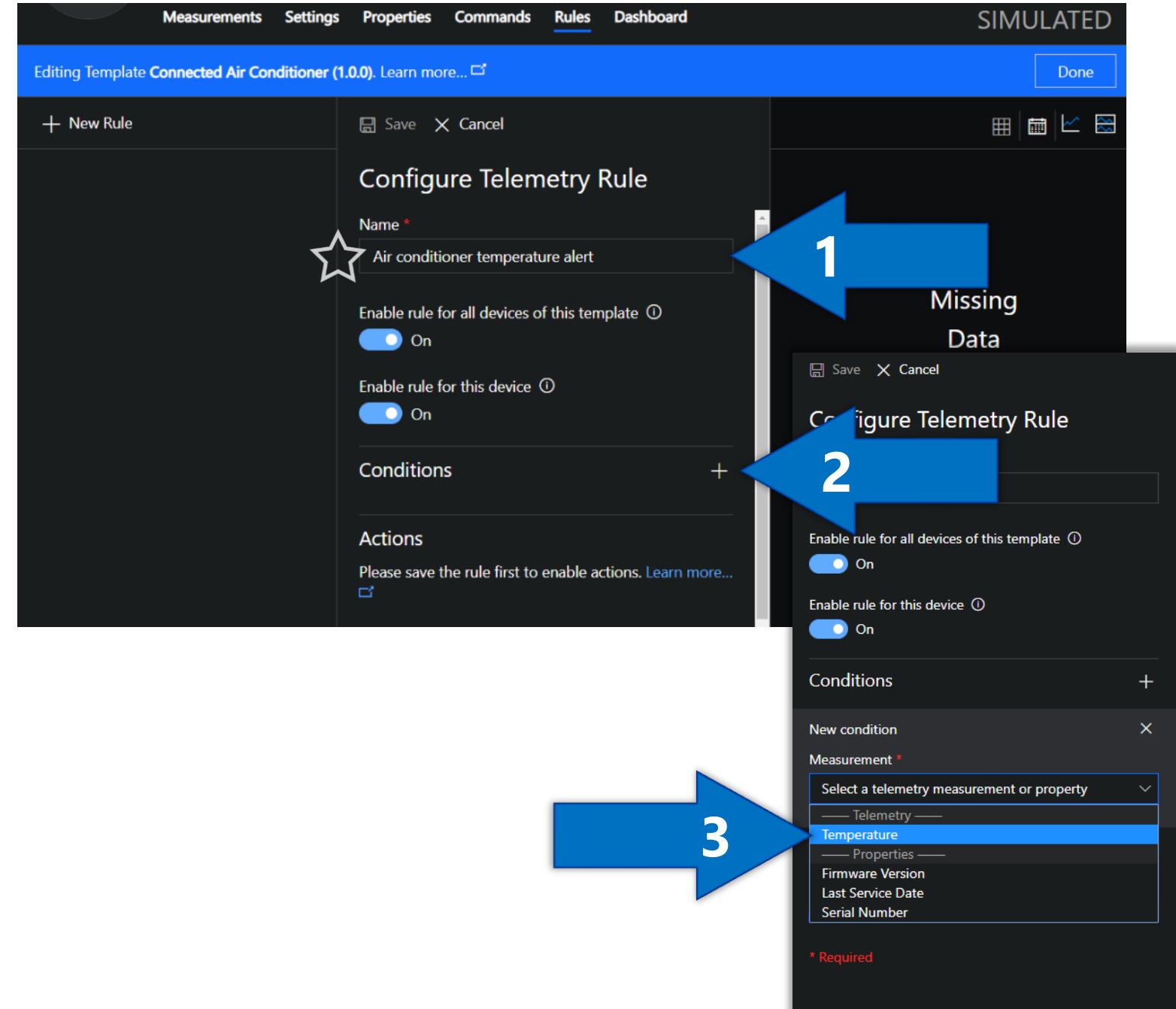
Rules monitor your device data and trigger actions. For example, send an email when temperature is above 80. Get started by adding a new rule. [Learn more...](#)

+ New Rule

Telemetry Monitor device telemetry against static or dyna... (e.g. Temperature > Temperature threshold)

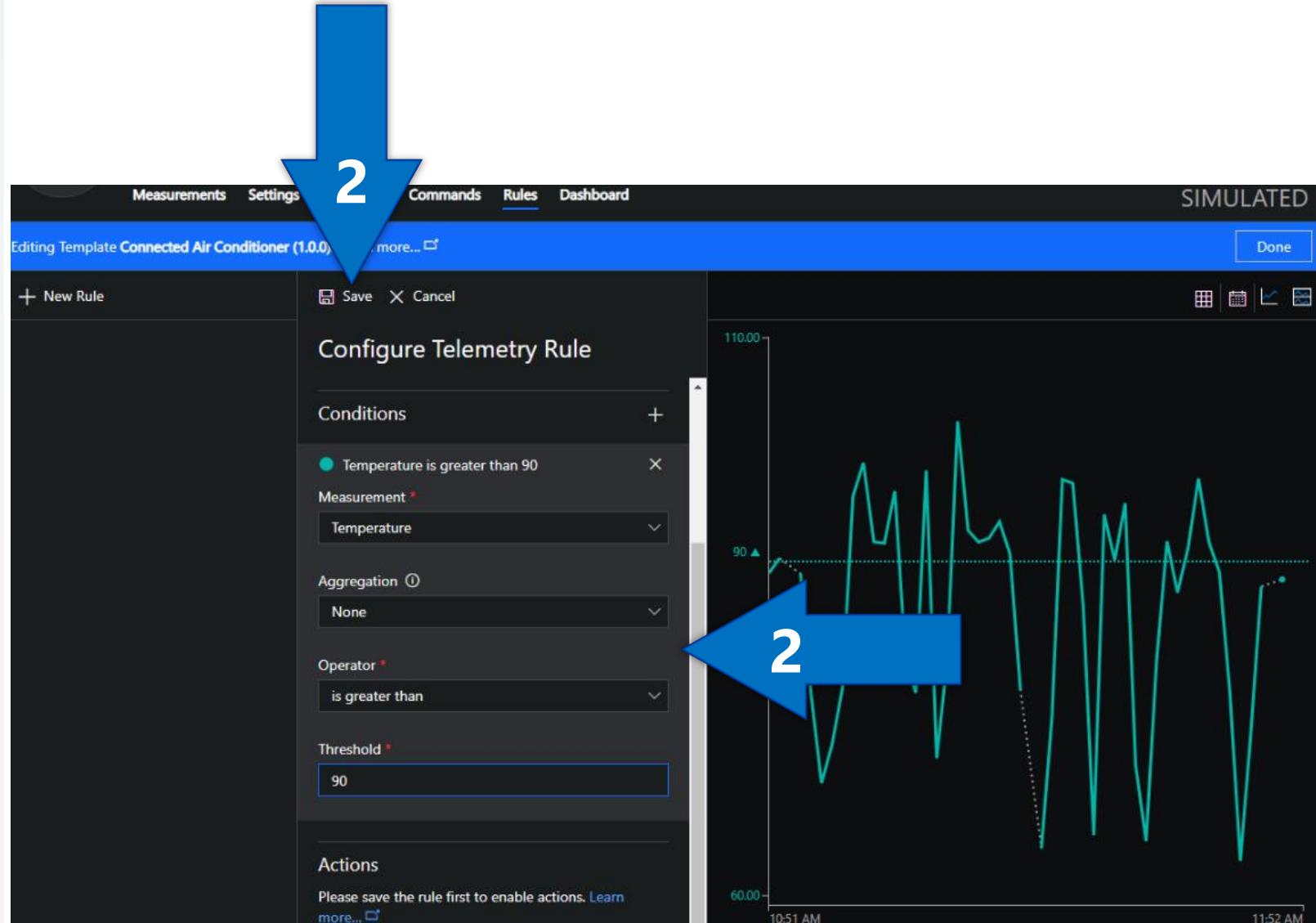
Dynamics 365

1. Add the Name *Air conditioner temperature alert* and leave the switches set on 
 2. Add a new Condition
 3. From the Measurement drop down select Temperature
- ★** 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.



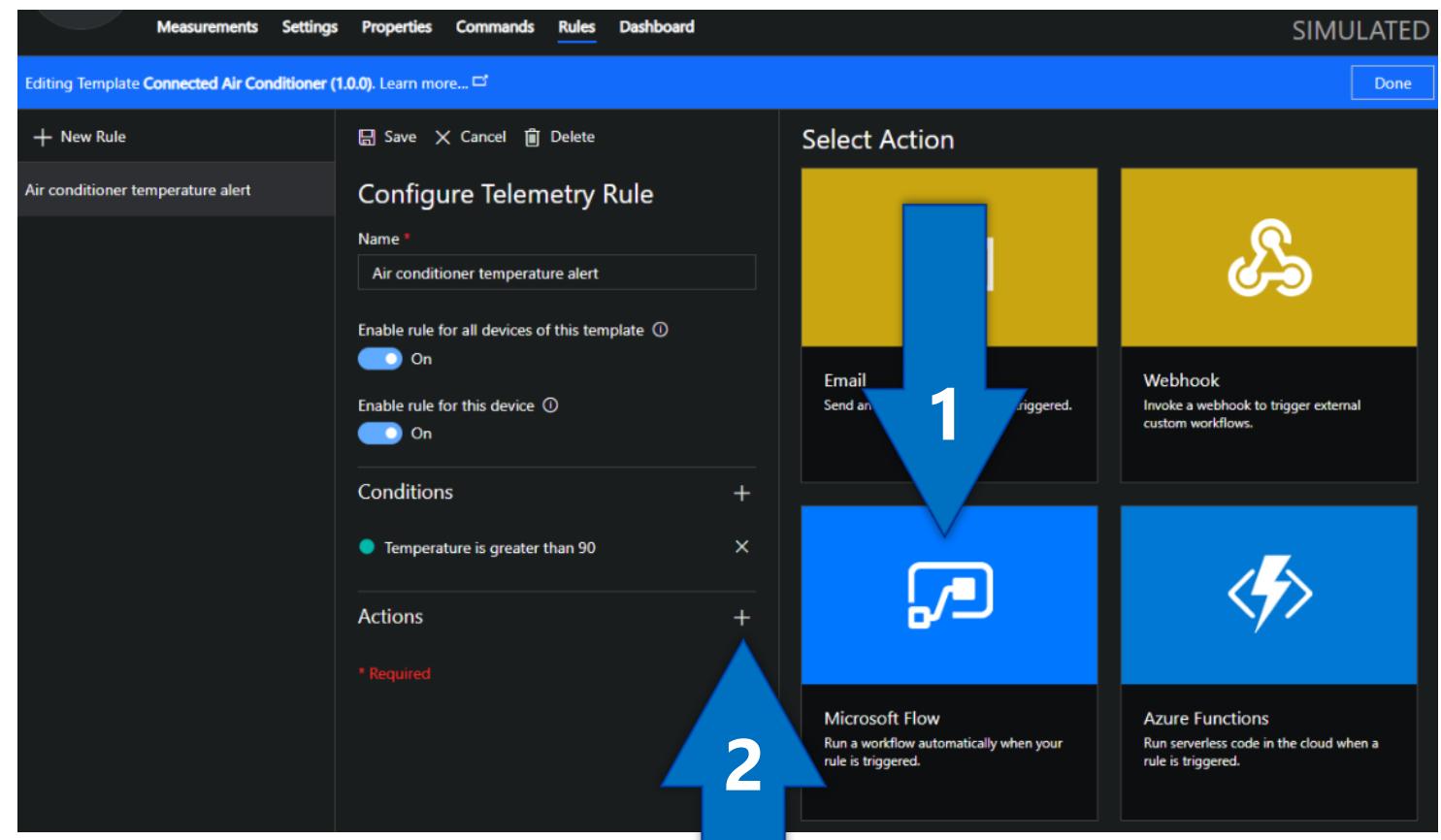
Dynamics 365

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



Dynamics 365

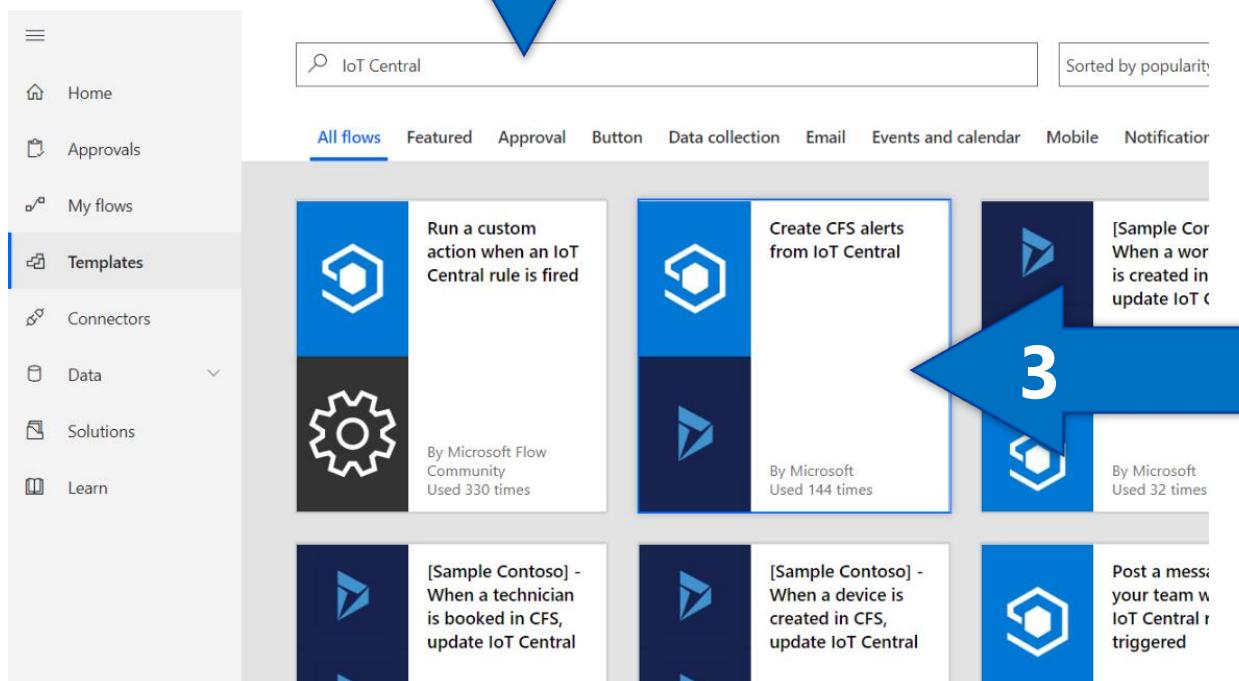
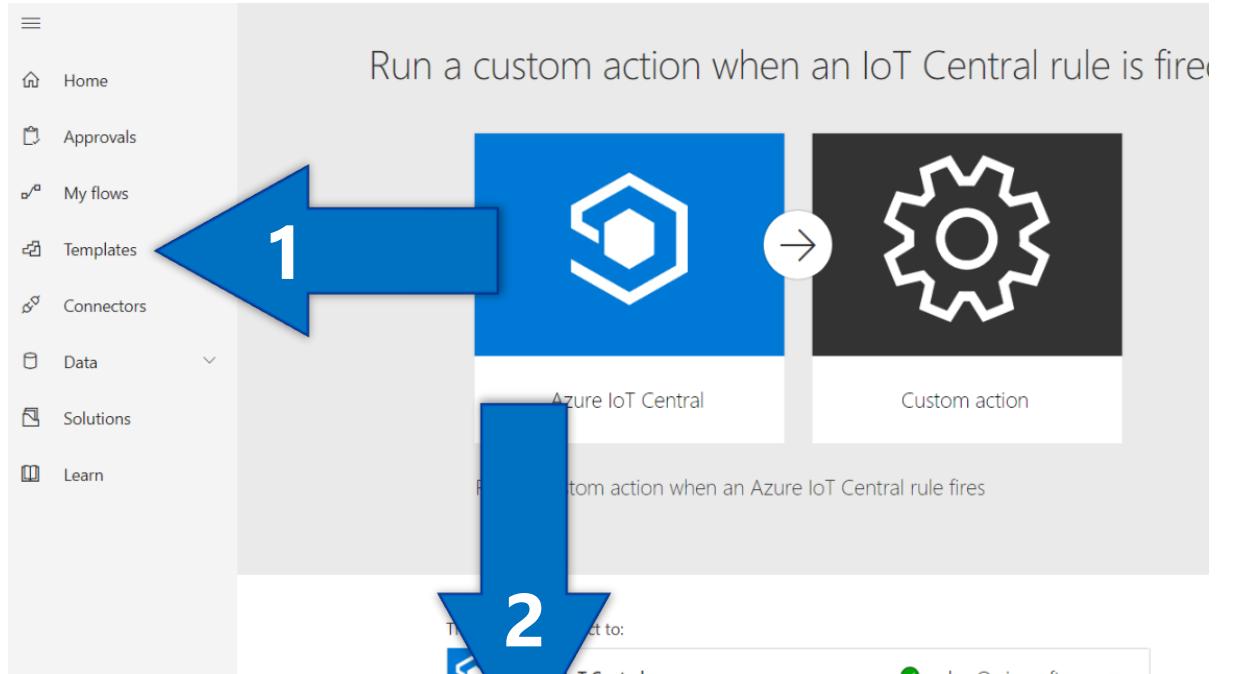
1. Sign in first, this will transport us to the full portal experience

The screenshot shows the Microsoft Flow website interface. At the top, there is a navigation bar with the Microsoft logo, followed by links for Flow, Templates, Connectors, Learn, a search bar labeled "Search templates ...", and two buttons: "Sign in" and "Sign up free". A large blue arrow points downwards from the top right towards the "Sign in" button. Below the navigation bar, the main content area has a heading "Run a custom action when an IoT Central rule is fired". It features a diagram with two boxes: a blue box on the left containing a white hexagon icon and the text "Azure IoT Central", and a black box on the right containing a white gear icon and the text "Custom action". An arrow points from the Azure IoT Central box to the Custom action box. Below the diagram, the text "Runs a custom action when an Azure IoT Central rule fires" is displayed. At the bottom, there is a prominent blue button with the text "Use this template".

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*



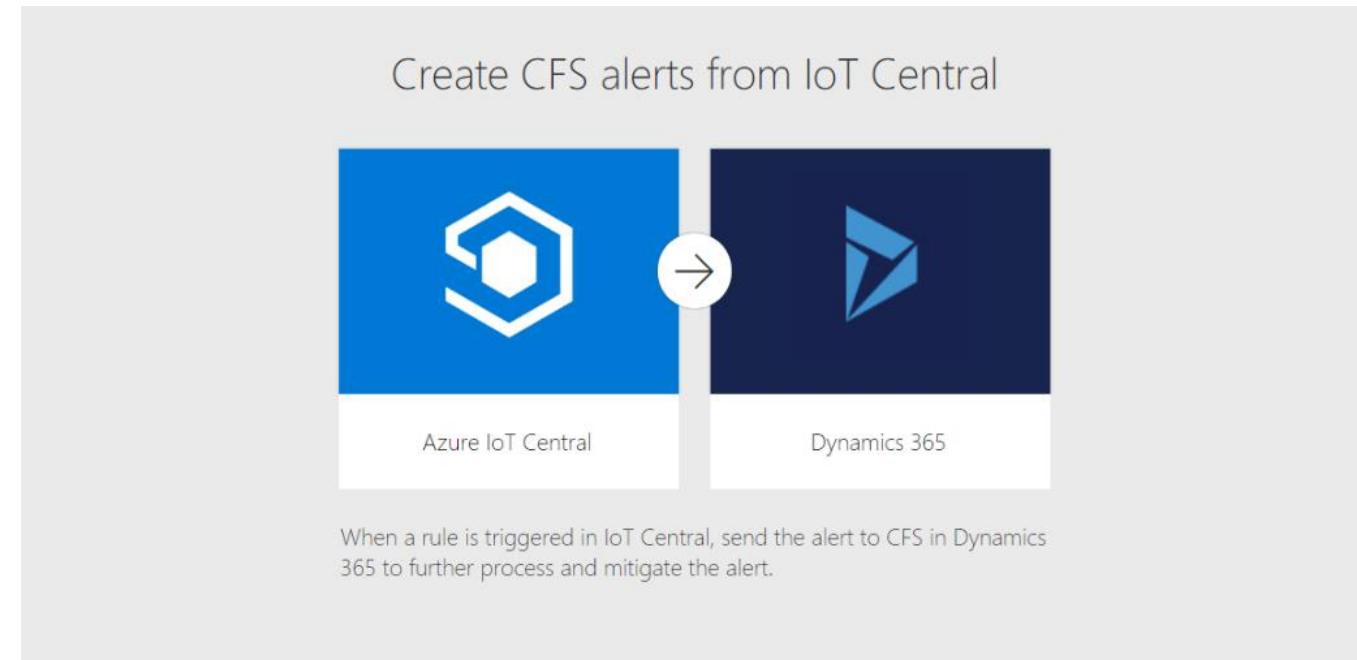
Dynamics 365

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.



This flow will connect to:

Dynamics 365 View permissions	grdegr@grdegr.onmicrosoft.com ...
Azure IoT Central	grdegr@microsoft.com ...

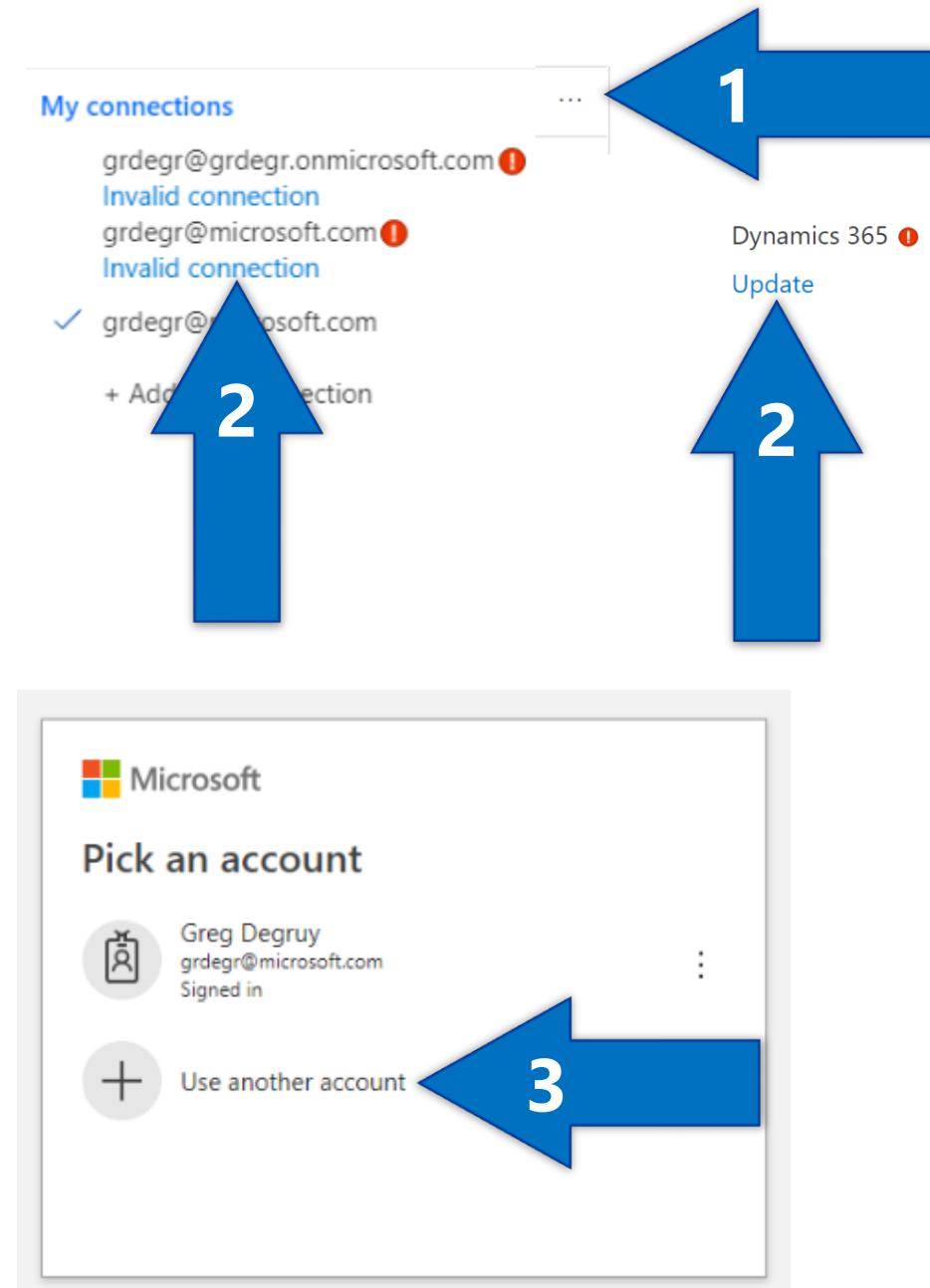


Dynamics 365

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

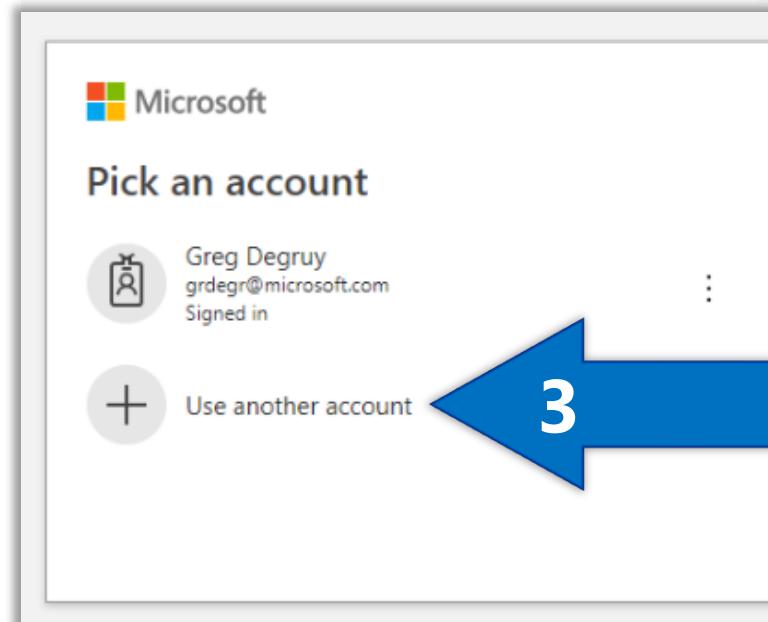
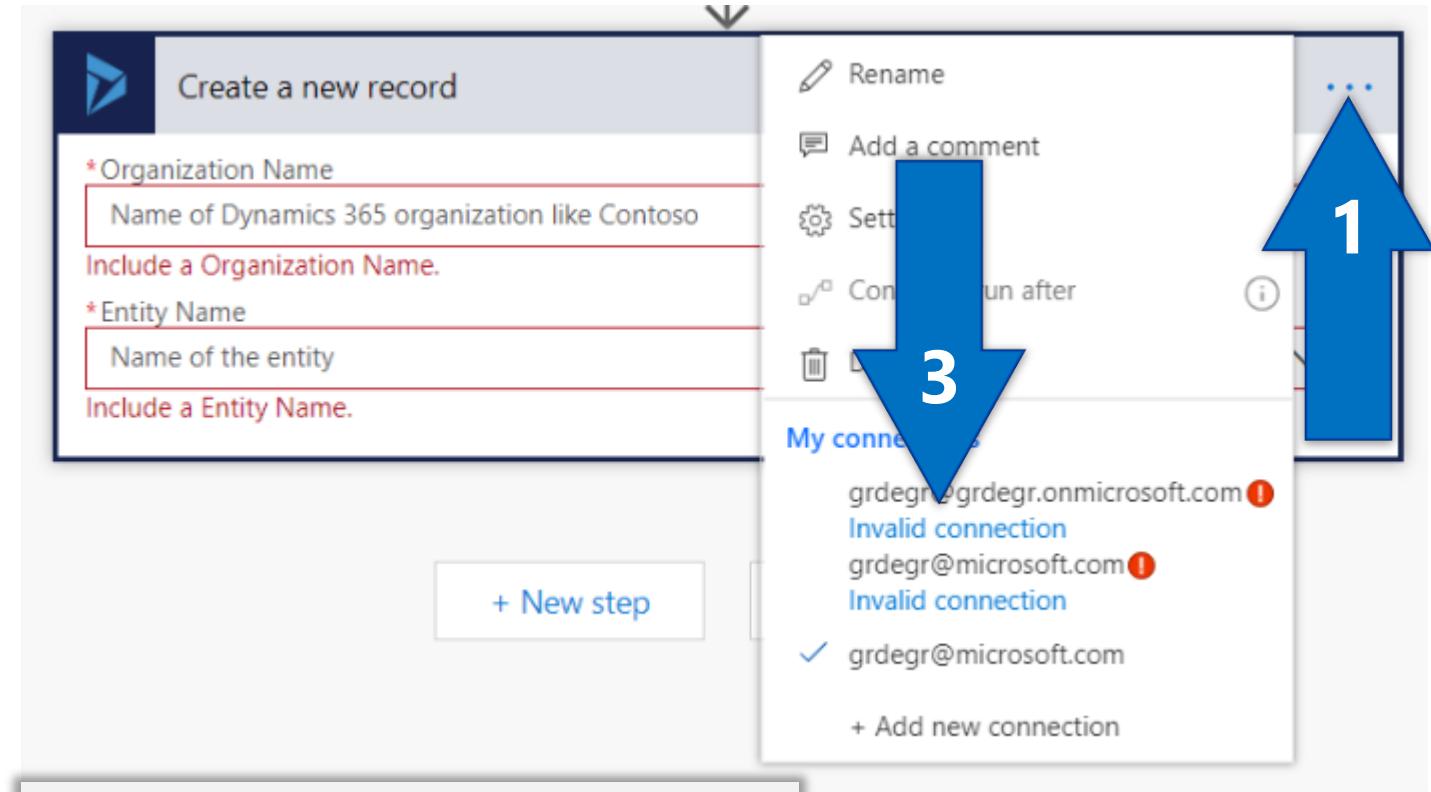


Dynamics 365

Optional Account fix

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

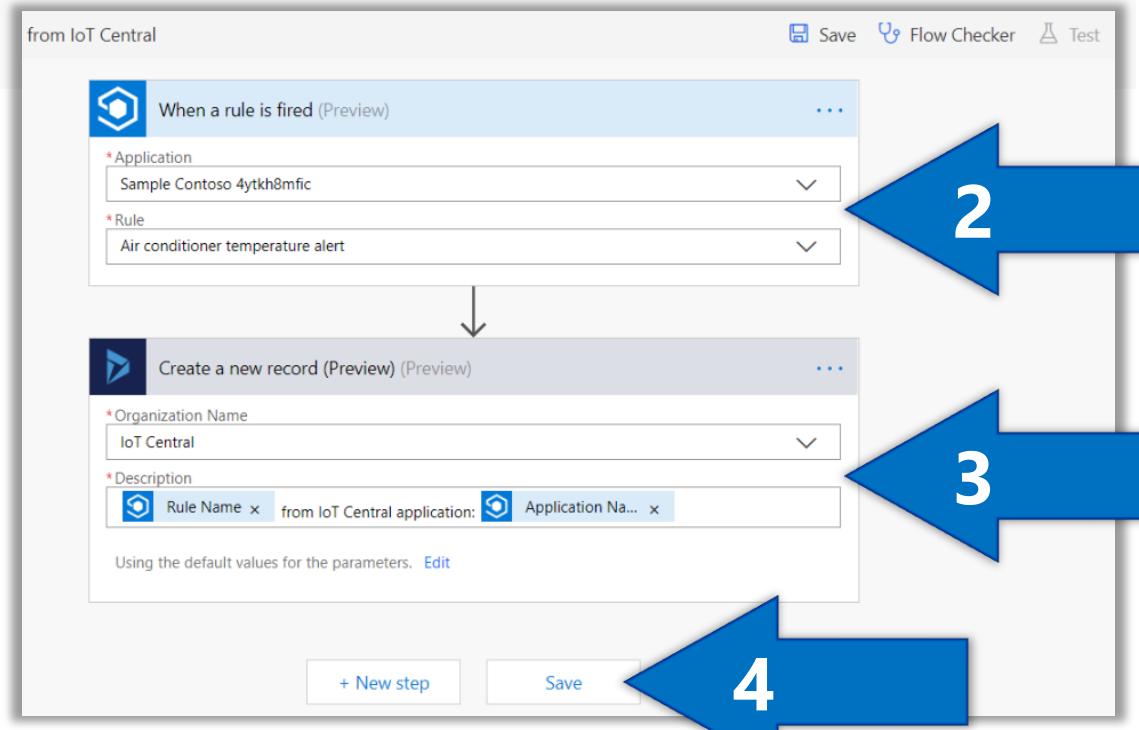
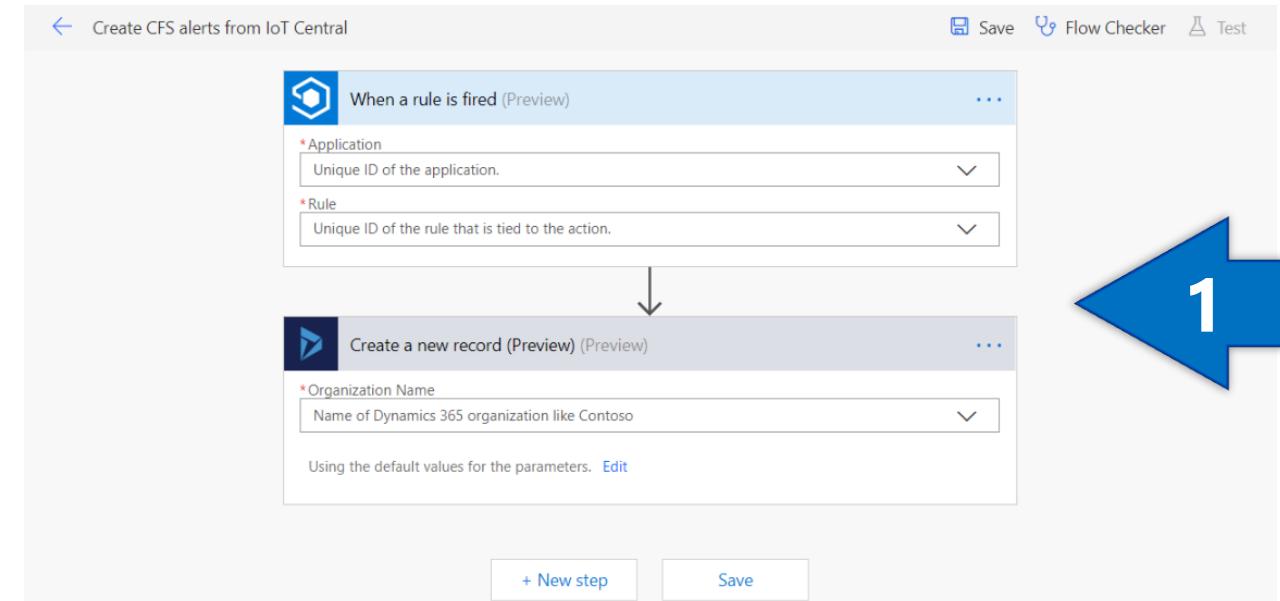
1. Select the ellipse •••
2. Select *Invalid Connection* under the connection associated with your Dynamics 365 instance
3. Select Use another account and sign in with your Dynamics 365 credentials



Dynamics 365

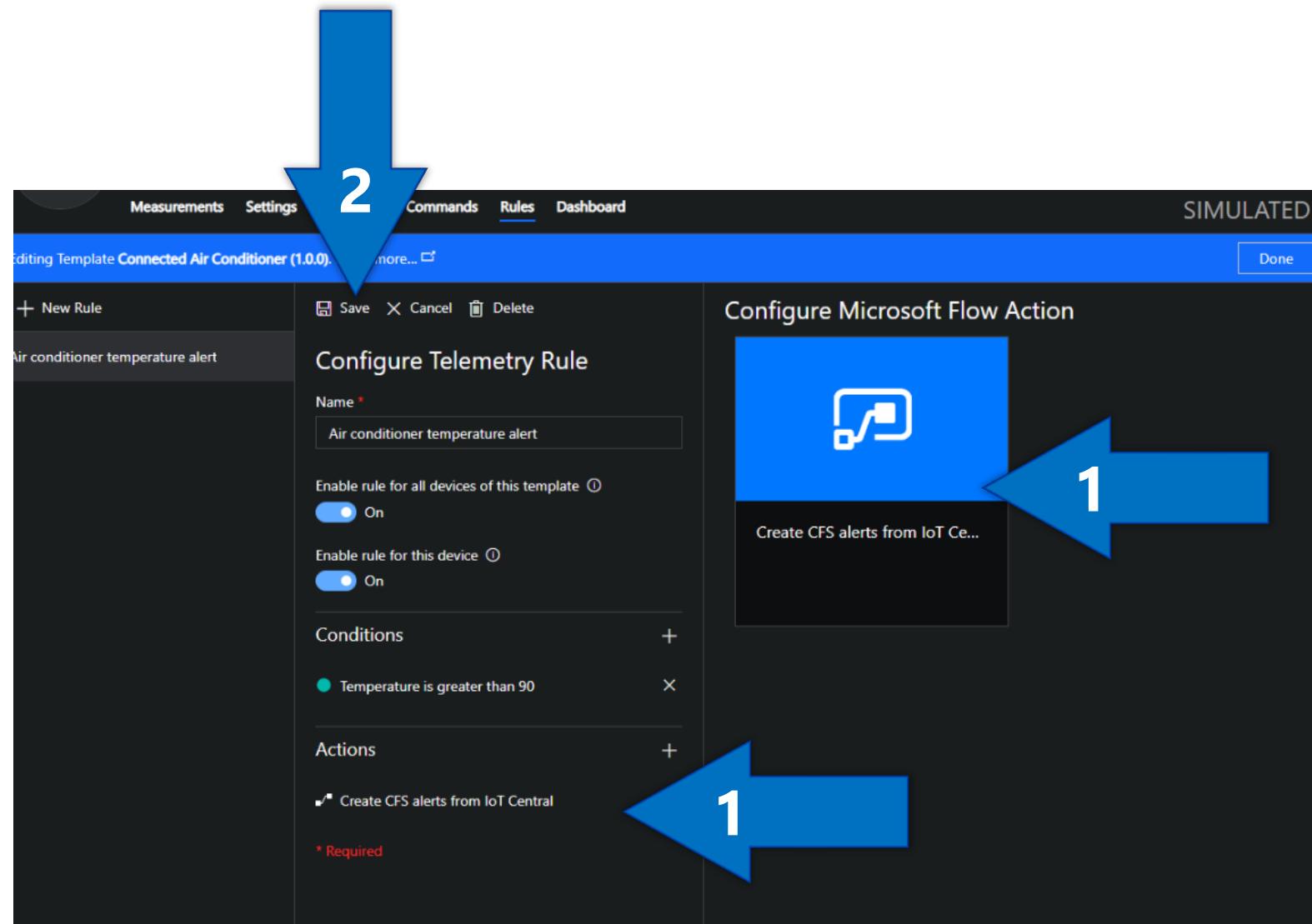
If you don't have issues on either of the two slides you should see the template flow that creates out IoT alerts for us

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 Contoso* (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



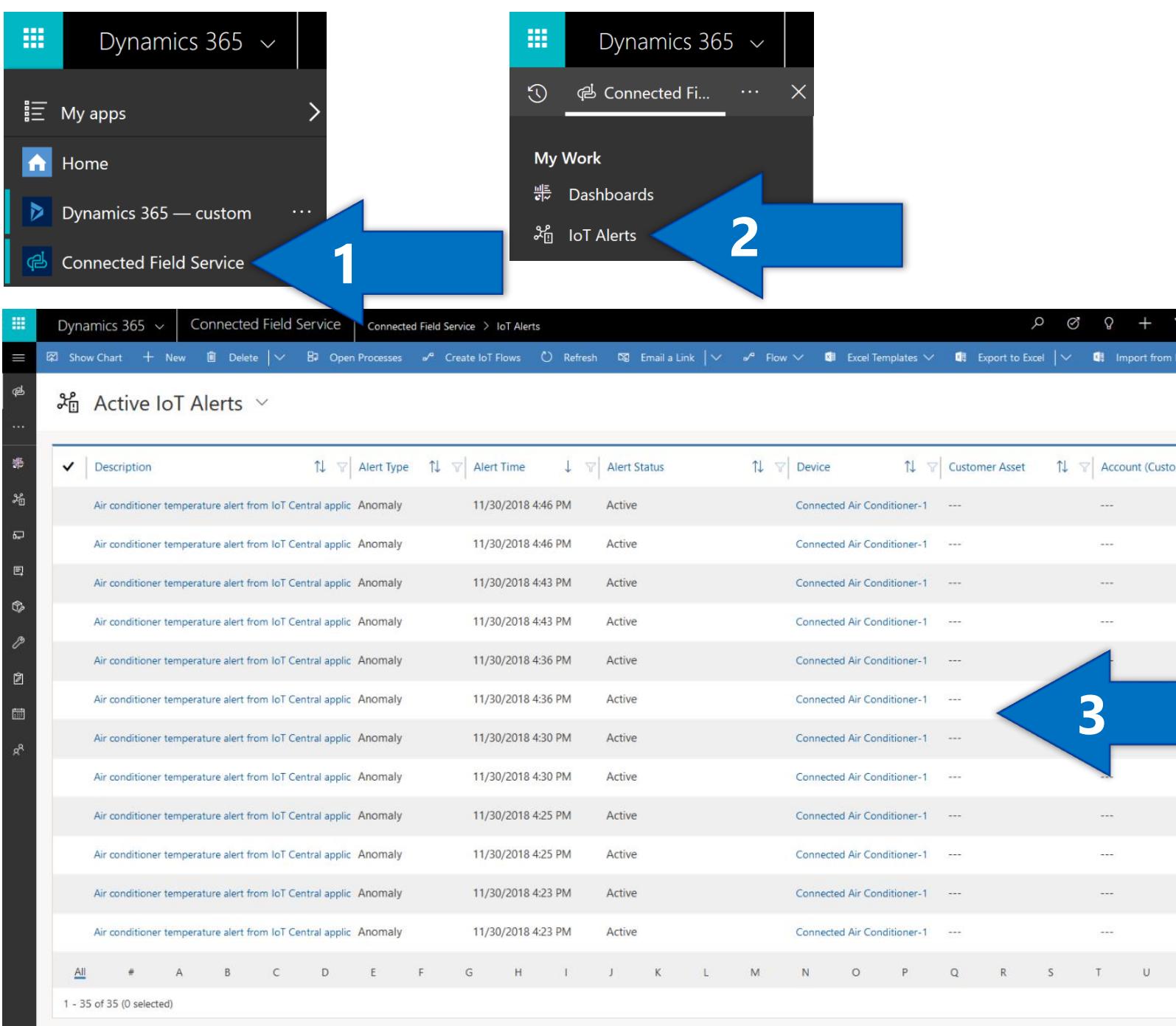
Dynamics 365

- 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!
- 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!



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 FI... 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 6F78050r-f99-4fa8-a77e-350Rff112Ra2

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.

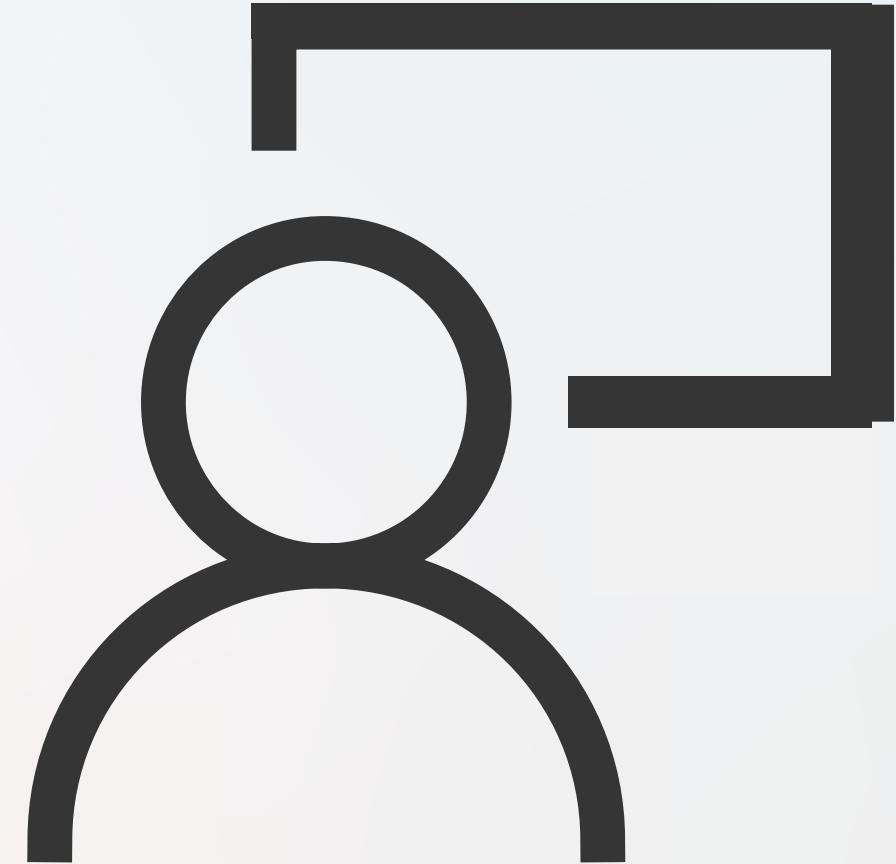
```
{  
    "id": "465387ad-2c9a-4378-a253-2dc85dda0ffb",  
    "timestamp": "2018-12-01T00:46:20.471Z",  
    "rule": {  
        "id": "6f78050c-f299-4fa8-a77e-3508ff1128e2",  
        "name": "Air conditioner temperature alert",  
        "enabled": true,  
        "deviceTemplate": {  
            "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"  
        }  
    }  
}
```

Install Dynamics 365 Sample Data & Work Orders Flows



Content Overview

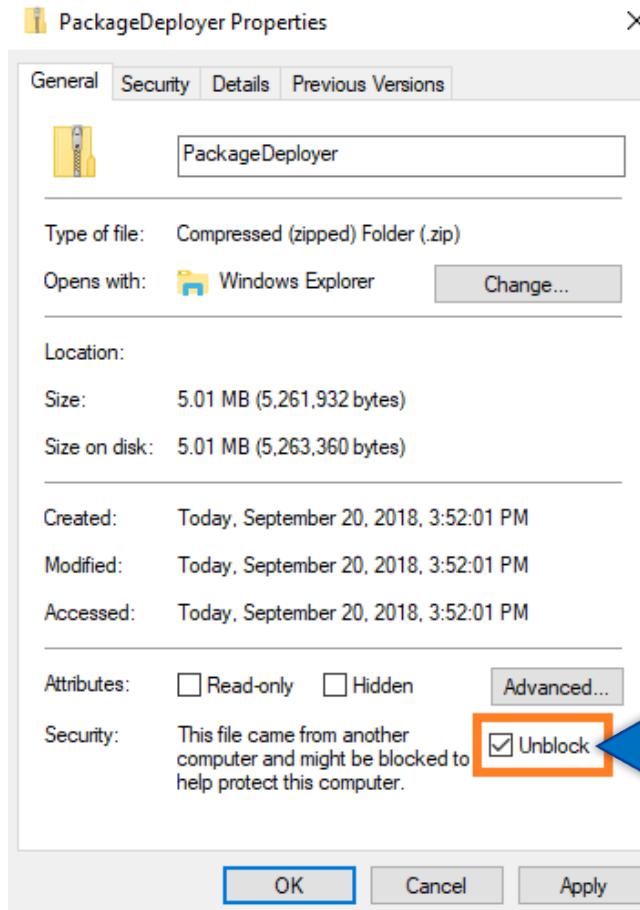
- 5 minutes
- You'll learn how to:
 - Install sample account, flow template and other data optimized to work with CFS



Dynamics 365 CFS Sample Data

The Connected Field Service sample data package, is designed for use with the Contoso template in Azure IoT Central. The sample data also includes an IoT Sample - Process alert workflow that showcases automated alert triaging.

1. [Download the PackageDeployer zip file.](#)
2. In Windows File Manager, go to the folder where you downloaded the zip file.
3. Right-click the zip file, and then select Properties.
4. On the Properties dialog, select Unblock. Select OK.
5. Right-click the zip file, select Extract All, and then select Extract.
6. Double-click packagedeployer.exe to run it and install the sample data.



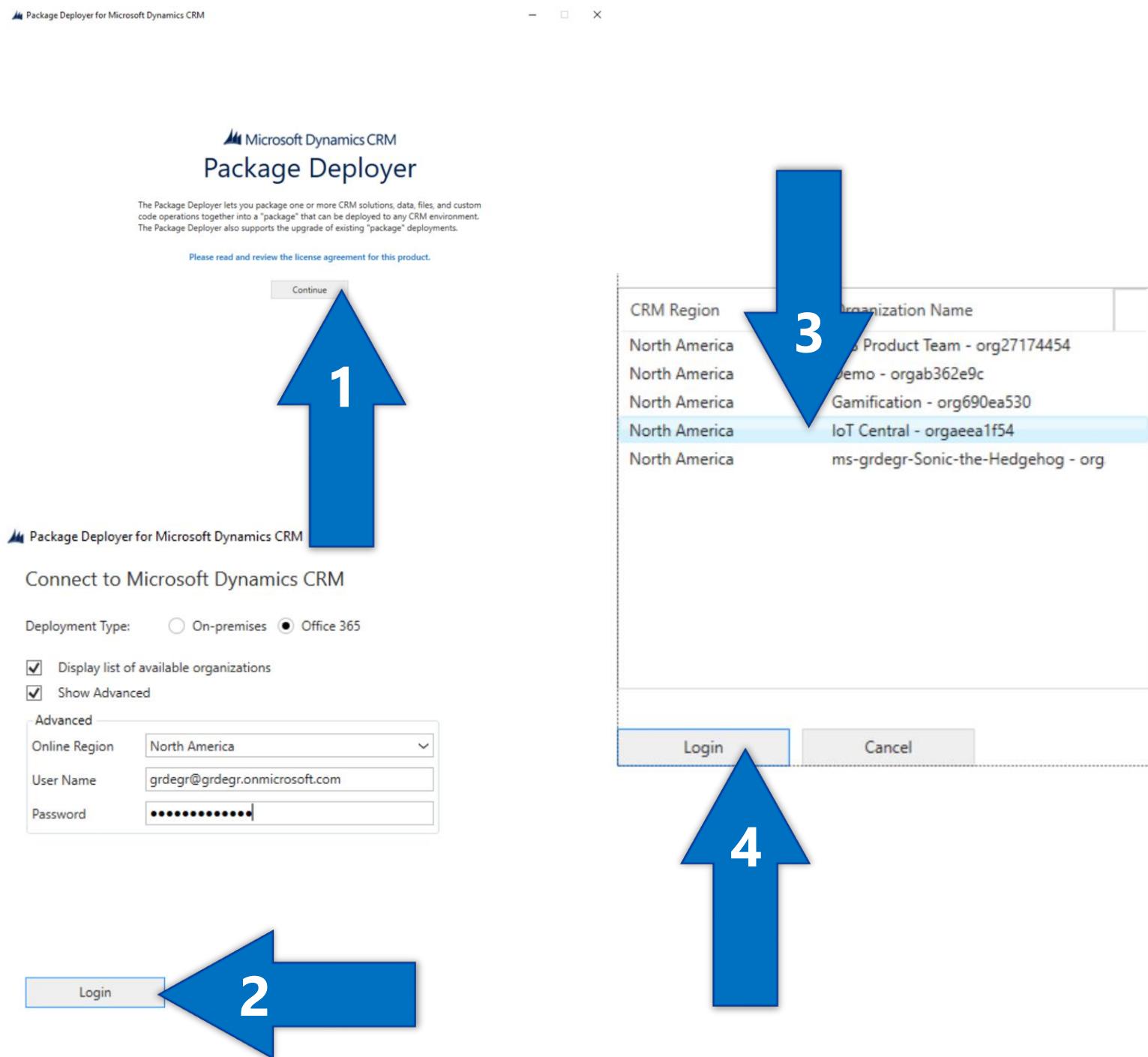
The screenshot shows a Windows File Explorer window displaying the contents of an extracted folder. The files listed are:

File	Last Modified	Type	Size
Microsoft.Xrm.Tooling.Ui.Styles.dll	9/24/2018 10:25 PM	Application extens...	148 KB
Newtonsoft.Json.dll	9/24/2018 10:25 PM	Application extens...	484 KB
Newtonsoft.Json	9/24/2018 10:25 PM	XML Document	468 KB
Other Redistributable	9/24/2018 10:25 PM	Text Document	1 KB
PackageDeployer	9/24/2018 10:25 PM	Application	230 KB
PackageDeployer.exe.config	9/24/2018 10:25 PM	XML Configuratio...	8 KB
System.IdentityModel.dll	9/24/2018 10:25 PM	Application extens...	526 KB
System.Windows.Interactivity.dll	9/24/2018 10:25 PM	Application extens...	55 KB
Third Party Notices for Dynamics 365 SDK	9/24/2018 10:25 PM	Microsoft Word D...	19 KB

A large blue arrow labeled '6' points to the 'PackageDeployer' executable file.

Dynamics 365 CFS Sample Data

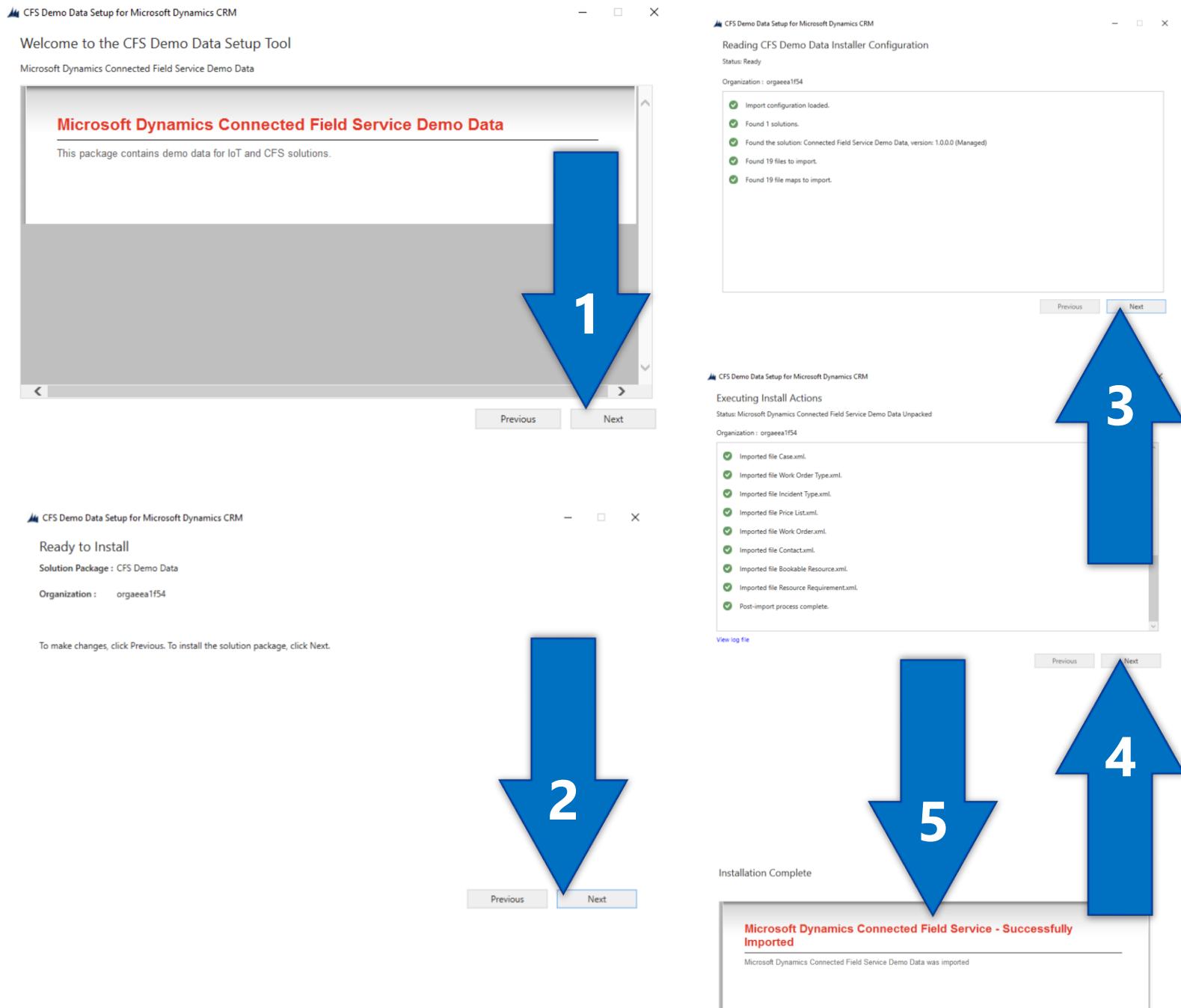
1. The Package Deployer welcome screen opens, select Continue
2. Enter your system administrator credentials to sign in to your Dynamics 365 tenant – before you enter your region and credentials for online environments like mine choose:
 - ✓ Office 365
 - ✓ Display a list of organizations,
 - ✓ Show AdvancedThen Login
3. Select your instance, then select Login. The Install takes about 5 minutes.



EXERCISE 3

Dynamics 365 CFS Sample Data

- When prompted, enter your system administrator credentials to sign in to your Dynamics 365 tenant. When you see the Azure IoT Central and Connected Field Service sample data deployment page, follow the on-screen instructions to complete the installation.



Send work order updates from Dynamics 365 to IoT Central



Content Overview

- 15 minutes
- You'll learn how to:
 - Create a Microsoft Flow template directly from Dynamics 365
 - Automatically capture Work Order Service Information data in IoT Central



Dynamics 365



IoT Devices are registered automatically in Dynamics once an Alert is captured.

1. From the CFS dashboard select the menu icon
2. Select Devices from Connected Devices
3. You'll now see a table of all of your Active IoT Devices. Like my device, it's okay if the Connection state is listed as Disconnected, this does not effect our scenario in any way
4. Select your device

The screenshot shows the Dynamics 365 interface. At the top, there is a navigation bar with icons for Dynamics 365, Connected Fi..., and a search bar. Below the navigation bar is a sidebar with sections for My Work (Dashboards, IoT Alerts), Connected Devices (Devices, Commands, Customer Assets), and a search bar. A large blue arrow labeled '1' points from the sidebar to the menu icon in the top-left corner of the main content area. Another blue arrow labeled '1' points from the sidebar to the 'Devices' section under 'Connected Devices'. A large blue arrow labeled '3' points down to the 'Active IoT Devices' list. A fourth blue arrow labeled '4' points up to the first row of the list, which shows a device named 'Connected Air Conditioner-1' with a status of 'Registered' and a connection state of 'Disconnected'. There is also a small star icon next to the device name.

Name	Regist...	Categ...	Account	Created On	Conne...	Last A...
Connected Air Conditioner-1	Registered	---	---	12/4/2018 2:43 ...	Disconnected	---

Dynamics 365 Customer Account

This will be important later in our Case creation. We need to make sure our IoT device is associated with our device.

1. Search for and select Active Transport Inc. one of our CFS sample data accounts, this verifies that the CFS sample data was successfully installed!
2. Save... all the way down there...

IOT DEVICE
Connected Air Conditioner-1

General Device Data History Commands Registration History Related

Name	* Connected Air Conditioner-1
Account	Active
Category	Active Transport Inc. 465-555-0156
Time Zone	+ New Change View
Device ID	jisyzh

Actions: + New Deactivate Delete Register Create Command Create IoT Flows Pull Device Data Refresh ...

Owner: Greg Degrugy

Connected Device Readings: Add a Power BI tile for the connected device.

General Device Data History Commands Registration History Related

Name	* Connected Air Conditioner-1
Account	Active Transport Inc.
Category	---
Time Zone	---
Device ID	jisyzh

Device Status: Registration Status Registered

Bottom Right: Save

Dynamics 365

1. Select the menu bars to expand our menu
2. Select IoT Alerts
3. Select the top IoT Alert

The image illustrates a navigation process through the Dynamics 365 interface:

- Step 1:** A large blue arrow points to the top-left menu bar icon (three horizontal lines).
- Step 2:** A blue arrow points to the "IoT Alerts" item in the expanded menu.
- Step 3:** A blue arrow points down to the first row of the "Active IoT Alerts" list.

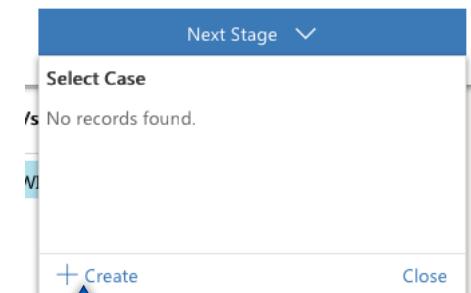
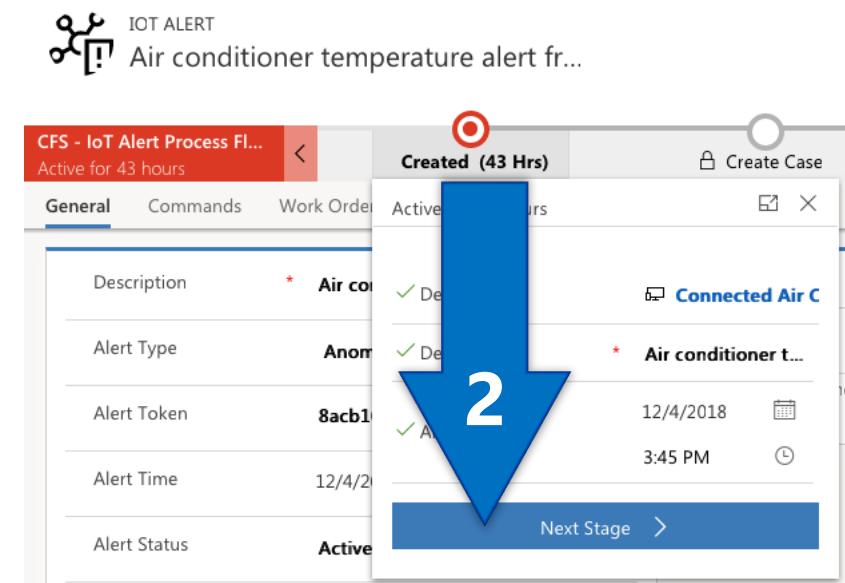
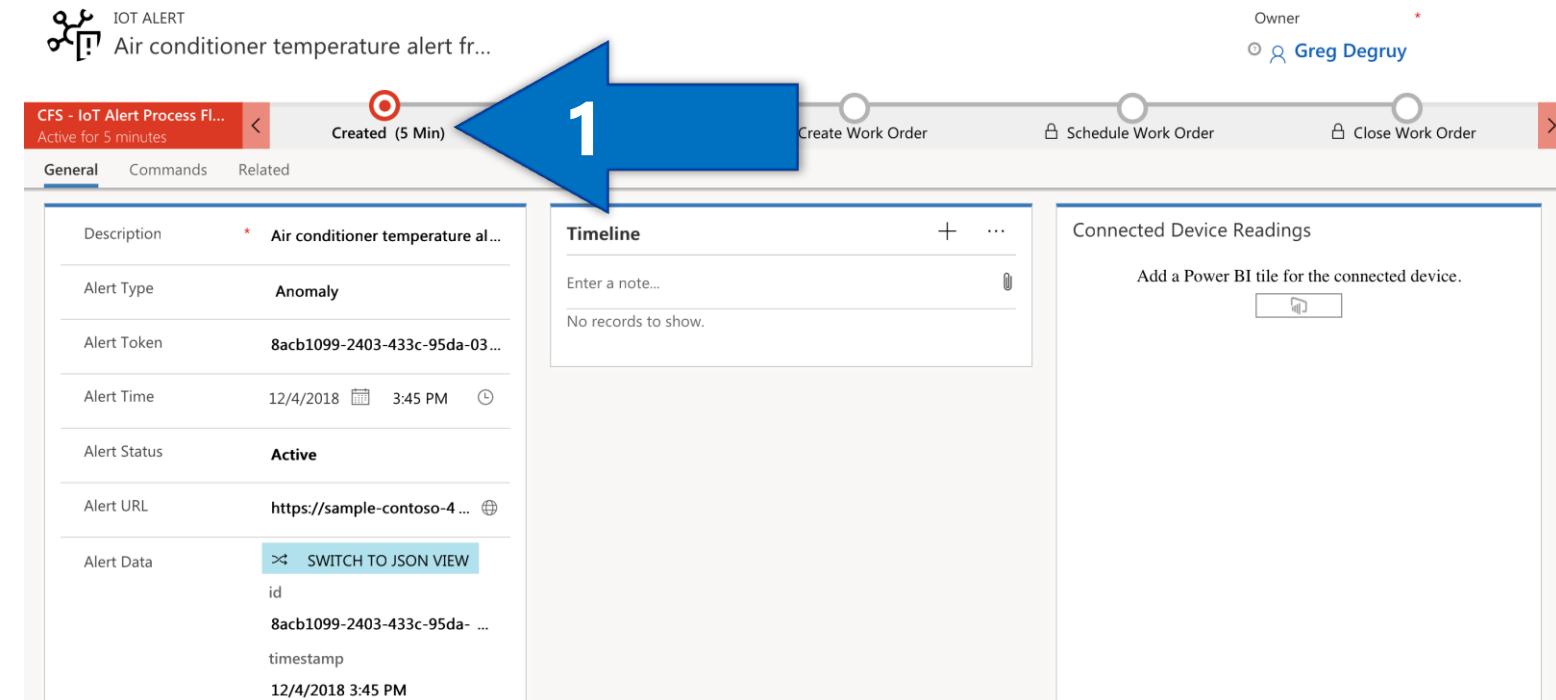
Active IoT Alerts

Description	Aler...	Alert Ti...	Alert Status	Device	Customer Asset
Air conditioner temperature alert from IoT Cen... Anomaly	12/4/2018 3:4...	Active	Connected Air Conditi...		
Air conditioner temperature alert from IoT Cen... Anomaly	12/4/2018 3:4...	Active	Connected Air Conditi...		
Air conditioner temperature alert from IoT Cen... Anomaly	12/4/2018 3:4...	Active	Connected Air Conditi...		

Dynamics 365 Work Orders

Our goal is to create a work order so we can take advantage of prebuilt flow templates to send this information to IoT Central.

1. When you click on our First Stage called *Created*
2. A stage menu opens that allows you to move to the next stage. select Next Stage
3. In the second menu that opens, we have an option to perform a case quick create. Select Create



Dynamics 365

Case Quick Create

All of the required Case information is populated for use, including the Customer this case is for the informative Title

1. Save

Quick Create: Case



Case Details

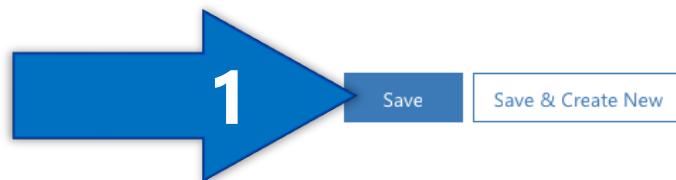
Customer	* Active Transport Inc.
Case Title	* Air conditioner temperature alert fro ...
Subject	---
Case Type	---
Contact	---
Assign to Others	* Greg Degruy
Parent Case	---
IoT Alert	Air conditioner temperature alert...

Other Details

Origin	---			
Product	---			
Entitlement	---			
First Response By	---		---	
Resolve By	---		---	

Description

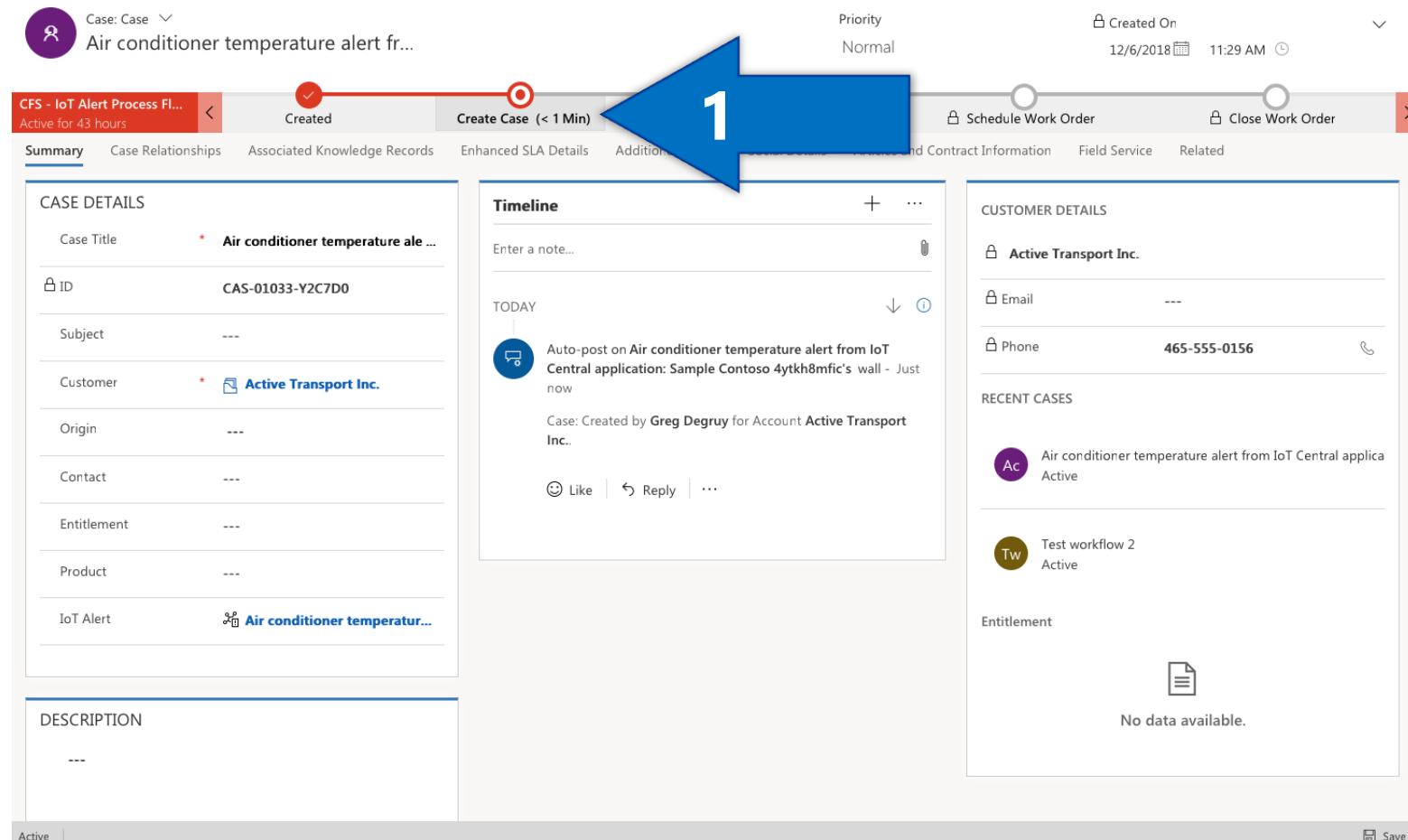
1



Dynamics 365

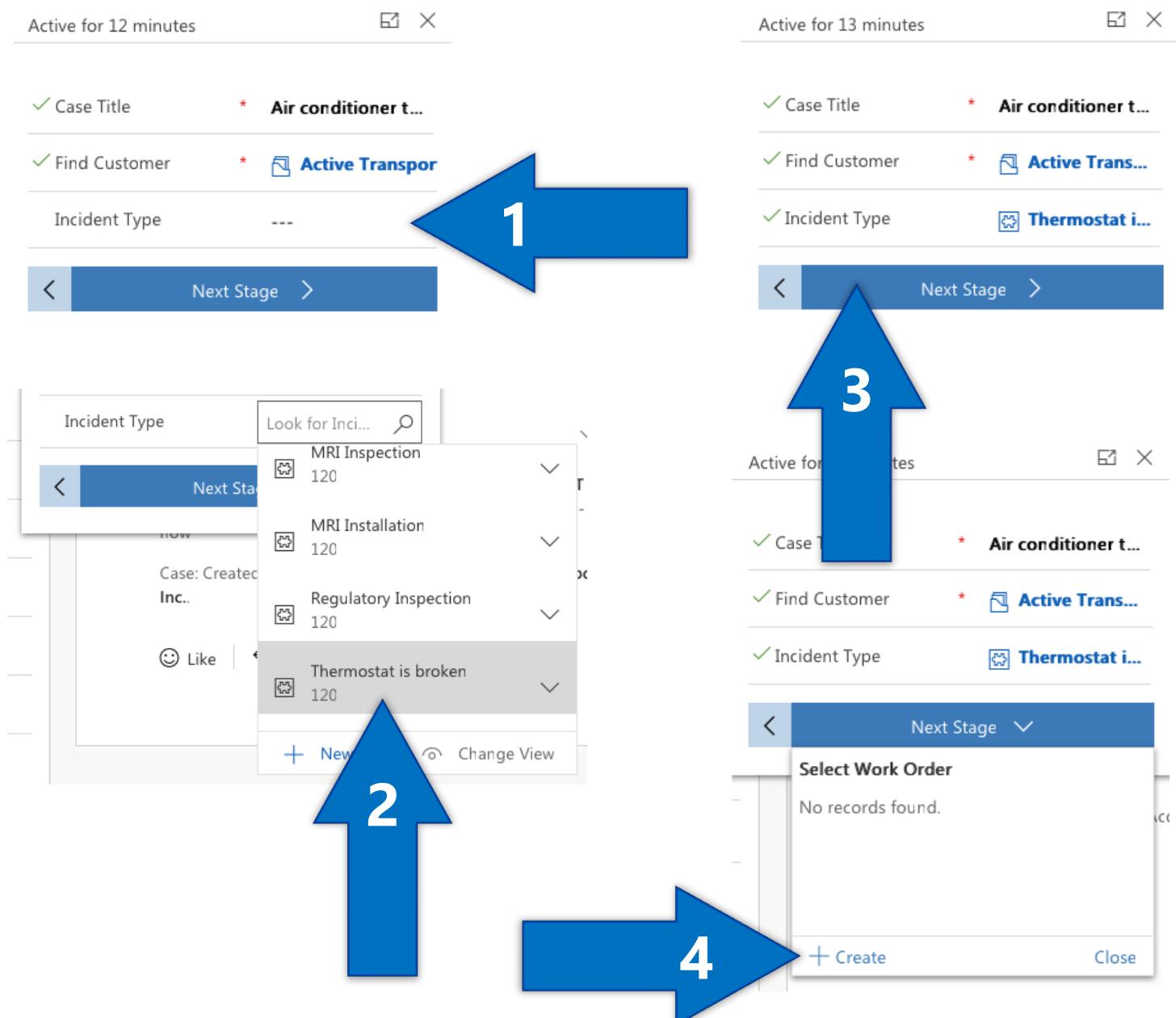
You'll now be navigated to your new Case's View

1. Select Create Case to open the next stage menu



Dynamics 365

1. Select the Incident Type field
2. Scroll down or search for the Thermostat is broken Incident type, select it. This incident type comes from Connected Field Service sample data.
3. Select Next Stage
4. Select Create



Dynamics 365

1. Select the Work Order Summary field. Add the following Work Order Summary information "Air conditioner temperature alert Work Order from IoT Central application: Sample Contoso 4ytkh8mfic". It's good to be as descriptive as possible and include the IoT Central Application name and IoT as I have. This will help better scale our ability to identify work orders as the amount grows
2. Select the IoT-predictive maintenance type
3. Scroll down the quick create form to find Price List. Select Standard US Dollar
4. Save

Quick Create: Work Order

CUSTOMER INFORMATION

Work Order Summary	---
Service Account *	<input type="button" value="Active Transport Inc."/>
Billing Account	<input type="button" value="Active Transport Inc."/>
Reported By Contact	---

INCIDENT INFORMATION

Primary Incident Type	<input type="button" value="Thermostat is broken"/>
Primary Incident Description	---
Primary Incident Customer Asset	---
Primary Incident Estimated Duration	---
Work Order Type *	<input type="button" value="Look for Work Order Type"/>
IoT Alert	<input type="button" value="IoT-break and fix"/>
Case	<input type="button" value="IoT-predictive maintenance"/>

DETAILS

Priority	<input type="button" value="Preventative Maintenance"/>
System Status *	<input type="button" value="Service Call"/>
Sub-Status *	<input type="button" value="New"/> <input type="button" value="Change View"/>

Case

Limited Warranty Price List	<input type="button" value="US Dollar"/>
Office 365 USA (sample)	<input type="button" value="US Dollar"/>
Standard	<input type="button" value="US Dollar"/>
Warranty Price List	<input type="button" value="US Dollar"/>

DETAILS

Priority	<input type="button" value="Standard"/>
System Status *	<input type="button" value="Warranty Price List"/>
Sub-Status *	<input type="button" value="New"/> <input type="button" value="Change View"/>

Service Territory

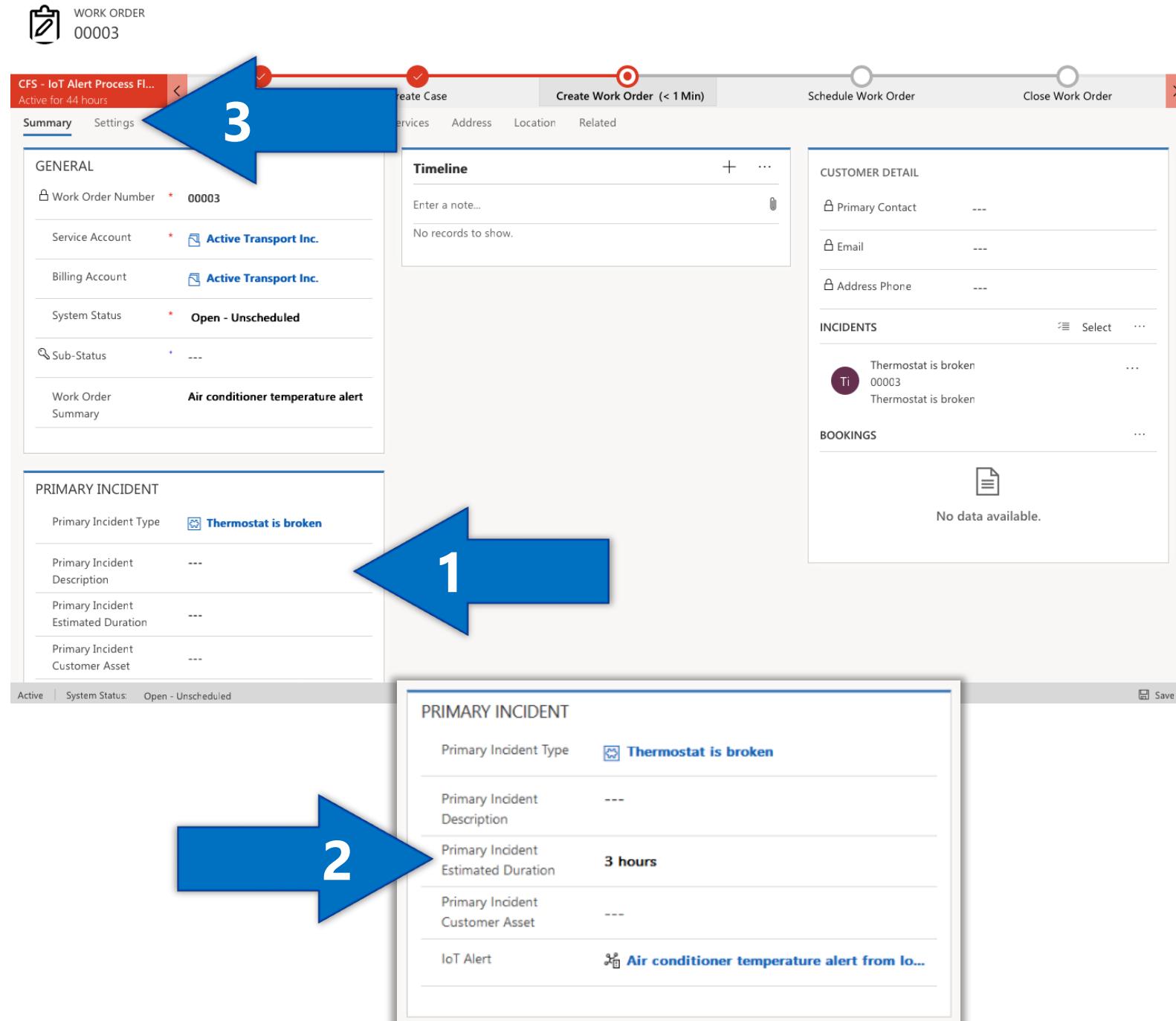
Price List *

Look for Price List	<input type="button" value=""/>
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Dynamics 365

You'll now be navigated to the page of your new Work Order

1. Scroll down the to Primary Incident section
2. Select 3 hours for Primary Incident Estimated Duration.
3. Select the Settings tab



Dynamics 365

1. Enter a 2pm starting time in Time Window Start. Dynamics enforces the format *h:mm tt* so your time must like 2:00 PM
2. Select the Summary tab



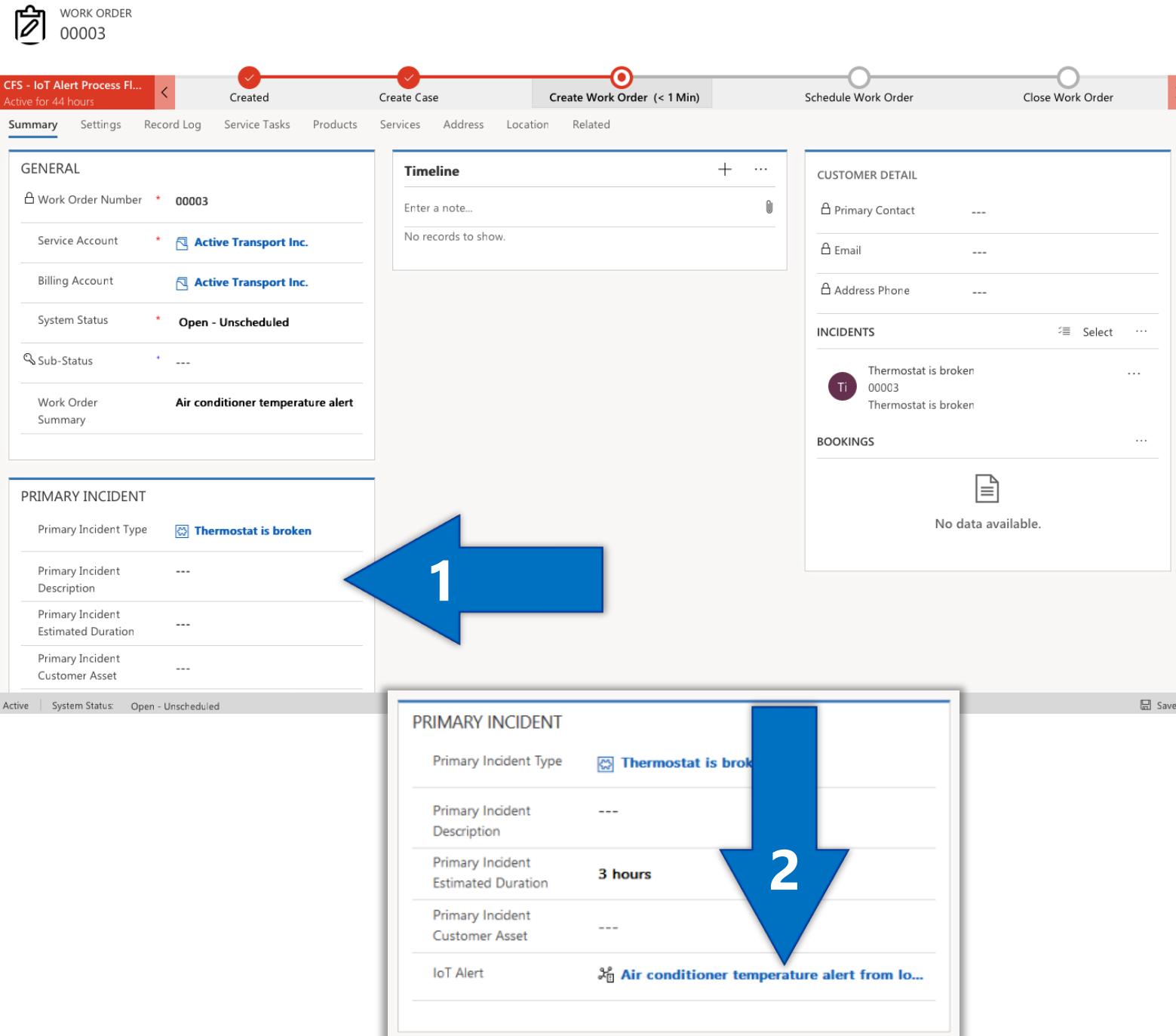
Time Window Start is The earliest time you are willing to start the work order

Time Window End is The latest time you are willing to end the work order

The screenshot shows the Dynamics 365 Work Order settings page. At the top, there are tabs: Summary, Settings (which is selected), Record Log, Service Tasks, Products, Services, Address, Location, and Related. Below the tabs, there are two main sections: 'GENERAL' and 'PREFERENCES'. In the 'GENERAL' section, there are fields for 'Customer Type' (with options 'IoT-predictive maintenance' and 'Standard'), 'Location' (set to 'Onsite'), 'Service Territory' (empty), 'Currency' (set to 'US Dollar'), 'Instructions' (empty), 'Reported By Contact' (empty), and 'Support Contact' (empty). In the 'PREFERENCES' section, there are fields for 'Time From Promised' (empty), 'Time To Promised' (empty), 'Date Window Start' (empty), 'Date Window End' (empty), 'Time Window Start' (set to '2:00 PM'), and 'Time Window End' (empty). A large blue arrow labeled '2' points upwards from the 'Time Window Start' field towards the 'Settings' tab. Another large blue arrow labeled '1' points left from the 'Time Window Start' field towards the 'Summary' tab. There is also a yellow star icon next to the 'Time Window Start' field.

Dynamics 365

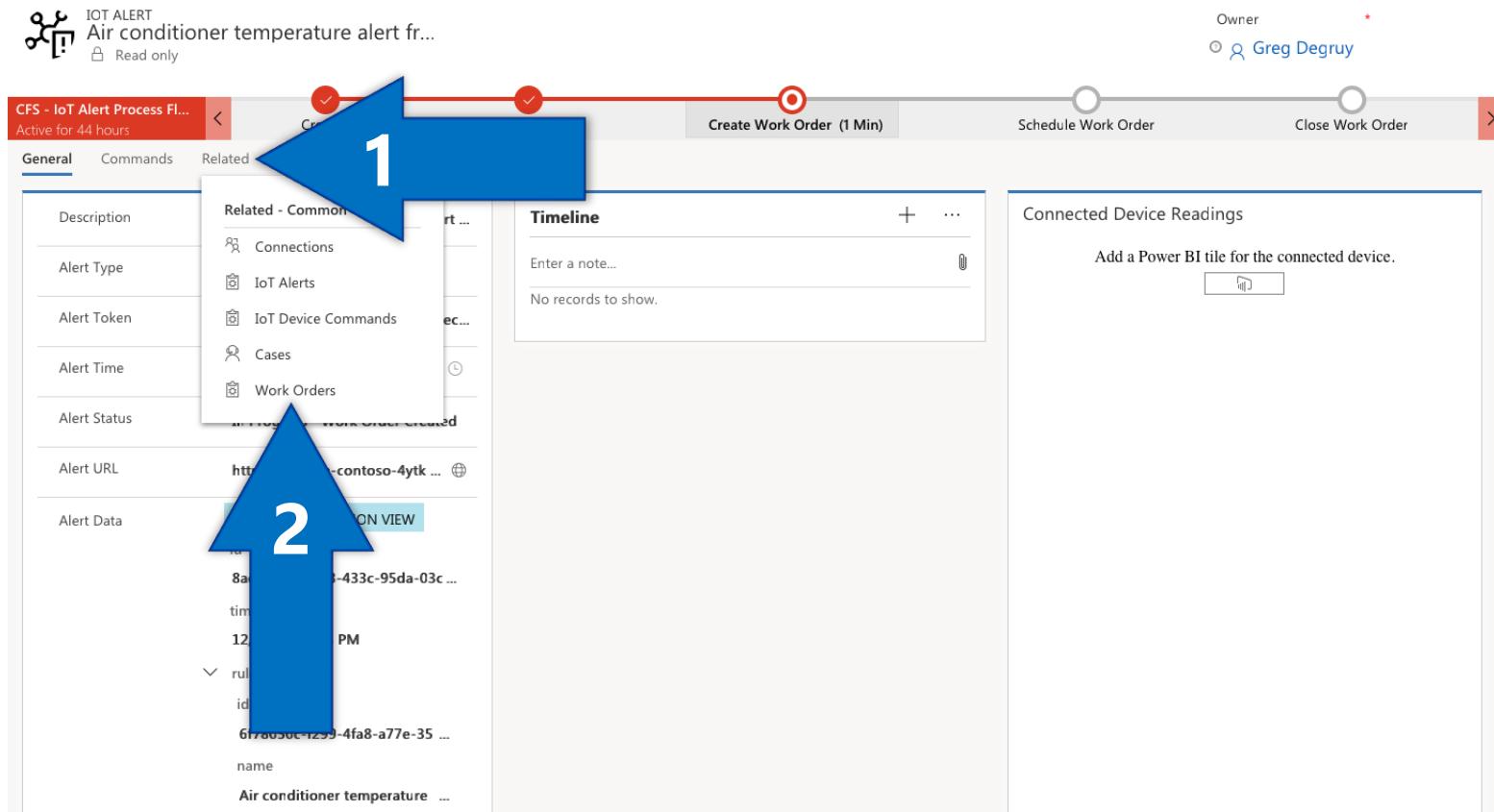
1. Scroll down the Primary Incident section
2. Select the link to the IoT Alert associated with our new Work order, in my case it's called Air conditioner temperature alert from lo...



Dynamics 365

Now you're back on the IoT Alert page

1. Select Related
2. Select Work Orders



Dynamics 365

1. Select Create IoT Flows
2. From the pop up window select



YOU CAN CREATE THESE IOT FLOWS FROM THE GENERAL TAB. JUST WANT TO EMPHASIZE THAT OUR WORK ORDER IS UNIQUELY TIED TO THIS PARTICULAR IOT ALERT

The screenshot shows the Dynamics 365 interface for the CFS - IoT Alert Process Flow. A large blue arrow labeled '2' points upwards from the flow to the 'Create Work Order (3 Min)' step. Below the flow, the 'Work Orders' tab is selected in the ribbon. A smaller blue arrow labeled '1' points left towards a modal window titled 'CFS Flow Templates'. The modal displays four available templates:

- Create CFS alerts from IoT Central (By Microsoft, Used 157 times)
- [Sample Contoso] - When a work order is created in CFS, update IoT Central (By Microsoft, Used 35 times)
- [Sample Contoso] - When a technician is booked in CFS, update IoT Central (By Microsoft, Used 21 times)
- [Sample Contoso] - When a device is created in CFS, update IoT Central (By Microsoft)

The background shows a 'Work Order Associated View' grid with columns: Work Order Number, Service Account, Work Order Type, Created On, Sub-Status, and System Status. The first row shows an entry for Work Order Number 00003, Service Account Active Transport Inc., Work Order Type IoT-predictive maintenance, Created On 12/6/2018 11:47 AM, Sub-Status ---, and System Status Open - Unscheduled.

Dynamics 365

You should now be navigated to the Microsoft Flow website. You can search for this flow anytime by looking up "Sample Contoso- When a work order is created in Connected Field Service, update IoT Central".

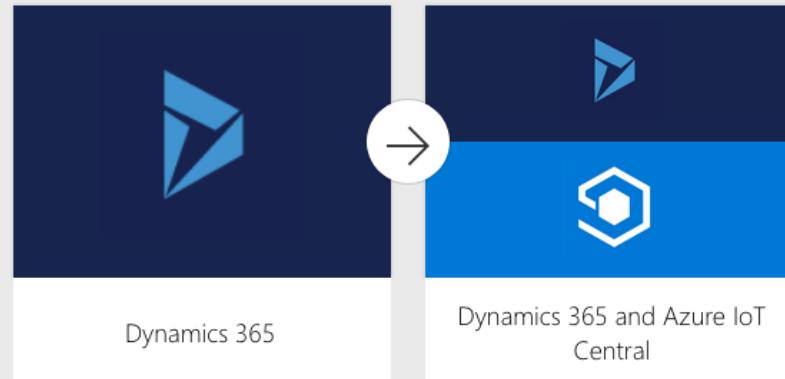
1. Select Continue



Be sure to sign in to IoT Central or Dynamics 365 if the accounts are not connected already.

When you select continue both accounts should have a green check mark.

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



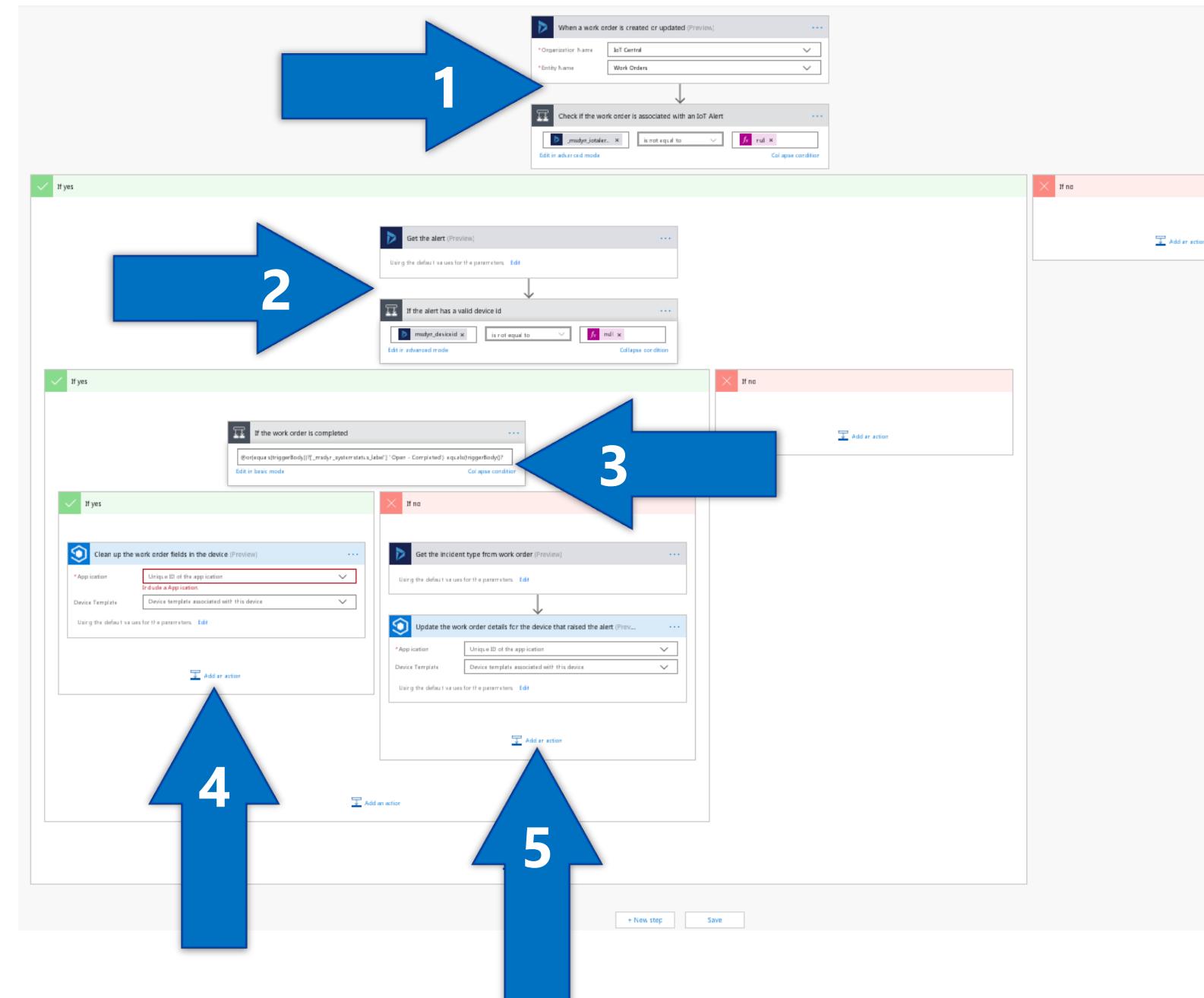
Keep IoT Central in sync with Connected Field Service for Dynamics 365 by updating a device in IoT Central with Work Order details from CFS. This is a sample flow template that works with Contoso template in IoT Central and CFS demo data in Dynamics 365.



Dynamics 365

The flow logic for this template is more complex than the previous one's we've used, but just keep these important steps in mind.

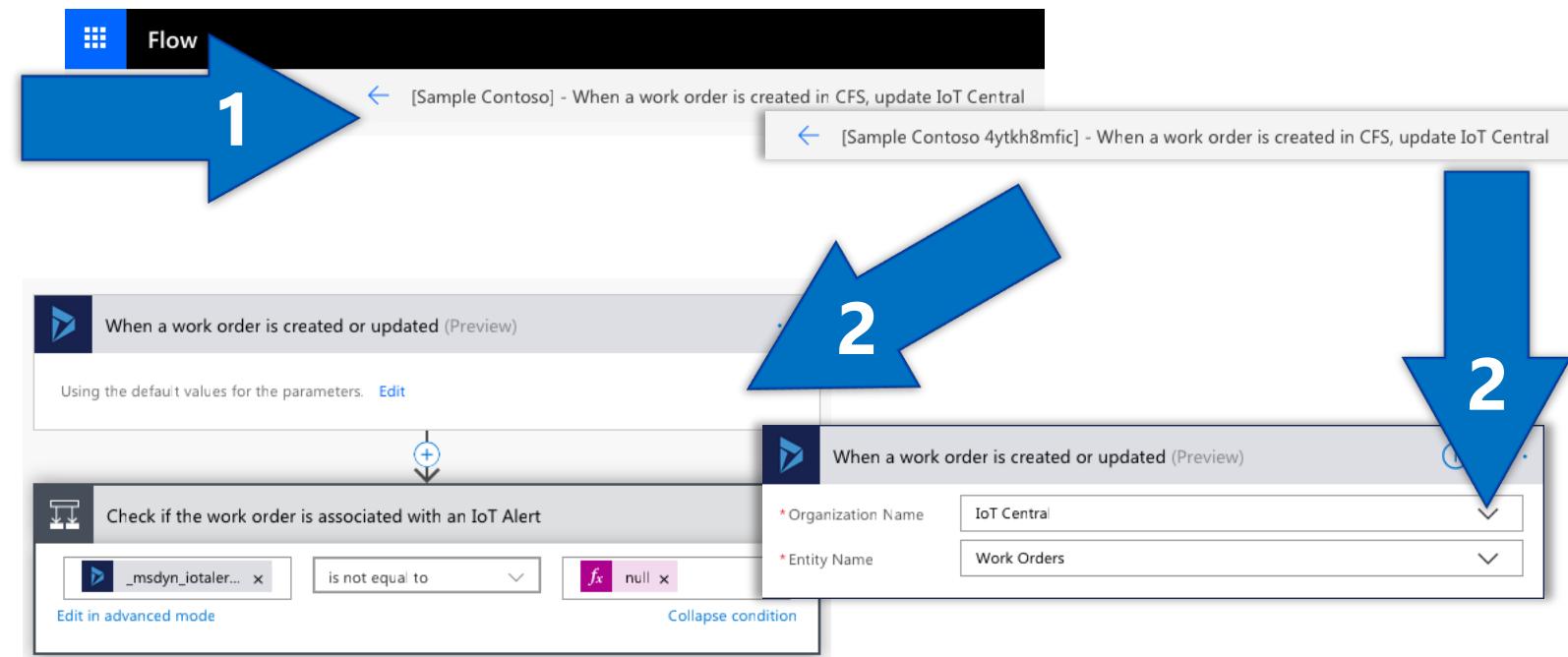
1. Watch for Work Order creation in our Organization
2. Move into the core flow logic if the Work Order is associated with our IoT Alert. Then get the alert data.
3. Move deeper into the core logic if the alert has a device id then check if the work order is completed.
4. If the work order is completed, clean up the devices details Service Information in IoT Central.
5. If the work order is not completed, update the Service Information in IoT Central.



Dynamics 365

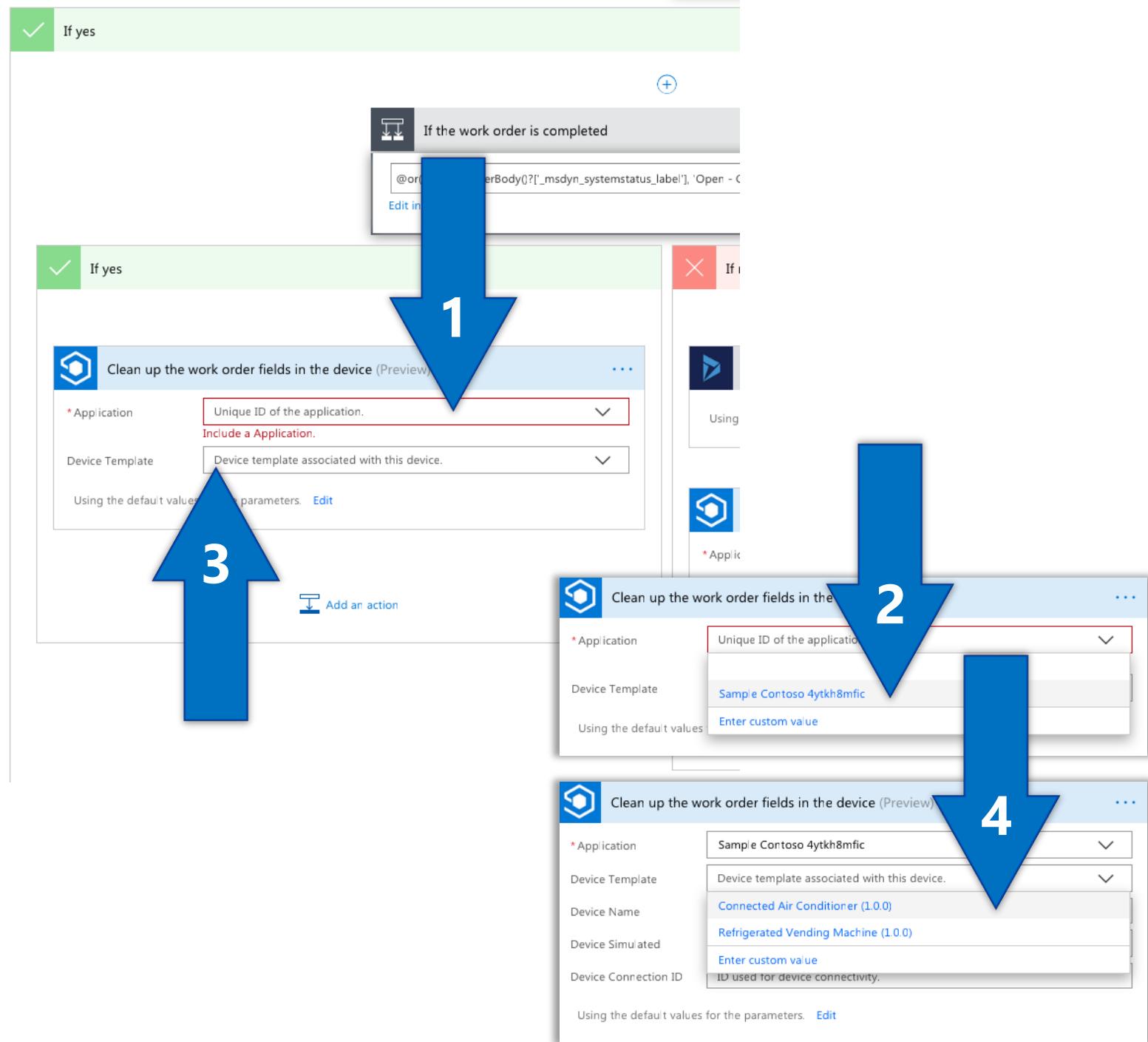
Flow

1. Give your Flow a more unique name, like one that includes the application id *[Sample Contoso 4ytkh8mfic]* - *When a work or updated order is created in CFS, update IoT Central*
2. The first part of our flow defined our organization to connect to and entity we'll be working with. Select it to verify the correct organization is listed if not select the drop down arrow to choose the correct one.



Dynamics 365

1. In the Inner most If yes condition, find the Clean up the work order fields in the device block. Select the Unique ID of the Application drop down
2. Select your Application name, in my case I choose *Sample Contoso 4ytkh8mfic*
3. Select the Device template associated with this device
4. Select your device template, in my case I choose *Connected Air Conditioner (1.0.0)*

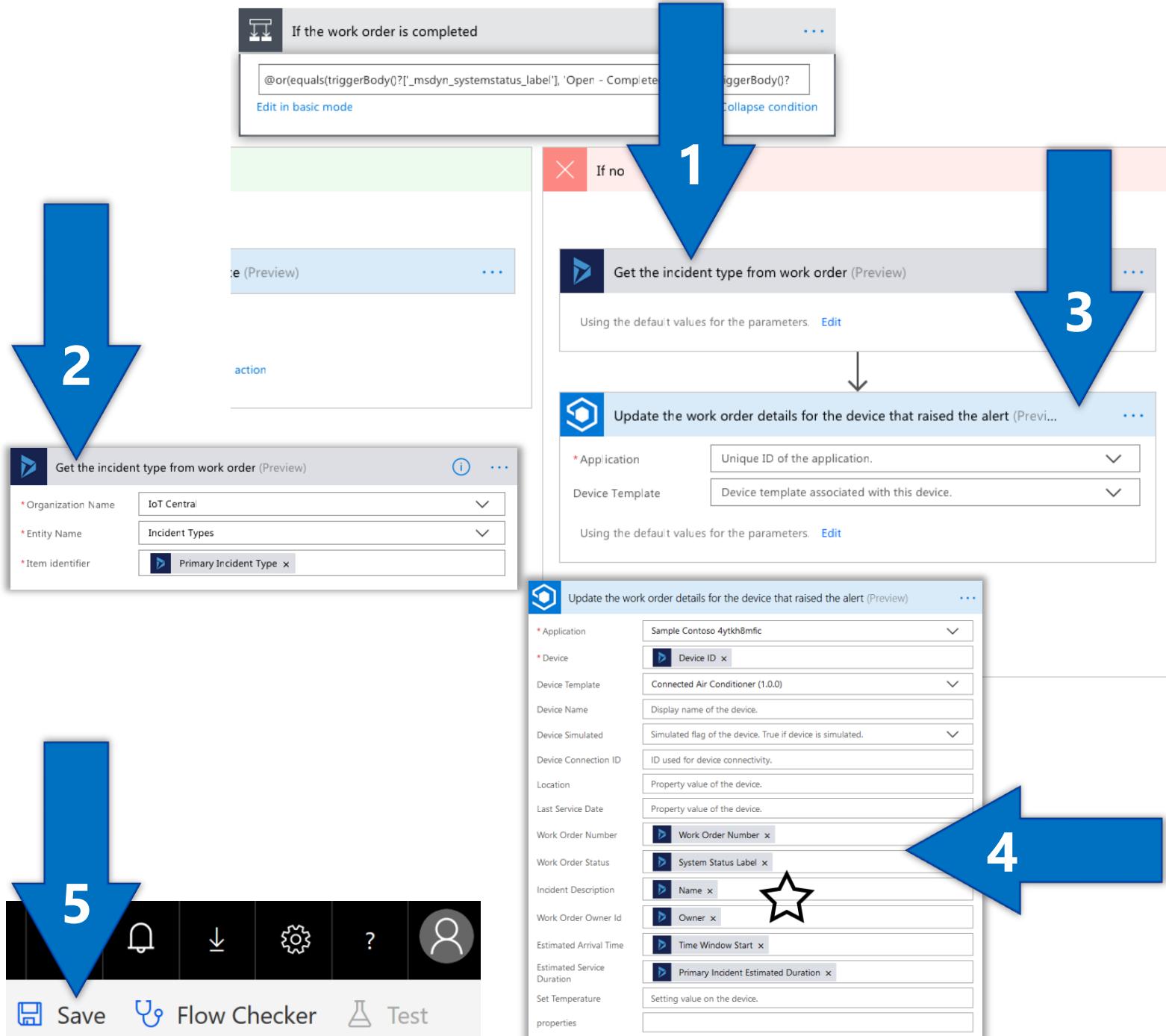


Dynamics 365

- In the innermost If no condition, select the Get incident type from work order block
- Select your Dynamics 365 organization and make sure the Entity Name Incident Types is and the Item identifier is Primary Incident Type
- Select the Get incident type from work order block
- Make sure Work order Number, Work order Status, and Incident Description have the pre filled information in place as seen in the screenshot. Along with the additional information we've added for Estimated Arrival Time, Estimated Service Duration and Owner Id since those aren't prefilled – I'll show you how to do this in the upcoming slides if you don't know how to, we've got your back 😊.
- Save



The next two slide shows you how to add the extra dynamic content and format the dynamics content properly



Dynamics 365



If while you're searching you don't see the content. Just select See more and it should appear.

1. First if you select an empty field

2. A Dynamics content window opens. All you need to do is search for the content you want to add, in this case Owner. [The content syntax is very specific, so you'll want to select Owner and not Owner Type.](#)

3. We also need to account for the Estimated Service Duration format, which gives us minutes, but IoT Central wants the format to be in hours.
 - a) Remove the Primary Incident Estimated Duration content for now so that your flow blocks looks like this
 - b) Then select the empty field

Last Service Date

Work Order Number

Work Order Status

Incident Description

Work Order Owner Id

Estimated Arrival Time

Estimated Service Duration

Set Temperature

properties

Add dynamic content +

Application

*Device

Device Template

Device Name

Device Simulated

Device Connection ID

Location

Last Service Date

Work Order Number

Work Order Status

Incident Description

Work Order Owner Id

Estimated Arrival Time

Estimated Service Duration

Set Temperature

properties

Add dynamic content from the apps and connectors Hide

Dynamic content Expression

owner

Get the incident type from work order

Owner Owner Id

Owner Type Owner Id

Get the alert

Owner Owner Id

Owner Type Owner Id

Dynamic content Expression

primary

When a work order is created or updated

We can't find any outputs to match this input format. Select [See more](#) to see all outputs from previous actions.

See more

Dynamic content Expression

primary

When a work order is created or updated

Primary Incident Estimated Duration Shows the time estimated to resolve this incident.

See less



Dynamics 365

- Once you select the empty Estimated Service Duration field
- The Dynamic content window will open, but this time we want to select the Expression tab
- Paste this code into the *f(x)* field
div(int(triggerBody()?['msdyn_pri maryincidentestimatedduration']), 60) then select OK

1

2

3

Dynamic content Expression

fx

OK

Add dynamic content

Math functions

- fx* min(collection or item1, item2?, ...)
- fx* max(collection or item1, item2?, ...)
- fx* rand(minValue, maxValue)
- fx* add(summand_1, summand_2)
- fx* sub(minuend, subtrahend)
- fx* mul(multiplicand_1, multiplicand_2)
- fx* div(dividend, divisor)
- fx* mod(dividend, divisor)

Dynamics 365

1. You're completed flow block for *Update the work order details for the device that raised the alert* should now look like this. All done!
2. Save

Update the work order details for the device that raised the alert (Preview) i ...

* Application: Sample Contoso 4ytkh8mfic

* Device: Device ID x

Device Template: Connected Air Conditioner (1.0.0)

Device Name: Display name of the device.

Device Simulated: Simulated flag of the device. True if device is simulated.

Device Connection ID: ID used for device connectivity.

Location: Property value of the device.

Last Service Date: Property value of the device.

Work Order Number: Work Order Number x

Work Order Status: System Status Label x

Incident Description: Name x

Work Order Owner Id: Owner x

Estimated Arrival Time: Time Window Start x

Estimated Service Duration: fx div(...) x

Add dynamic content +

Set Temperature: Setting value on the device.

Properties: ...

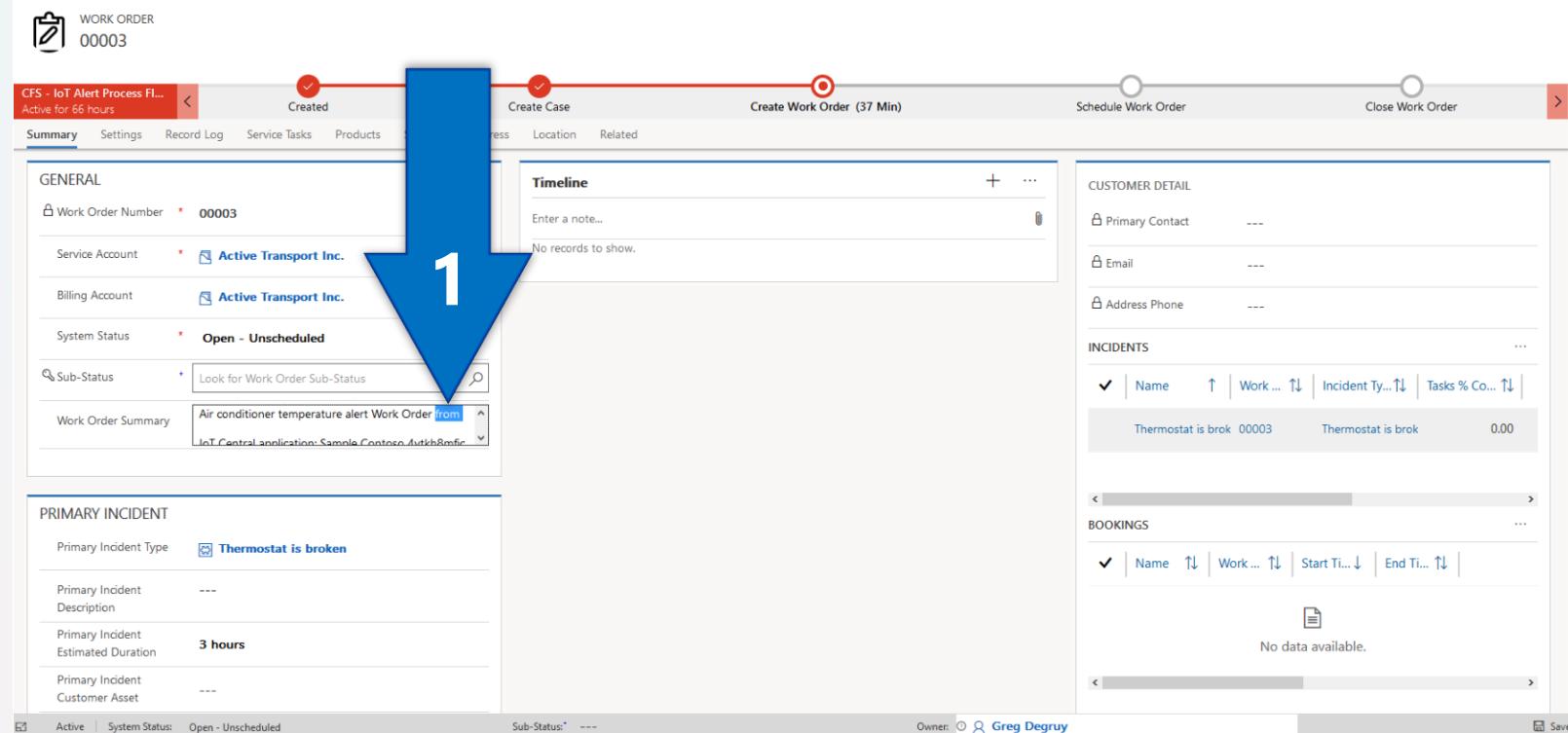
1 2

Save Flow Checker Test

Dynamics 365

Navigate back to Dynamics 365 and head over to the Work Order we created associated with our IoT Alert.

1. As a quick test for our flow, select the Work Order Summary and edit it. In my case I just removed the work from in the summary.
2. Save



Dynamics 365

Navigate back to your device dashboard in IoT Central.

After some time, possibly under a minute. If you visit IoT Central you'll now see your Dynamics 365 data sent over from flow that we connected to the Dashboard. This data will be sent over every time a Work Order is saved or updated for this device 😊.

I hope this guide was helpful to you or your team. We appreciate you considering the Azure and Dynamics products in your solution, thank you!



Sample Contoso 4ytkh8mfic

Template: Connected Air Conditioner (1.0.0)

Connected Air Conditioner-1

Measurements Settings Properties Commands Rules Dashboard

Select Edit Template to add or edit information tiles about your device.

Temperature

Events

Event	Time
Fan Motor Error	12/7/2018, 10:24:41 AM
Fan Motor Error	12/7/2018, 10:29:01 AM
Fan Motor Error	12/7/2018, 10:32:06 AM
Fan Motor Error	12/7/2018, 10:36:47 AM
Fan Motor Error	12/7/2018, 10:45:56 AM
Fan Motor Error	12/7/2018, 10:50:10 AM

Service Information

Estimated Arrival Time 12/7/2018, 2:00:00 PM	Estimated Service Duration 3	Incident Description Thermostat is broken
Work Order Owner Id b1f93fef-e402-46a1-8d27-b4f5...	Work Order Number 00003	Work Order Status Open - Unscheduled

Completed Basic CFS IoT Central Deployment



In the coming labs we'll begin to walk through how to work with real IoT Devices with Connected Field Service



IoT Central Service



To Save Cost Stop the following services if you do not plan to continue the other labs.



Thank you for your time in learning more about CFS and completing this tutorial.