

Install Connected Field Service Add-on

Exercise 3



CFS Add-on

On your computer, browse to AppSource
<https://appsource.microsoft.com/en-us/product/dynamics-365/mscrm.58666c7d-65ee-452d-8708-70b4d471d4c0>

`1` Install the "Connected Field Service Add-On" by clicking `GET IN NOW`.
 Make sure to complete the form with valid company information and your User ID / email created in Exercise 1.

`2` Click `Continue`

The screenshot shows the AppSource page for the 'Connected Field Service Add-on' by Microsoft Dynamics 365. A blue arrow labeled '1' points to the 'GET IT NOW' button. An overlay window titled 'One more thing ...' is displayed, showing a registration form. A blue arrow labeled '2' points to the 'Continue' button at the bottom right of the overlay.

AppSource Apps Consulting services List on AppSource Blog

Apps > Connected Field Service Add-on

Connected Field Service Add-on
 Microsoft Dynamics 365

Overview Reviews

GET IT NOW

★★★★★ (5)

Pricing
 Free

Products
 Dynamics 365 for Sales, Ente...
 Dynamics 365 for Customer ...
 Dynamics 365 for Field Servi...
 Dynamics 365 for Project Ser...

Publisher
 Microsoft Dynamics 365

Acquire Using
 Work or school account

Version
 1.2

Updated
 10/5/2017

Categories
 Customer service
 Operations + supply chain

Support
 Support
 Help

Highlights

- **Basic:** When an issue is reported, a technician is dispatched. This proactive approach reduces downtime and makes repairs faster.
- **Advanced:** When an issue is reported, a technician is dispatched. If the technician is scheduled, the issue is resolved because fewer technicians are needed.
- **Expert:** Here, Field Service technicians can troubleshoot and resolve issues in all available resources, productivity because they are exhausted.

Learn more
 Connected Field Service Data Sheet

One more thing ...

Connected Field Service Add-on
 By Microsoft Dynamics 365

This app requires some basic profile information. We have pulled your Microsoft Account data to help you get started. AppSource will save your information for next time.

Name * Gregory Degruy

Work email * [Redacted]

Job title Senior Super Sonic Engineer

Company [Redacted]

Country / region United States of America

Phone number * [Redacted]

☒ I give Microsoft permission to use or share my [account information](#) so that the provider or Microsoft can contact me regarding this product and related products. I agree to the provider's [terms of use](#) and [privacy policy](#) and understand that the rights to use this product do not come from Microsoft, unless Microsoft is the provider. Use of AppSource is governed by separate [terms](#) and [privacy](#).

You're signed in as Gregory Degruy (gregdeg@gregdegruy.onmicrosoft.com).

Continue

App permissions

You should now see a prompt notifying you that you are being taken to Dynamics 365 to complete the process and to choose a consent option for app permissions.



gregdegury@gregdegury.onmicrosoft.co...



Connected Field Service Deployment

Publisher's website: microsoftcrmservices.onmicrosoft.com

This app would like to:

- ✓ Access Azure Service Management as you (preview)
- ✓ Access CRM Online as you
- ✓ Sign you in and read your profile

You should only accept if you trust the publisher (Microsoft CRM Services) and if you selected this app from a store or website you trust. Ask your admin if you're not sure.

Cancel

Accept

Dynamics org

The first step in configuring your Connected Field Service environment is choosing the Dynamics 365 organization you want to install the Connected Field Service Add-On too.

- '1' Your Dynamics 365 organization is auto selected for you
- '2' Check off the two boxes if you agree to the terms of use
- '3' Click the 'Agree' button

The screenshot shows the Microsoft Dynamics 365 Connected Field Service Add-on configuration page. It includes the Microsoft logo, the product name, a description, and a list of features. On the right, there is a section for adding the application to Dynamics 365, which includes a dropdown menu for selecting the organization and two checkboxes for agreeing to the terms of use. Three blue arrows with numbers 1, 2, and 3 indicate the steps: 1 points to the organization dropdown, 2 points to the checkboxes, and 3 points to the 'Agree' button.

Microsoft

Microsoft Dynamics 365

Connected Field Service Add-on

Detect, troubleshoot, and resolve issues remotely. Dispatch a technician

- **Basic:** When an issue is detected, automatically create a work order and dispatch a technician. This proactive approach improves customer satisfaction by decreasing overall downtime and making repairs before customers are aware.
- **Advanced:** When an issue is detected, Field Service asks the device sends a single, self-healing command. If that doesn't work, then a work order is automatically created, and a technician is scheduled. Experience improved customer satisfaction and productivity because fewer technicians are dispatched when devices can self-heal.
- **Expert:** Here, Field Service initiates a multi-step workflow when an issue is detected.

Publisher: Microsoft Dynamics 365

Add the application to Dynamics 365

Select the Dynamics 365 organization you want to add this application to.

Connect to Dynamics 365

Organization to add the application to: Four (gregdegruy)

☒ Agree to Microsoft's [Legal Terms](#) and [Privacy Statement](#)

☒ Agree to [Privacy Statement](#) and [Legal Terms](#) for importing solutions into Dynamics 365

Agree

Service terms

Read over the Terms of service. Click `Next` when you're ready.

Terms of service

These license terms are an agreement between you and Microsoft Corporation (or one of its affiliates). They apply to the software named above and any updates are accompanied by new or additional terms, in which case those different terms apply prospectively and do not alter your or Microsoft's rights. BY USING THE SOFTWARE, YOU ACCEPT THESE TERMS.

1. INSTALLATION AND USE RIGHTS.

a) General. You may install and use any number of copies of the software.
b) Third Party Software. The software may include third party applications that are licensed to you under this agreement or under their own terms. Licenses for such applications may be accessible in an accompanying notices file. Even if such applications are governed by other agreements, the disclaimer, limitations on, and exclusions of warranty for such applications may be accessible in an accompanying notices file.

2. DATA COLLECTION. The software may collect information about you and your use of the software and send that to Microsoft. Microsoft may use this information for product development, marketing, and other purposes. Your opt-out rights, if any, are described in the product documentation. Some features in the software may enable collection of data from users of your applications. To control data collection in your applications, you must comply with applicable law, including getting any required user consent, and maintain a prominent privacy policy. You can learn more about Microsoft's data collection and use in the product documentation and the Microsoft Privacy Statement at <https://go.microsoft.com/fwlink/?LinkId=521839>.

3. DISTRIBUTABLE CODE. The software may contain code you are permitted to distribute (i.e. make available for third parties) in applications you develop.

a) Distribution Rights. The code and test files described below are distributable if included with the software.

i. Sample Code. You may copy, modify, and distribute the source and object code form of code marked as "sample".

ii. Third Party Distribution. You may permit distributors of your applications to copy and distribute any of this distributable code you elect to distribute.

b) Distribution Requirements. For any code you distribute, you must:

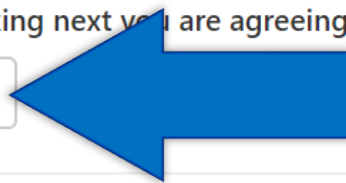
i. add significant primary functionality to it in your applications;

ii. require distributors and external end users to agree to terms that protect it and Microsoft at least as much as this agreement; and

iii. indemnify, defend, and hold harmless Microsoft from any claims, including attorneys' fees, related to the distribution or use of your applications, or the software.

By clicking next you are agreeing to the above terms of service agreement.

Next

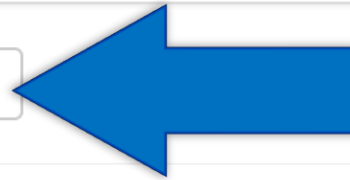


Privacy statement

Read over the Privacy statement. Click `Next` when you're ready.

Privacy Statement

By enabling this command, you consent to share your data with external systems. Data imported from external systems is subject to the privacy statement that can be accessed [here](#). Please consult the feature technical documentation for [more information](#).

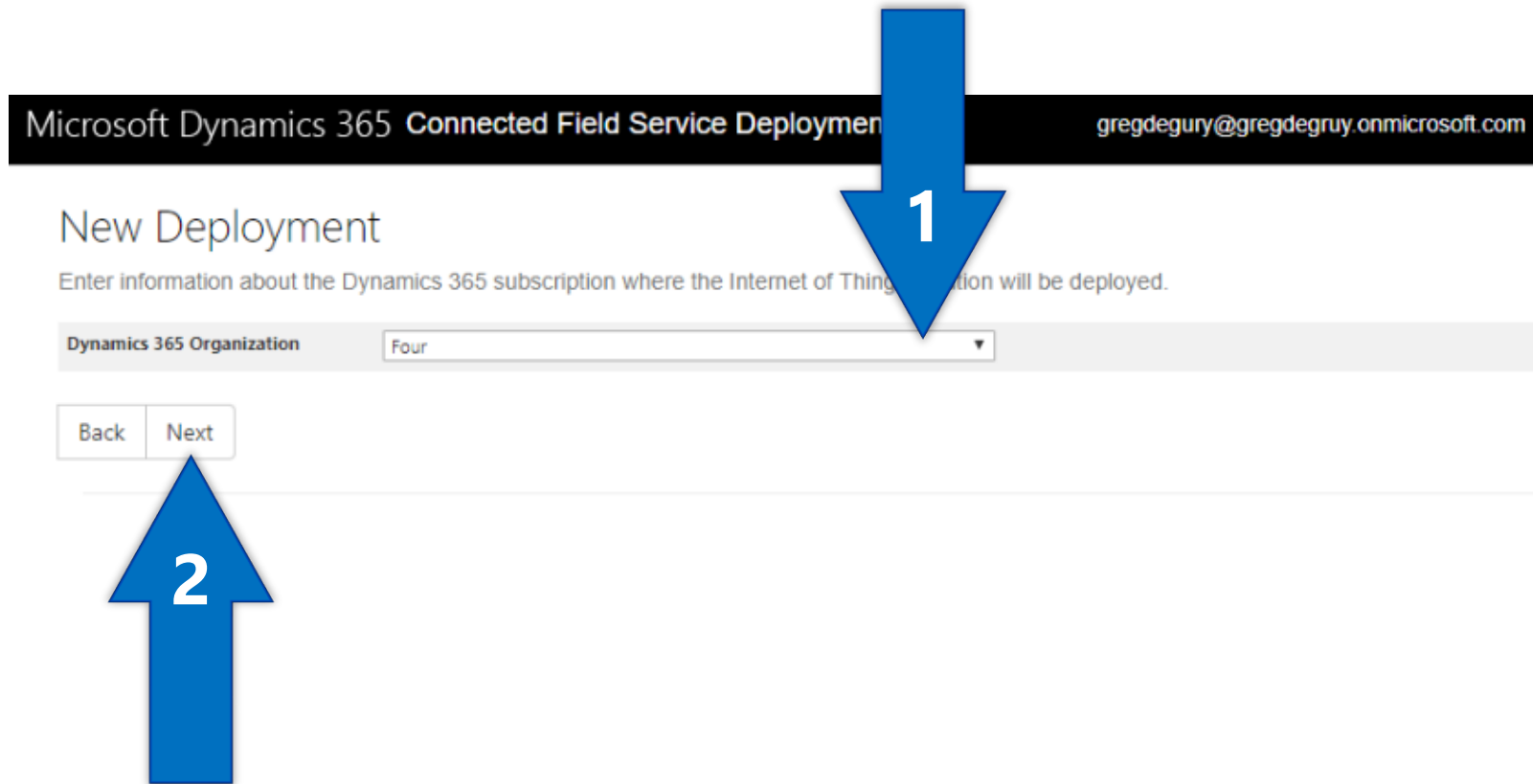
[Back](#)[Next](#)

Deployment org

Verify the Dynamics 365 subscription where the Internet of Things solution will be deployed is selected properly.

- '1' Your Dynamics 365 organization is auto selected for you and there should only be since we created only one instance in Exercise 1

- '2' Click the 'Next' button



Microsoft Dynamics 365 Connected Field Service Deployment gregdegury@gregdegury.onmicrosoft.com

New Deployment

Enter information about the Dynamics 365 subscription where the Internet of Things solution will be deployed.

Dynamics 365 Organization Four

Back Next

Azure service information

Let's setup the Azure IoT services for your Dynamics organization.

- `1` Your Azure Trial is auto selected for you and should say "Free Trial", this came from the work we did in Exercise 2.
- `2` Choose `Create new` for our Resources
- `3` Check Enable Power BI Integration and add data storage information. In my case I choose "gregdegruy" as my SQL Server Admin Login.
- `4` Choose `Create new` for our Resource Group Selection
- `5` Give your Resource Group a name and deployment region, in my case I called it "rg-connected-field-service" and choose "West US".
- `6` Click Deploy

New Deployment

Provide provisioning details for the Azure assets required by the IoT connector for Dynamics 365.

Use a different account

Azure Subscription: Free Trial

Resources: ☒ Create new ☐ Existing Azure resources

Enable Power BI Integration : ☒

SQL Server Admin Login: gregdegruy

SQL Password:

Confirm Password:

Resource Group Selection: ☒ Create new ☐ Existing resource group

Resource Group Name: rg-connected-field-service

Deployment Region: West US

Back Deploy

Azure service deployment

Your Azure IoT services for your Dynamics organization are now automatically deploying for you!

Starting with your Azure StorageAccount that currently has a InProgress Deployment Status, but will soon show success and so will the other services that will slowly appear under Resource Type.

This deployment will take around 25 minutes to complete.

Deployment Status

Free Trial

Submitted On	3/12/2018 11:18:58 PM
Deployment Status	InProgress
Resource Group Name	rg-connected-field-service
Deployment Region	West US
Dynamics 365 Organization	https://gregdegruy.crm.dynamics.com
Authorize Dynamics 365 API Connection ?	<button>Authorize</button>
Open Simulator Web Application	<button>Open Simulator</button>

Resource Type	Deployment Status
StorageAccount	InProgress



Authorize Dynamics

Once deployment is completed, you'll notice all services will have a Success Deployment Status.

You should now be able to click the Authorize button that will take you to your Azure Portal where we will complete our setup.

Click the `Authorize` button.

Deployment Status

Free Trial

Submitted On	3/12/2018 11:18:58 PM
Deployment Status	InProgress
Resource Group Name	rg-connected-field-service
Deployment Region	West US
Dynamics 365 Organization	https://gregdegruy.crm.dyn
Authorize Dynamics 365 API Connection ?	<button>Authorize</button>
Open Simulator Web Application	<button>Open Simulator</button>

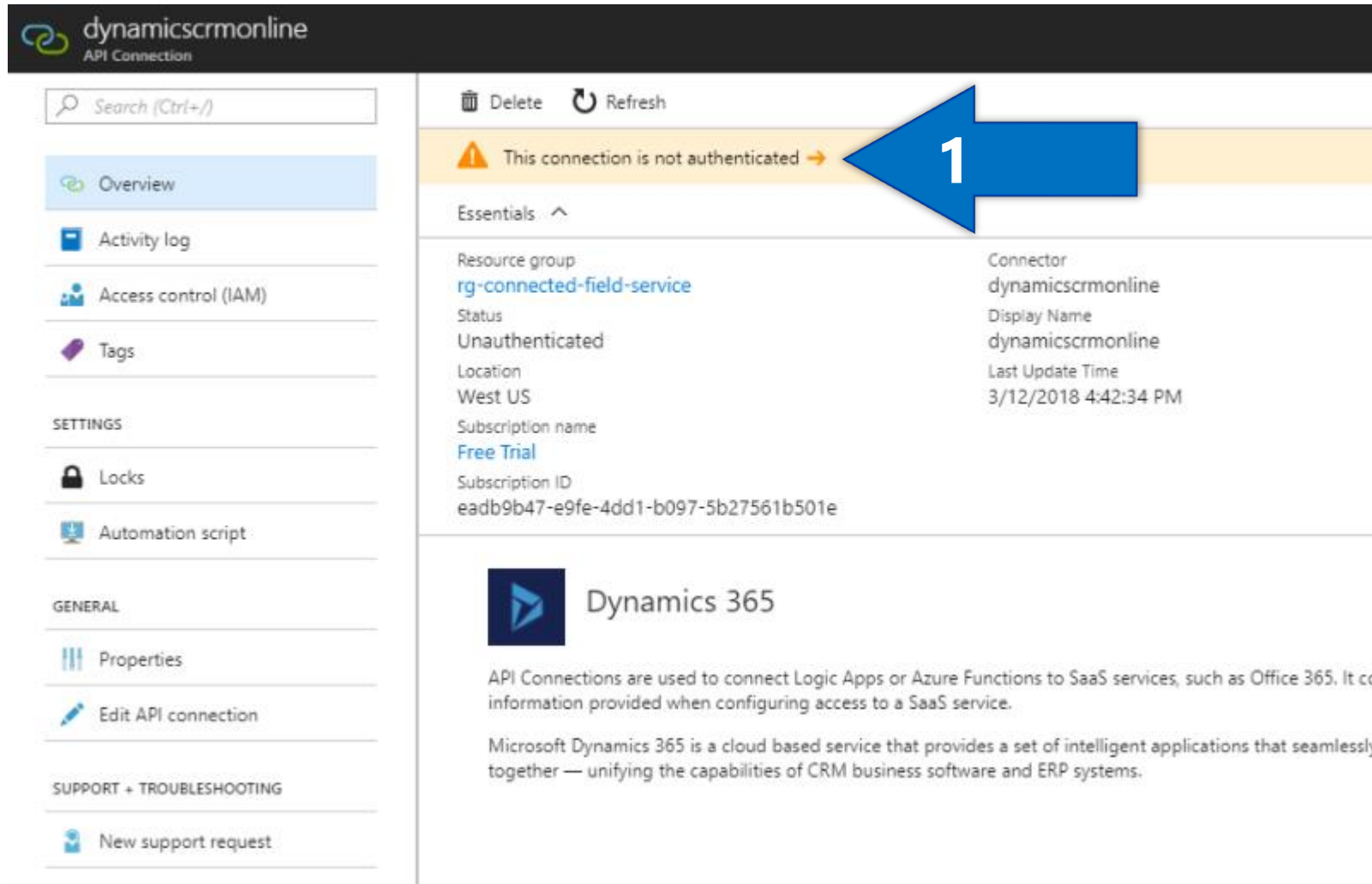
Resource Type	Deployment Status
StreamAnalytics	Success
Simulator	Success
CrmHelperConnector	Success
StreamAnalytics	Success
StorageAccount	Success
QueueMessageParserApiApp	Success
IoT Hub	Success
ServiceBus	Success
SqlDatabase	Success
CrmToIoTLogicApp	Success
IoT Hub ApiApp	Success
IoT ToCrmLogicApp	Success
ServicePlan	Success

Dynamics API connection

The first windows you'll see in your Azure portal is for the dynamicscrmonline API Connection service.

We need to authorize this API Connection service to connect to our Dynamics organization.

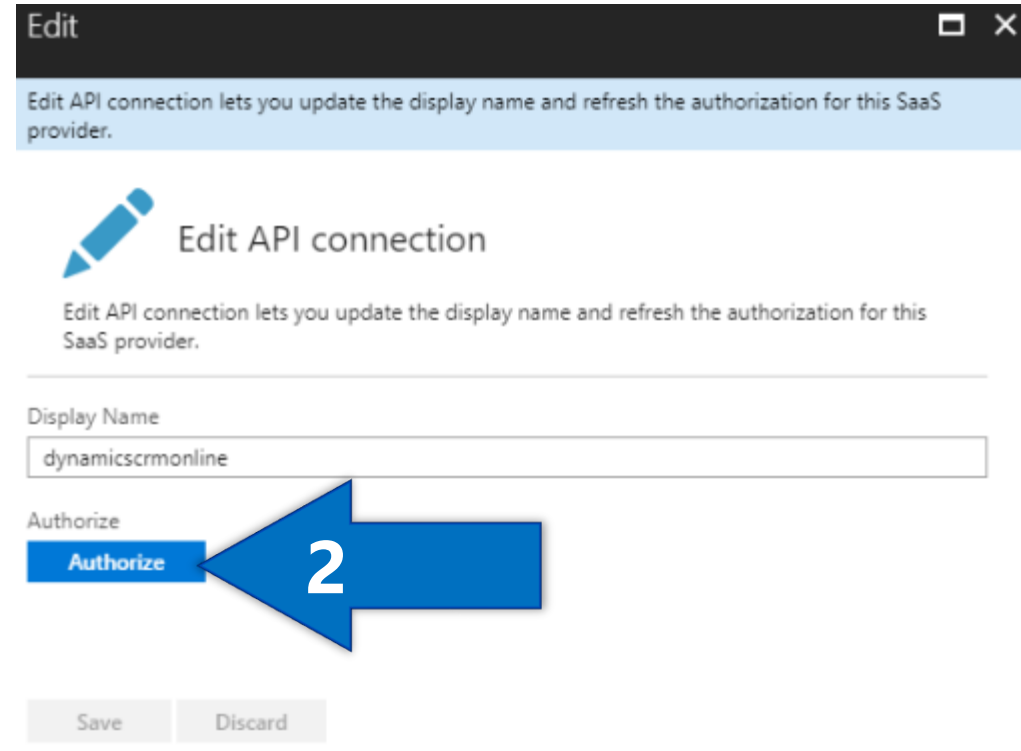
- 1` Click "This connection is not authenticated" highlighted in yellow.



The screenshot shows the Azure portal interface for the Dynamics CRM Online API Connection service. The left sidebar contains navigation links: Overview (selected), Activity log, Access control (IAM), Tags, SETTINGS (Locks, Automation script), GENERAL (Properties, Edit API connection), and SUPPORT + TROUBLESHOOTING (New support request). The main content area displays the connection status as 'Unauthenticated' and provides details for the resource group 'rg-connected-field-service', including its location (West US), subscription name (Free Trial), and subscription ID (eadb9b47-e9fe-4dd1-b097-5b27561b501e). A yellow warning banner at the top of the main content area states 'This connection is not authenticated' with a right-pointing arrow. A large blue arrow with the number '1' points to this banner. Below the banner, the 'Essentials' section shows the Dynamics 365 logo and a description of API Connections.


Edit API connection

`2` Give your connection a Display Name and click `Authorize`



Edit

Edit API connection lets you update the display name and refresh the authorization for this SaaS provider.

 Edit API connection

Edit API connection lets you update the display name and refresh the authorization for this SaaS provider.

Display Name

dynamicscrmonline

Authorize

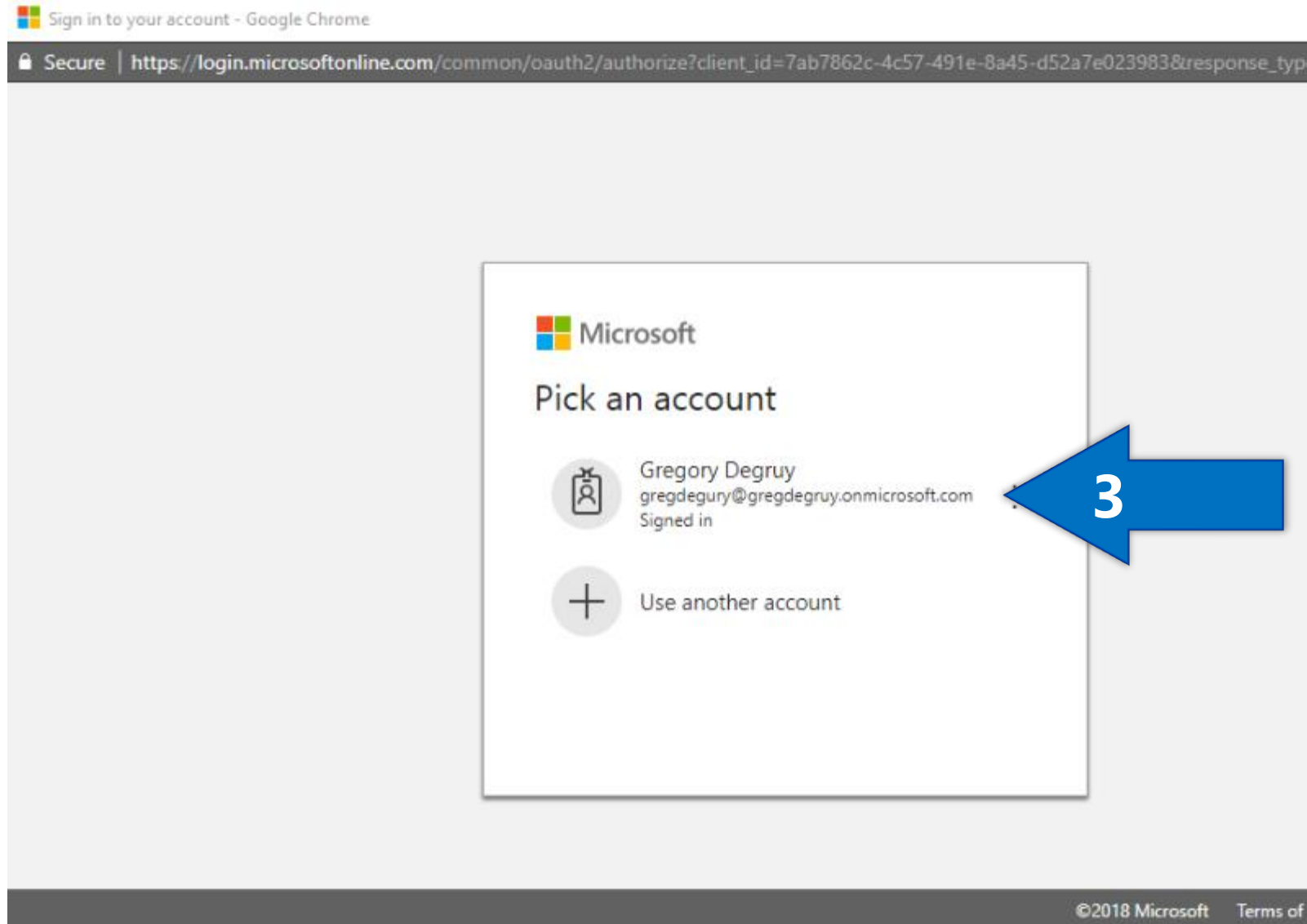
2

Save Discard

Dynamics User ID

`3` A Window will open for you to pick your Microsoft account login.

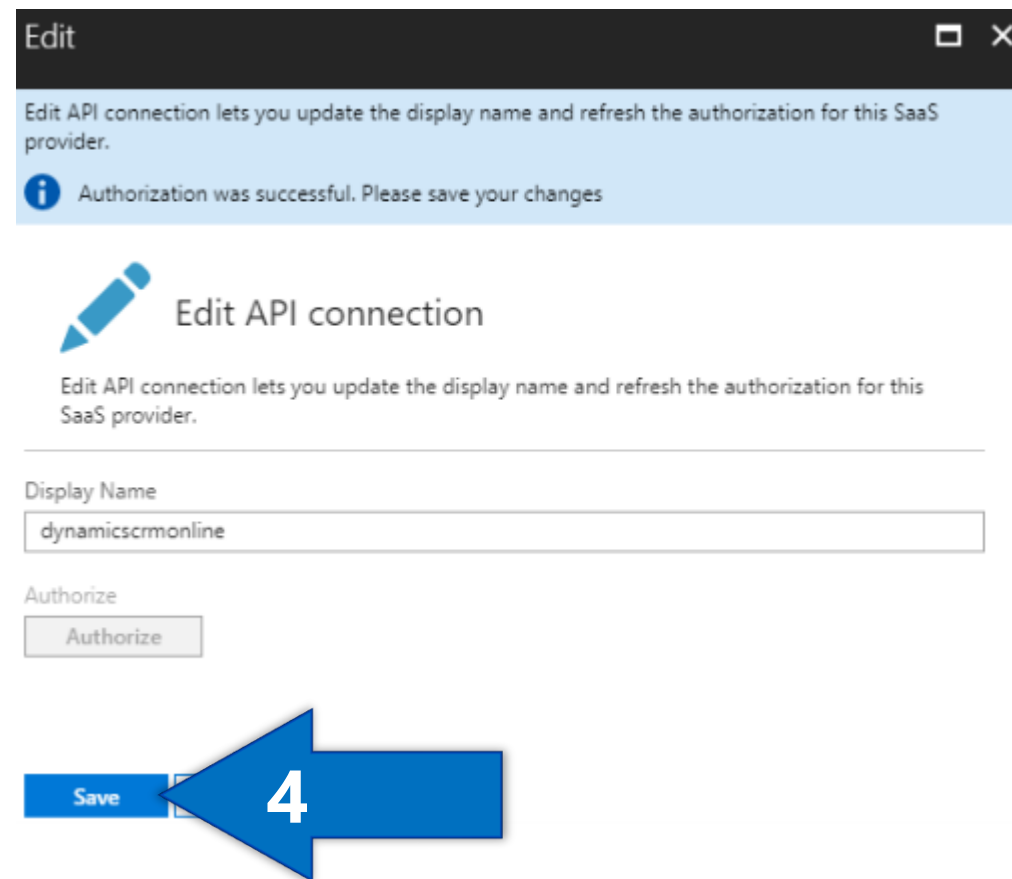
We created this login in Exercise 1, only one login should be shown show so select it.



EXERCISE 3

Save API connection

`4` The window will close and you'll now have the option to save your API connection information, click `Save`.



The screenshot shows a window titled "Edit" with a close button. Below the title bar is a light blue informational banner that reads: "Edit API connection lets you update the display name and refresh the authorization for this SaaS provider." followed by an information icon and the text "Authorization was successful. Please save your changes".

Below the banner is a section titled "Edit API connection" with a pencil icon. Underneath this title is a description: "Edit API connection lets you update the display name and refresh the authorization for this SaaS provider."

There is a form field labeled "Display Name" containing the text "dynamicscrmonline".

Below the form field is a button labeled "Authorize".

At the bottom of the window is a blue button labeled "Save". A large blue arrow with the number "4" inside points directly at the "Save" button.

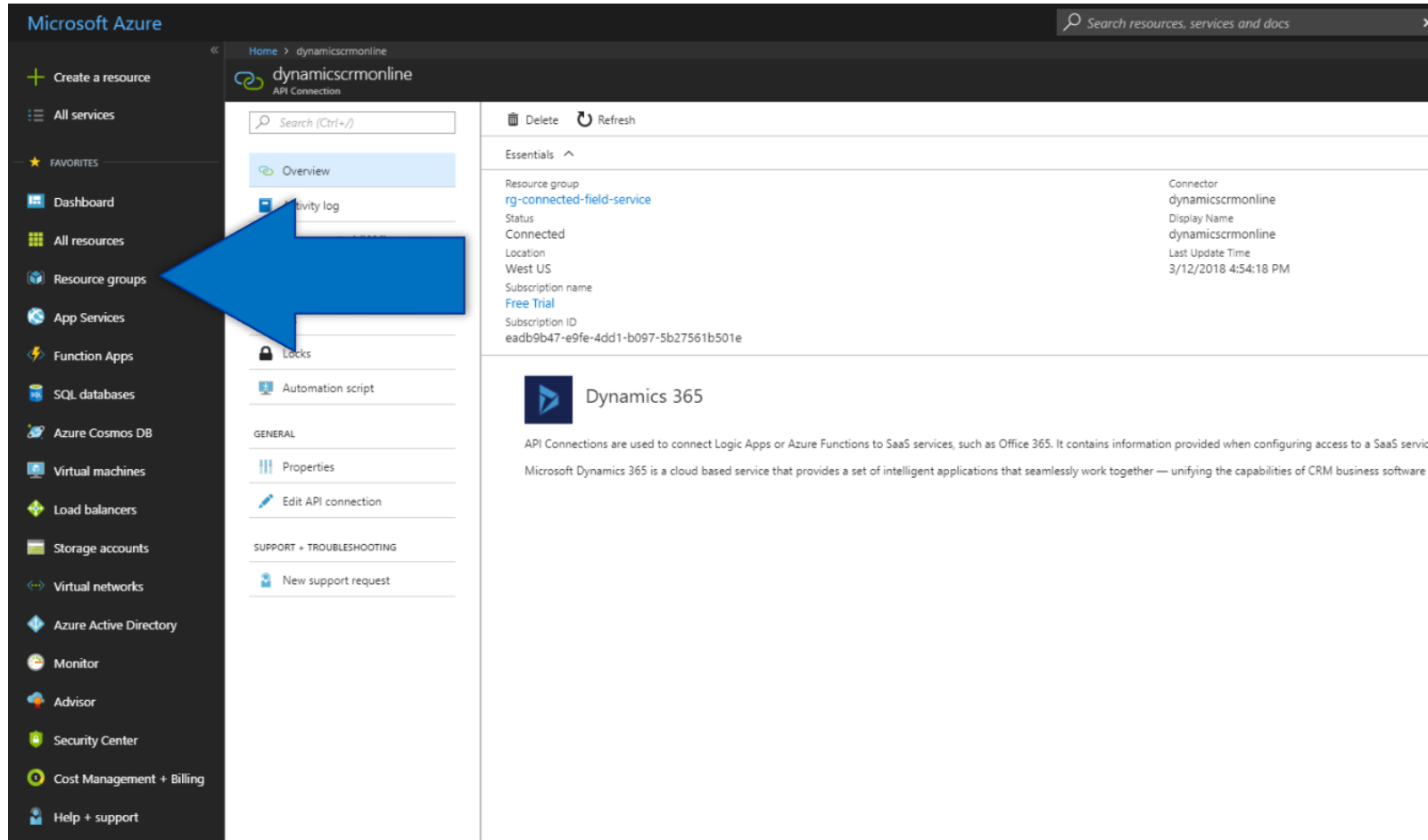


Resource group menu

Now that we have an authorized API connection between Azure and Dynamics, we can start configuring our IoT Hub.

This IoT Hub serves as our management service for the IoT device(s) in our Connected Field Service solution.

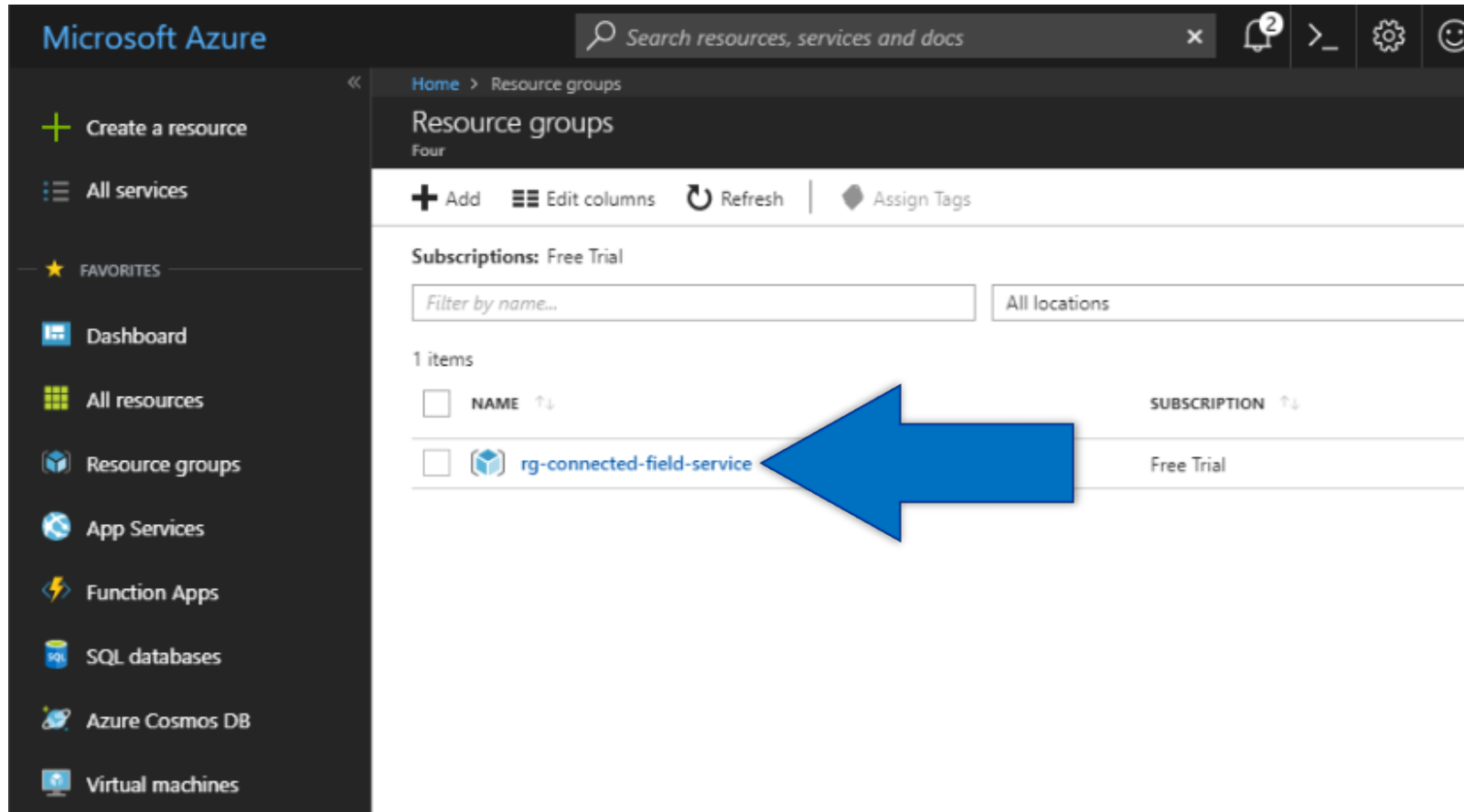
Click on 'Resource Groups' from the left menu.



CFS resource group

This will bring you to the resource group selection list. We created this resource group int eh 25 minute deployment at the start of this exercise and contains all of the IoT services we'll be using.

Click on `rg-connected-field-service`.



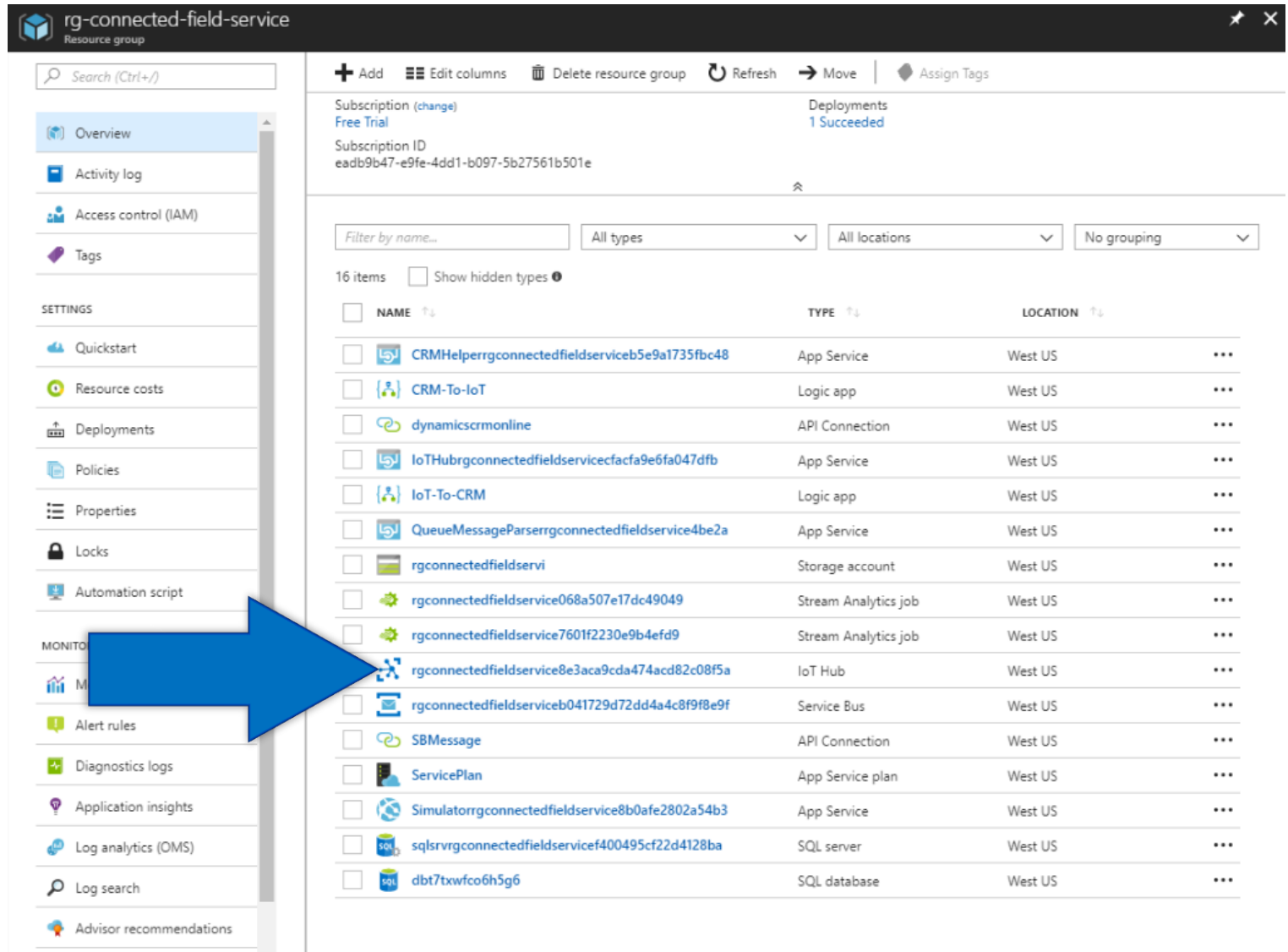
The screenshot shows the Microsoft Azure portal interface. On the left is a dark sidebar with navigation options: 'Create a resource', 'All services', 'FAVORITES', 'Dashboard', 'All resources', 'Resource groups', 'App Services', 'Function Apps', 'SQL databases', 'Azure Cosmos DB', and 'Virtual machines'. The main area is titled 'Resource groups' and shows a list of resource groups. A blue arrow points to the resource group named 'rg-connected-field-service'.

NAME	SUBSCRIPTION
rg-connected-field-service	Free Trial

IoT services

This resource group contains all of the Azure services we deployed from AppSource solution.

Click on your IoT Hub. It is named the same as your Resource Group with a long list of letters and numbers in the form of a GUID, in my case it's called `rgconnectedfieldservice8e3aca9cda474acd82c08f5a`.



The screenshot shows the Azure portal interface for the resource group 'rg-connected-field-service'. The left sidebar contains navigation options: Overview, Activity log, Access control (IAM), Tags, SETTINGS (Quickstart, Resource costs, Deployments, Policies, Properties, Locks, Automation script), and MONITOR (Alert rules, Diagnostics logs, Application insights, Log analytics (OMS), Log search, Advisor recommendations). The main pane displays a list of 16 resources. A blue arrow points to the 'IoT Hub' resource, which is named 'rgconnectedfieldservice8e3aca9cda474acd82c08f5a'.

NAME	TYPE	LOCATION
CRMHelperrgconnectedfieldserviceb5e9a1735fbc48	App Service	West US
CRM-To-IoT	Logic app	West US
dynamicscrmonline	API Connection	West US
IoTHubrgconnectedfieldservicecfacfa9e6fa047dfb	App Service	West US
IoT-To-CRM	Logic app	West US
QueueMessageParseerrgconnectedfieldservice4be2a	App Service	West US
rgconnectedfieldservi	Storage account	West US
rgconnectedfieldservice068a507e17dc49049	Stream Analytics job	West US
rgconnectedfieldservice7601f2230e9b4efd9	Stream Analytics job	West US
rgconnectedfieldservice8e3aca9cda474acd82c08f5a	IoT Hub	West US
rgconnectedfieldserviceb041729d72dd4a4c8f9f8e9f	Service Bus	West US
SBMessage	API Connection	West US
ServicePlan	App Service plan	West US
Simulatorrgconnectedfieldservice8b0afe2802a54b3	App Service	West US
sqlsrvrgconnectedfieldservicef400495cf22d4128ba	SQL server	West US
dbt7txwfc06h5g6	SQL database	West US

IoT Hub

Shared access policy

Now we need to add a Shared access policy to create a connection between our IoT Hub and Dynamics.

- 1` Click "Shared access policy" from the IoT Hub menu.

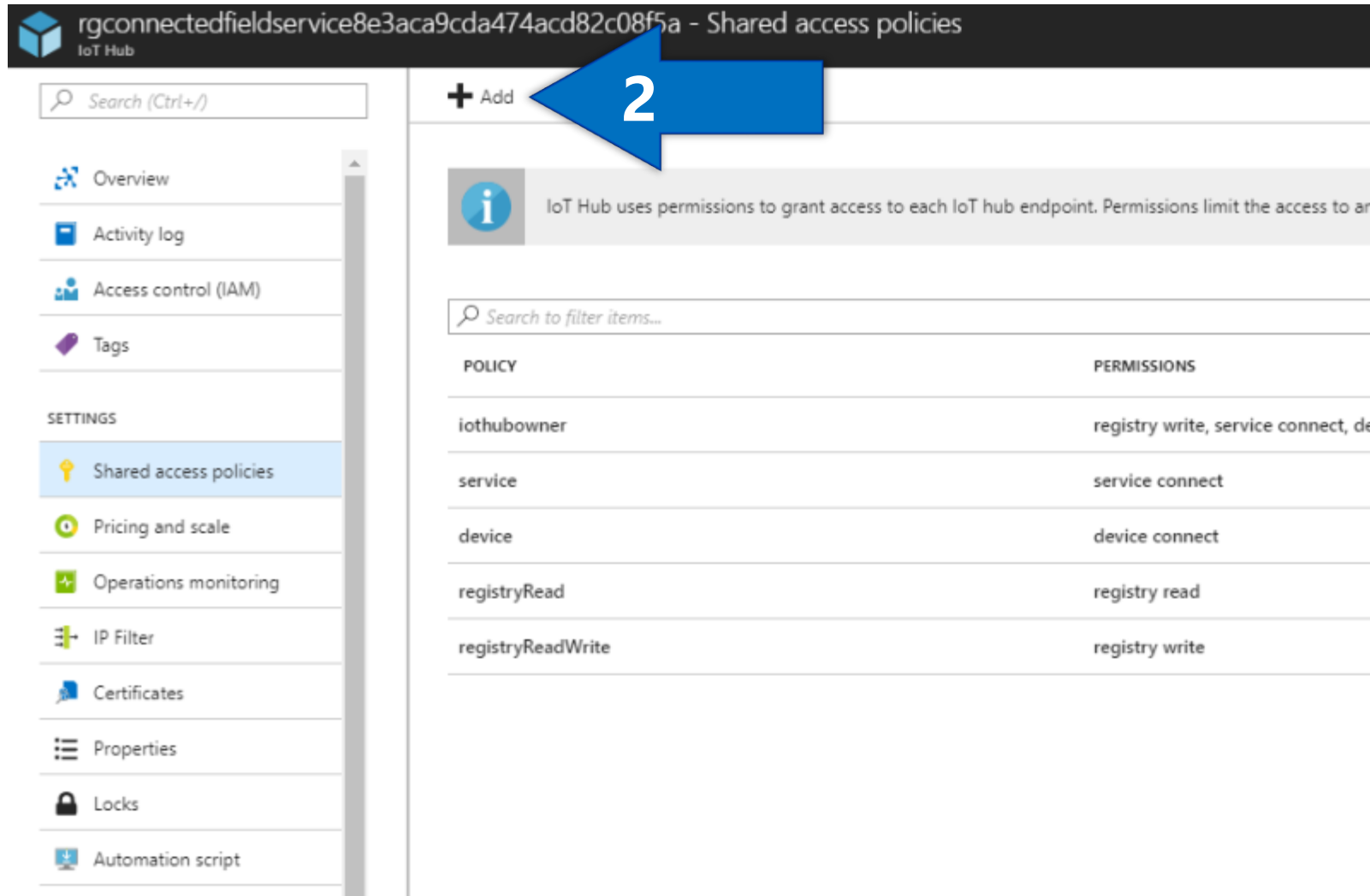
The screenshot shows the Azure IoT Hub portal for the resource group 'rgconnectedfieldservice8e3aca9cda474acd82c08f5a'. The left-hand navigation pane is expanded, showing various settings and explorers. A blue arrow with the number '1' points to the 'Shared access policies' option under the 'SETTINGS' section. The main pane displays the 'Essentials' section with details about the IoT Hub, including its resource group, status, location, and subscription name. Below this, there is a summary card showing '0% TOTAL' for messages and '0' for devices.

Property	Value
Resource group	rg-connected-field-service
Status	Active
Location	West US
Subscription name	RG-Connected-Field-Service
Subscription ID	8e3aca9cda474acd82c08f5a
Hostname	rgconnectedfieldservice8e3aca9cda474acd82c08f5a.azure-devices.net
Pricing and scale tier	S1 - Standard
IoT Hub units	1

MESSAGES: 0 / 400k
DEVICES: 0

Add Shared access policy

- `2` Click "+ Add" at the very top of the Shares access policy list.



rgconnectedfieldservice8e3aca9cda474acd82c08f5a - Shared access policies

IoT Hub

Search (Ctrl+/)

- Overview
- Activity log
- Access control (IAM)
- Tags

SETTINGS

- Shared access policies
- Pricing and scale
- Operations monitoring
- IP Filter
- Certificates
- Properties
- Locks
- Automation script

+ Add

IoT Hub uses permissions to grant access to each IoT hub endpoint. Permissions limit the access to ar

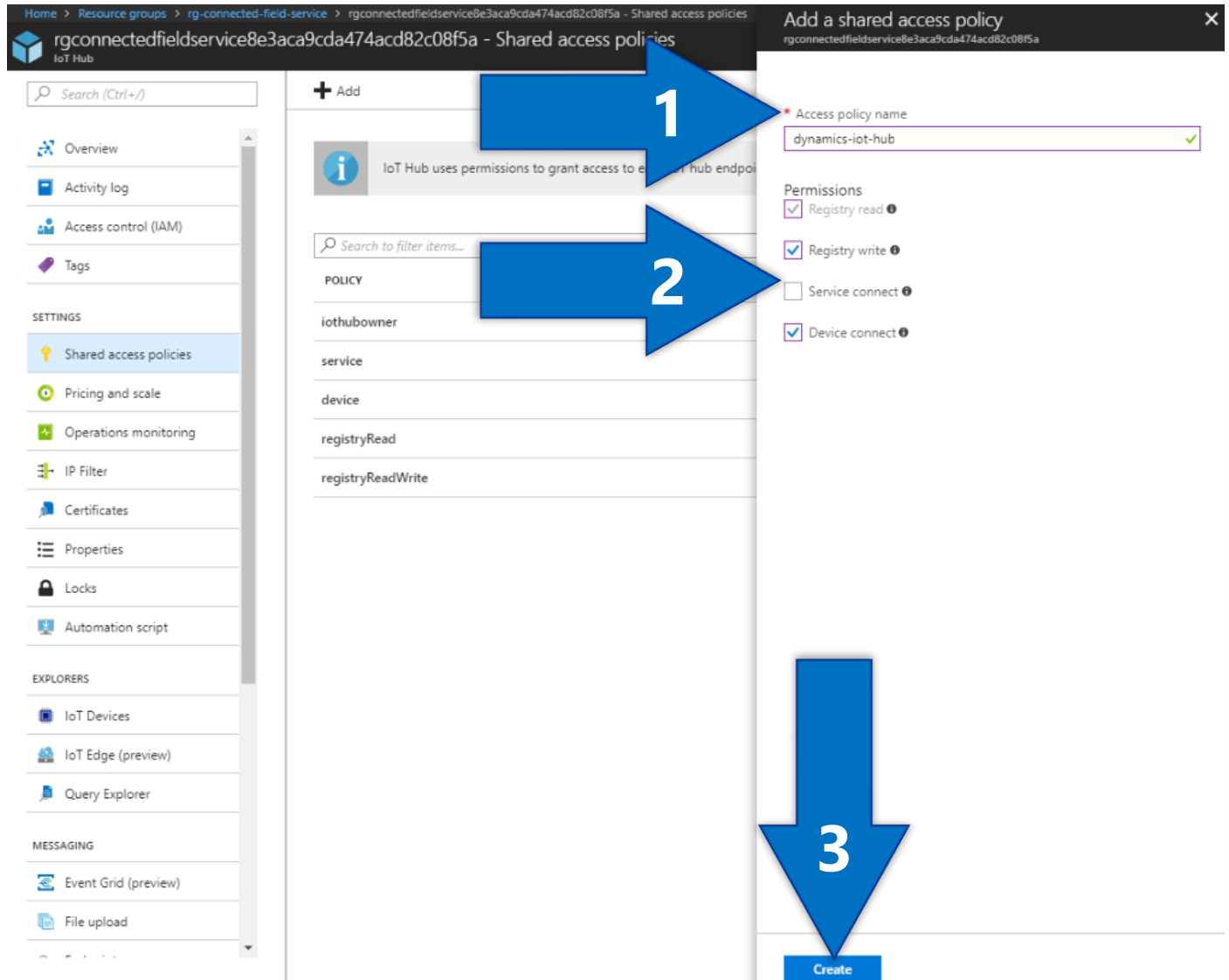
Search to filter items...

POLICY	PERMISSIONS
iothubowner	registry write, service connect, de
service	service connect
device	device connect
registryRead	registry read
registryReadWrite	registry write

Shared access policy permissions

Then give the Shared access policy the permissions it needs to communicate with Dynamics:

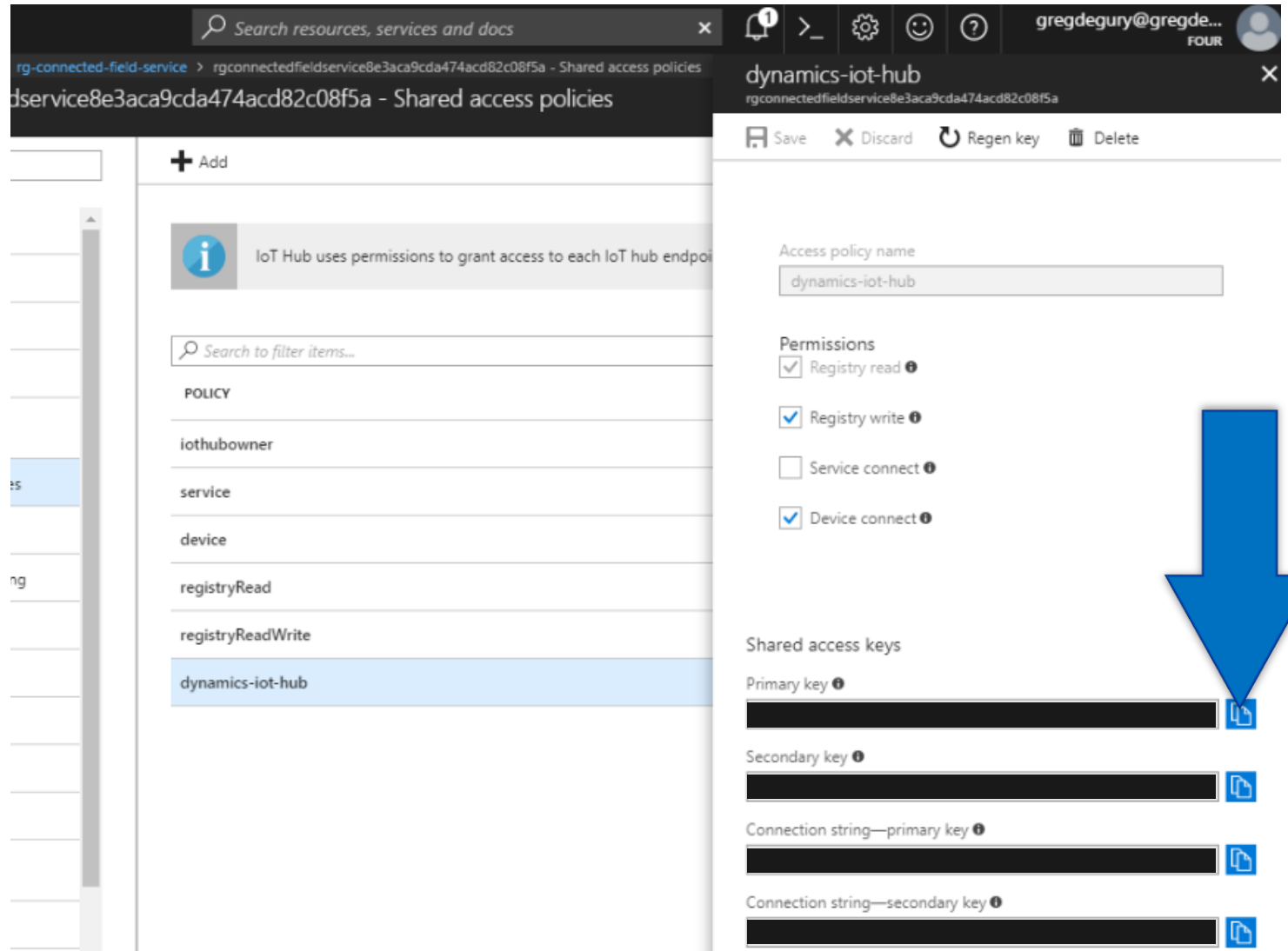
- '1' Give your policy a name, I called mine dynamics-iot-hub
- '2' Select the 'Registry read', 'Registry write', and 'Device connect' permissions
- '3' Click the 'Create' button



Shared access policy keys

Once created, the shared access policy will provide 4 keys to you.

The one we will need going forward is the `Primary Key`, click the copy button for the primary key and save it in Notepad.



The screenshot shows the Azure IoT Hub management console. The breadcrumb trail indicates the path: `rg-connected-field-service > rgconnectedfieldservice8e3aca9cda474acd82c08f5a - Shared access policies`. The selected policy is `dynamics-iot-hub`. The permissions section shows the following settings:

- ☒ Registry read
- ☒ Registry write
- ☐ Service connect
- ☒ Device connect

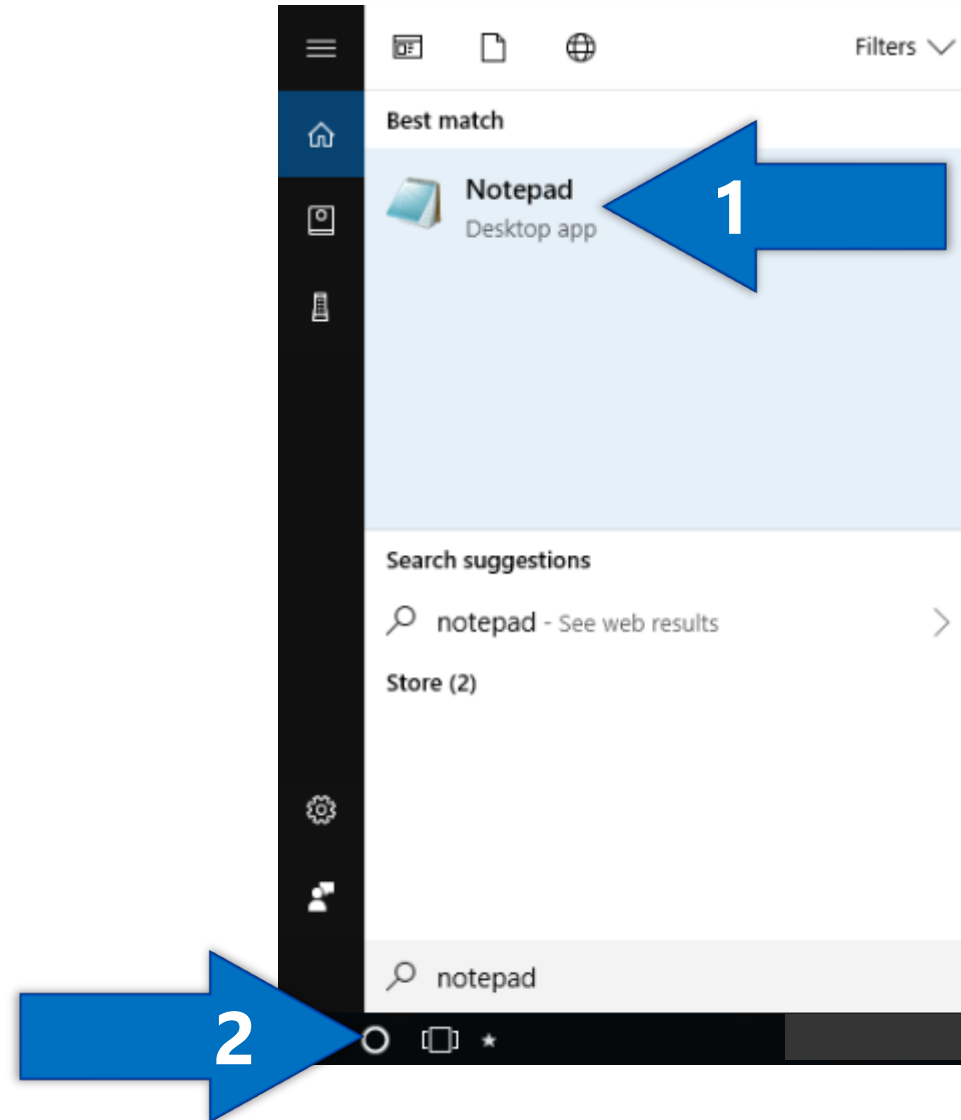
The 'Shared access keys' section displays the following keys and their corresponding copy buttons:

- Primary key: [Redacted] [Copy]
- Secondary key: [Redacted] [Copy]
- Connection string—primary key: [Redacted] [Copy]
- Connection string—secondary key: [Redacted] [Copy]

A large blue arrow points to the 'Copy' button next to the Primary key.

Notepad

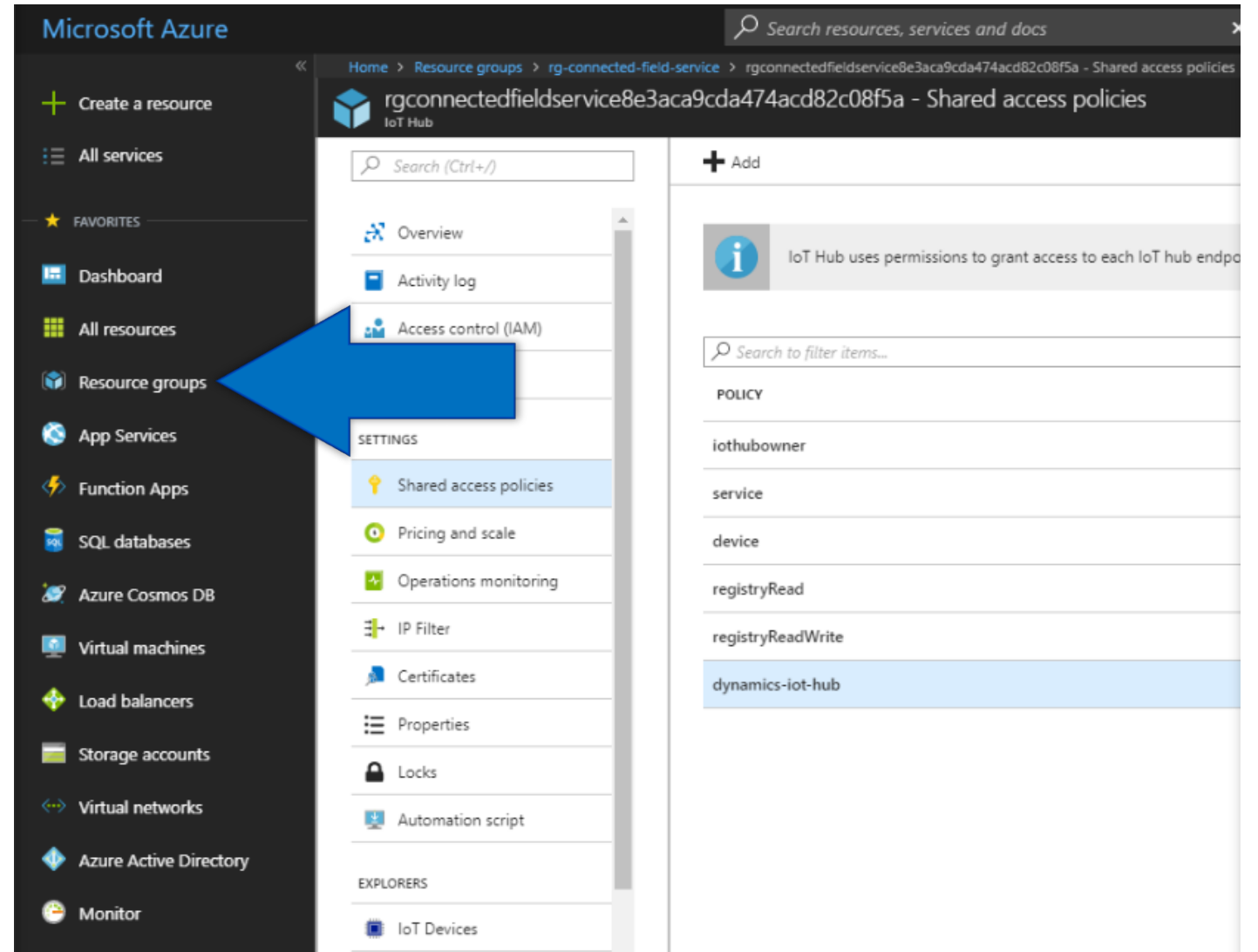
Notepad can be open by clicking the `1` Cortana button next to the Windows icon and typing in Notepad. It will be the first app on the list that you can then `2` click on.



Back to resource group

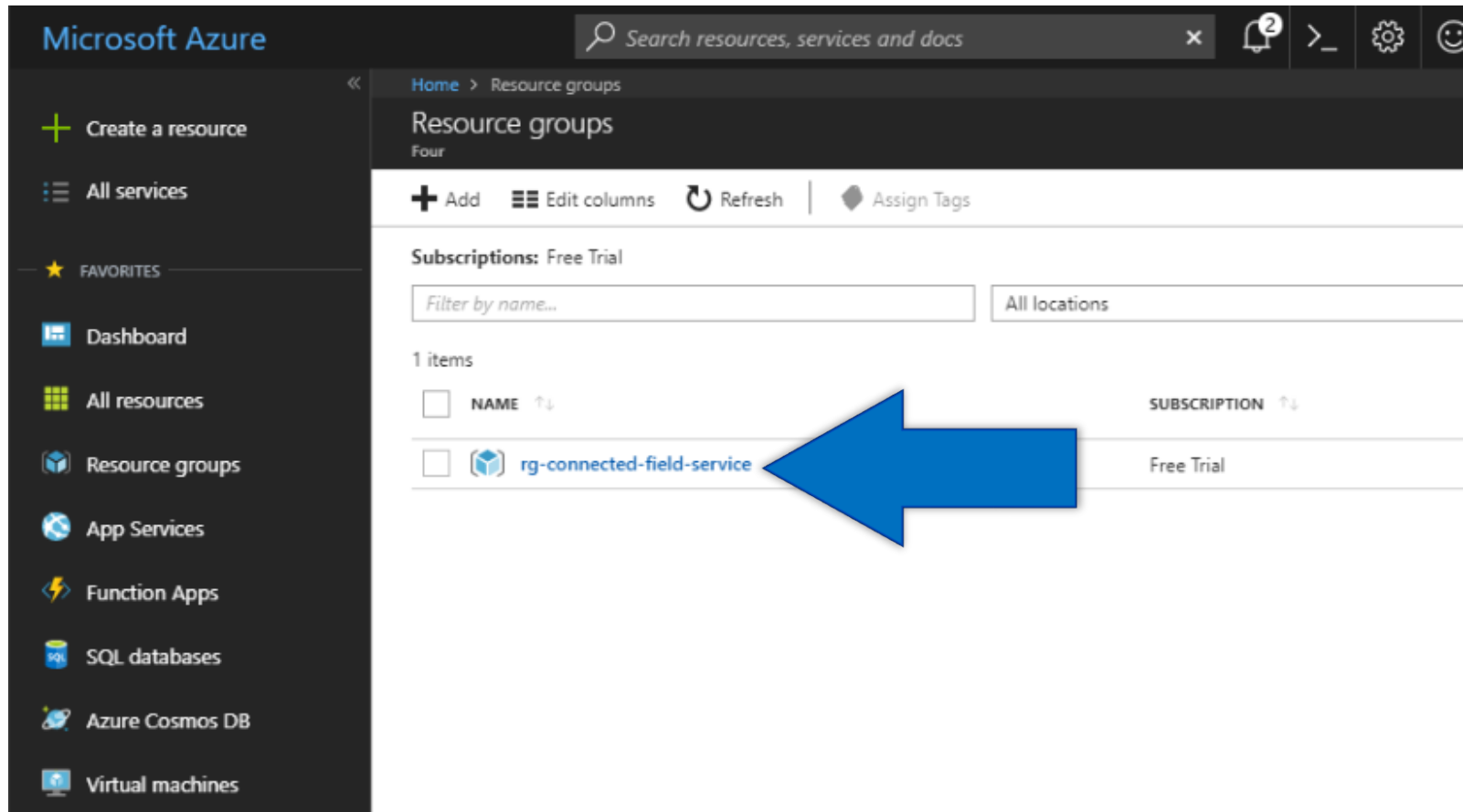
Now that we have our Primary key saved, we can head to our device simulator.

This simulator is a web app that we can use to see real time IoT device telemetry. Click on `Resource Groups` from the left menu.



CFS resource group

This will bring you to the resource group selection list. Click on `rg-connected-field-service`.



The screenshot shows the Microsoft Azure portal interface. On the left is a dark sidebar with navigation options: 'Create a resource', 'All services', 'FAVORITES', 'Dashboard', 'All resources', 'Resource groups', 'App Services', 'Function Apps', 'SQL databases', 'Azure Cosmos DB', and 'Virtual machines'. The main area is titled 'Resource groups' and shows a list of resource groups. A blue arrow points to the resource group named 'rg-connected-field-service'.

Microsoft Azure

Search resources, services and docs

Home > Resource groups

Resource groups


Four

+ Add Edit columns Refresh Assign Tags

Subscriptions: Free Trial

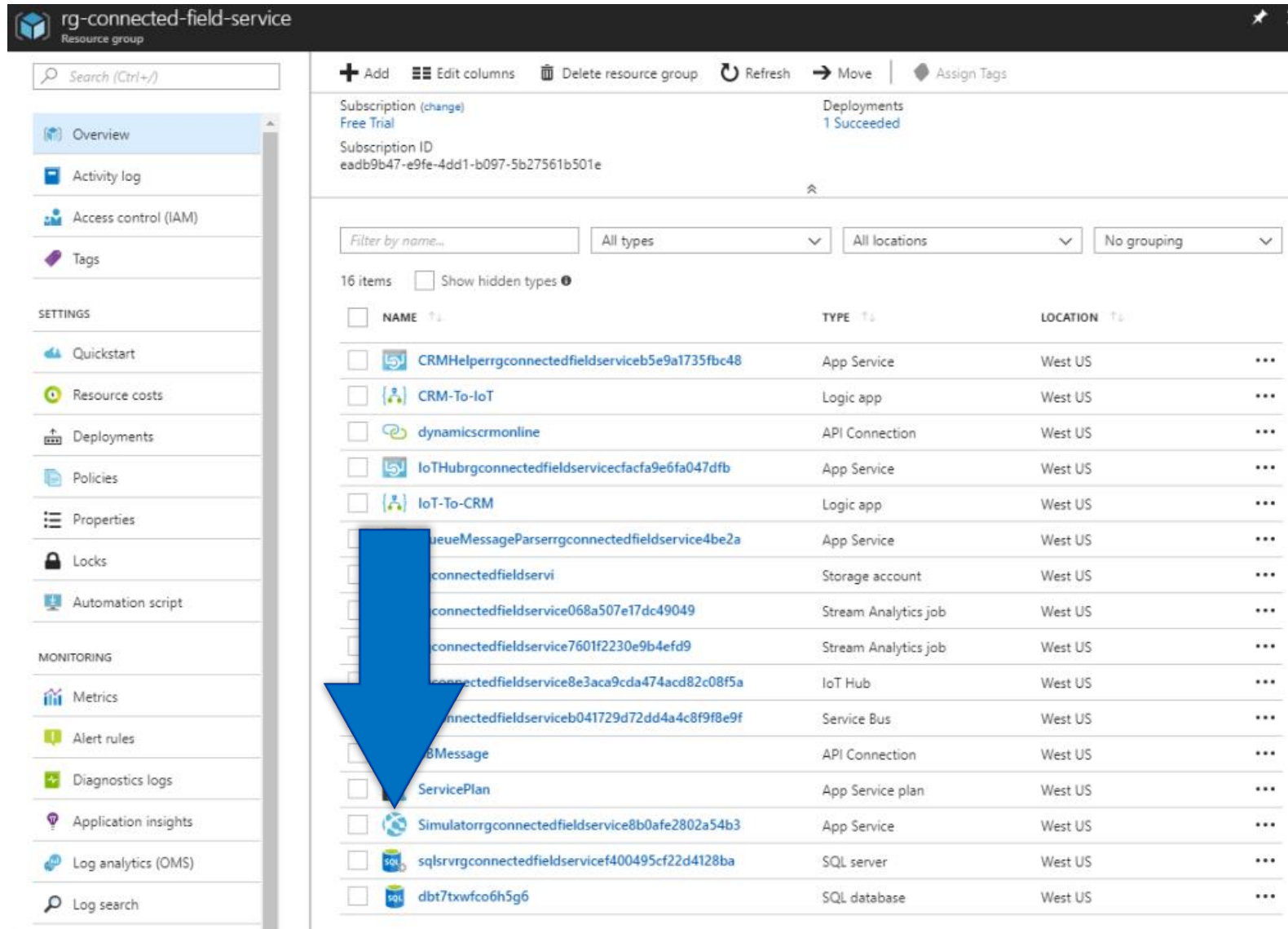
Filter by name... All locations

1 items

<input type="checkbox"/>	NAME ↑↓	SUBSCRIPTION ↑↓
<input type="checkbox"/>	 rg-connected-field-service	Free Trial

App Service

Click on your Simulator App Service. It is named Simulator followed by the same name as your Resource Group with a long list of letters and numbers in the form of a GUID, in my case it's called `Simulatorrgconnectedfieldservice8b0afe2802a54b3`.



The screenshot shows the Azure portal interface for the resource group 'rg-connected-field-service'. The left sidebar contains navigation options: Overview, Activity log, Access control (IAM), Tags, SETTINGS (Quickstart, Resource costs, Deployments, Policies, Properties, Locks, Automation script), and MONITORING (Metrics, Alert rules, Diagnostics logs, Application insights, Log analytics (OMS), Log search). The main pane displays a list of 16 resources. A large blue arrow points to the 'Simulatorrgconnectedfieldservice8b0afe2802a54b3' App Service.

NAME	TYPE	LOCATION
CRMHelperrgconnectedfieldserviceb5e9a1735fbc48	App Service	West US
CRM-To-IoT	Logic app	West US
dynamicscrmonline	API Connection	West US
IoTHubrgconnectedfieldservicecfacfa9e6fa047dfb	App Service	West US
IoT-To-CRM	Logic app	West US
QueueMessageParseerrgconnectedfieldservice4be2a	App Service	West US
connectedfieldservi	Storage account	West US
connectedfieldservice068a507e17dc49049	Stream Analytics job	West US
connectedfieldservice7601f2230e9b4efd9	Stream Analytics job	West US
connectedfieldservice8e3aca9cda474acd82c08f5a	IoT Hub	West US
connectedfieldserviceb041729d72dd4a4c8f9f8e9f	Service Bus	West US
Message	API Connection	West US
ServicePlan	App Service plan	West US
Simulatorrgconnectedfieldservice8b0afe2802a54b3	App Service	West US
sqlsrvrgconnectedfieldservicef400495cf22d4128ba	SQL server	West US
dbt7txwfc06h5g6	SQL database	West US

IoT device Simulator

Web App URL

After you click on your Simulator App Service, you'll be brought to the main page for your App Service.

Move your mouse to the right of the URL link, a copy button will appear. Click the copy button to copy the URL. In a new browser tab, paste the URL.

Simulatorrgconnectedfieldservice8b0afe2802a54b3
App Service

Search (Ctrl+ /)

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

DEPLOYMENT

Quickstart

Deployment credentials

Deployment slots

Deployment options

Continuous Delivery (Preview)

SETTINGS

Application settings

Authentication / Authorization

Managed service identity

Backups

Browse Stop Swap Restart Delete Get publish profile Reset publish profile

Resource group (change)
rg-connected-field-service

Status
Running

Location
West US

Subscription (change)
Free Trial

Subscription ID
eadb9b47-e9fe-4dd1-b097-5b27561b501e

URL
<https://simulatorrgconnectedfieldservice8b0afe2802a54b3.azurewebsites.net/>

App Service plan/pricing tier
FreePlan (Standard: 1 Small)

Deployment username

Deployment user set

Deployment slot name

Deployment slot name

Deployment slot name

Diagnose and solve problems

Our self-service diagnostic and troubleshooting experience helps you identify and resolve issues with your web app.

Application Insights

Application insights helps you detect and diagnose issues with your apps, and helps you understand what's going on with it.

App Service Advisor

App Service Advisor provides insights for improving app experience on the App Service platform. Recommendations are sorted by freshness, priority and impact to your app.

Http 5xx

100
80
60
40

Data In

1008
808
608
408

Thermometer simulator

The Field Service IoT device simulator is a web app that we can use in place of a physical device to experiment with sending device alerts to Dynamics.

Next we will show you how to use this simulator to send messages to Azure and capture alerts in Dynamics.

Then we will setup a physical device.

Field Service IoT

Thermometer

Connection

Reboot

Connection Status: Disconnected

Device ID

Refresh

Humidity

40%

Temperature

65°F

Messages Received:

Messages Sent: