# Admin in a day

# Module 1: Securing your tenant

# Hands on lab

# Lab Scenario

In this Hands-on Lab, you will be an environment administrator for Contoso helping to adopt the Power Platform. You have been assigned responsibility for ensuring that Contoso’s employees are able to build PowerApps applications and Microsoft Flows to help them be productive. At the same time you are expected to ensure that Contoso’s data and security policies are followed.

Some of Contoso’s employees have already started experimenting with the Power Platform so your first task is to get an understanding of what is already in use.

Next, you will be taking steps to put some baseline security policies in place to implement Contoso’s data and security policies. As part of this, you will be establishing a one of the environments that can be used for deploying and testing more broadly-used applications and automations.

# Lab Requirements

## Lab Test Environment

This hands on lab is designed to be completed in an environment setup for multiple students to complete the Admin in a day series of hands on labs.

You will be assigned one or more users to use to complete the tasks. Because this is a shared environment, some tasks that require a tenant Global Administrator or a Service Administrator will already be completed. Your account will only be an environment administrator.

# Exercise 1: Exploring existing Power Platform usage

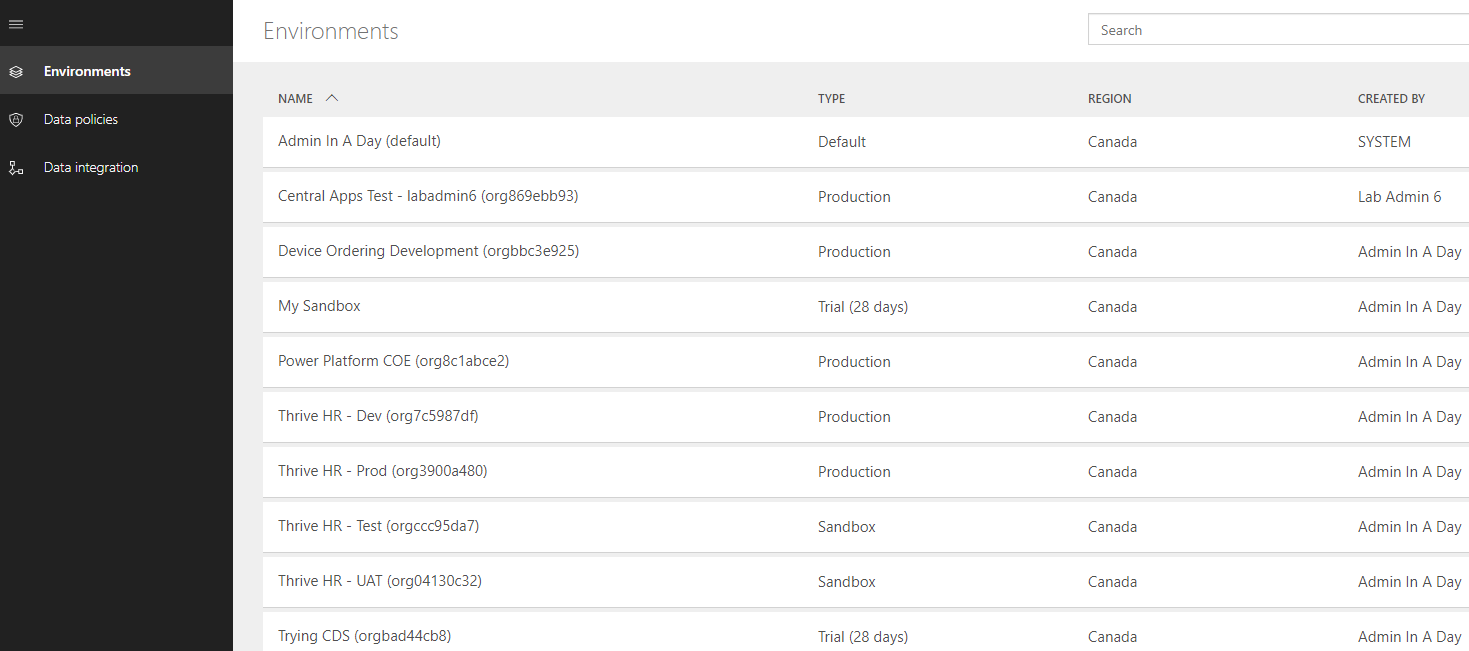
## Scenario

In this exercise, you will be exploring the tenant to see what Power Platform assets have already been created. Specifically, you will be looking at the following:

* Environments that have been created
* Data Loss Prevention (DLP) policies.

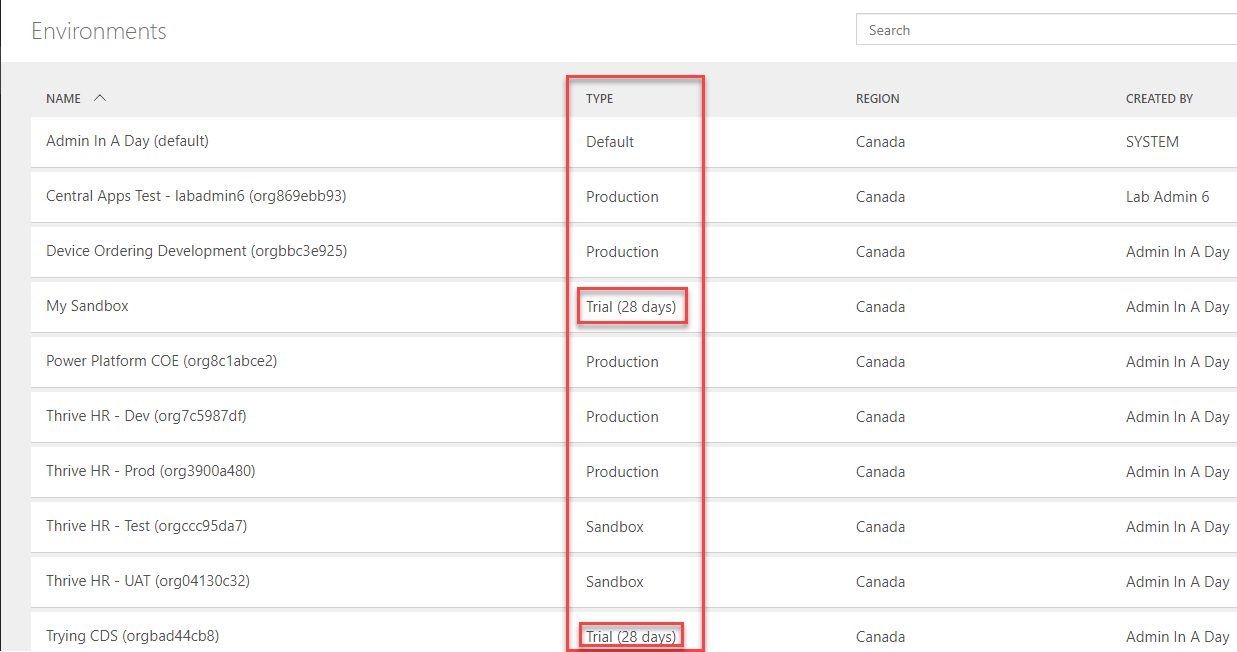
### Task 1: Review existing environments

1. Logged in with the **Lab Admin account** in an in-private browser session. Navigate to https://admin.powerapps.com and select **Environments**.
2. Review the list of environments. These are the environments that are available for you to manage.



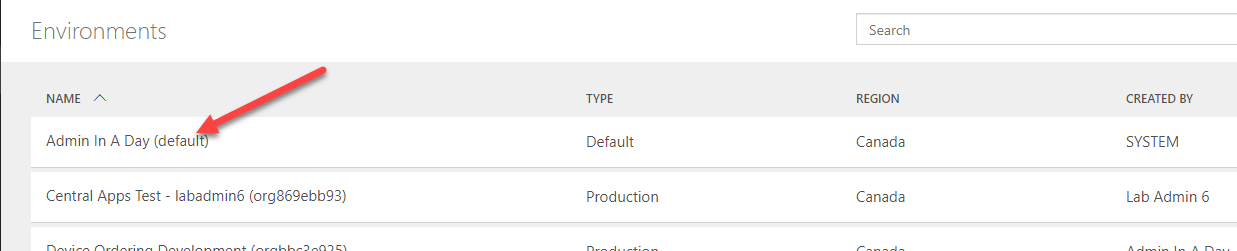
Environments

1. Notice the **type column**, you can see Contoso already is using several types of environments.
2. Locate the environments of type **trial** in the list. These are setup by users trying out building apps and flows and they self-service created a trial environment. They will last for 30 days and you can see the countdown to expiration in the list.



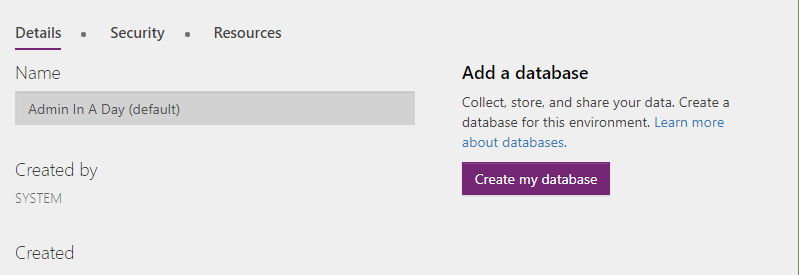
Trial Environments

1. Next, notice all the environments with **Thrive HR** in the name. These are a set of environments Contoso uses to manage the lifecycle of their Thrive apps - these are a suite of employee engagement apps. They are built in Thrive HR - Dev and then are promoted to Test -> UAT-> Production after testing by your admin team.
2. Locate the environment with a type of **Default**. This is the environment in which all users are makers and can build their own apps and flows. Think of this environment as supporting personal productivity use of the platform. This is also the default location used by any customizations built with PowerApps in Office apps. The Default environment can’t be deleted, but you can rename it to make it clear its purpose. For example, some name it Personal Productivity.
3. Select the default environment in the list to drill down into the detail page.



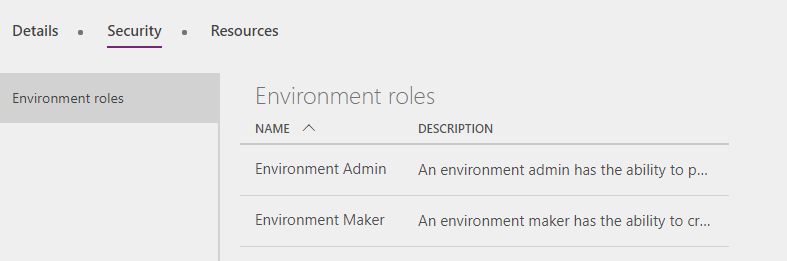
Default Environment

1. Notice on the right it says **Create my database**. **Do Not Click the button!** This environment currently does not have a CDS database associated. That means security will not be controlled by CDS roles but will be managed by the simple Environment Admin and Environment Maker roles.



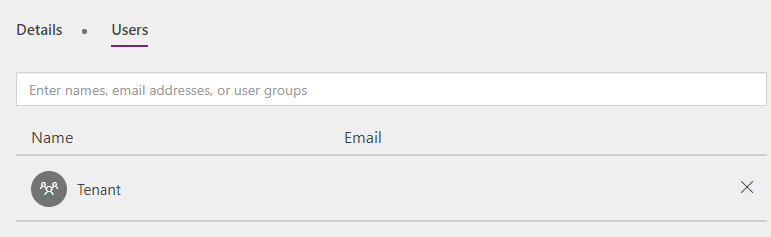
No database installed

1. Select the **Security** tab. Notice the two roles that are available.



available roles

1. Click on **Environment Maker**, notice Tenant is listed - this means everyone in the tenant has this role. For all environments other than default, you control this. However, default is special and Tenant can’t be removed from the role.



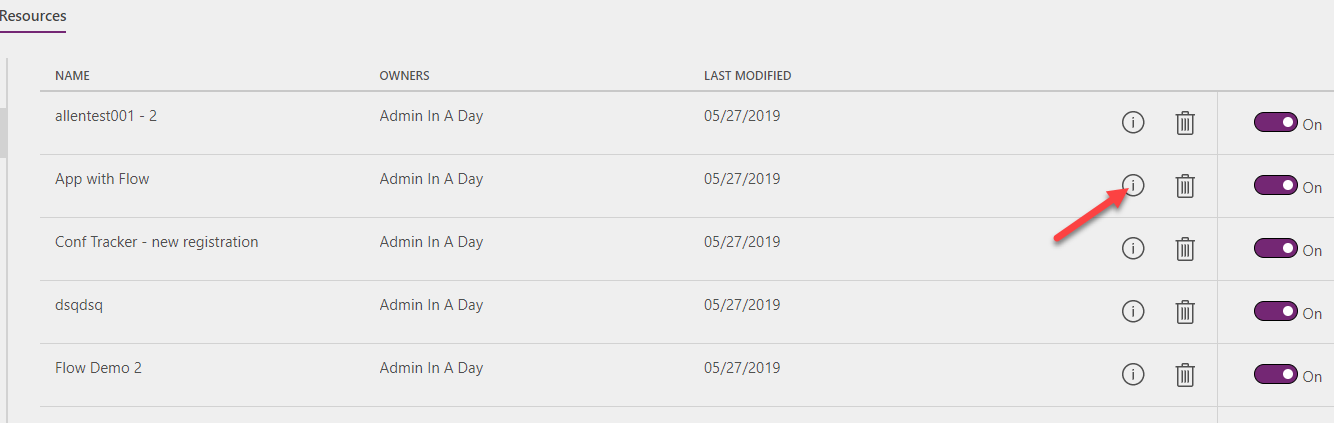
environment maker

1. Go back and select the **Resources** tab
2. By default it will show the app list. These are apps built by users in your company. Notice many of them are just test names because this is where a lot of users will experiment and build their first app. As you scroll down the list you might notice some names are more deliberate e.g. Product Showcase. Later in the course we will talk about how to identify these upcoming apps so you can help give them the guidance to ensure they mature and have adequate governance.



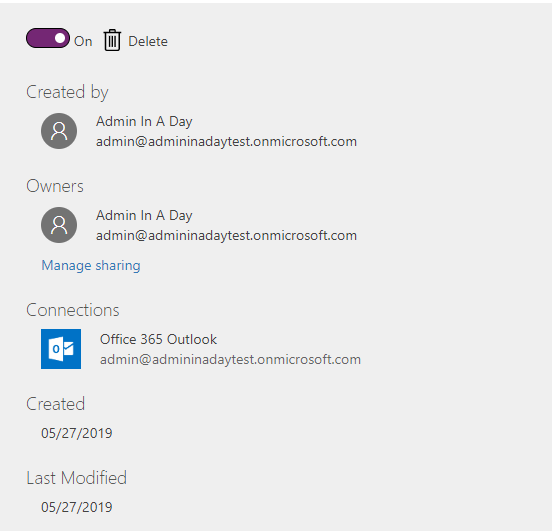
resources

1. Click on **Flows** in the left navigation and you will notice a similar pattern to apps.
2. From here you can quickly turn off a flow that is active, as well as delete it if necessary.
3. Click the **(i)** on one of the flows and it will take you to the detail page.



open flow

1. From here you can see who created it, who the owner is as well as what connections it is using. You can also view and share the flow with others from here. We will discuss that more later in the course.

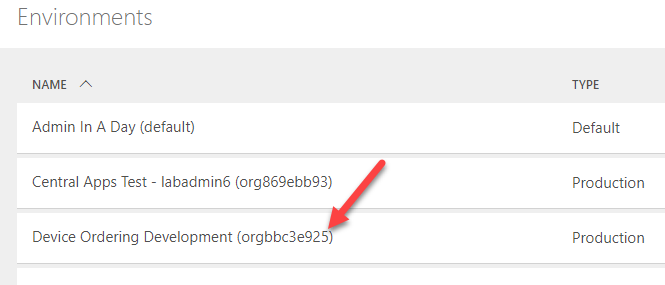


flow details

### Task 2: Review the Device Ordering Dev environment detail

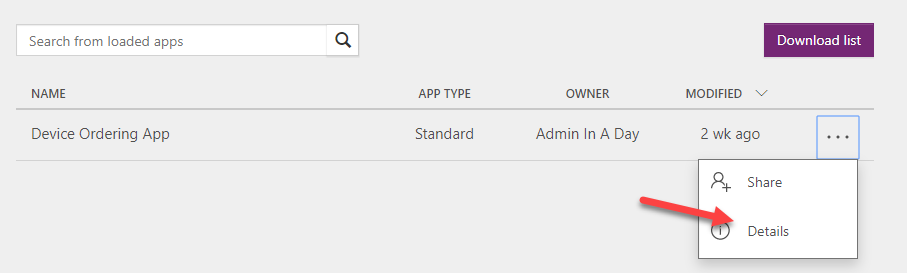
In this task, you will be reviewing one of the environments used by a team building an internal device ordering app. The app was built in this environment and you will help them deploy to a test and production environment. Unlike the Thrive application that has its own test and production this application will deploy to a shared environment of multiple Contoso apps named Central Apps. There is still test and production, they are just shared by other small apps Contoso is building.

1. From the environment list, Select the **Device Ordering Development (orgNNNN)**. This environment is used by a team building a device ordering application for Contoso.



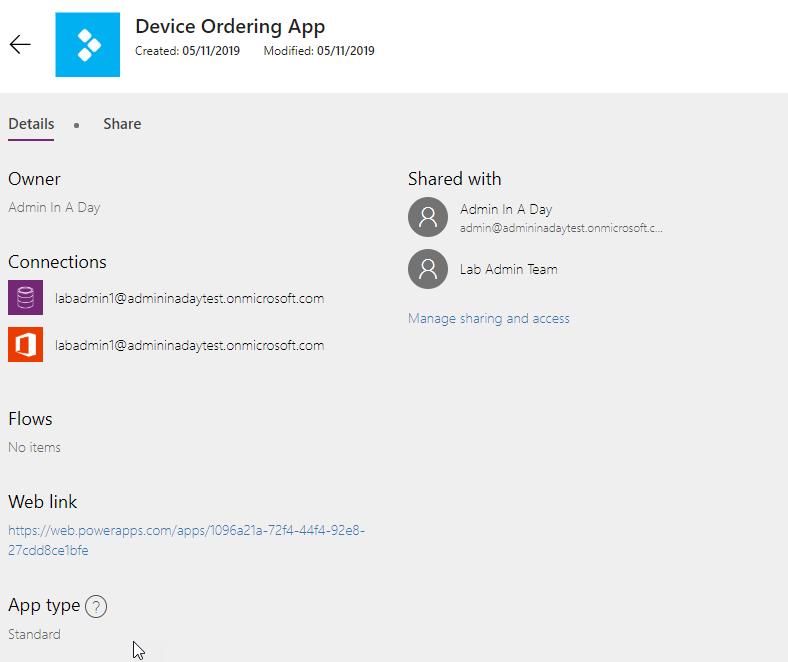
open environment

1. Select the the **Resources** tab, you will see options to view both the flows and canvas apps in the environment.
2. Select **Apps** if not already selected.
3. Select the **Device Ordering** app and on the far right, click the … and choose Details.



app details

1. Review the details. This is a good way to see what connectors are used and who the author is, you can also see who it is shared with from here as well.

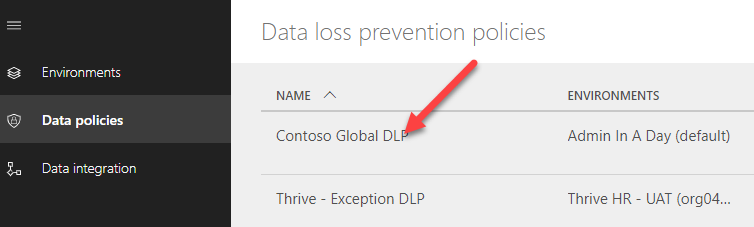


review details

1. Click back and navigate to **Flows** and review the flows that are part of this environment.
2. Notice this is a well controlled development environment and no one is creating test apps like in default. These are all purpose built to support the device ordering solution.

### Task 3: Review existing Data policies

1. Select **Data policies** on the left navigation.
2. Review the list of existing policies.
   * As the login you are using is not a tenant admin but only an environment admin, you will see policies that impact environments that you are a member of.
   * As an environment admin or regular environment user, you will also be able to see any tenant-wide DLP policies applied to your environment, however you would not be able to edit those tenant-side DLP policies.
   * As a tenant admin in your production tenant you will also see the policies that exist for any environments, even those that you are not explicitly added as an environment admin.
3. Click on the **Contoso Global DLP** data policy.



open data policy

1. Select the **Data Groups** tab and review the Business Data and Non-Business Data selections.
2. You will also notice a DLP for **Thrive Exceptions**. That team had worked with your IT department to agree on exceptions they need for their environment and their environment would be excluded from the Contoso Global DLP
3. Click on the **Thrive Exceptions** policy to open it.
4. Notice on the **Environments** tab it has been set to apply only to specific environments with each of the Thrive environments being listed.
5. Click on the **Data groups**. Notice it copied Common Data Service and SharePoint being in the Business data only from the normal global policy and it added Microsoft Teams, OneDrive for Business, Office 365 Users and Office 365 Outlook.

# Exercise 2: Creating Environments

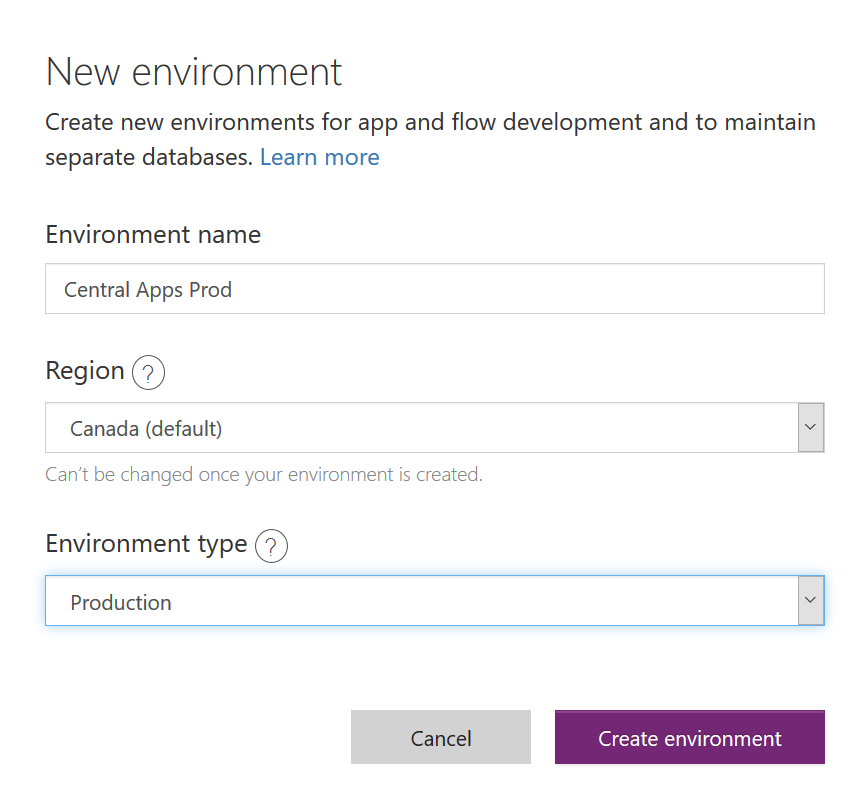
## Exercise 2 Scenario

In this exercise, you will be creating one Power Platform environment to support shared apps at Contoso. The test environment Central Apps Test has already been created, you will be creating the production environment Central Apps Prod

In the prior exercise, you learned that a team was working on building a Contoso Device Ordering app and had a development environment named Device Ordering Development. In this exercise, you will be creating the production environment that will contain that device ordering app when it’s ready to go live; along with other shared apps built by other teams at Contoso.

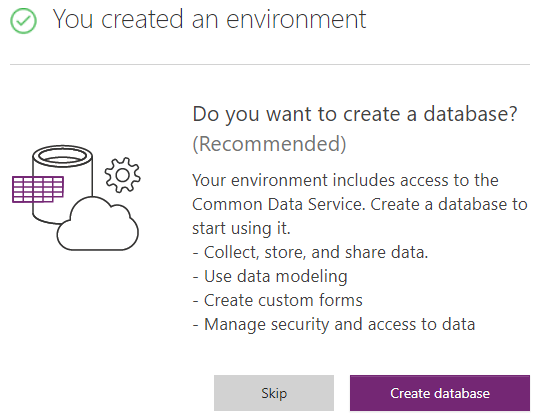
### Task 1: Create an environment using the portal

1. Navigate to https://admin.powerapps.com and select Environments.
2. Click **New Environment**.
3. Enter **Central Apps Prod** - YourUserName for Name, *keep the default selected region*, select Production for Type, and click Create environment. Note: Your default region maybe different from the image as it is based on where the tenant is created.



Create environment

1. Click **Create database**.



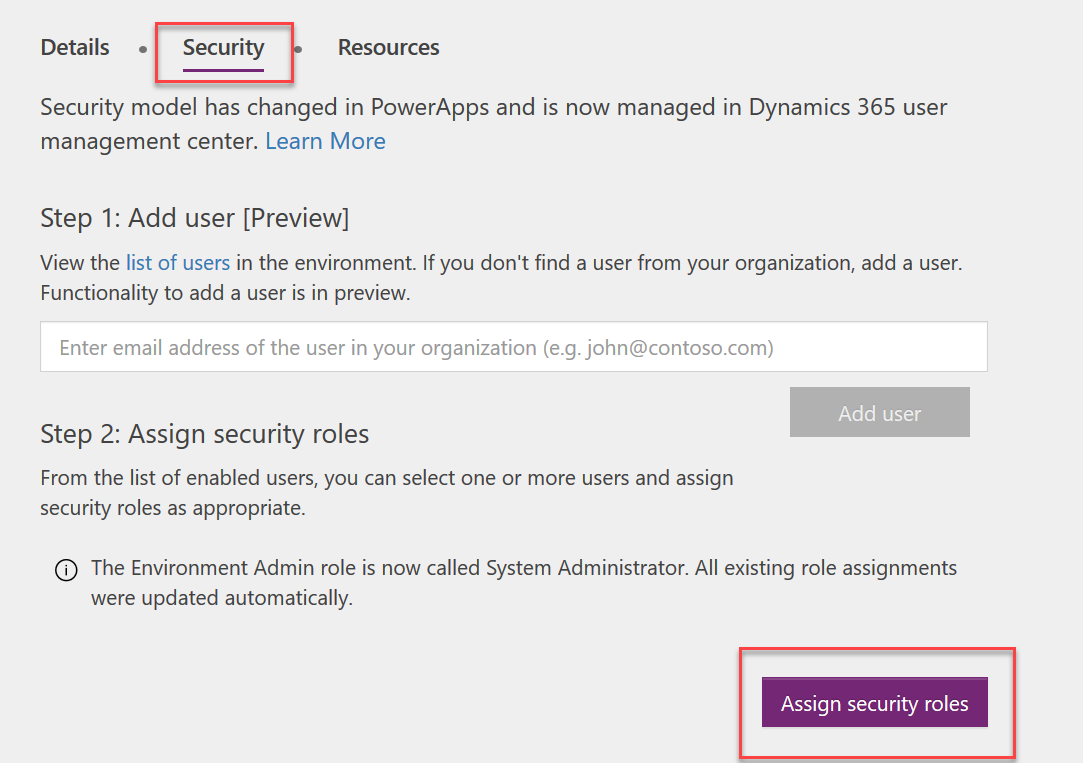
Create database

1. Select your **Currency and Language** (For this lab, choose currency of USD and Language of English), and then click Create database.
2. Wait for the environment to be created.

### Task 2: Grant access to another administrator

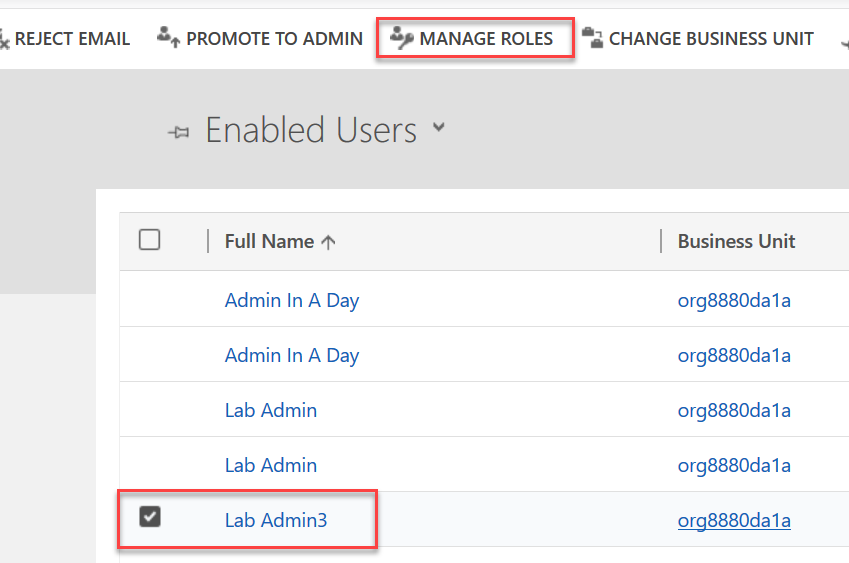
After you create an environment you will be automatically added to the System administrator role. In this task you will assign the role to another user also. Note: After other users complete this task, you may see other Central App Prod environments showing up on your environment list.

1. Navigate to https://admin.powerapps.com and select Environments.
2. Select the Security tab



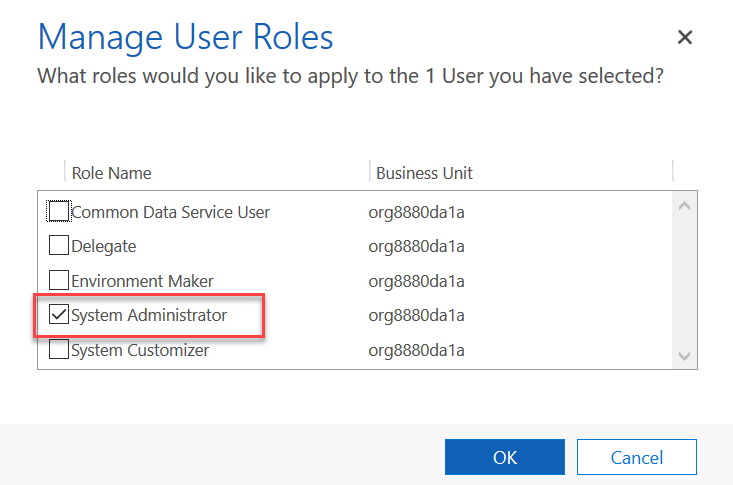
Security Tab

1. Click on Step 2 Assign Security Roles this will open up the list of users
2. Select a row containing a user other than your user.
3. Click the Manage Roles command bar button



Choose User

1. In the list of roles, scroll down and locate system admin, check the box and click OK



Assign Role

# Exercise 3: Creating Data Policies

## Exercise 3 Scenario

In this exercise, you will be creating exception policies for the Test and Production environments that will control what connectors can be used in those environments.

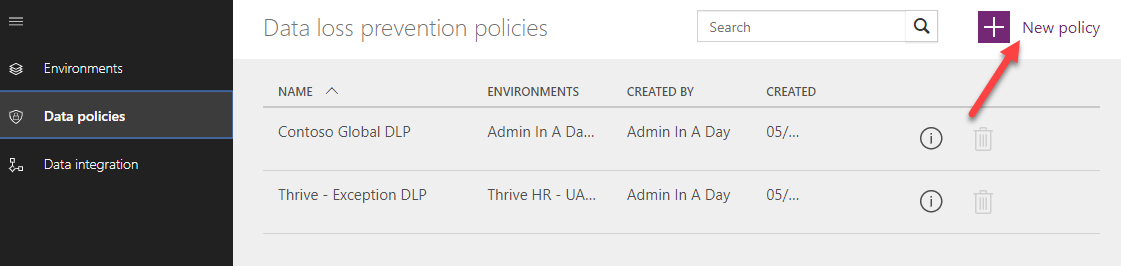
The following are the steps to create a policy that is an exception to the global tenant policy:

* Exclude from the global tenant policy the environment that you are building an exception for. We have already completed that in this tenant.
* Create an environment specific DLP configured with the connectors allowed by the exception.

To know what connectors to include in the Business Data only section of the DLP we have met with the team building the Device Ordering app to understand their connector needs. Any negotiation of data and security policies at Contoso would happen at this time. We have discovered that for this app Office 365 Outlook, Approval and Common Data Service connectors will be used.

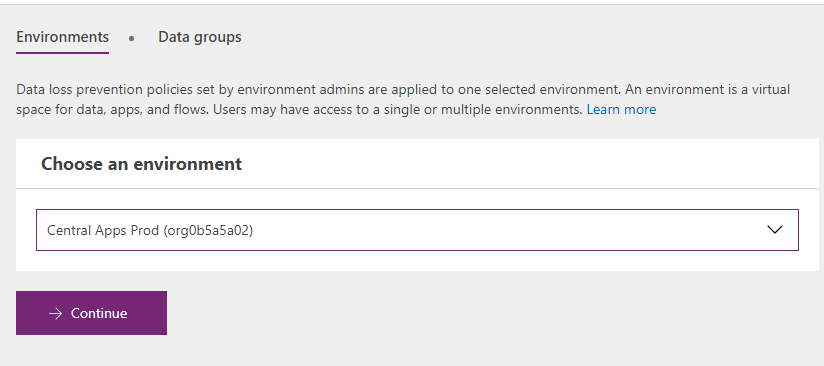
### Task 1: Create a DLP for Test

1. Navigate to **https://admin.powerapps.com** and the Data policies tab.
2. Click New policy.



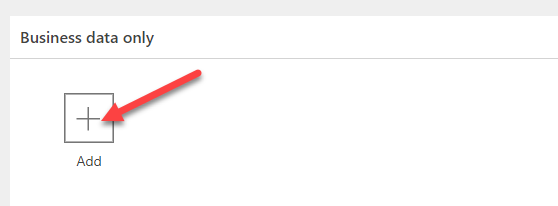
Add new policy

1. Select **Central Apps Prod** and click Continue. If you were a global tenant admin you would also see options to include or exclude and apply to all environments but since you are not, you only see the option to pick a single environment.



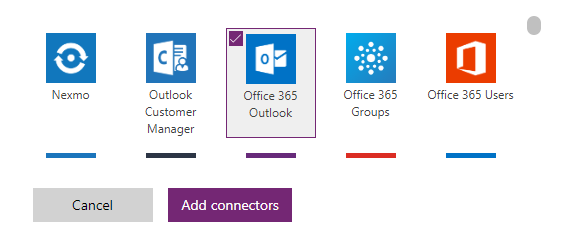
Select environment and continue

1. Click Add.

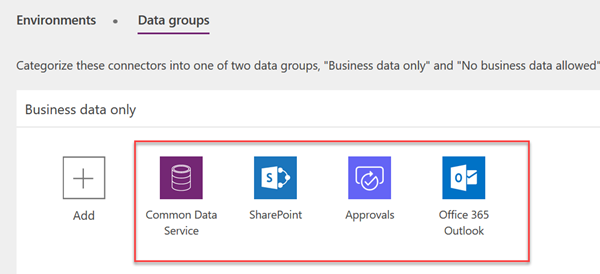


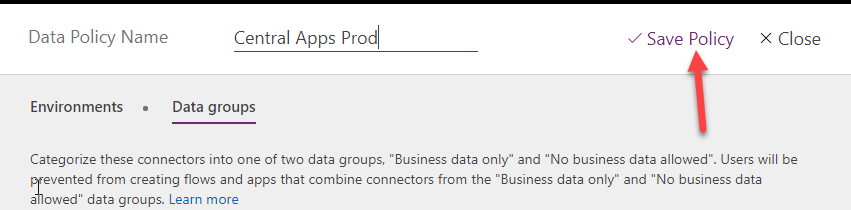
Add

1. Select **Common Data Service** and **SharePoint** as these are the same as the Global DLP. Generally, exception DLPs should start similar to the Global DLP unless it conflicts with the exceptions. Note: Select the Common Data Service and not the Common Data Service (Current Environment)
2. Select **Approvals** and **Office 365 Outlook** these are needed by the app you will be deploying, and then click Add Connectors.



Add connector

1. After adding the connectors your data group should look like the following 
2. You should have four connectors added. Enter **Central Apps Prod** for Name and click Save Policy.



Save policy

# Exercise 4: Working with Security Roles

## Exercise 4 Scenario

In this exercise, you will be reviewing the security roles that the Device Order Management app team put together. Security roles define the privileges a user has to access CDS data and services. As an admin it is important that you review security roles to ensure they aren’t creating broader access to data that is shared with other apps unintentionally.

In a future hands on lab you will be assigning the security roles you review here to users and teams that need to use the apps. You can read more about security roles and privileges [here](https://docs.microsoft.com/en-us/dynamics365/customer-engagement/admin/security-roles-privileges).

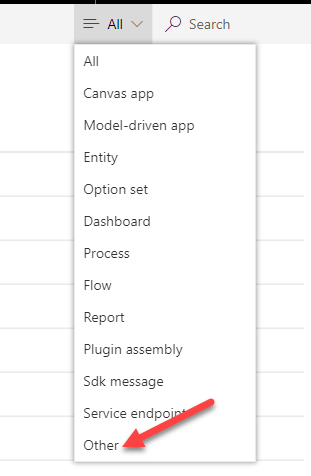
Working with the team you identified that there are three different usage patterns for the app and you asked the team to create the following security roles:

* **Contoso Device Order App** - this defines the permissions for all employees that will run the canvas app used to place a device order. This is the most restrictive role as they only need the ability to create a device request.
* **Contoso Device Procurement App** - this defines the permission of the back office staff that process the employee device requests, work with device vendors, and finally configure and deliver the device to the requestor. This role provides the ability to work with all device request records regardless of which user placed the order.
* **Contoso Device Procurement Flow SP** - this role is to support the access needs of the automated flow that runs on create of the device request. In a future HOL, we will be creating a special type of app user (a service principal) that will use this role to ensure least privileged access to CDS by the executing flow.

One additional role (Contoso CDS Model Driven User) was created. This role is designed to have just the base permission any user needs to login to a CDS model driven application. It is similar to the Common Data Service User security role. In fact it was copied from that and modified. This role unlike the default one that comes with CDS does not have access to any business data like Account and Contacts. This role is designed to be used with the app roles like Contoso Device Order app and allows the app roles to be built without including all the base permissions required to login to a CDS model-driven app. When we assign roles to users in a future HOL we will give the user this role plus the app role. When combined, these two roles will give them the privileges needed to run the app.

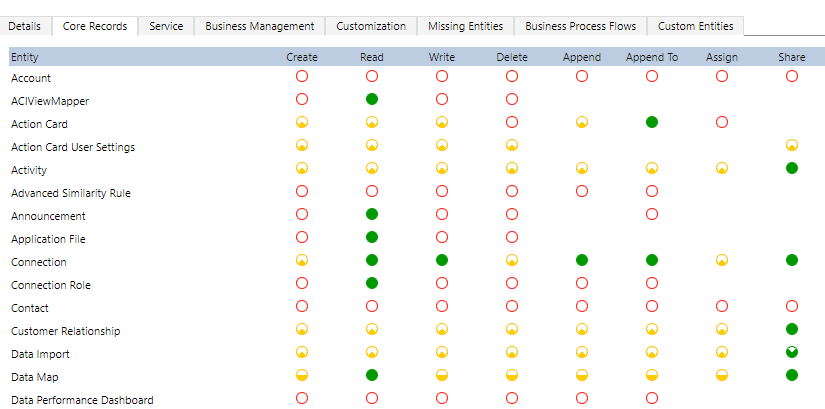
### Task 1: Review the Security Roles

1. Navigate to **make.powerapps.com** - select **Device Ordering Development** environment.
2. Select **Solutions**, click on the **Contoso Device Order Management** solution to open it.
3. Filter on Other.



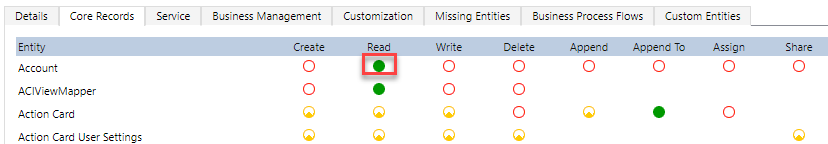
Filter on others

1. Click to open the **Contoso CDS Model Driven User** security role.
2. Select the Core Records tab and review it. Don’t make any changes. Locate the Account and Contact rows and make sure none of the circles have been granted access to the data. An empty means it isn’t granting access.



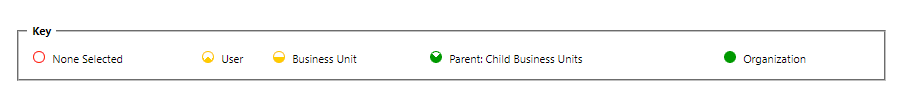
select core records

1. Review the rest of the tabs.
2. Close the security role browser tab without saving.
3. Click Done.
4. Review both **Contoso Device Order App** and **Contoso Device Procurement App** security roles and close them without making any changes.
5. Click to open the **Contoso Device Procurement Flow SP**.
6. Select the **Core Records tab**.
7. Click on the **Read** circle of the Account entity 4 times. The circle will become green/filled in. Each click progressively grants more access.



Edit accounts

1. Look at the **Key** section and review the different security levels. When reviewing security roles with the developers you should talk through with the ones that grant full organization level access. If this is done on an entity shared by another application it could result in bypassing limited access to that data. Security roles for users should be looked at in the context of all applications installed in the environment and the sensitivity of the data.



View key area

1. Close the security role browser tab without saving.
2. Click Done.

# Exercise 5 - Optional Create Environment with PowerShell

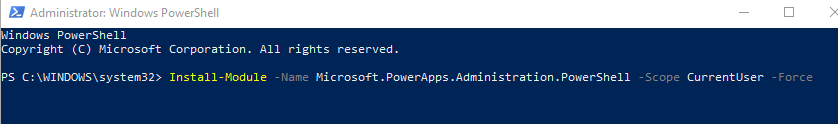
In this exercise, you will optionally be creating an environment from Powershell. This exercise is not required for you to complete other labs in this course.

Note: If you are running on a non-windows computer you can check here for options for installation of PowerShell https://docs.microsoft.com/en-us/powershell/scripting/install/installing-powershell?view=powershell-6

### Task 1: Create an environment using PowerShell

In this task, you will be using the PowerApps PowerShell cmdlets to create a new environment. You can read more about the cmdlets [here](https://docs.microsoft.com/en-us/power-platform/admin/powerapps-powershell).

1. Open a **PowerShell** command prompt window with Run as an administrator.
2. Install the **PowerApps Administration PowerShell cmdlets**. Paste the command below and [ENTER].



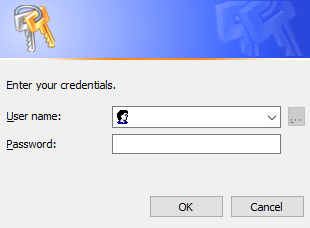
Install cmdlets

Install-Module -Name Microsoft.PowerApps.Administration.PowerShell -Scope CurrentUser -Force

1. Prompt for credentials. Paste the command below and [ENTER].

$creds = Get-Credential

1. Use your **lab admin** credentials provided for the HOL and click OK.



Provide credentials

1. Identify the user to use when we create the environment. Paste the command below and [ENTER].

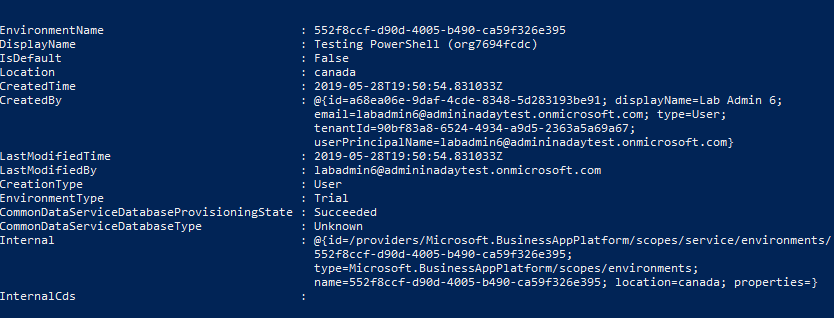
Add-PowerAppsAccount -UserName $creds.UserName -Password $creds.Password

1. Create the new environment.

$envProd = New-AdminPowerAppEnvironment -DisplayName "Testing PowerShell" -LocationName canada -EnvironmentSku Trial -Verbose

1. Now that the environment is created, provision the CDS database in that environment. When it completes it will display the environment information.

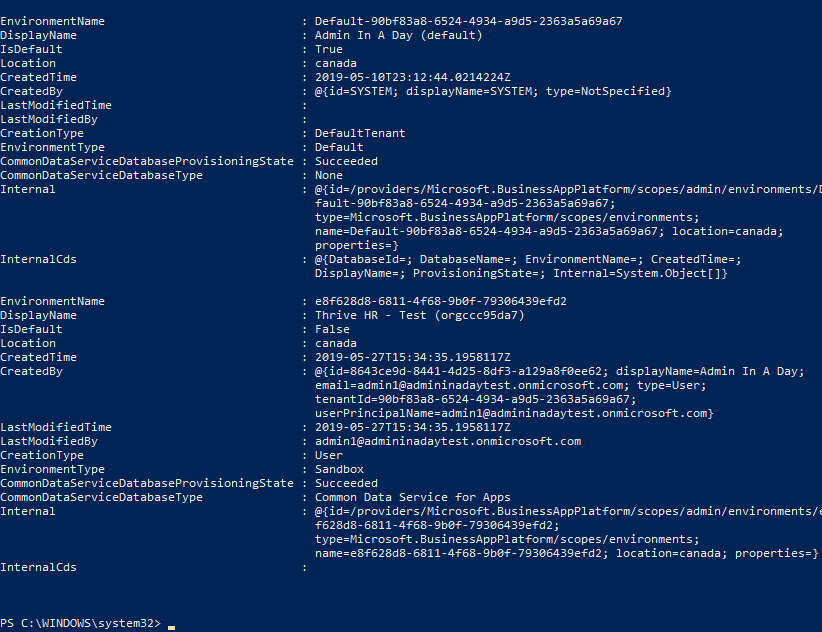
New-AdminPowerAppCdsDatabase -EnvironmentName $envProd.EnvironmentName -CurrencyName USD -LanguageName 1033 -Verbose -WaitUntilFinished $true



provision the CDS database

1. List all of the environments you have access to.

Get-AdminPowerAppEnvironment



List environments

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