

Lab 3: Deploy

A key facet of healthy ALM is separating changes in development from those in testing and in production. Pipelines in Power Platform deploys the latest version of your solution across these environments, with the ability to add secure approvals and review changes before they're deployed. *Note: in this lab you'll only deploy from development to production, but in the real world it's recommended to add an additional test stage. Other stages may also be added.*

Lab 3 Prerequisite

- Complete lab 2.1, Task 1 --> Import the ContosoRealEstate solution and commit to source control

Lab 3 – Tasks

In this lab, you will complete the following tasks:

1. [Create your first pipeline](#)
2. [Run the deployment to the Production environment](#)
3. [Add delegated deployments with approvals \(optional\)](#)
4. [Submit and approve a deployment \(optional\)](#)
5. [Re-deploy a prior version](#)

Task 1: Create your first pipeline

Go to the [maker portal](#), and make sure you are in your **development** environment created in Lab 1.

Important: make sure you use <https://make.preview.powerapps.com>

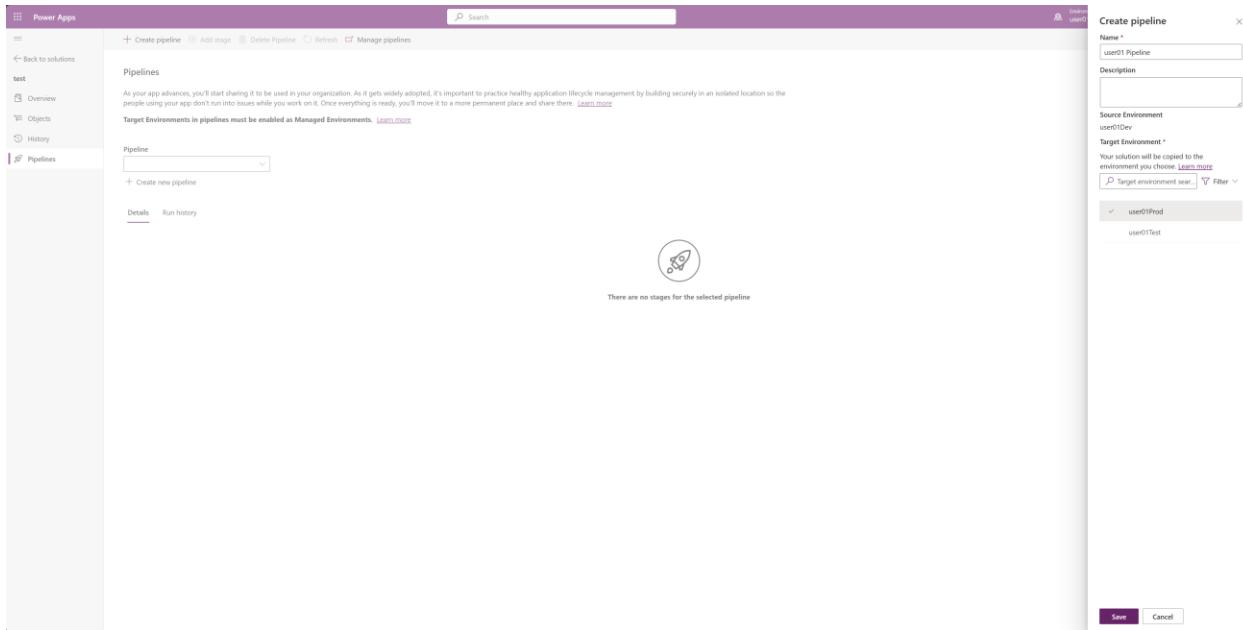
This screenshot shows the Microsoft Power Apps home page. On the left, there is a navigation bar with links for Home, Create, Learn, Apps, Tables, Flows, Solutions, and More. Under Power Platform, there is a link to Ask a virtual agent. The main area features a large banner with the text "Let's build an app. What should it do?" and several buttons for "Collect RSVPs", "Track sales leads", "List inventory", and "Manage inspections". Below the banner, there are three boxes: "Start with data" (Create new tables, select existing tables, or connect to external data sources), "Start with a page design" (Select from a list of different designs and layouts to get your app going), and "Start with an app template" (Select from a list of fully functional business app templates). A table titled "Your apps" lists four items: Power Pages Management, DataVine Accelerator App, Solution Health Hub, and Power Platform Environment Settings, all created by SYSTEM and modified 6 days ago. At the bottom, there is a section for "Learning for every level" with four cards: "Get started with Power Apps" (Beginner, 51 min), "Author a basic formula to change properties in a canvas app" (Beginner, 40 min), "Work with external data in a Power Apps canvas app" (Intermediate, 1 hr 4 min), and "Manage and share apps in Power Apps" (Beginner, 40 min).

1. Select pipelines from the left navigation. Click **Create new pipeline**.

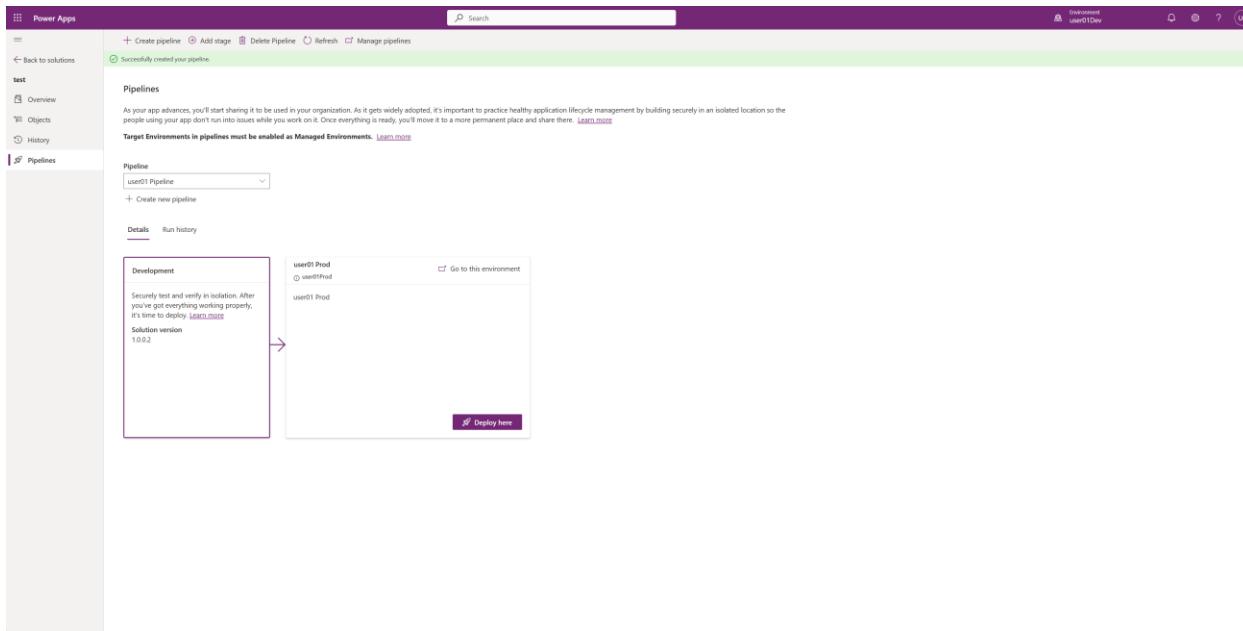
If you see an error “The user is not a member of the organization”, wait a moment, then refresh the page. It can take a minute to synchronize your access.

This screenshot shows the Microsoft Power Apps Pipelines page. The left sidebar includes links for Back to solutions, Overview, Objects, History, and Pipelines. The Pipelines section has a search bar and buttons for + Create pipeline, Add stage, Delete Pipeline, Refresh, and Manage pipelines. A note states: "As your app advances, you'll start sharing it to be used in your organization. As it gets widely adopted, it's important to practice healthy application lifecycle management by building securely in an isolated location so the people using your app don't run into issues while you work on it. Once everything is ready, you'll move it to a more permanent place and share there." Another note says: "Target Environments in pipelines must be enabled as Managed Environments." The main area shows a pipeline named "Pipeline" with a status message: "There are no stages for the selected pipeline". On the right, a "Create pipeline" dialog box is open, prompting for "Name" (with "user01Pipeline" entered), "Description" (empty), "Source Environment" (set to "user01Dev"), and "Target Environment *". A dropdown menu for "Target environment" shows "user01Prod" and "user01Test". At the bottom of the dialog are "Save" and "Cancel" buttons.

Name your pipeline **[your username] Pipeline**, then select your **production** environment as the target environment and **Save**.



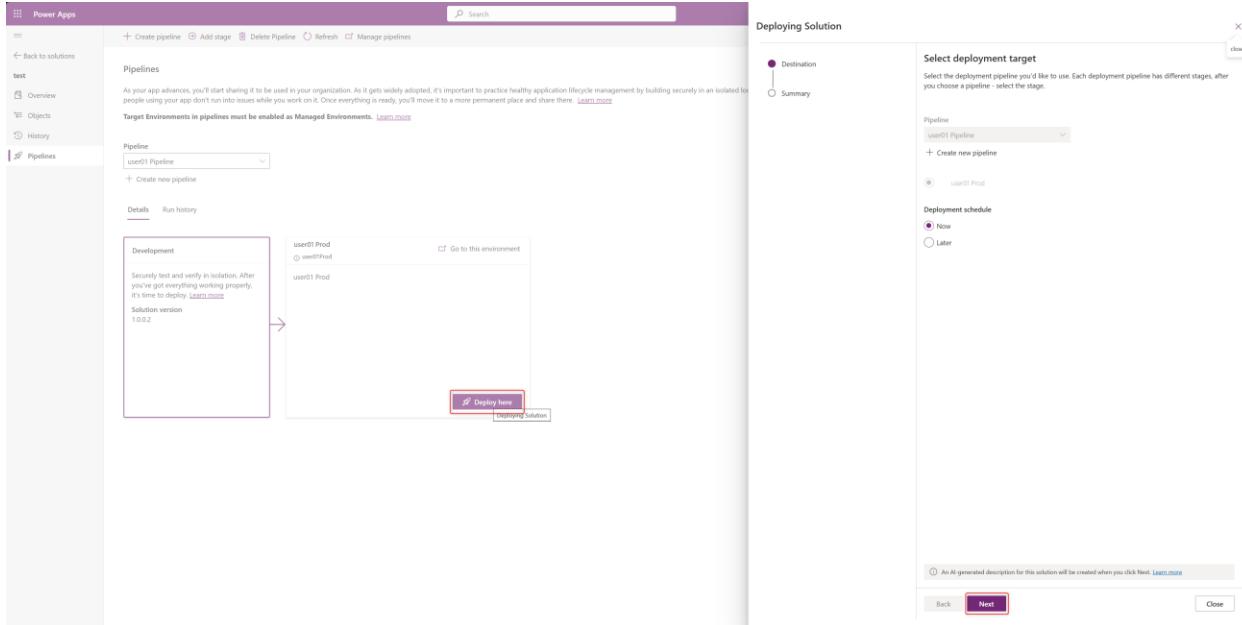
Now you have a basic working pipeline.



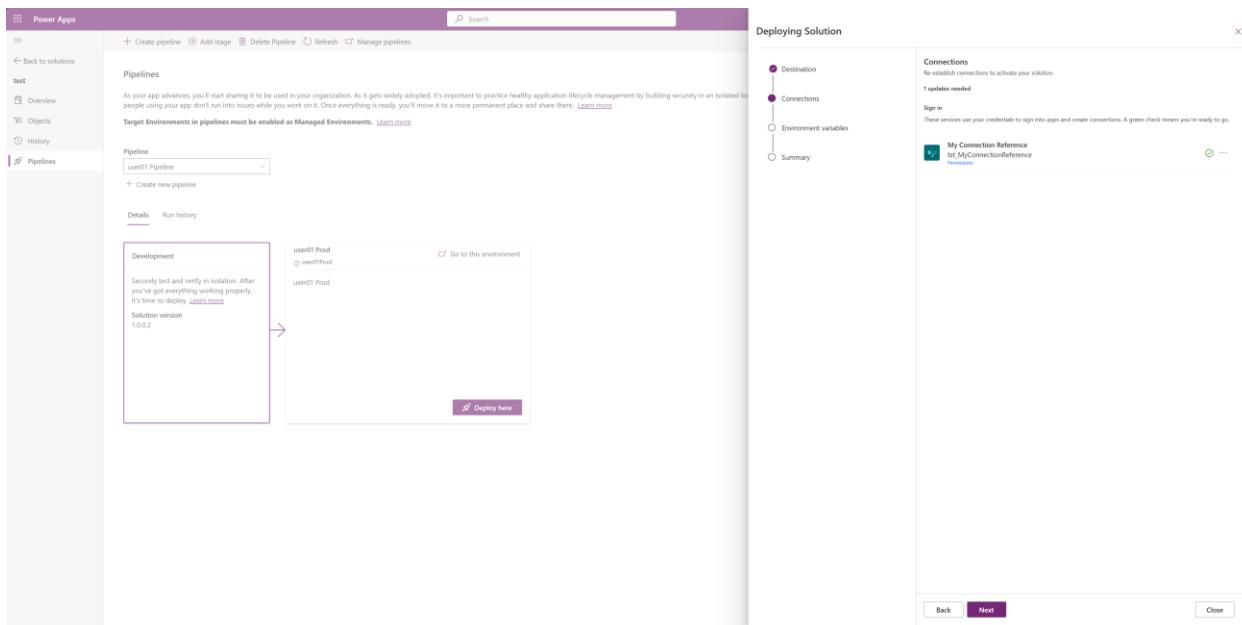
Task 2: Run the deployment to the production environment

Now it's time to deploy your solution to users in production.

1. Click **Deploy here**. Notice you have the option to deploy now or schedule this deployment for later. Click **Next** to deploy now.

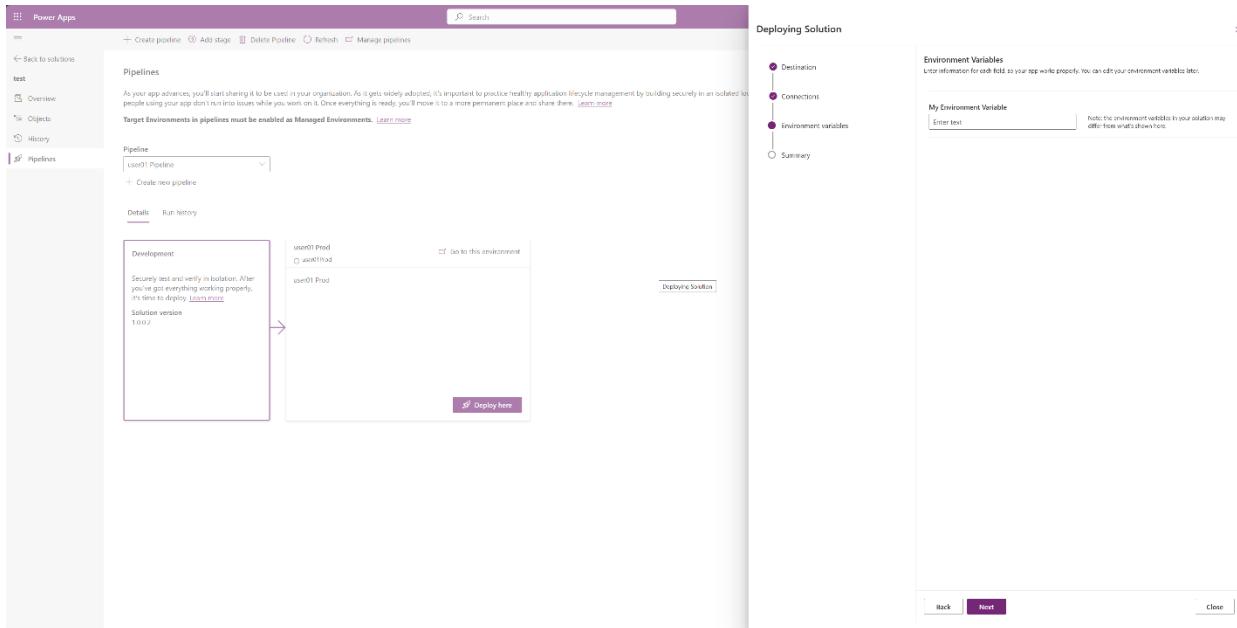


- When your solution contains connection references, you'll be signed into new **connections** for your apps, automations, Copilots, etc to use in Production.

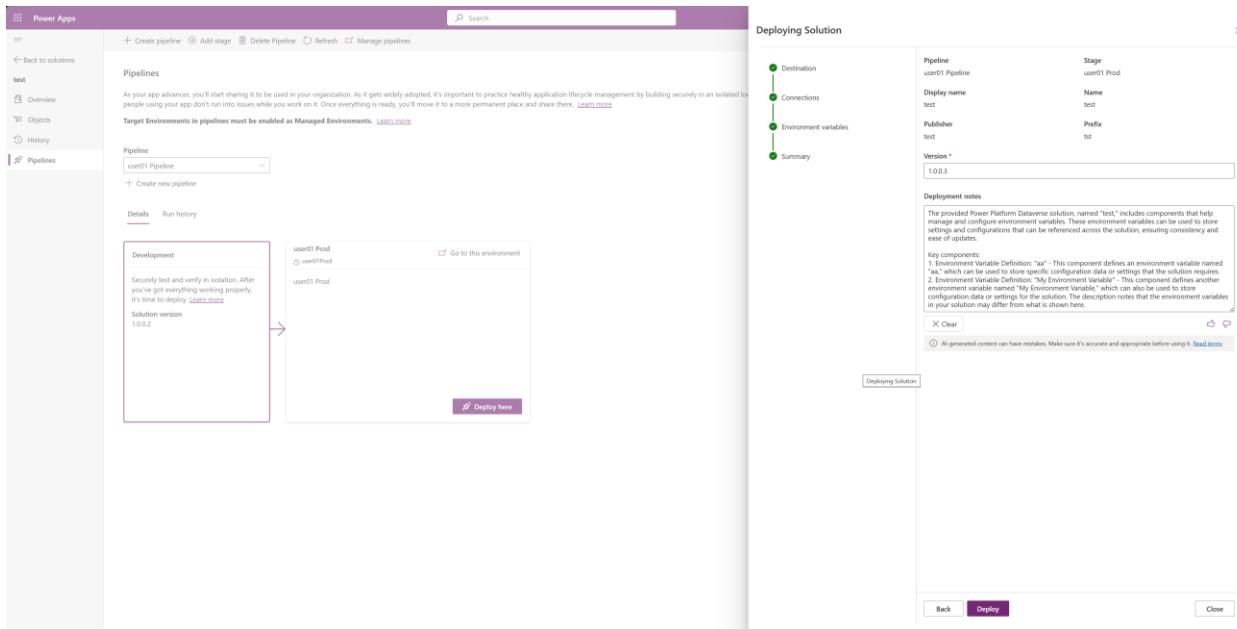


Note: some customers use service accounts and service principals (where supported) for connections in Production. Any type of supported connection can be created by clicking the ellipse, then Add new connection.

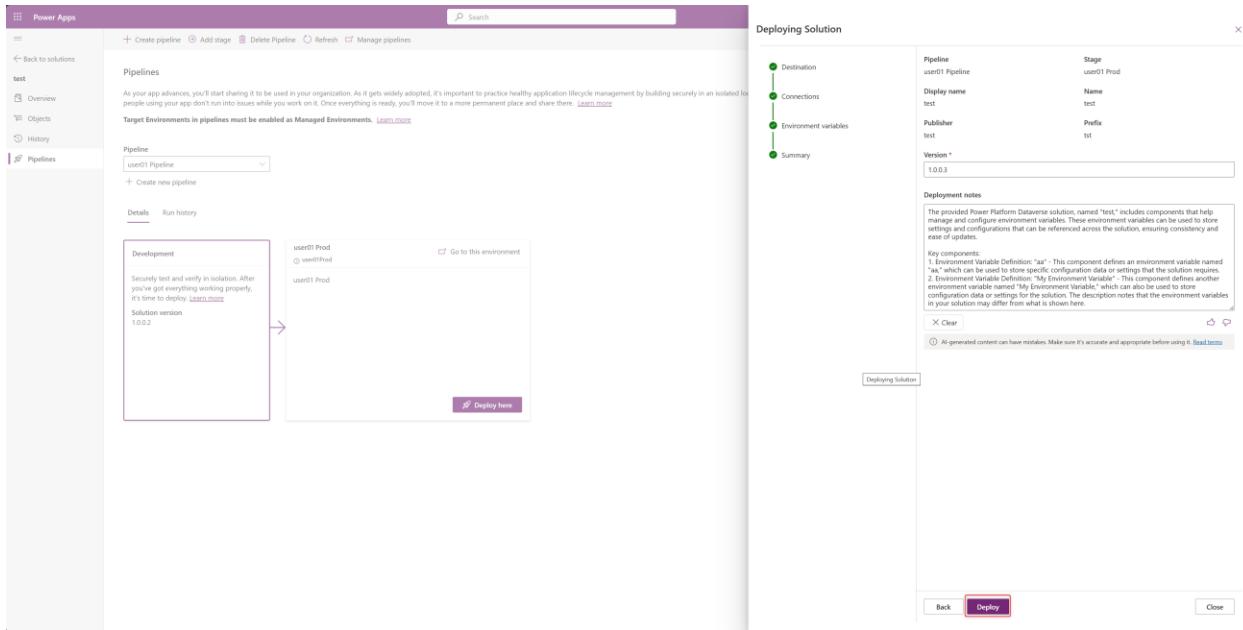
- Click **Next**
- When your solution contains environment variables, you can set new values here. If your solution doesn't contain environment variables then you won't see this screen.



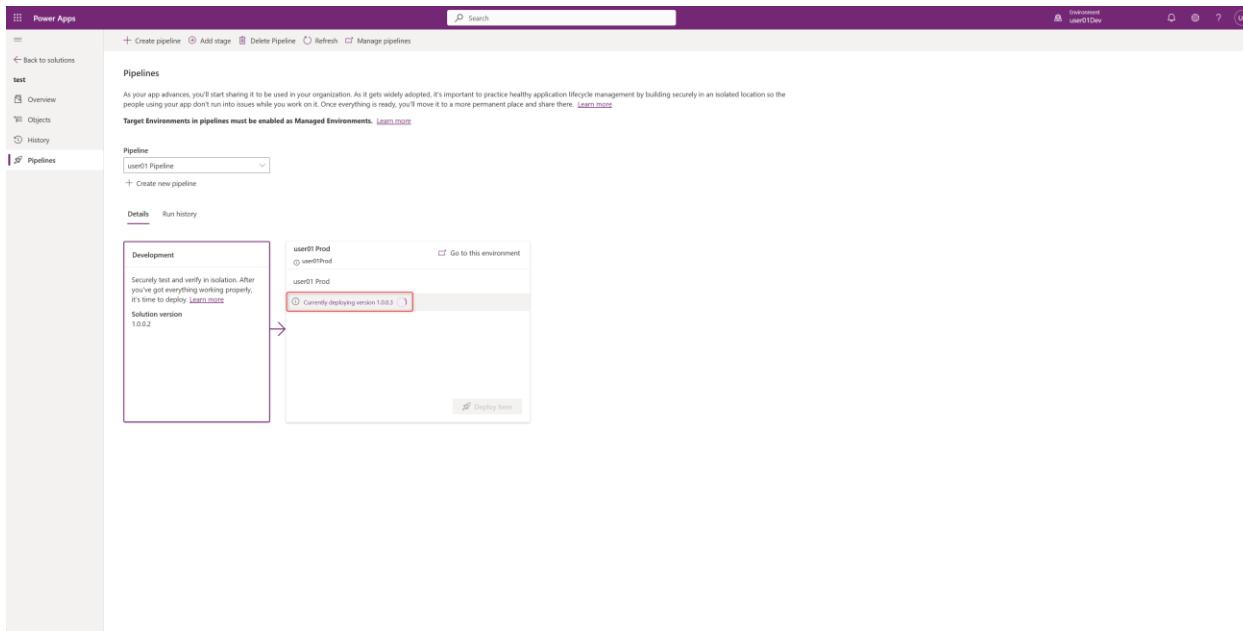
Enter a new value, then click **Next**.



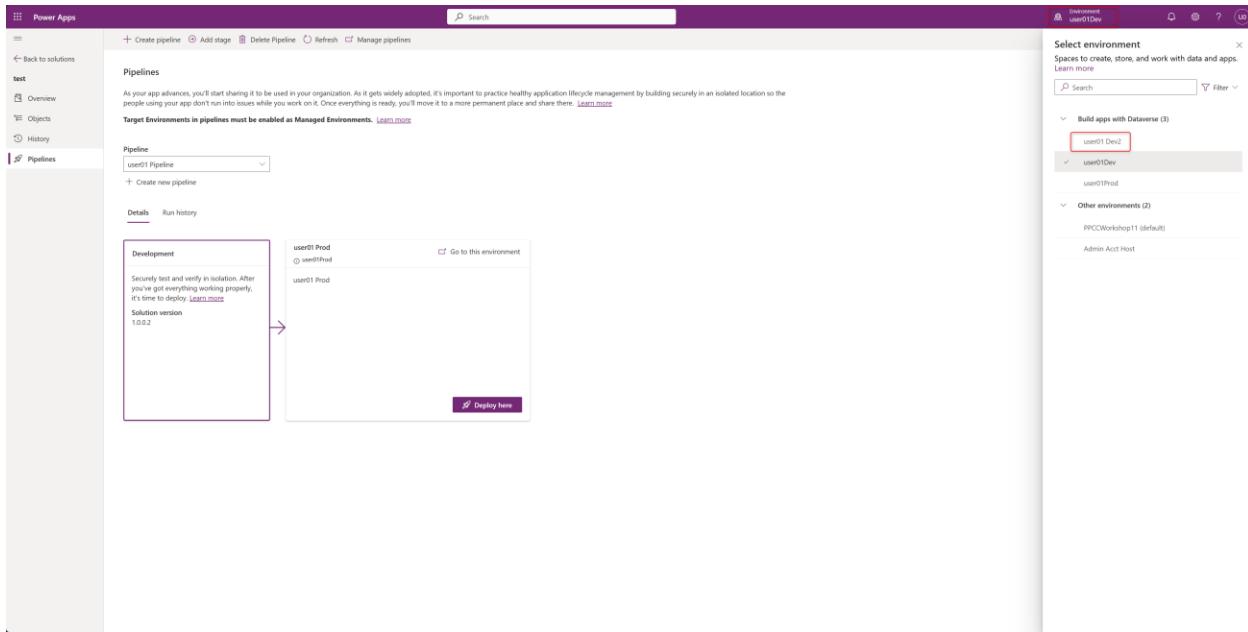
5. Confirm the details of your deployment and check the AI generated deployment notes to make sure it doesn't include any errors. Correct if needed. This summary is handy for approvers or when later identifying this solution.
6. Click **Deploy**



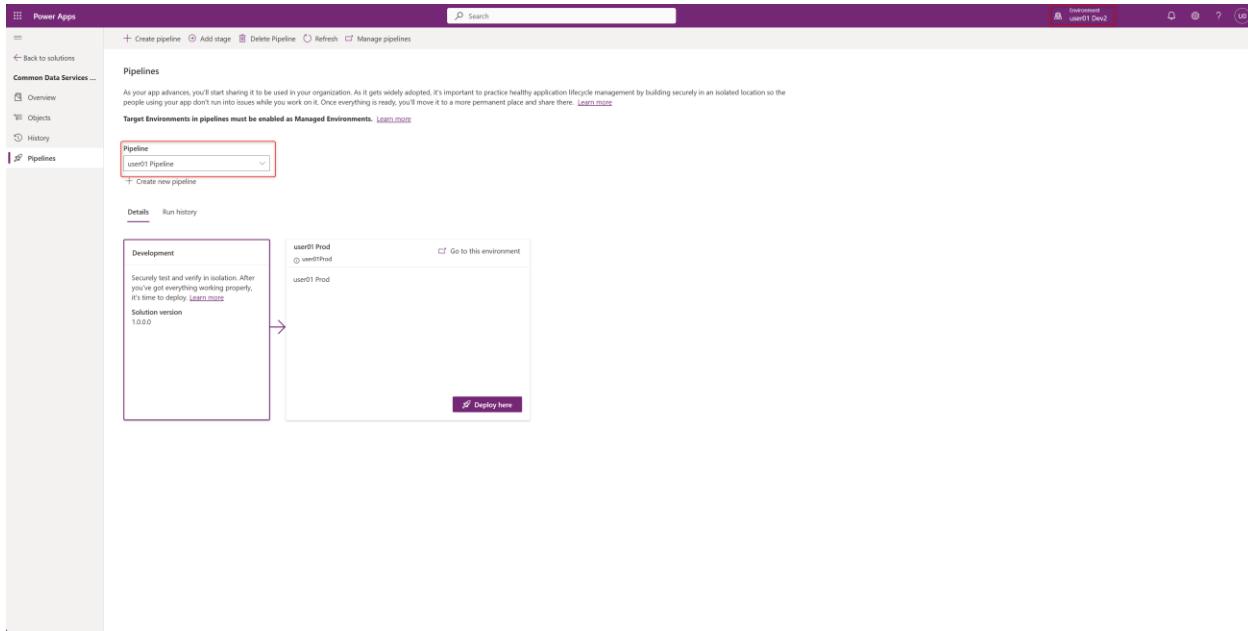
It will take a couple of minutes to deploy the solution to Production.



7. In the meantime, **Navigate** to your **2nd development environment**, then click into **any unmanaged solution** and select **Pipelines** from the left navigation.

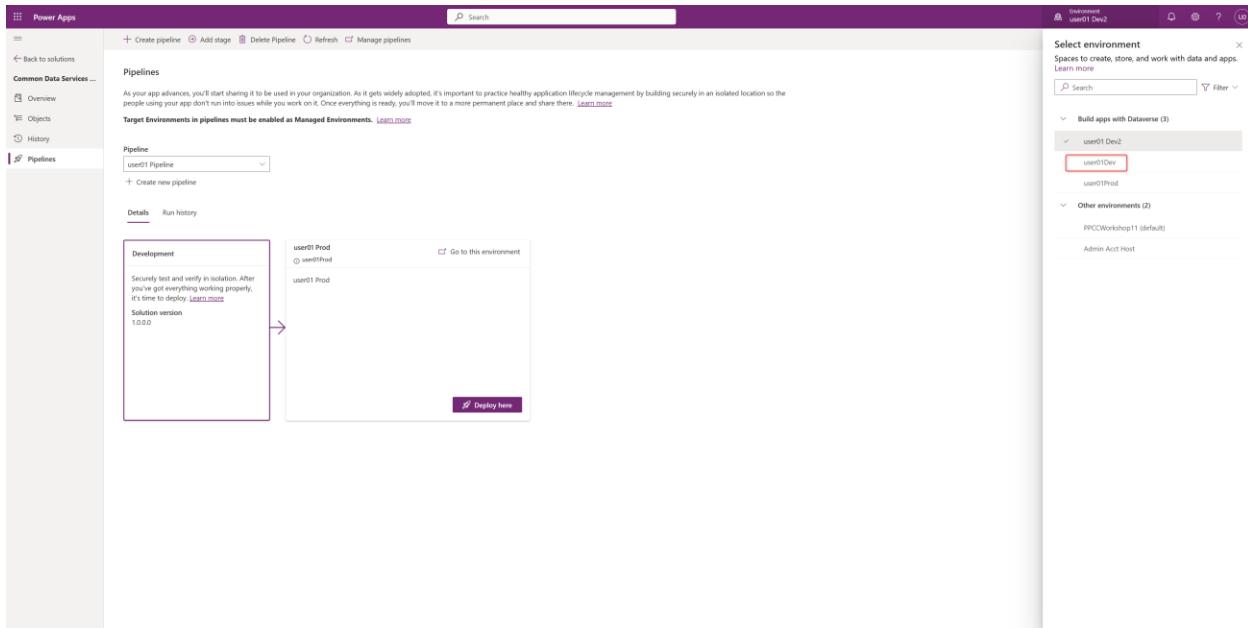


8. Notice you can use the same pipeline within your other development environment.

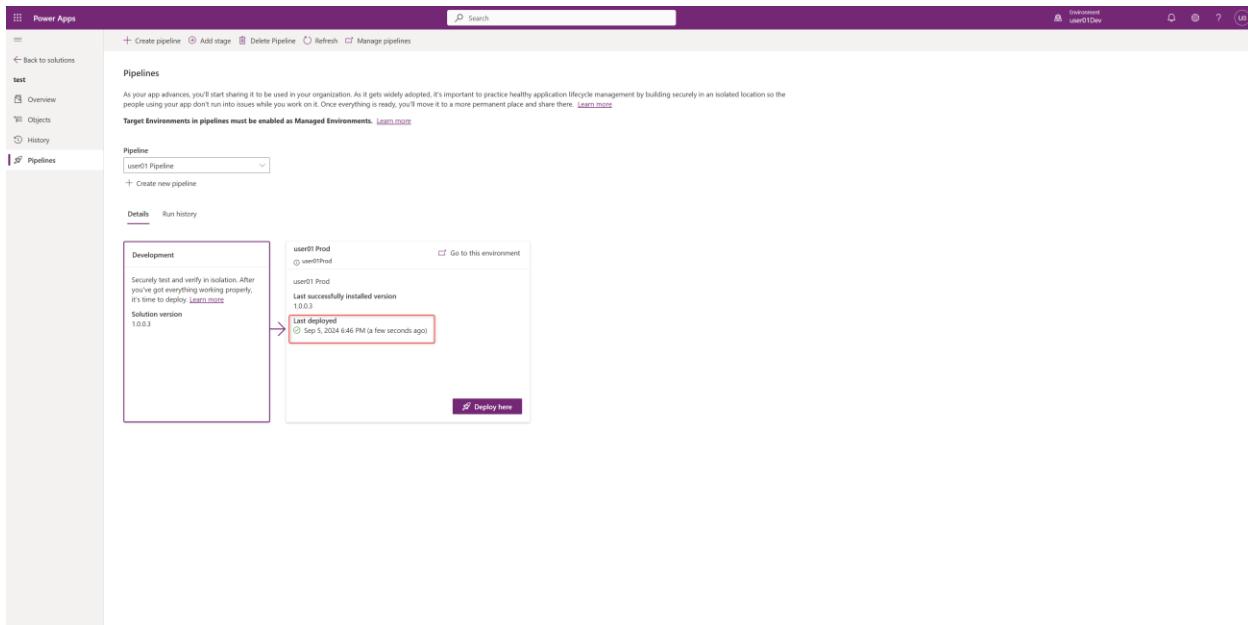


Note: accessing pipelines you have access to from within new development environments is new functionality intended to reduce admin overhead.

9. Switch back to your primary development environment and check on your deployment.



When completed, you'll see a green checkbox.



Task 3: Add delegated deployments with approvals

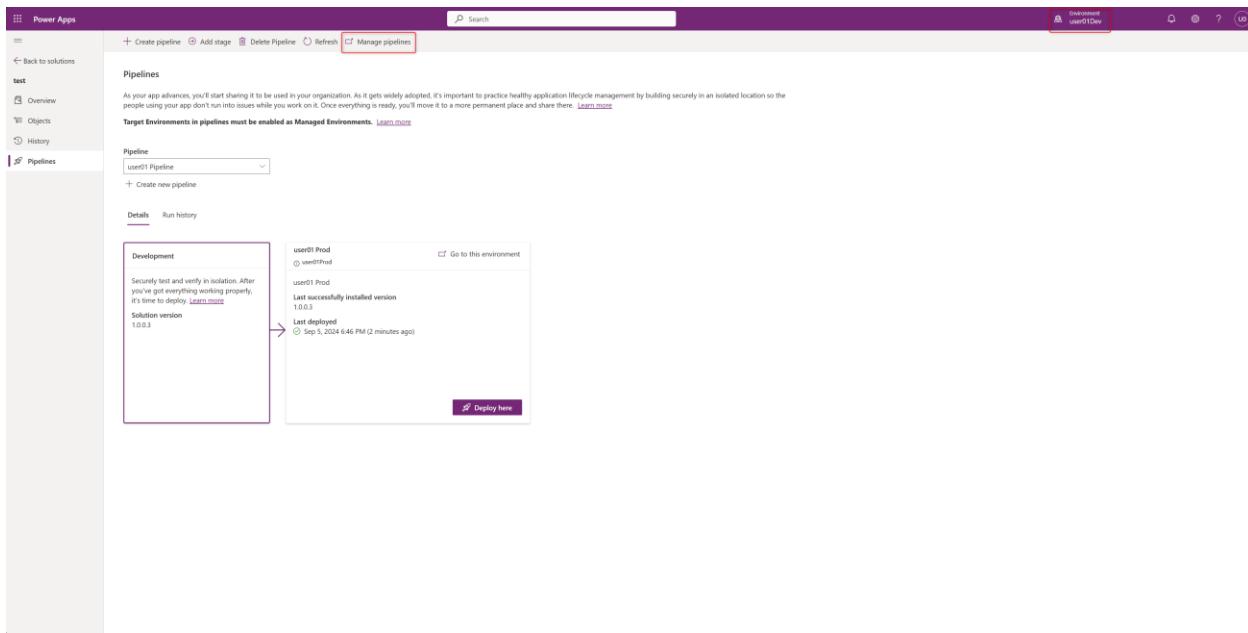
- Note: Task 3 and Task 4 aren't required to complete Task 5: *Re-deploy a prior version* or the next lab: *Catalog*.
- While recommended, these advanced tasks can be skipped if you're running behind schedule.

In this task, you will learn how to extend the pipeline and add an approval before deploying to production.

While administrators have permission to deploy to production, it's important makers and developers do not have elevated access. With delegated deployments, makers don't need elevated (or any access) to submit a deployment request to production. A deployment request must always be approved by an admin or other approver(s) configured by admins.

After setting up the approval, you'll play both roles: a maker submitting a deployment request to production and an admin approving the deployment request.

1. Go to your primary development environment in [maker portal](#).
2. Navigate to the **ContosoRealEstate** solution from Lab 2.1.
3. Select **Manage pipelines**. This is where more advanced pipelines configurations are managed.



The pipelines administrative app will launch.

4. **Select** your pipeline.

The screenshot shows the 'Deployment Pipeline Configuration' page in the Power Apps portal. The left sidebar has 'Pipelines' selected. The main area displays a table titled 'Active Deployment Pipelines' with one row. The row for 'user01 Pipeline' is highlighted with a red box. The columns include Name, Description, Modified On, Owner, and Created On.

5. Scroll down and select your **Production deployment stage**.

The screenshot shows the 'user01 Pipeline' details page. The left sidebar has 'Pipelines' selected. The main area shows the 'General' tab selected. Below it, the 'Deployment stages' tab is selected. A table titled 'Deployment Stages (Deployment Pipeline)' lists one stage: 'user01 Prod', which is highlighted with a red box.

6. Scroll down and select the **Is Delegated Deployment** checkbox.

Delegated Deployment Type: Service Principal

Client Id: **copy from the below table** for your workshop user.

Allow sharing requests: **Yes**

If your user name is between	SPN Client ID to use
User 01 – User 99	9506923e-1725-4237-aac5-b118ead16612

User 100 – User 198	8f2287f8-bbae-4f14-a3bd-b1032d44d453
User 199 and above	e92f27f7-fdfa-4ee1-a40a-893d9e2b3bad

The screenshot shows the 'Deployment Pipeline Configuration' screen in the Microsoft Power Apps portal. A specific deployment stage, 'user01 Prod', is selected. The 'General' tab is active. Key configuration details visible include:

- Name:** user01 Prod
- Owner:** user01 # (Offline)
- Description:** user01 Prod
- Deployment Pipeline:** user01 Pipeline
- Target Deployment Environment ID:** user01 Prod
- Is Delegated Deployment:** checked (highlighted by a red box)
- Delegated Deployment Type:** Service Principal
- SPN Client Id:** c8eb7134-9502-4732-9ec2-101337846458
- Allow sharing requests:** Yes

Go back to [Power Apps](#). Switch to the **Workshop Pipelines Host (Shared)** environment.

This environment was setup by your workshop admins as the dedicated “Pipelines Host”. Think of it as the control center for all deployments – it stores pipelines, run information, environment information, deployment approval flows, and more.

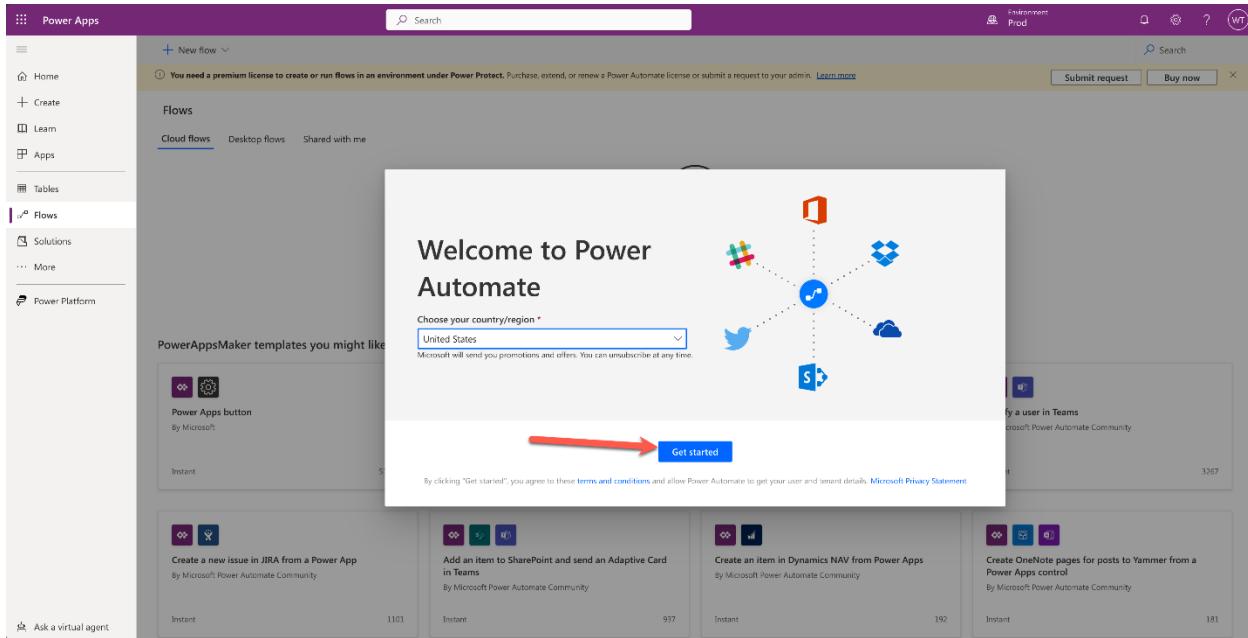
Workshop attendees have two security roles in this environment: 1) Deployment Pipeline Default – this allows you to create, view, edit, use, and delete pipelines you own. 2) Environment maker – this allows you to discover this environment and create, view, edit, and delete flows you own. Flows are used to extend pipelines functionality.

The screenshot shows the Power Apps home page. On the left, there is a navigation pane with options like Home, Create, Learn, Apps, Tables, Flows, Solutions, and More. Under Power Platform, there is also a 'Power Platform' option. A red arrow points to the 'Flows' link in the navigation pane. The main area features a large 'Let's build an app. What should it do?' pop-up with several buttons: Collect RSVPs, Track sales leads, List inventory, and Manage inspections. Below this, there is a text input field for everyday words to describe the app, followed by a 'See terms' link. There are also three 'Other ways to create an app' sections: Start with data, Start with a page design, and Start with an app template. At the bottom, there is a section titled 'Your apps' with a table listing five apps: Deployment Pipeline Configuration, Power Pages Management, Dataverse Accelerator App, Solution Health Hub, and Power Platform Environment Settings. Each entry includes columns for Name, Modified, Owner, and Type.

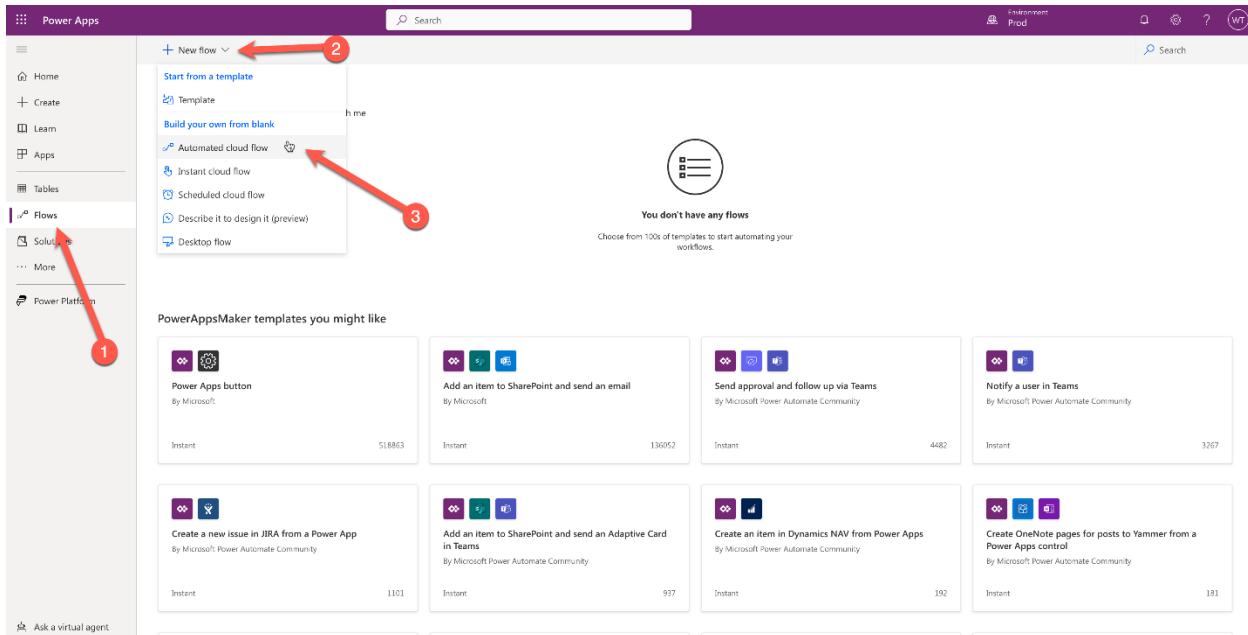
3. Select **Flows** in the left navigation pane

This screenshot is similar to the previous one, but the 'Flows' link in the navigation pane is highlighted with a red arrow. The rest of the interface remains the same, including the 'Let's build an app' pop-up and the 'Your apps' section below.

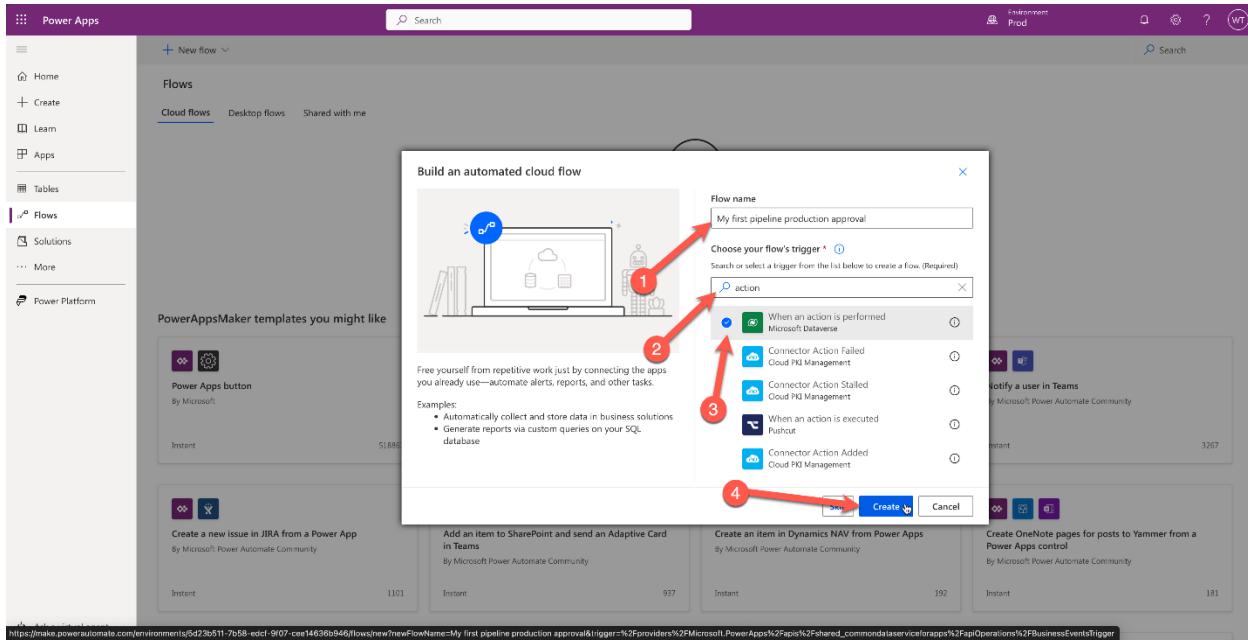
4. Select **Get started** in the welcome pop-up



5. Select **Flows** in the left navigation, select **New flow** in the command bar at the top and select **Automated cloud flow**



6. This will open a pop up where you can name your flow and configure a trigger. Name your flow **[User name] pipeline production approval**, search for action, select the Microsoft Dataverse trigger called When an action is performed and select the blue **Create** button.



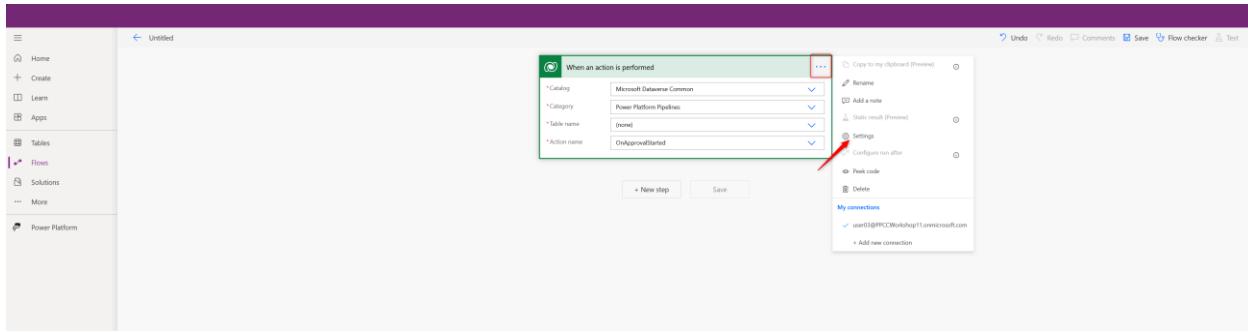
7. Configure the trigger inputs by making it look like the screenshot below. Use **OnApprovalStarted** for Action name.

When an action is performed

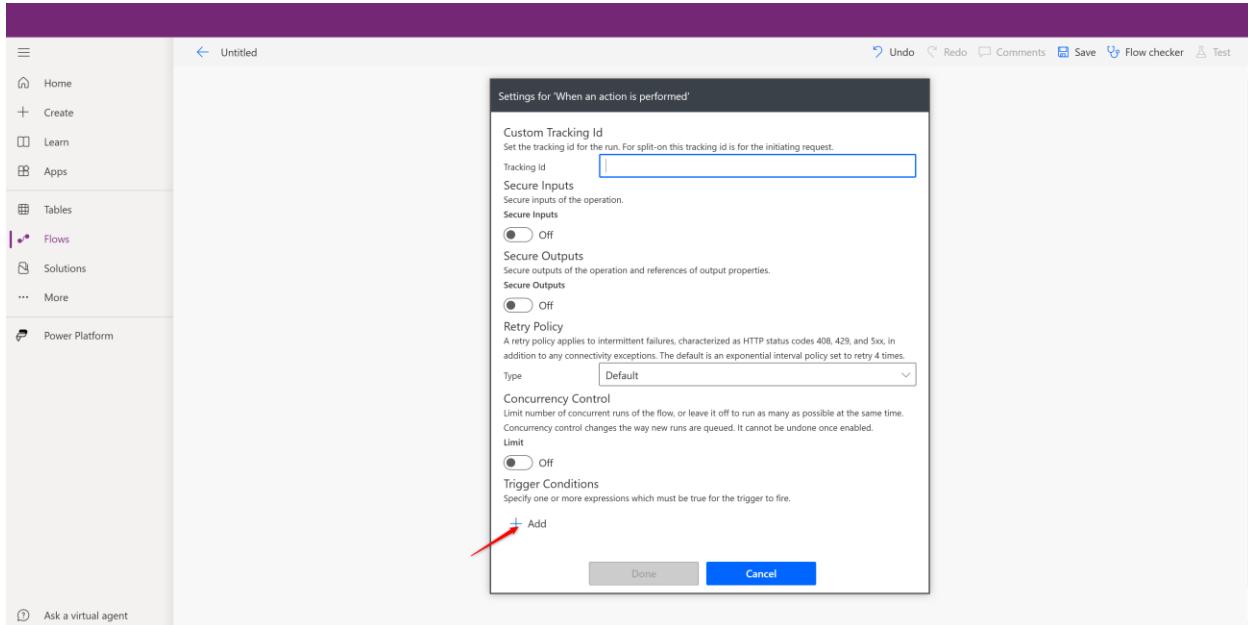
* Catalog	Microsoft Dataverse Common
* Category	Power Platform Pipelines
* Table name	(none)
* Action name	OnApprovalStarted

8.

Select the **ellipsis** at the top-right corner of the trigger and select **settings** to open up the trigger settings



9. Select the **Add** button below trigger conditions to add a trigger condition in the trigger settings



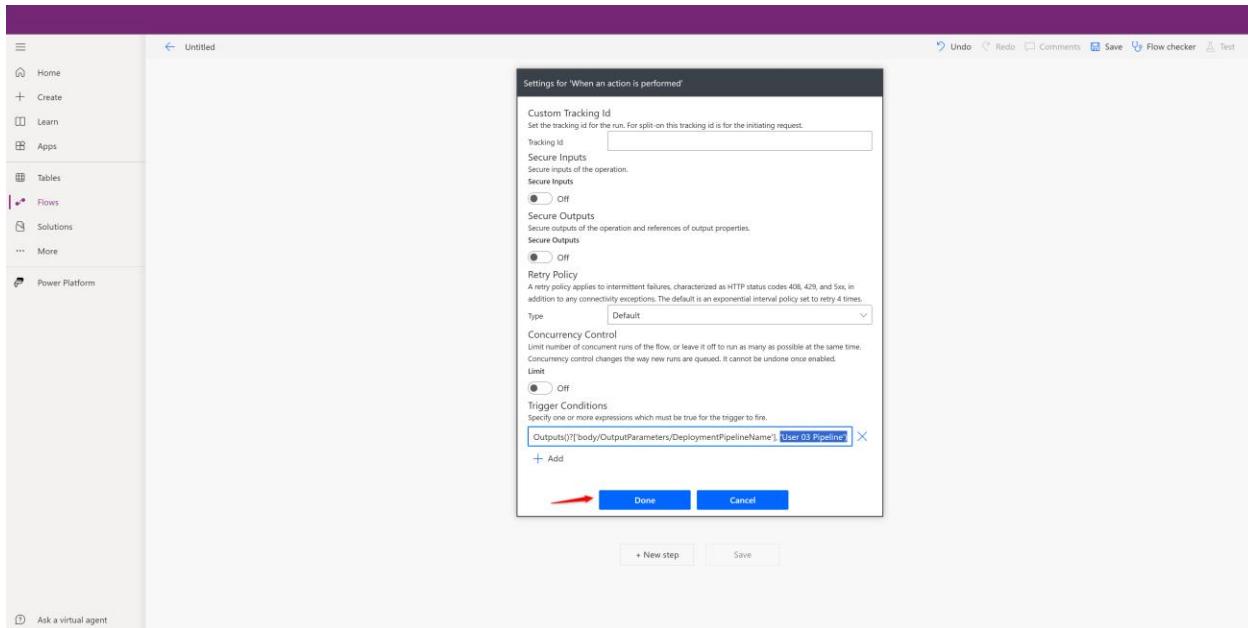
10. Add the following trigger condition to make sure the cloud flow only triggers when the pipeline name is equal to your pipeline's name:

```
@equals(triggerOutputs()?'body/OutputParameters/DeploymentPipelineName', 'My pipeline name')
```

Tip: Copy the name of your pipeline from the pipelines app and paste it into the flow. The pipeline name must match precisely.

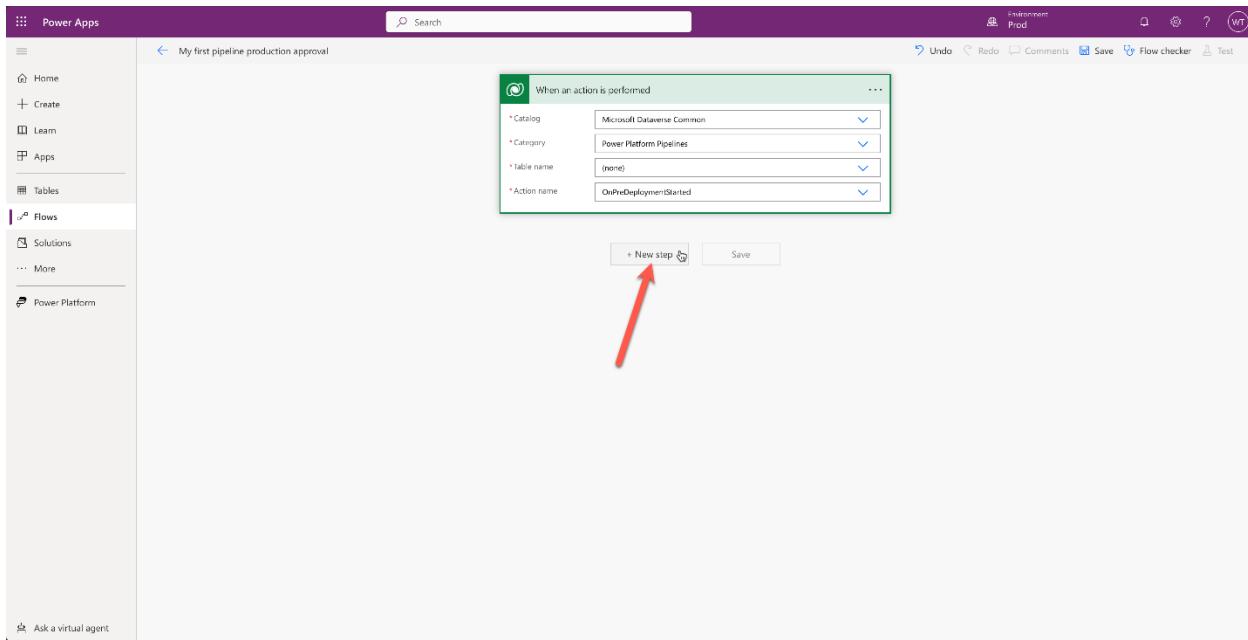
11. Select the **Add** button below the trigger condition above to add another trigger condition

12. Add the following trigger condition to make sure the cloud flow only triggers when the pipeline name is equal to your pipeline's.

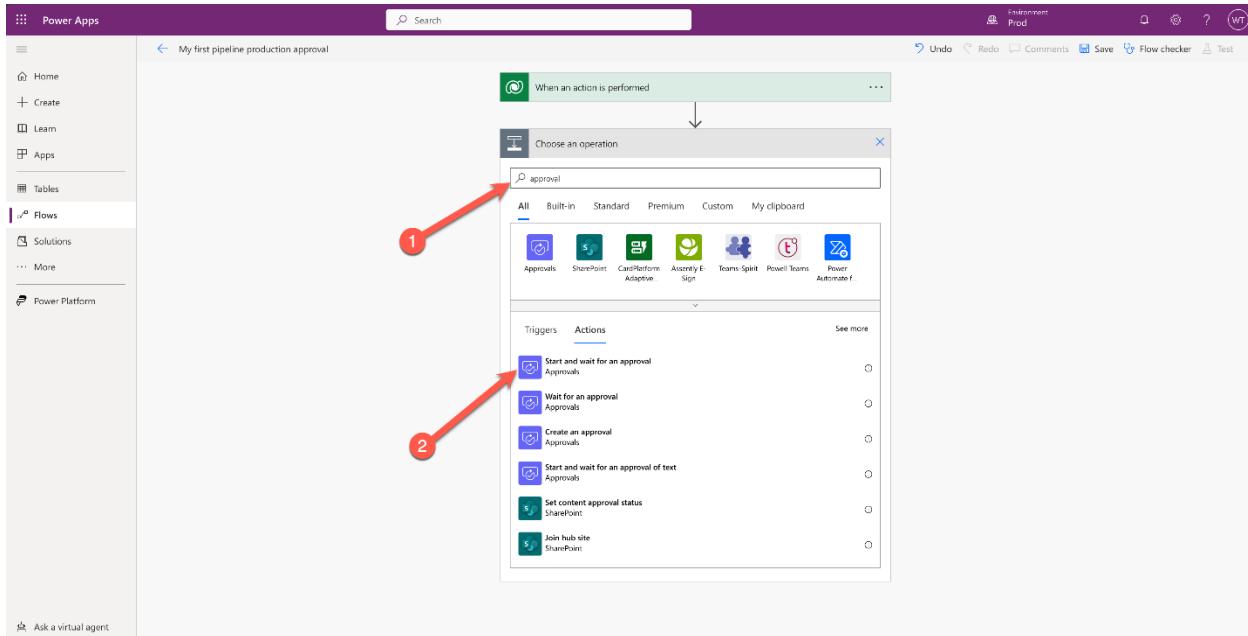


13. Select the **Done** button at the bottom of the trigger card to save the trigger conditions

14.+ New step



15. Search for approval and select the **Start and wait for an approval** action



16. Configure the approval action like the screenshot below:

For approval type, select **Approve/Reject - First to respond**

For title, add Approval requested for, select **ActionOutputs**

DeploymentPipelineName from the dynamic content fields on the right, add -, and select another dynamic content field from the right called **ActionOutputs**

DeploymentStageName.

For assigned to, add the **email address of your user.**

In production scenarios, this would be an admin that would approve deployments.

For details, add # Deployment notes, add a hard return, and select the **ActionOutputs DeploymentNotes** field from the dynamic content fields on the right.

For Item link, select the **ActionOutputs StageRunDetailsLink** field from the dynamic content fields on the right.

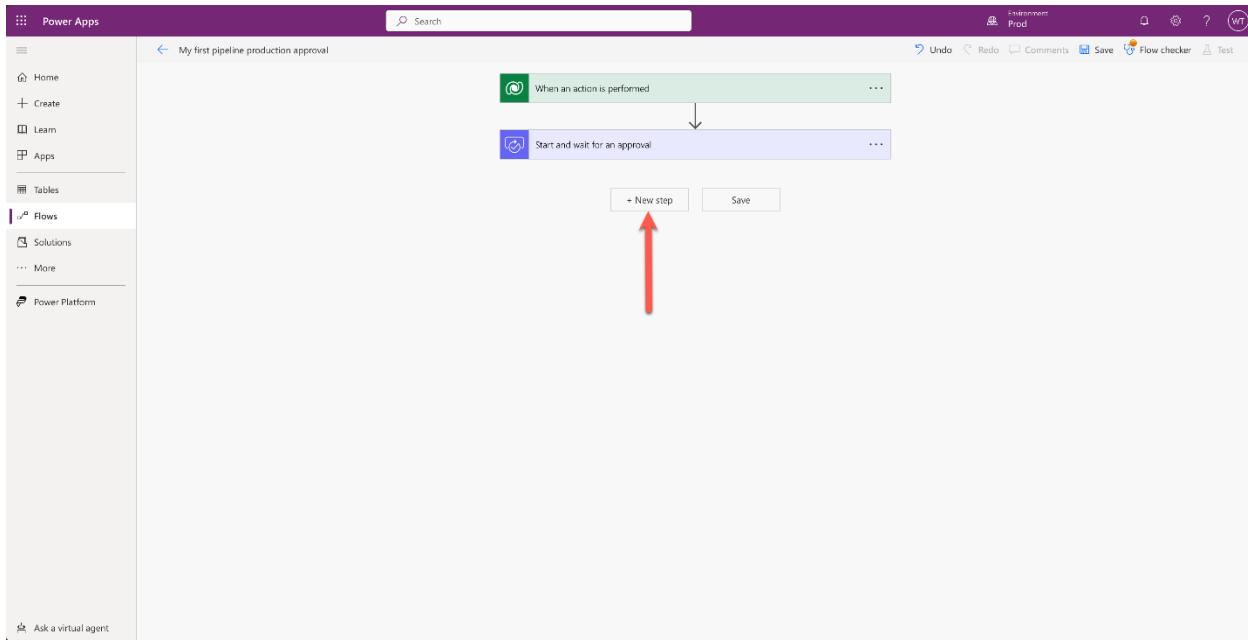
For item link description, add Stage Run Details.

 Start and wait for an approval ...

* Approval type	Approve/Reject - First to respond ✓
* Title	Approval requested for  ActionOutputs ... x
* Assigned to	Workshop Atte... x ;
Details	# Deployment notes  ActionOutputs ... x
Item link	 ActionOutputs ... x
Item link description	Stage Run Details

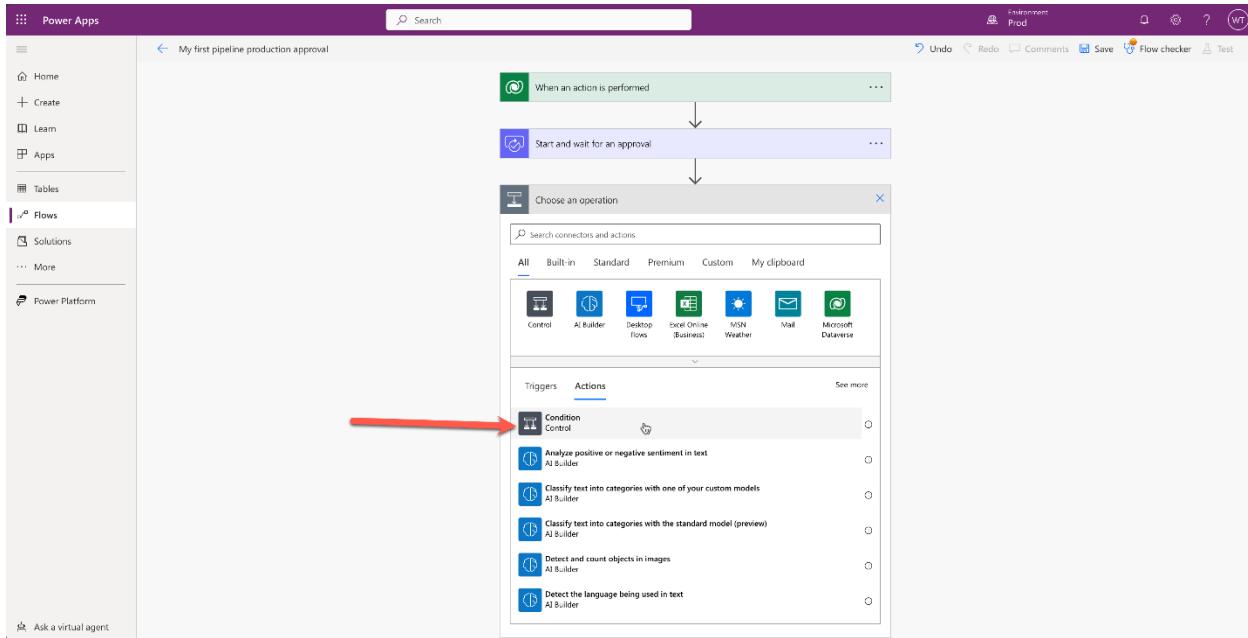
[Show advanced options](#) ▼

17. Select the **New step** button to add a condition below the Start and wait for an approval action



The screenshot shows the Microsoft Power Apps Flow builder interface. On the left, there's a navigation bar with 'Power Apps', 'Home', 'Create', 'Learn', 'Apps', 'Tables', 'Flows' (which is selected), 'Solutions', 'More', and 'Power Platform'. Below the navigation is a search bar and a toolbar with 'Environment Prod', 'Undo', 'Redo', 'Comments', 'Save', 'Flow checker', and 'Test'. The main area displays a flow titled 'My first pipeline production approval'. The flow consists of two steps: 'When an action is performed' (green card) and 'Start and wait for an approval' (purple card). At the bottom of the step list, there are two buttons: '+ New step' (highlighted with a red arrow) and 'Save'.

18. Add the **Condition** action



19. Add the **Outcome** dynamic content field from the **Start and wait for an approval** action in the first input field of the condition

20. Add the text Approve to the other input field of the condition

21. Select the **Add an action** button in the **If yes** part of the condition and add the **Perform an unbound action** from the Microsoft Dataverse connector

Select **UpdateApprovalStatus** as Action Name.

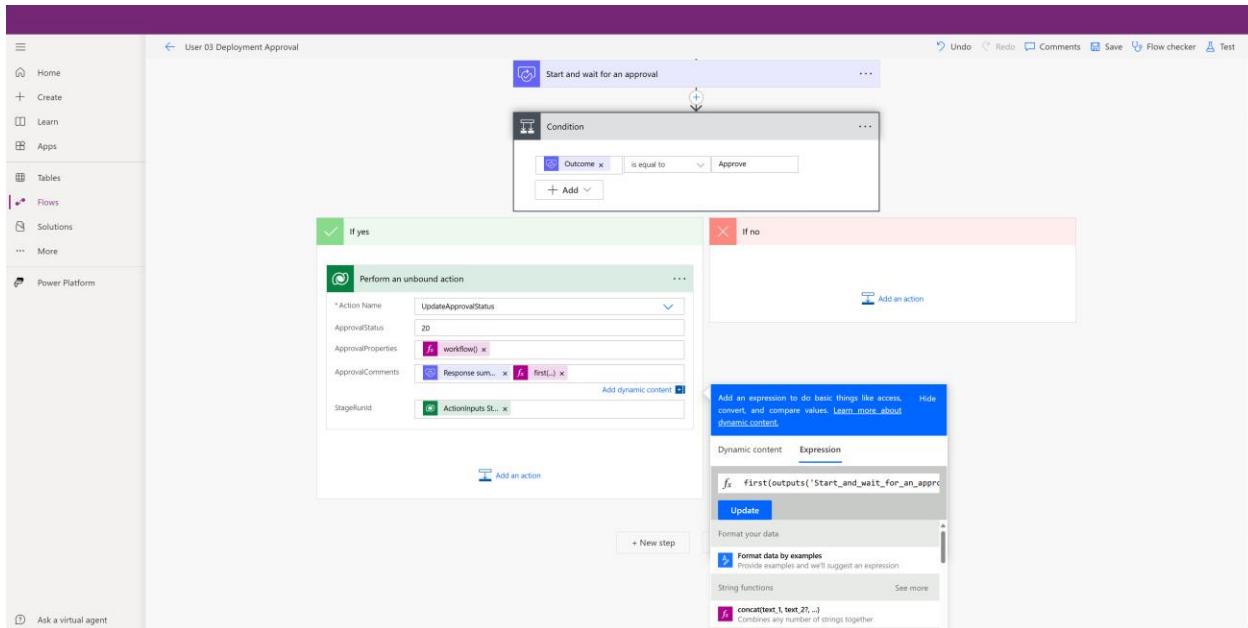
Add 20 as the **ApprovalStatus** (20 is the status ID for approved).

Optionally, add workflow() as an expression for **ApprovalProperties**. This way pipelines admins have a direct link to this flow run when troubleshooting deployments.

Add the **Response summary** dynamic content field from the **Start and wait for an approval** action as ApprovalComments.

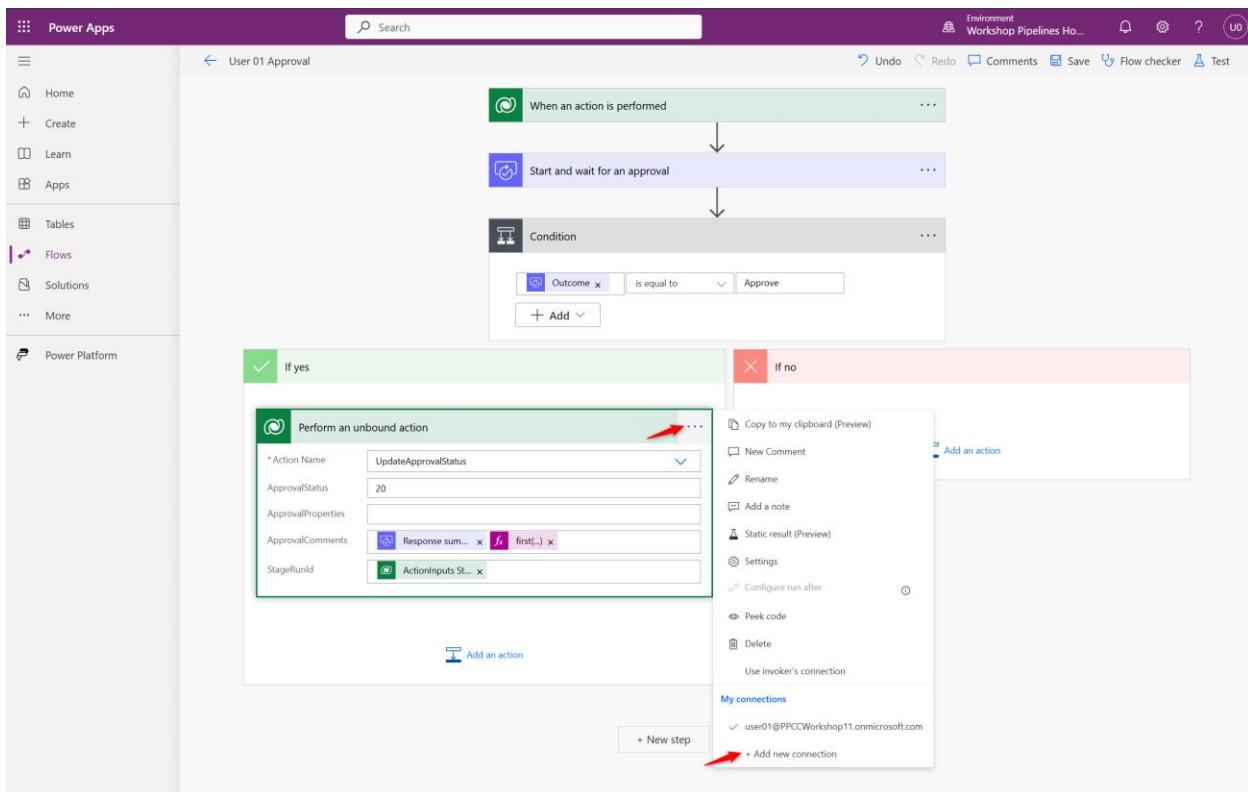
Add the following expression via the expression panel to the **Comments** field and select the blue **OK** button:

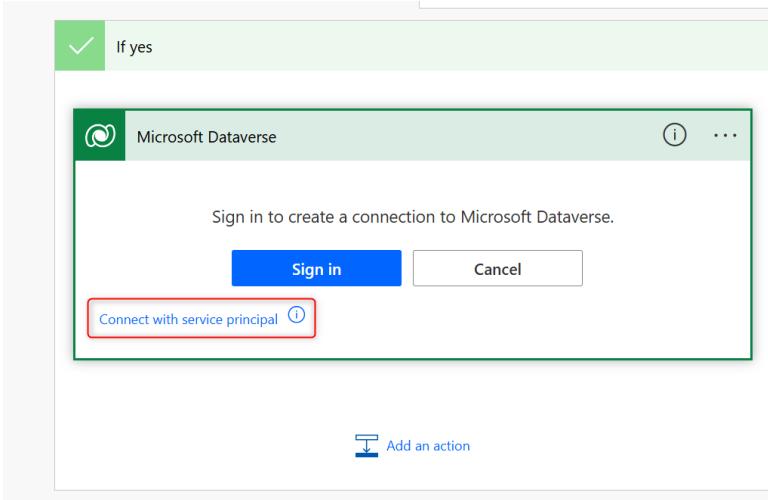
```
first(outputs('Start_and_wait_for_an_approval')?['body/responses'])?['comments'])
```



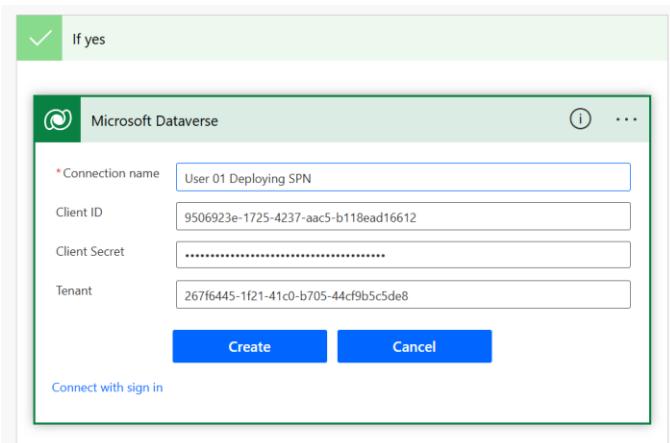
Add the **ActionInputs StageRunId** dynamic content field from the **When an action is performed** trigger as StageRunId.

22. Add new connection, then select Connect with service principal.

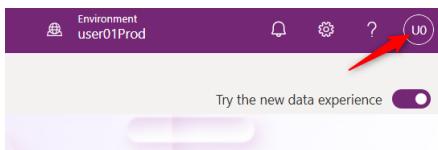




23. For **Connection name**, enter [Your workshop user name] Deploying SPN. From the below table, use the corresponding **Client ID**, and **Tenant** for your workshop user.



You can find your workshop user here.



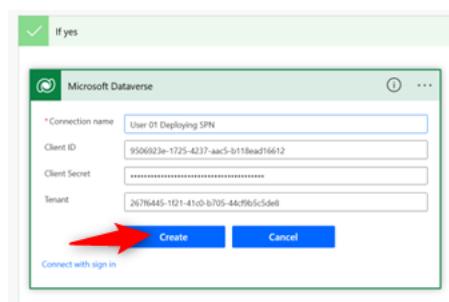
Your user name	Client ID	Secret	Tenant
User 01 – User 99	9506923e-1725-4237-aac5-b118ead16612	ALM Workshop SPN User 01-99 - Microsoft Entra admin center	267f6445-1f21-41c0-b705-44cf9b5c5de8
User 100 – User 198	8f2287f8-bbae-4f14-a3bd-b1032d44d453	https://entra.microsoft.com/#view/Microsoft_AAD_Regis	267f6445-1f21-41c0-b705-44cf9b5c5de8

		<u>teredApps/ApplicationMenuBlade/~/Credentials/appId/8f2287f8-bbae-4f14-a3bd-b1032d44d453/isMSAApp~/false</u>	
User 199 and above	e92f27f7-fdfa-4ee1-a40a-893d9e2b3bad	<u>https://entra.microsoft.com/#view/Microsoft_AAD_RegistedApps/ApplicationMenuBlade/~/Credentials/appId/e92f27f7-fdfa-4ee1-a40a-893d9e2b3bad/isMSAApp~/false</u>	267f6445-1f21-41c0-b705-44cf9b5c5de8

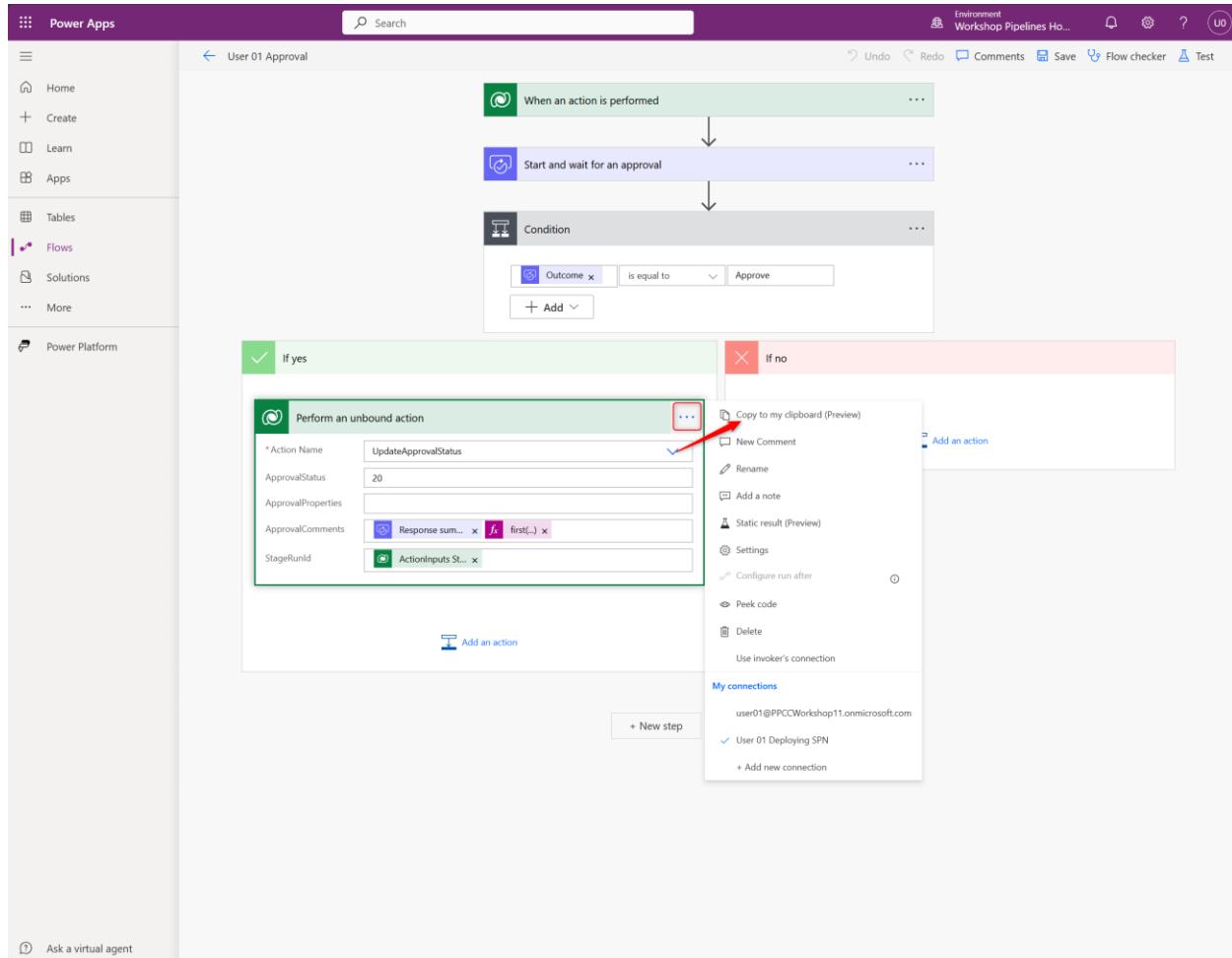
Click the corresponding **Secret** link above then create a new secret in Microsoft Entra.

The screenshot shows the Microsoft Entra admin center interface. On the left, the navigation menu includes sections like Home, Favorites, Identity, Users, Groups, Devices, Applications (with sub-options for Enterprise applications, App registrations, Roles & admins, Protection, Identity Governance, External Identities, and Show more), Protection, Identity Governance, Verified ID, Permissions Management, and Global Secure Access. The main content area is titled 'ALM Workshop SPN User 01-99 | Certificates & secrets'. It displays information about certificates and secrets, with a specific focus on client secrets. A modal window titled 'Add a client secret' is overlaid on the page, containing fields for 'Description' (with placeholder 'Enter a description for this client secret'), 'Expires' (set to 'Recommended: 180 days (6 months)'), and 'Value' (which is currently empty). The 'Value' field is highlighted with a red arrow.

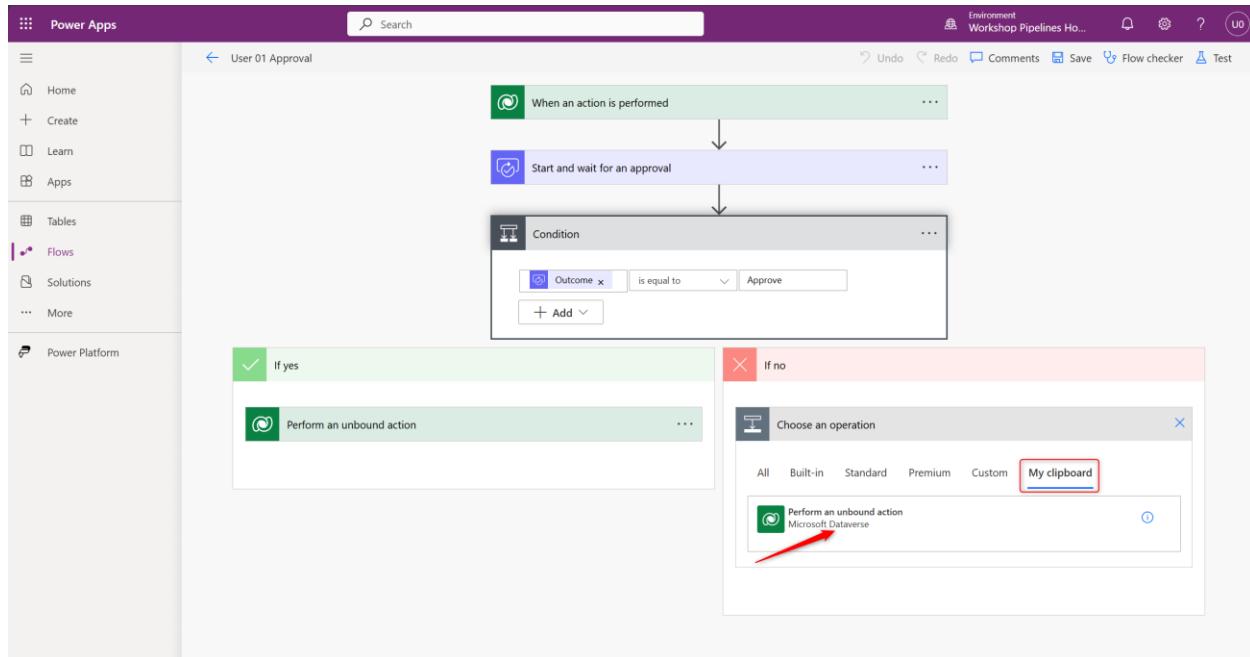
Copy the **Value**, navigate back to the flow editor, paste as the Client Secret, and **Create** the connection. This approval action will now run under the service principal's connection.



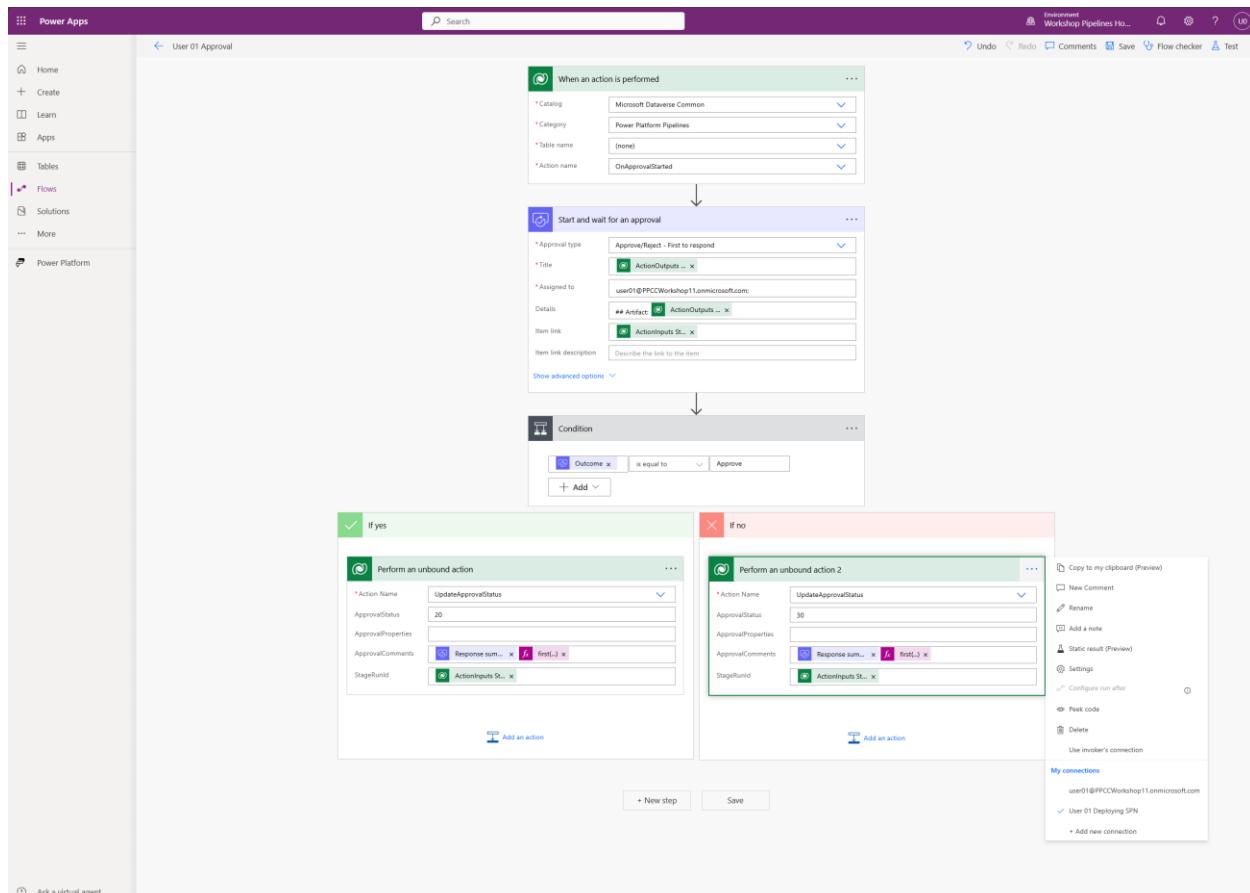
Copy this action to your clipboard so you can reuse it.



24. Add an action under the If no condition, then select **My clipboard** and select the action you copied in the last step.



Change ApprovalStatus to 30 (fail the deployment).



23. Save the flow

24. Navigate to the admin center

The screenshot shows the Power Apps admin center interface. On the left, there's a navigation bar with options like Home, Create, Learn, Apps, Tables, Flows, Solutions, More, and Power Platform. The Flows section is currently selected, showing a list of flows under 'Cloud flows'. A search bar at the top right has the placeholder 'Search'. On the right, a 'Settings' sidebar is open, featuring a 'Power Apps' section with 'Admin center' (which has a red box around it) and other options like 'Plan(s)', 'Advanced settings', 'Session details', 'Developer resources', and 'Power Apps settings'. Below this are sections for 'Themes' (with preview cards), 'Password' (with a link to change it), and 'Contact preferences' (with a link to update them). A red arrow points from the text in step 24 to the 'Admin center' button in the sidebar.

25. In the left navigation, select **Environments**, then drill into your **Production** environment.

The screenshot shows the Power Platform admin center. The left navigation bar includes 'Home', 'Environments' (which is highlighted with a red box), 'Advisor', 'Analytics', 'Billing', 'Resources', and 'Help + support'. The main area is titled 'Environments' and contains a table with environment details. The table has columns: Environment, Type, State, Dataverse, Managed, and Region. It lists three environments: 'user01 Dev2' (Developer, Ready, Yes, No, United States), 'user01Prod' (Developer, Ready, Yes, No, United States, indicated by a red arrow), and 'user01Dev' (Developer, Ready, Yes, No, United States).

Environment	Type	State	Dataverse	Managed	Region
user01 Dev2	Developer	Ready	Yes	No	United States
user01Prod	Developer	Ready	Yes	No	United States
user01Dev	Developer	Ready	Yes	No	United States

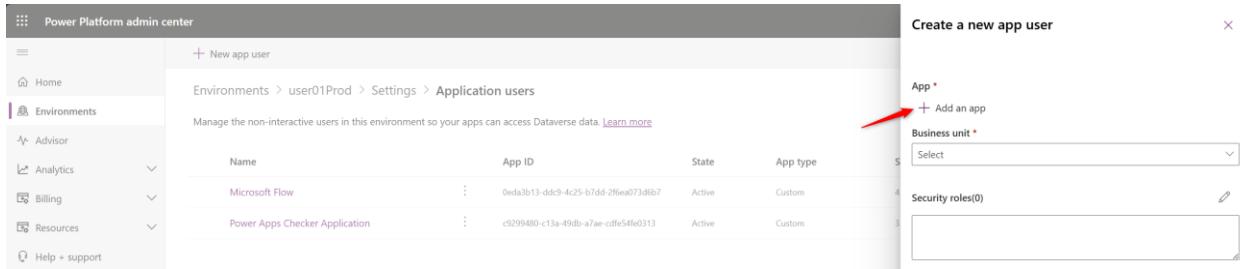
26. Select S2S apps

The screenshot shows the Power Platform admin center interface. On the left, there's a navigation sidebar with various sections like Home, Analytics, Billing, Resources, Help + support, Data integration, Data (preview), Policies, and Admin centers. The main area is titled 'Environments > user01Prod'. It has two main tabs: 'Details' and 'Auditing'. Under 'Details', there are sections for Environment URL (org79be3305.crm.dynamics.com), Region (United States), Type (Developer), Organization ID (1c9a560d-2f67-ef11-a66d-002248257b17), State (Ready), Refresh cadence (Frequent), Security group (Not assigned), and Environment ID (e014b610-26c9-eba5-847e-3ab078fa1701). Under 'Auditing', it shows Auditing enabled (No), Retain audit logs for (Forever), and options to Free up capacity or Delete audit logs. Below these tabs is a table with columns Version, Managed Environments, and Updates. The 'Managed Environments' column shows Dataverse version 9.2.24074.216 and No managed environments. The 'Updates' column shows a circular progress bar. To the right, there's a 'Access' panel with sections for Security roles, Teams, Users, S2S apps (which is highlighted with a red arrow), and Business Units. Below that is a 'Resources' panel with sections for Power Pages sites, Power Apps, and Flows.

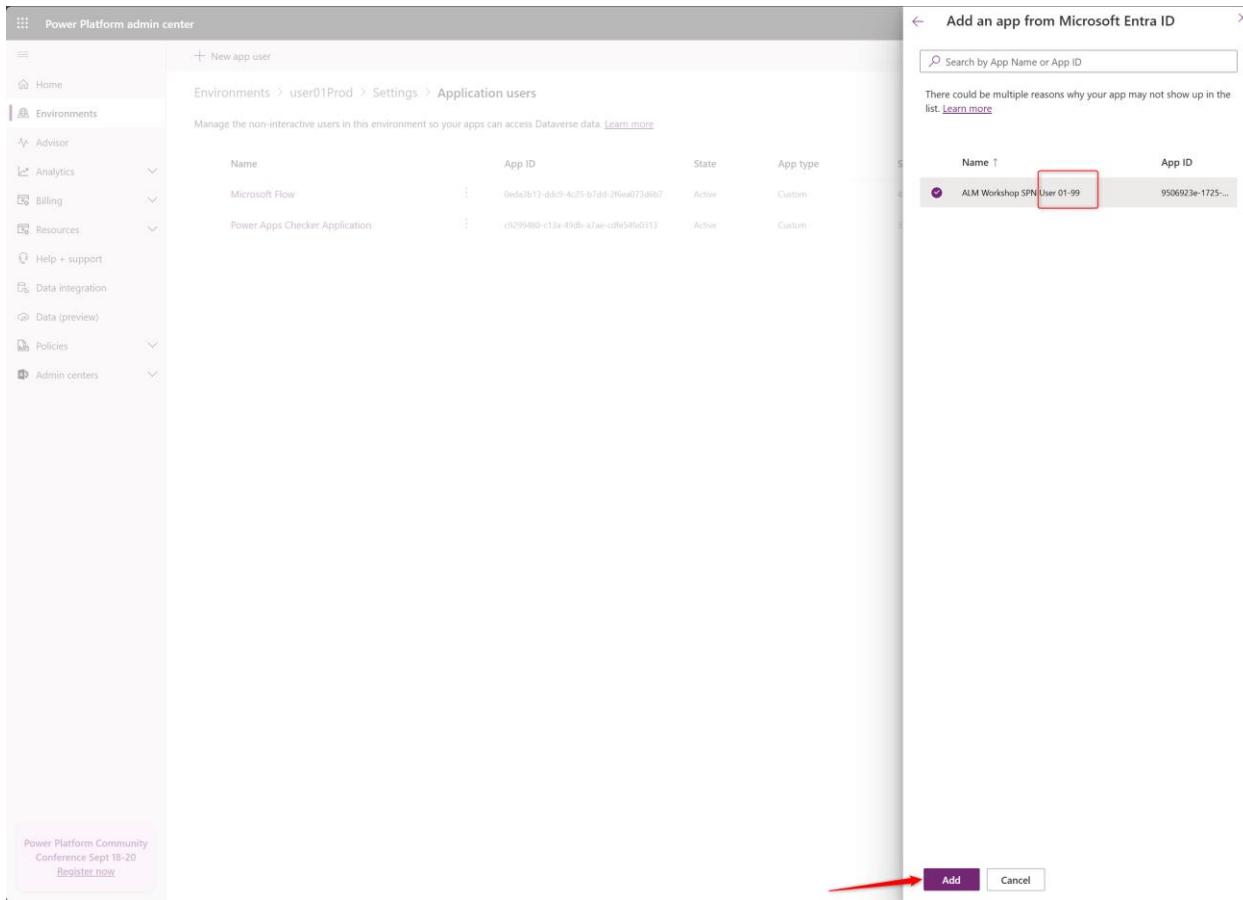
27. Add a New app user

The screenshot shows the Power Platform admin center interface. The navigation sidebar is identical to the previous screenshot. The main area is titled 'Environments > user01Prod > Settings > Application users'. It says 'Manage the non-interactive users in this environment so your apps can access Dataverse data.' with a 'Learn more' link. Below this is a table of application users. The table has columns for Name, App ID, and State. There are two entries: 'Microsoft Flow' with App ID 0eda3b13-ddc9-4c25-b7dd-2f6ea073d6b7 and State Active; and 'Power Apps Checker Application' with App ID c9299480-c13a-49db-a7ae-cdf54fe0313 and State Active. At the top of the application users page, there's a '+ New app user' button, which is highlighted with a red arrow.

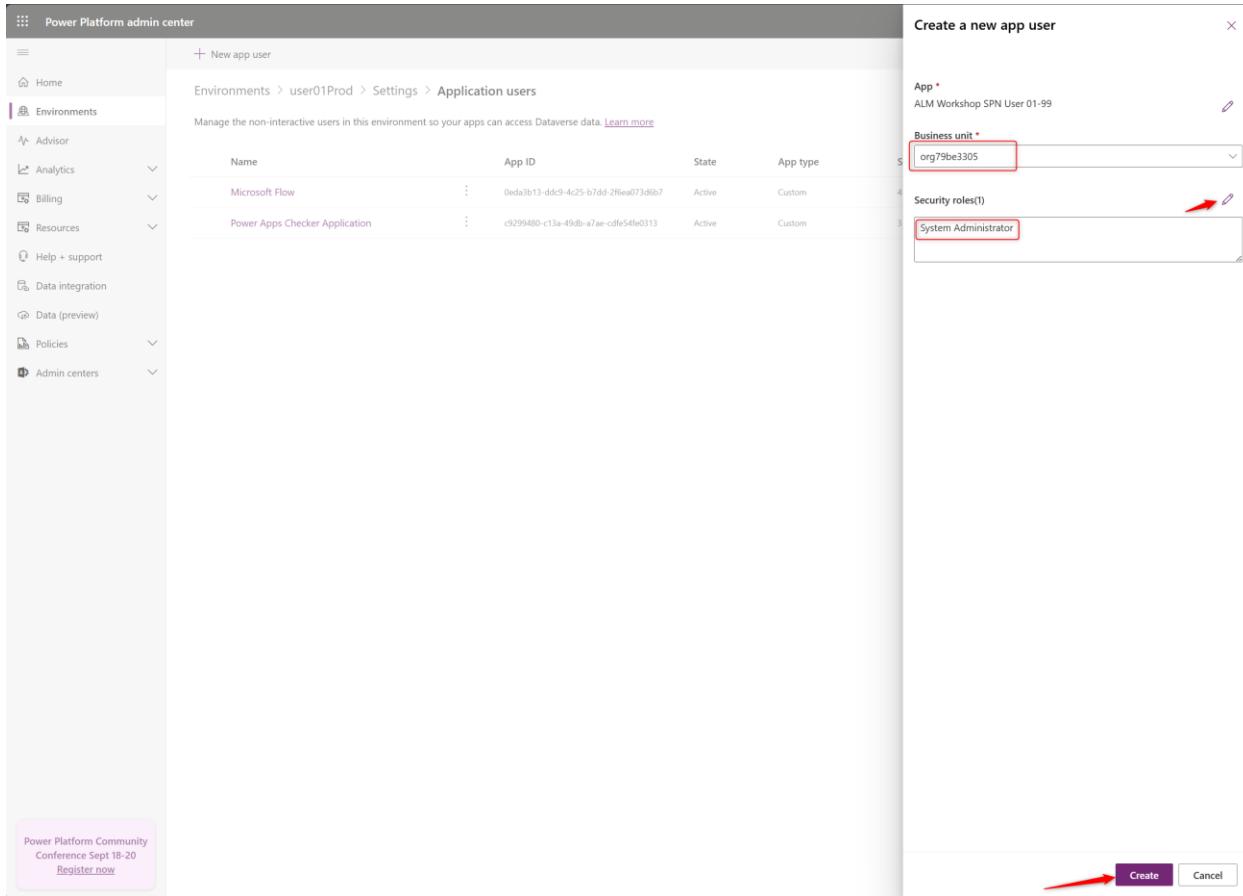
28. Add an app



29. Search for the SPN associated with your workshop user, then add it.



30. Select the default Business unit, the **System Administrator** security role, then **Create**.



Note: your workshop admins already added the service principal to the pipelines host.

Now the pipeline is configured to deploy using this service principal, your flow is configured to approve the deployment using the same service principal, and this service principal has access to deploy to production.

Task 4: Submit and approve a deployment

- **Prerequisite:** Task 3. Tasks 3 & 4 are not required to complete Task 5 or the next lab.

In this task, you are going to find out if the approval you configured in the last task actually works! Because this pipeline is deploying as a service principal (vs you), you'll request sharing as part of the deployment request.

Prerequisite:

1. Create a **new security group** in Microsoft Entra using this link: [New Group - Microsoft Entra admin center](#)

- a. Group type: Security**
- b. Group name: [Your user name] App Access**
- c. Membership type: Assigned**

Microsoft Entra admin center

Home > New Group

Group type * Security

Group name * User 0x App Access

Group description Enter a description for the group

Membership type * Assigned

Owners No owners selected

Members No members selected

2. Add your workshop user as a member.

Microsoft Entra admin center

Home > New Group

Add members

Try changing or adding filters if you don't see what you're looking for.

Search All Users Groups Devices Enterprise applications

Name	Type	Details
AAD App Management	Enterprise application	f0ae4899-d877-4d3c-ae25-679e38eea492
Azure ATP pccworkshop11 Admins	Group	
LAPTOP-MARCELF	Device	4b74620a-d915-4483-a31a-34b2252cadd1
user 01	User	user01@PPCCWorkshop11.onmicrosoft.com
AAD Request Verification Service	Enterprise application	c728155f-7b2a-4502-a08b-b8af9b269319
Azure ATP pccworkshop11 Users	Group	
User 02	User	user02@PPCCWorkshop11.onmicrosoft.com
ALM Workshop SPN User 01-99	Enterprise application	9506923e-1725-4237-aac5-b118ead16612
Azure ATP pccworkshop11 Viewers	Group	
User 03	User	user03@PPCCWorkshop11.onmicrosoft.com
Azure AD Identity Governance -	Enterprise application	810dcf14-1858-4bf2-8134-4c369fa3235b
Workshop Attendees	Group	
User 04	User	user04@PPCCWorkshop11.onmicrosoft.com
Azure AD Identity Protection	Enterprise application	fc68d9e5-1f76-45ef-99aa-214805418498
User 05	User	user05@PPCCWorkshop11.onmicrosoft.com
Azure DevOps	Enterprise application	499b84ac-1321-427f-aa17-267ca6975798
User 06	User	user06@PPCCWorkshop11.onmicrosoft.com

Selected (1)

user 01 user01@PPCCWorkshop11.onmicrosoft.com

Create Select

3. Create the group. Take a note of the group name for a later step.

4. New security role

The screenshot shows the 'Objects' section in the Power Apps admin center. A red arrow points to the 'Security' category, which is highlighted with a red circle containing the number '3'. Below it, another red arrow points to the 'Security role' item, also highlighted with a red circle containing the number '4'.

5. Configure your role like this and **Save**.

The screenshot shows the 'Create New Role (Preview)' dialog. The 'Role Name' field contains 'Contoso Real Estate Security Role'. The 'Business unit' dropdown is set to 'org73cc3af'. Under 'When role is assigned to a Team', it says 'Team member gets all team privileges by default.' and 'Team members can inherit team privileges directly based on access level.' A 'Member's privilege inheritance' dropdown is set to 'Direct User (Basic) access level and Team privileges'. A checked checkbox says 'Include App Opener privileges for running Model-Driven apps'. At the bottom are 'Save' and 'Cancel' buttons.

6. Search for the tables in your solution, select a table, then **Permission settings**

Power Apps

← Back **3** Permission Settings Copy table permissions Copy security role Rename security role Save Configure column view

New Role Contoso Real Estate Security Role successfully created

Security Role: Contoso Real Estate Security Role (Preview)

Details

Business unit: orgc73cc3af

When role is assigned to a Team

Team member gets all team privileges by default.
Team members can inherit team privileges directly based on access level. [Learn More](#)

Member's privilege inheritance

Direct User (Basic) access level and Team privileges

Tables Miscellaneous privileges Privacy-related privileges

Show all tables

Compact Grid View **On**

Table	Name	Record owner...	Permission S...	Create	Read	Write	Delete	Append	Append to
Custom Tables (2)									
Listing	contoso_listing	User or Team	No Access	None	None	None	None	None	None
Listing Image	contoso_listingimage	User or Team	No Access	None	None	None	None	None	None

7. Select **Collaborate**, then **Save** the security role. Repeat for other table(s) in your solution. Click **Back** when finished to go back to solution objects.

Power Apps

← Back Permission Settings Copy table permissions Copy security role Rename security role Save Configure column view

New Role Contoso Real Estate Security Role successfully created

Security Role: Contoso Real Estate Security Role (Preview)

Details

Business unit: orgc73cc3af

When role is assigned to a Team

Team member gets all team privileges by default.
Team members can inherit team privileges directly based on access level. [Learn More](#)

Member's privilege inheritance

Direct User (Basic) access level and Team privileges

Tables Miscellaneous privileges Privacy-related privileges

Show all tables

Permission Settings

Learn about setting details

Full Access

- Create
- Assign
- Read
- Share
- Write
- Append
- Delete
- Append to

1 Collaborate

- Create
- Assign
- Read
- Share
- Write
- Append
- Delete
- Append to

Private

- Create
- Assign
- Read
- Share

2 Save Cancel

Table	Name	Record owner...	Permission S...	Create	Read	Write
Custom Tables (2)						
Listing	contoso_listing	User or Team	No Access	None	None	None
Listing Image	contoso_listingimage	User or Team	No Access	None	None	None

8. Share the Model-driven app with the security role in your solution. You won't share with users yet. Instead, you will during the deployment to Production.

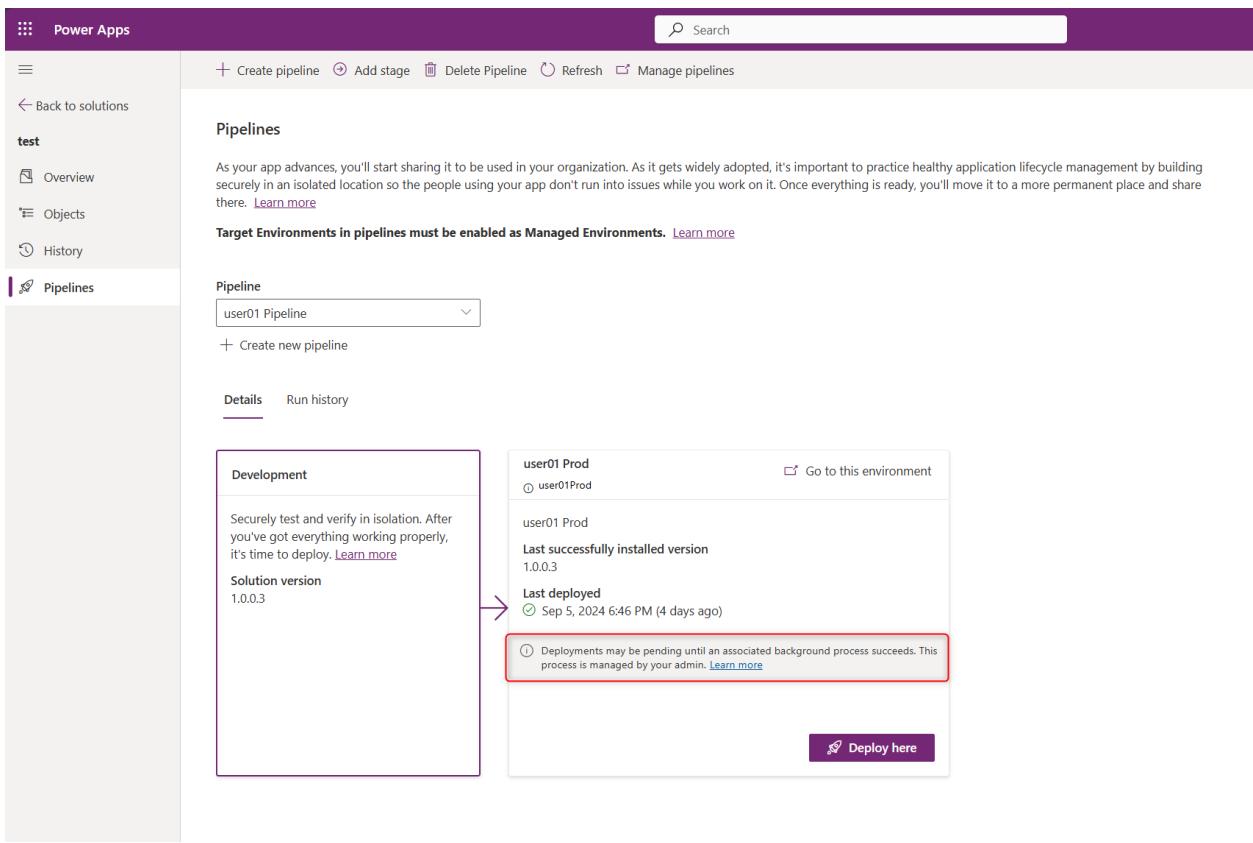
The screenshot shows the Microsoft Power Apps portal interface. On the left is a navigation sidebar with sections like 'Objects', 'Search', 'All (5)', 'Apps (1)', 'Cards (0)', 'Chatbots (0)', 'Cloud flows (0)', 'Security roles (1)', 'Site maps (1)', and 'Tables (2)'. The main area displays a list of objects under 'Contoso Real Estate > All'. The first item, 'Contoso Real Estate Listings', has a red circle with the number '1' next to its icon. The second item, 'Contoso Real Estate Listings', has a red circle with the number '2' next to its icon. The 'Share' button in the top navigation bar is also highlighted with a red arrow.

Display name ↑	Name	Type	Managed	Customized	Last Modif...	Owner	Status
Contoso Real Estate Listings	contoso_Contos...	Site Map	No	Yes	3 hours ago	-	
Contoso Real Estate Listings	contoso_Contos...	Model-Driven App	No	Yes	2 hours ago	-	On
Contoso Real Estate Security Role	Contoso Real Est...	Security Role	No	Yes	19 seconds ago	-	
Listing	contoso_Listing	Table	No	Yes	3 hours ago	-	
Listing Image	contoso_Listingi...	Table	No	Yes	3 hours ago	-	

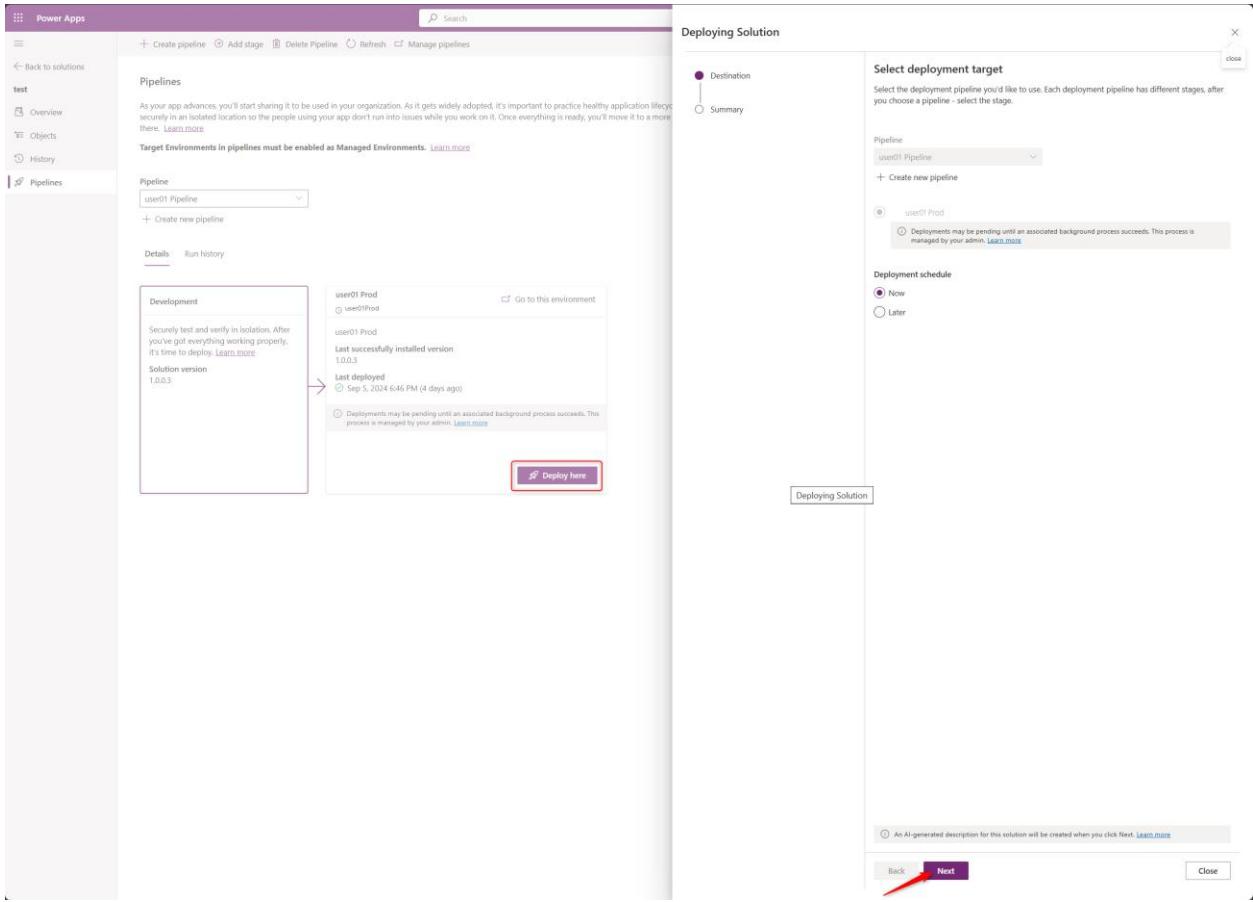
9. Optionally, add an environment variable and connection reference to your solution.
The app in this lab doesn't use them, but you'll see how they can be updated when deploying.
10. Optionally, add a flow and Copilot to your solution.

Submit the deployment request:

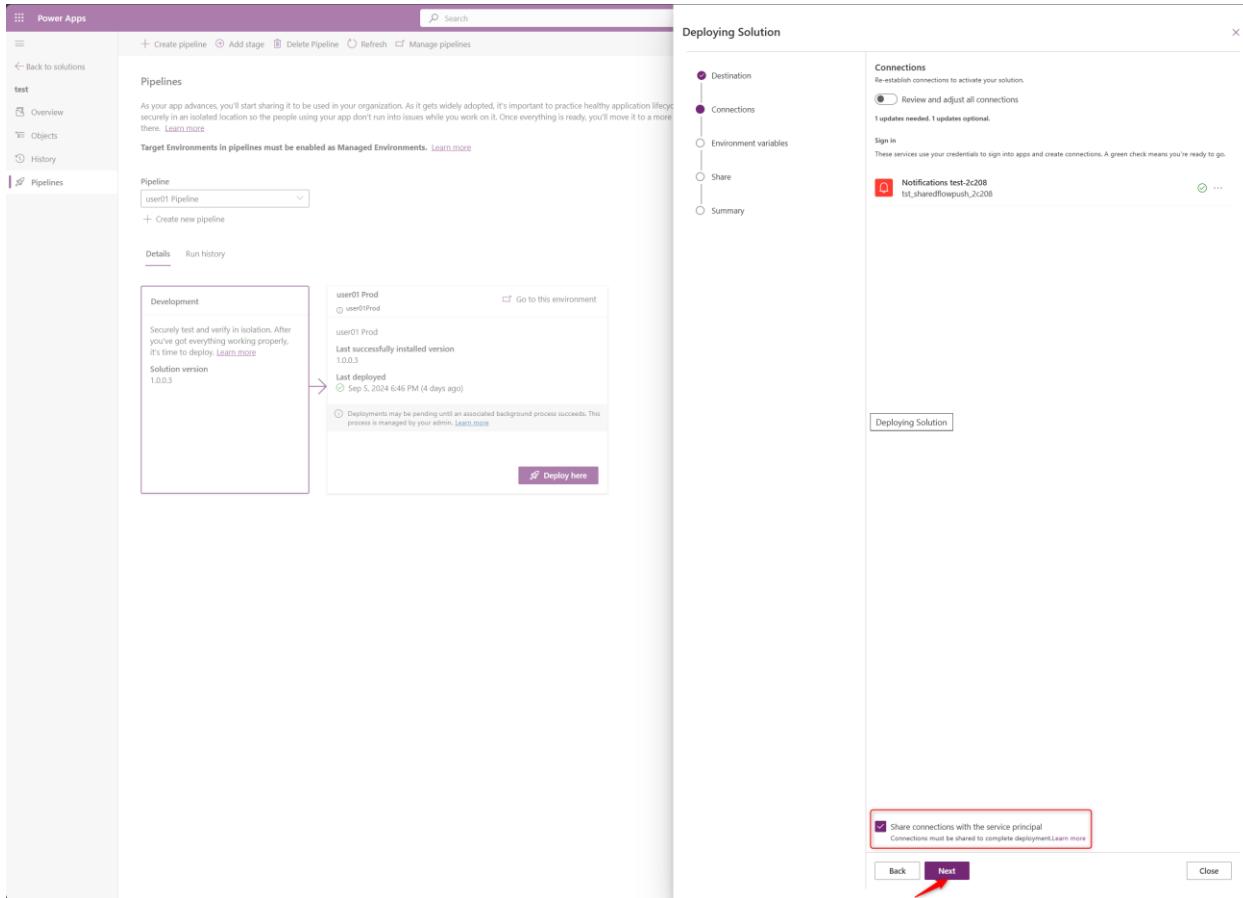
1. Go to your primary development environment in [maker portal](#).
2. Navigate to the **ContosoRealEstate** solution from Lab 2.1.



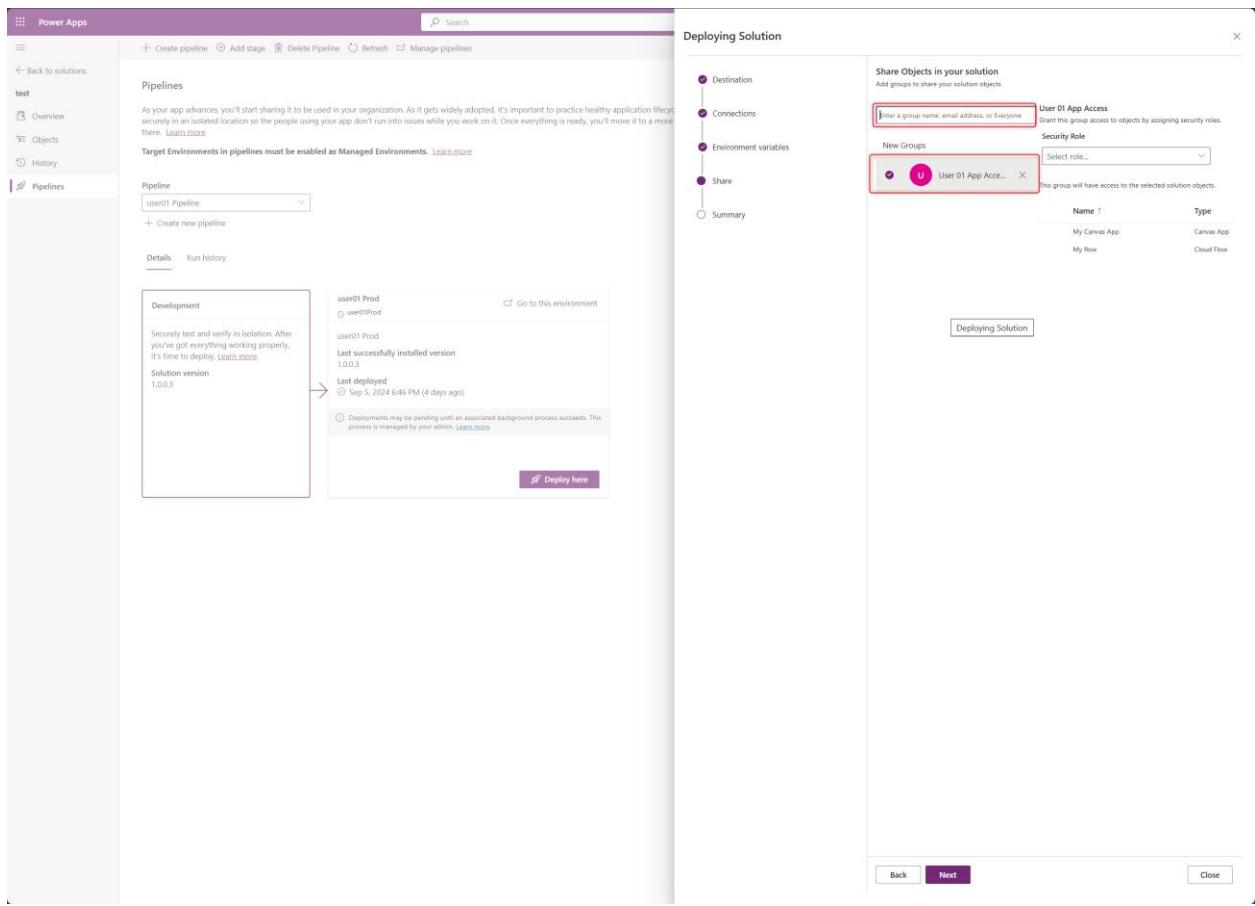
- 3. Click **Deploy here** on the production stage**
- 4. Click **Next** when the panel opens. It will take a few moments to validate your solution against the target environment.**



5. Notice your connections will be shared with the deploying service principal. This is needed as the service principal will own connection references, applications, automations, and Copilots in production. Click **Next**.



6. Click **Next** on the Environment variables screen.
7. Under **Share objects in your solution**, enter the name of Microsoft Entra Security group you created at the beginning of Task 4.



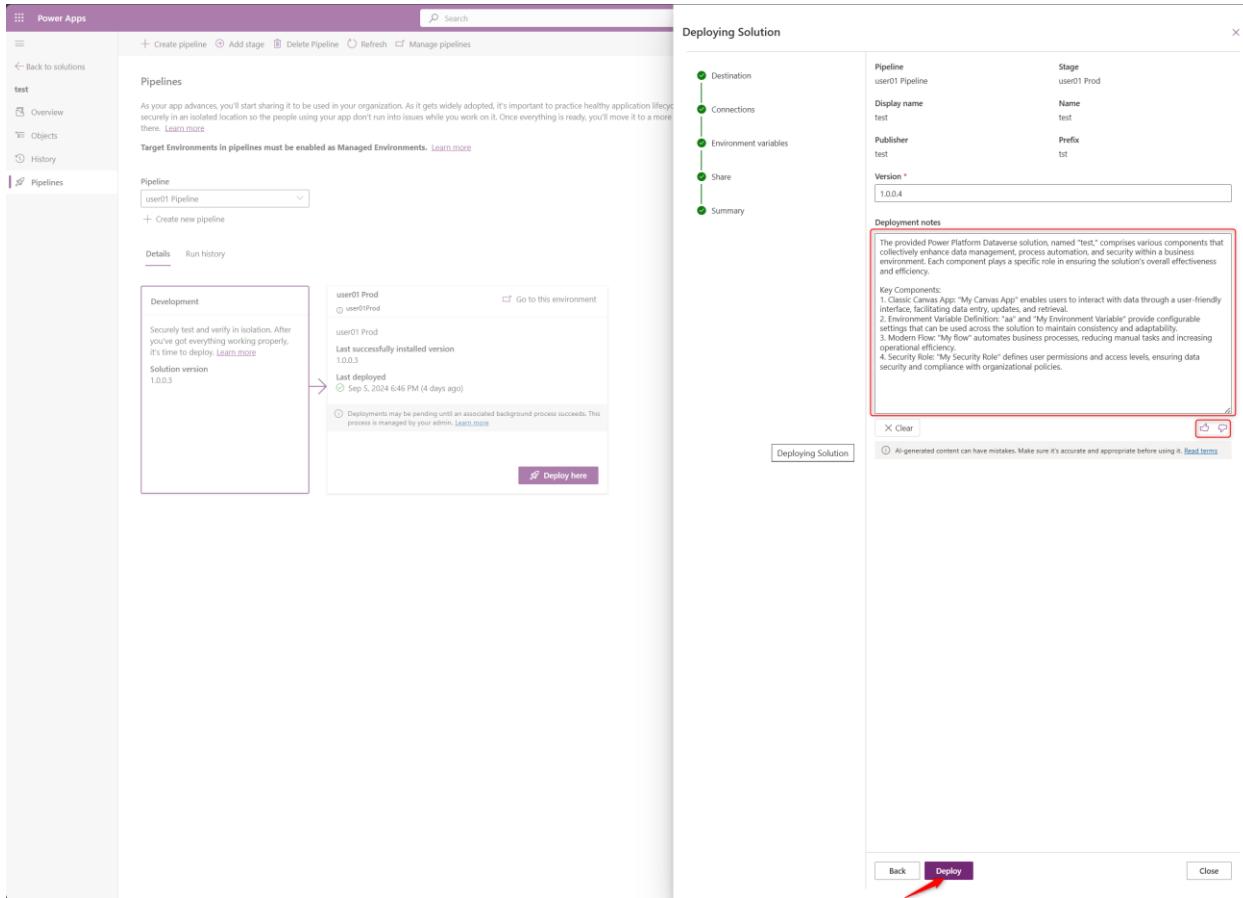
31. Select any security roles, canvas apps, cloud flows, and Copilots in your solution to share with this security group. You and other users in this group will gain access to

use objects in your solution after the deployment is approved to production.

The screenshot shows the 'Deploying Solution' dialog in the Power Apps interface. On the left, there's a sidebar with 'test' selected, showing 'Overview', 'Objects', 'History', and 'Pipelines'. The main area displays a pipeline named 'user01 Pipeline' with a 'Development' stage. The 'user01 Prod' environment is selected, showing its last successfully installed version (1.0.0.3) and the date it was deployed (Sep 5, 2024, 6:46 PM). A 'Deploy here' button is visible. To the right, the 'Deploying Solution' dialog is open, showing a tree view with 'Destination' selected. Under 'Share', a 'User 01 App Access' group is being assigned 'My Security Role'. This group contains two users: 'User 01 App Acc...' and 'User 01 App Acc...'. A red arrow points to the 'My Security Role' dropdown. Below the group list, a table shows objects: 'My Canvas App' (Canvas App) and 'My flow' (Cloud Flow). At the bottom of the dialog are 'Back', 'Next', and 'Close' buttons.

32. Click **Next**

33. Confirm the AI generated description of your solution and modify if needed.



23. Click **Deploy**.

Your solution will take a moment to export, then it will be submitted for approval. The deployment will be pending until approved (or rejected or cancelled).

The screenshot shows the Microsoft Power Apps Pipelines interface. On the left, there's a sidebar with a navigation menu: Back to solutions, Overview, Objects, History, and Pipelines (which is selected). The main area has a header with 'Power Apps' and a search bar. Below the header, there are buttons for 'Create pipeline', 'Add stage', 'Delete Pipeline', 'Refresh', and 'Manage pipelines'. A message at the top says: 'As your app advances, you'll start sharing it to be used in your organization. As it gets widely adopted, it's important to practice healthy application lifecycle management by building securely in an isolated location so the people using your app don't run into issues while you work on it. Once everything is ready, you'll move it to a more permanent place and share there.' It also mentions 'Target Environments in pipelines must be enabled as Managed Environments'.

The central part of the screen shows a 'Pipeline' section with a dropdown menu set to 'user01 Pipeline'. Below it is a link to 'Create new pipeline'. Under the 'user01 Pipeline' section, there are two tabs: 'Details' (which is selected) and 'Run history'. The 'Details' tab displays the following information:

- Development**:
 - Securely test and verify in isolation. After you've got everything working properly, it's time to deploy. [Learn more](#)
 - Solution version**: 1.0.0.4
- user01 Prod**:
 - Go to this environment
 - Last successfully installed version: 1.0.0.3
 - Last deployed: Sep 5, 2024 6:46 PM (4 days ago)
 - Your request to deploy here is pending. [Learn more](#)
 -
 -

24. In a new tab, open [Outlook web](#) and wait for the approval email. It may take a few minutes to arrive.

25. In the approval mail you will see a couple of familiar parts:

You will see the title of the approval (1)

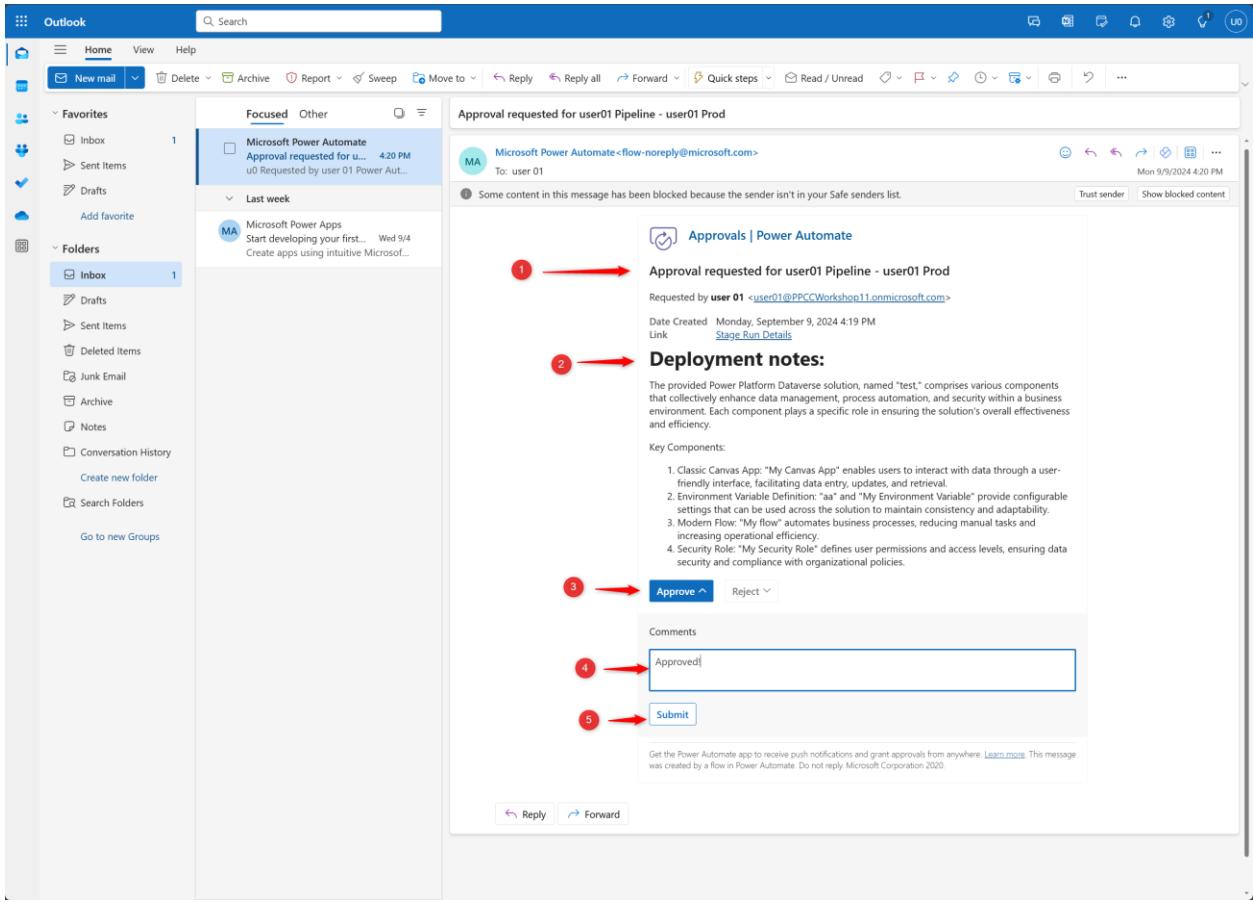
You will see the deployment notes (2)

You will see approve / reject buttons (3)

You will be able to add comments (4)

You will be able to submit the approval / rejection (5)

26. Make sure to select **Approve** in the approval email, add **Approved!** as comments and select the **Submit** button



27. Close the Outlook browser tab, and you will see (sometimes you have to refresh) that the deployment to production is in progress
28. After the deployment is finished, navigate to the target environment.

The screenshot shows the Power Apps Pipelines page. On the left, there's a sidebar with navigation links: Back to solutions, Overview, Objects, History, and Pipelines (which is selected). The main area has a search bar and a toolbar with Create pipeline, Add stage, Delete Pipeline, Refresh, and Manage pipelines. Below that is a section titled 'Pipelines' with a sub-section 'user01 Pipeline'. It shows a dropdown menu with 'user01 Pipeline' and a '+ Create new pipeline' button. There are two tabs: 'Details' (selected) and 'Run history'. The 'Details' tab shows a 'Development' environment summary: 'Securely test and verify in isolation. After you've got everything working properly, it's time to deploy.' (with a 'Learn more' link), 'Solution version 1.0.0.4', and a 'user01 Prod' environment summary: 'Last successfully installed version 1.0.0.4'. A red arrow points to the 'Go to this environment' link. Another red arrow points to the 'Last deployed' section, which shows 'Sep 9, 2024 4:26 PM (a minute ago)' with a note: 'Deployments may be pending until an associated background process succeeds. This process is managed by your admin.' (with a 'Learn more' link). At the bottom right of the 'user01 Prod' summary is a 'Deploy here' button.

Notice how the resources deployed in your solution are owned by the service principal and shared with you (plus anyone else in the security group).

To use delegated deployments in your company, admins can share a delegated pipeline with makers and ensure they don't have elevated security roles to edit directly in production. All customization gets deployed to production in a healthy, audited, repeatable, and least privileged manner.

Task 5: Re-deploy a prior version

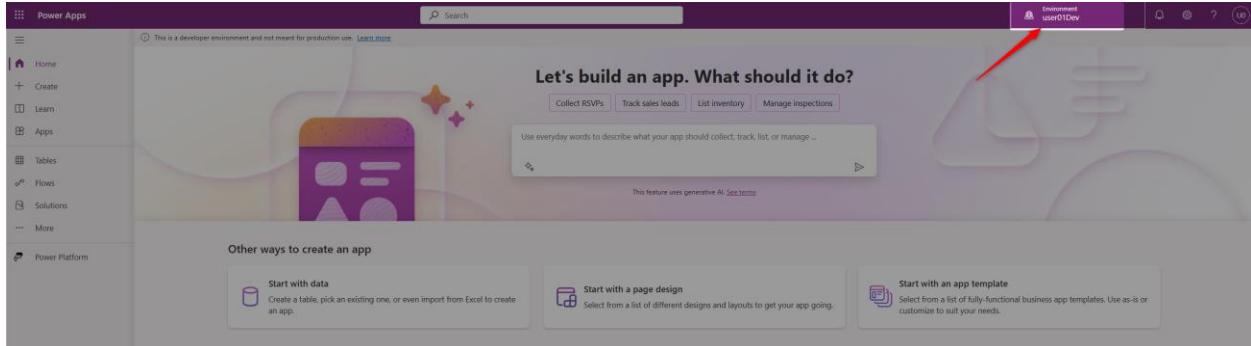
- **Prerequisite:** If you didn't complete task 4, submit another deployment now. Run History should have at least two deployed versions.

While delegated deployments and approvals reduce the chances of breaking applications in production, mistakes can and do happen.

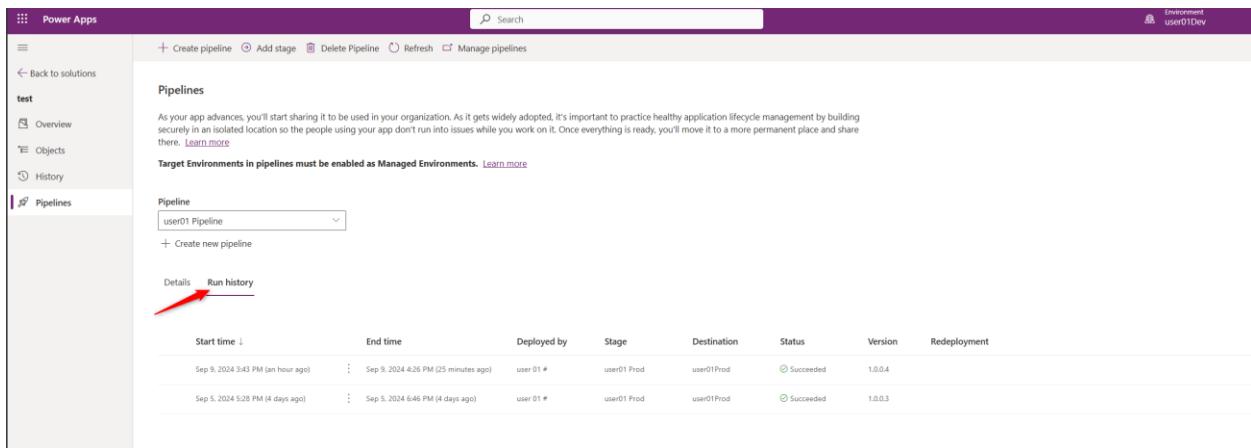
Let's pretend the last deployment contained a critical breaking change and it needs to be rolled back. In this task, you'll re-deploy the last known good version of your solution.

1. Go to your primary development environment in the [maker portal](#)

- Check if you are in your primary **Development** environment and if not, switch to that environment



- Go to **Solutions** via the left menu
- Drill into the solution developed in Lab 2 and deployed in the last task, then select **pipelines**.
- Select **Run history**



- Select the lower version, then **Re-deploy** from the menu. *Details in your environment will be different than this screenshot.*

The screenshot shows the Power Apps Pipelines page. On the left, there's a sidebar with 'test' selected under 'Pipelines'. The main area shows a table of deployment history:

Start time	End time	Deployed by	Stage	Destination	Status	Version	Redeployment
Sep 9, 2024 3:43 PM (an hour ago)	Sep 9, 2024 4:26 PM (25 minutes ago)	user01 #	user01 Prod	user01Prod	Success	1.0.0.4	
Sep 5, 2024 5:28 PM (4 days ago)	Sep 5, 2024 6:46 PM (4 days ago)	user01 #	user01 Prod	user01Prod	Success	1.0.0.3	Redeploy

A red arrow points to the 'Redeploy' button for the second row. To the right, there's an 'Information' panel with details like Source (user01Dev), Destination (user01Prod), Start time (Sep 5, 2024 5:28 PM), and Version (1.0.0.3). At the bottom of the Information panel is a 'More details' link.

7. In the confirmation dialog, click **Redeploy**.

Redeploy version 1.0.0.3? X

This will overwrite the most recent version, and any data within that version. This is irreversible, and the data lost is unrecoverable. Updates, including new tables, will also be removed.

Redeploy

Close

8. When the deployment panel opens, click Next until you get to the last screen, then **Deploy**. See *prior Task for detailed steps if needed*.
9. In a new tab, open [Outlook web](#) and wait for the approval email. It may take a few minutes to arrive.
10. Add comments, and **Approve** the deployment, then close the tab.
11. Deployment is now in-progress. Wait until it finishes. You *may need to refresh the pipelines page*.

12. Disaster averted! Now the prior version is deployed to production and you have time to fix the (hypothetical) issue and deploy an updated version when ready.