

ALM with Power Platform using ALM Accelerator

License requirements

ALM Accelerator for Power Platform uses the following premium Power Platform features:

- Dataverse
- Custom Connector
- HTTP with Microsoft Entra connector

To use the ALM Accelerator, you need the following licenses:

- Power Apps Per User or Per App license
- Azure DevOps Basic Plan

Who should use the ALM Accelerator?

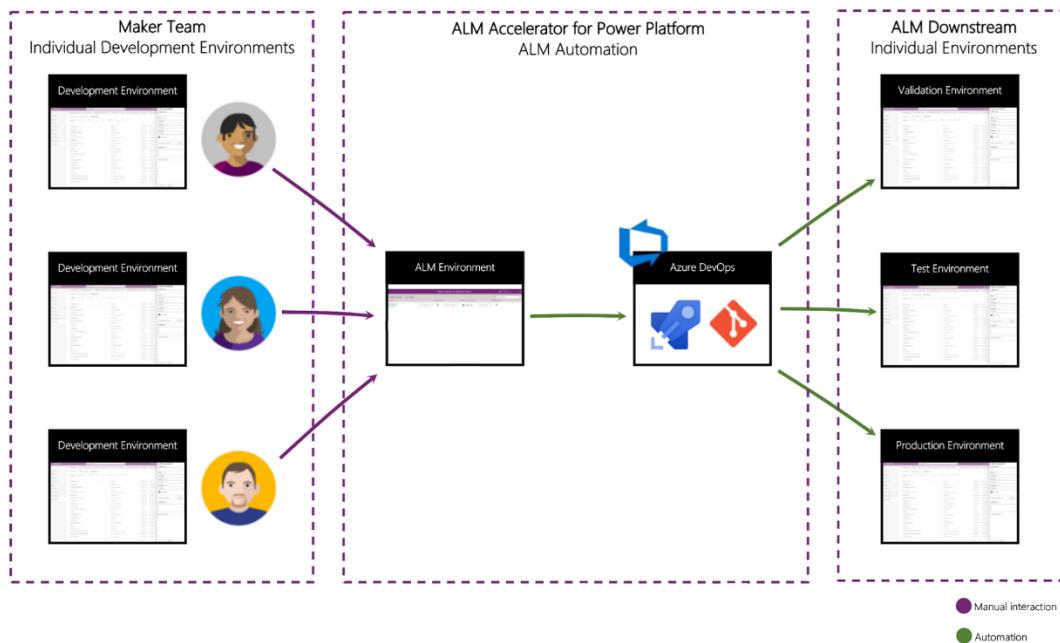
[ALM Accelerator for Power Platform - Power Platform | Microsoft Learn](#)

The ALM Accelerator is targeted at **Power Platform makers** and maker teams:

- **Makers who are unfamiliar with ALM concepts, but want to be able to save their work,** along with a history of changes, and share those changes with other users
- **Makers who are comfortable with the advanced concepts of using Git,** such as pull requests, branching, and merging, and want to work in a familiar way with source control and deployment automation

To [set up and configure](#) the ALM Accelerator, you should be an administrator with a deeper understanding of Power Platform environments, solutions, and Azure Pipelines. You should also be familiar with Azure AD and Dataverse administration.

The following diagram illustrates how the ALM Accelerator facilitates interactions between a maker team and development, validation, test, and production environments.



- Makers work in isolation in their personal development environments. They use the ALM Accelerator canvas app to import solutions from source control, export changes to source control, and create pull requests to merge changes.
- Customizable templates for Azure Pipelines automate ALM tasks and support a staged deployment from development to production.

What are my options for ALM in Power Platform?

The ALM Accelerator is one of many options for ALM in Power Platform. Others include:

- [Pipelines for Power Platform](#) aim to democratize ALM by bringing ALM automation capabilities to Power Platform and Dynamics 365 services in a way that's more approachable for all makers, admins, and developers.
NOTE: Requires Additional Managed Environments Power Apps and Power Automate standalone plans
[Licensing - Power Platform | Microsoft Learn](#)
- [Power Platform Build Tools](#) tasks can be used with other Azure DevOps tasks to compose your build and release pipelines. Pipelines that teams commonly put in place include Initiate, Export from Dev, Build, and Release.
- [GitHub Actions for Power Platform](#) enable developers to build automated software development lifecycle workflows to build, test, package, release, and deploy apps; perform automation; and manage bots and other components built on Power Platform.

What's the right choice for my organization?

- There's no one right answer for every organization. The following table and the descriptions that follow can help you decide which option is right based on your organization's current

capabilities and future plans. This table isn't exhaustive.

- It's meant to help you make an informed decision. It will evolve over time as we add more capabilities to the ALM Accelerator and the ALM capabilities in Power Platform.

Compare ALM Accelerator and DevOps/GitHub			
Capability	Pipelines	ALM Accelerator	DevOps/GitHub
IT/Developer involvement	Not required	Up-front setup	Required for every project
Source code integration	No, but planned	Yes	Yes
<i>Maker requires elevated privileges in target environment</i>	Yes	No, service principal is supported	No, service principal is supported
Quality control	Minimal	Best practices	Unlimited
Democratized for citizen development	Yes	Yes	No
In-product experience	Yes	Canvas app provided, but not in the maker experience	No
Support	Microsoft-supported	Power CAT support through GitHub issues and discussions	Microsoft-supported and GitHub issues
Customization	Yes	Yes	Yes
Code-first development	No	Yes	Yes

[ALM Accelerator for Power Platform - Power Platform | Microsoft Learn](#)

Configure the ALM with Power Platform

[Configure the ALM Accelerator using the admin app - Power Platform | Microsoft Learn](#)

ALM Accelerator Prerequisites

1. The ALM Accelerator must be installed in a Power Platform environment that has a Microsoft **Dataverse database**.

All the environments you use the ALM Accelerator to deploy solutions to also require a **Dataverse database**.

2. We recommend you install the **ALM Accelerator** in the **same environment** as other CoE Starter Kit solutions.
3. ALM Accelerator uses **Azure DevOps** for source control and deployments. If you don't have an Azure DevOps organization, sign up for **free for up to five users** on the [Azure DevOps site](#).
4. Certain user and permissions are required.
 - A **licensed Azure user** with permissions to create and view **Microsoft Entra groups**, **create app registrations**, and **grant admin consent** to app registrations in Microsoft Entra ID
 - A **licensed Azure DevOps user** with permissions to **create** and **manage** pipelines, **service connections**, **repos**, and **extensions**
 - A **licensed Power Platform user** with permissions to **create application users** and **grant** them administrative permissions.

NOTE:

- 1) If you are doing a on **test environment**, you will have all rights.
- 2) In an **enterprise setup in an organization** , you will certainly have not full rights and request your IT team to give you proper rights.

5. Connectors required.

- [Dataverse \(legacy\)](#)
- HTTP
- [Power Apps for Makers](#)
- [HTTP with Microsoft Entra ID](#) (with endpoint access to <https://graph.microsoft.com>)
- ALM Accelerator Custom DevOps (this connector is created as part of the [accelerator solution import](#))
- [Office 365 Users](#)
- HTTP

6. [Install the Creator Kit](#) in the environment where you install the ALM Accelerator.

Create 3 Environments

Environment	Type	State
Test - ALM Accelerator	Sandbox	Ready
Prod - ALM Accelerator	Sandbox	Ready
Dev - ALM Accelerator	Sandbox	Ready

Main Idea for ALM Process

1. Create a DEV – ALM Accelerator Solution with Power Platform objects with Power Apps, Power Automate.
2. Export using Leverage **Power Platform ALM Accelerator** to Test - ALM Accelerator Solution via **ALM Accelerator**
3. Export using Leverage **Power Platform ALM Accelerator** to Prod - ALM Accelerator Solution via **ALM Accelerator**

Create a new Solution and Publisher at the DEV – ALM Accelerator Environment

The screenshot shows the Microsoft Power Apps portal interface. On the left, there's a navigation sidebar with options like Home, Create, Learn, Apps, Flows, Azure Synapse Link, Solutions (which is highlighted with a red box and a circled '1'), and Tables. The main area is titled 'Solutions' and shows a list of existing solutions: ITRequest (Name: ITRequest, Created: 1 day ago, Version: 1.0.0.0, Publisher: ITRequest), Common Data Services Default Solution (Name: Cra550, Created: 1 week ago, Version: 1.0.0.0, Publisher: CDS Default Publisher), and Default Solution (Name: Default, Created: 1 week ago, Version: 1.0, Publisher: Default Publisher for...). Above this list, there's a button labeled '+ New solution' (circled '2'). To the right, a 'New solution' dialog box is open. It has fields for 'Display name *' (containing 'Leave Request') (circled '3'), 'Name *' (containing 'LeaveRequest') (circled '3'), 'Publisher *' (containing 'ITRequest (ITRequest)') (circled '4'), and 'Version *' (containing '1.0.0.0'). At the bottom right of the dialog is a 'Create' button (circled '5').

New publisher

Publishers indicate who developed associated solutions. [Learn more](#)

[Properties](#) [Contact](#)

Display name *

Contoso

Name *

Contoso

Description

Demo to demonstrate ALM Process

Prefix *

contoso

Choice value prefix *

33065

Preview of new object name

contoso_Object

Save

[Cancel](#)

Solutions

[New solution](#) [Import solution](#) [Open AppSource](#) [Publish all customizations](#) [See history](#) [...](#)

Display name	Name	Created	Version	Publisher	Solution check
Common Data Services Default Solution	Cn614b	2 days ago	1.0.0	CDS Default Publisher	Hasn't been run
Default Solution	Default	2 days ago	1.0	Default Publisher for...	Not supported for analysis

New solution

Display name *

Helpdesk Solution

Name *

HelpdeskSolution

Publisher *

Contoso (Contoso)

+ New publisher

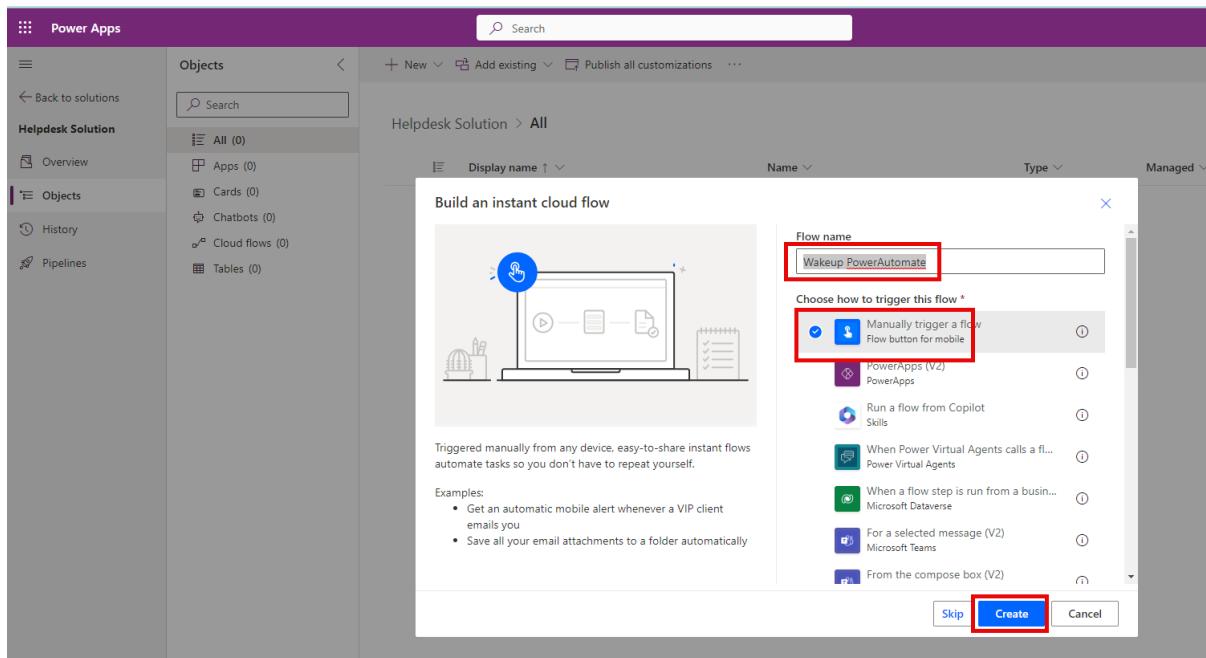
Version *

1.0.0.0

Create

[Cancel](#)

Create Power Automate Approvals solution

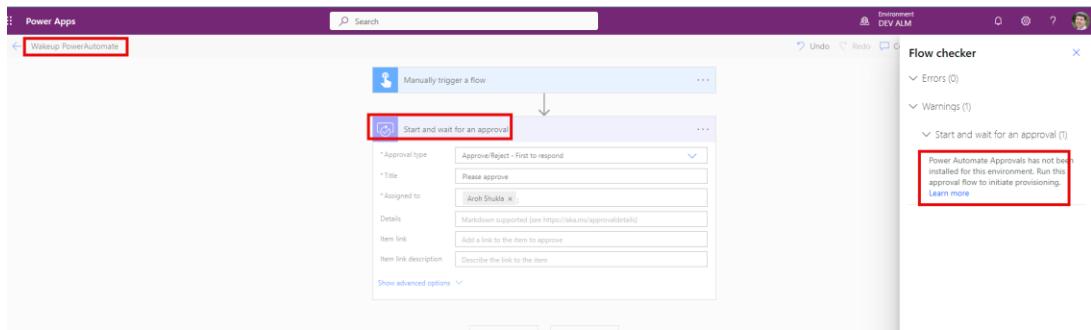


Select a SharePoint Online List

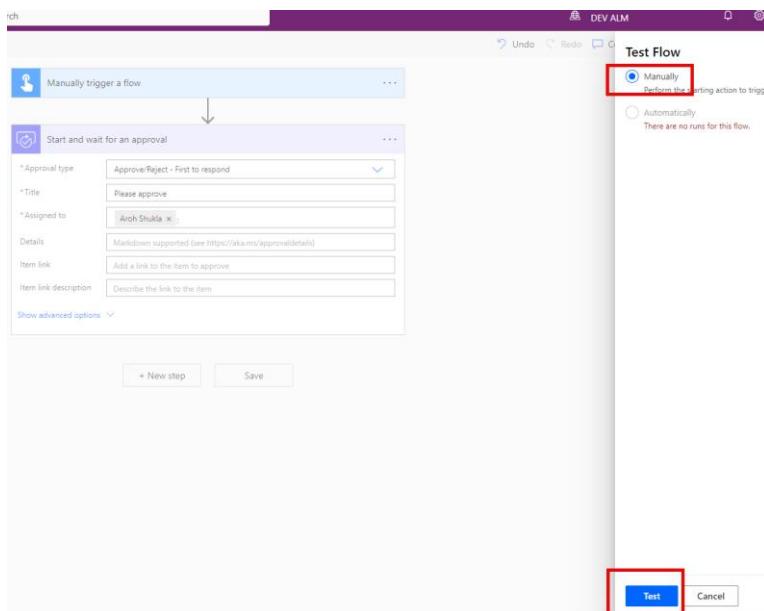
The screenshot shows a SharePoint Online site with the URL 'arohmvp365.sharepoint.com/sites/DataSite/lists/Help%20Desk%20Center/AllItems.aspx'. The navigation bar at the top has a blue header with the SharePoint logo and a search bar. The left sidebar shows a navigation tree with 'Team Site with Data' selected. The 'Help Desk Center' list is highlighted with a red box (1) in the navigation tree. The list view shows three items:

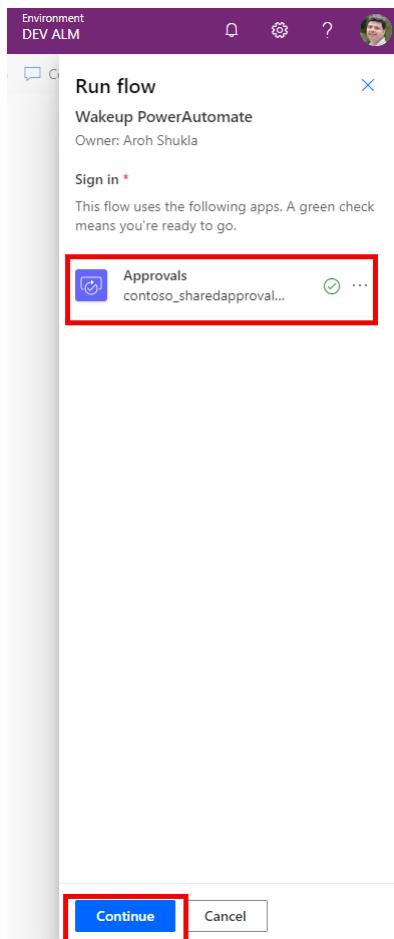
- Phone**: Ticket Description: Phone, Due Date: 9/21/2021, Category: HR, Status: Completed, Approval: Approved By Aroh Shukla (21 Sep 2021); Ok
- VPN**: Ticket Description: VPN, Due Date: 9/22/2021, Category: HR, Status: Rejected, Approval: Rejected By Aroh Shukla (21 Sep 2021)
- Access Card Does not work**: Ticket Description: Access Card Does not work, Due Date: 9/23/2021, Category: HR, Status: Rejected, Approval: Rejected By Aroh Shukla (22 Sep 2021)

Configure Approval action and wait for Approval tables get populated at Dataverse



Test the flow



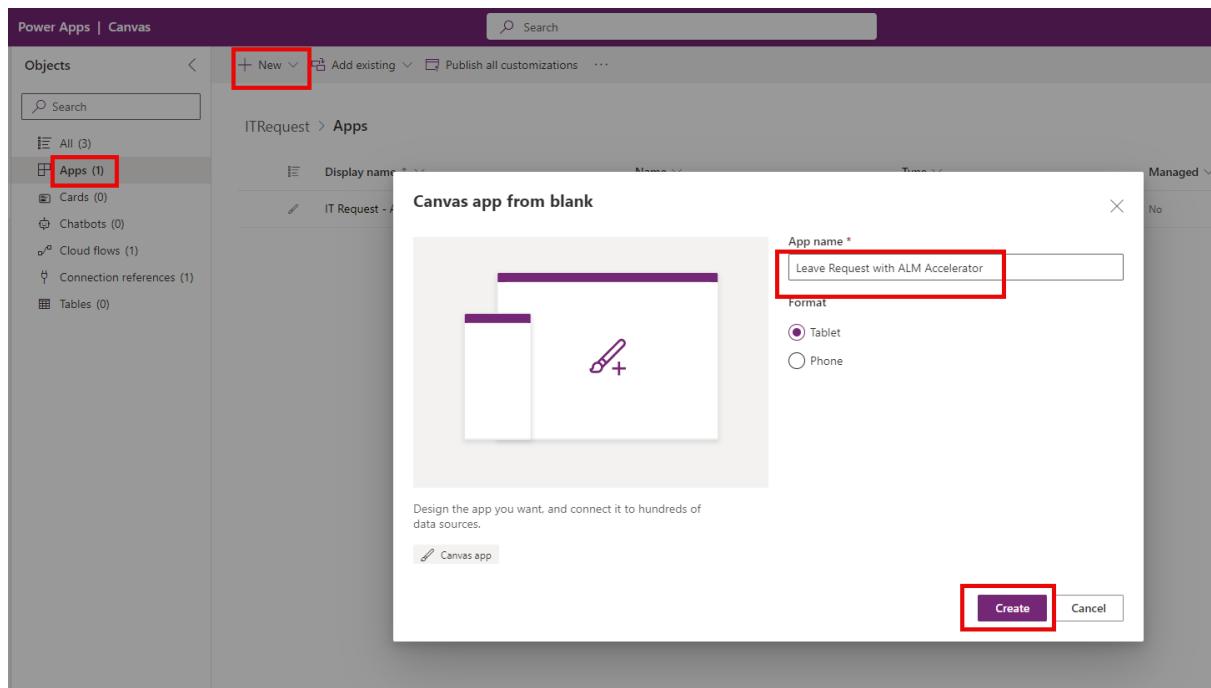


Run flow
Wakeup PowerAutomate
Owner: Aroh Shukla

This flow uses Approvals.
[Review connections and actions](#)



Create a Simple App



Connect to SharePoint Online

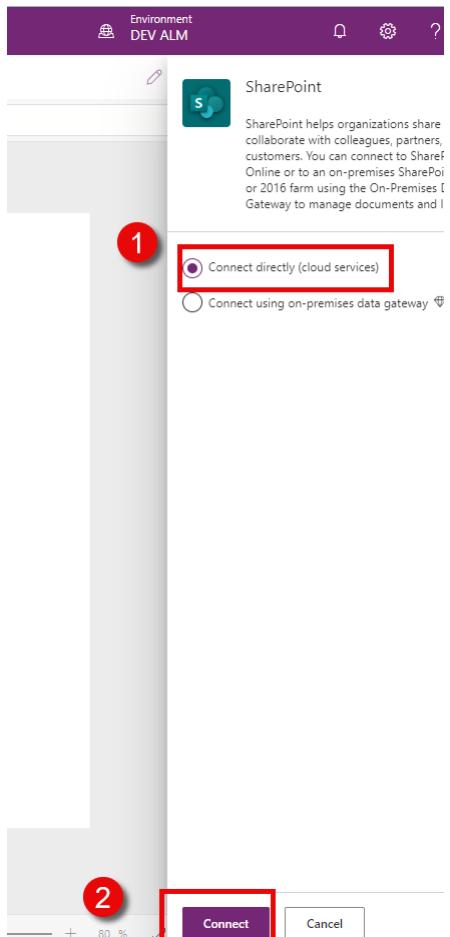
The screenshot shows the Power Apps interface with the title "Power Apps | IT Request - ALM (Editing)". The top navigation bar includes Back, Insert, Add data, and other standard icons. A search bar is present on the right.

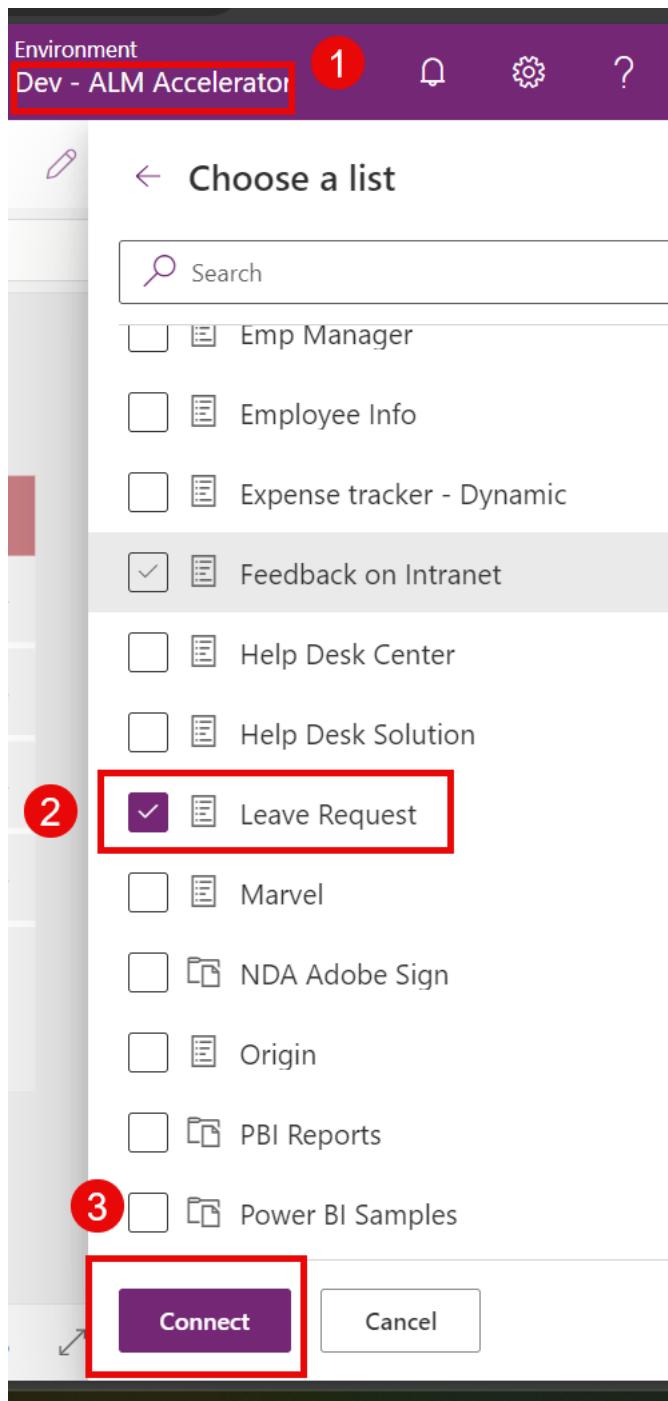
The main area displays the "Data" pane on the left, which includes:

- A "Data" section with a "Search" input field.
- An "Add data" button (circled in red with number 2).
- A "SharePoint" icon (circled in red with number 1).
- A "(X)" button.
- A "Leave Request" button.
- A "SharePoint" button.
- A "Create new table" button.

On the right, a modal window titled "Select a data source" is open. It contains a search bar with the text "sharepoint" (circled in red with number 3) and a list of results:

- SharePoint**: SharePoint helps organizations share and co... (selected item, circled in red with number 4)
- SharePoint Sites: Microsoft Dataverse
- airSlate: Automate your business workflows i...
- Document Merge: SharePoint Document and Mail Merge i...
- dox42: The dox42 connector provides a connec...





Place controls on Canvas App, save and publish the app.



1

Choose a list

Search

Emp Manager

Employee Info

Expense tracker - Dynamic

Feedback on Intranet

Help Desk Center

Help Desk Solution

Leave Request

Marvel

NDA Adobe Sign

Origin

PBI Reports

Power BI Samples

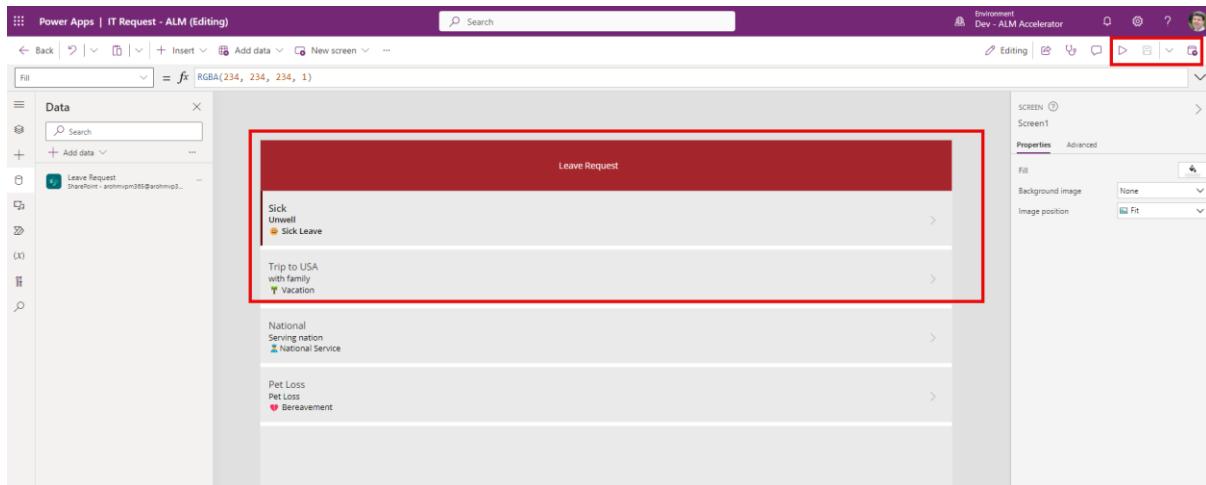
2

3

Connect

Cancel

This screenshot shows the 'Choose a list' screen in the Power BI mobile app. At the top, there's a purple header bar with the environment name 'Dev - ALM Accelerator'. Below it is a navigation bar with icons for edit, refresh, settings, and help. A red circle with the number '1' is positioned above the navigation bar. The main area has a light gray background with a search bar at the top. A list of datasets is displayed, each with a checkbox and a small icon. The 'Feedback on Intranet' dataset is selected, indicated by a checked checkbox and a gray background. The 'Leave Request' dataset is highlighted with a red rectangular border around its checkbox and icon. A red circle with the number '2' is placed to the left of the 'Leave Request' item. Another red circle with the number '3' is placed to the left of the 'Power BI Samples' item. At the bottom, there are two buttons: a purple 'Connect' button and a white 'Cancel' button.



Publish all customizations

Display name ↑	Name ↓	Type ↓
Approvals ITRequest-40520	contoso_sharedapprovals_40520	Connection Reference
IT Request - ALM	contoso_trequestalm_e47e4	Canvas App
Kickstart Flow	Kickstart Flow	Cloud Flow

Connect to Azure - App Registration

- Microsoft Entra ID >> App Registration
- Name the application as **PowerPlatformALMAccelerator** and
- Click on **Register**.

Microsoft Azure

https://portal.azure.com/#view/Microsoft_AAD_IAM/ActiveDirectoryMenuBlade/~/RegisteredApps

1 Microsoft Entra ID

2 App registrations

3 All applications

4 + New registration

Dashboard > arohmvp365

arohmvp365 | App registrations

Microsoft Entra ID

Overview | Preview features | Diagnose and solve problems

Manage

- Users
- Groups
- External Identities
- Roles and administrators
- Administrative units
- Delegated admin partners
- Enterprise applications
- Devices
- App registrations** (highlighted)
- Identity Governance
- Application proxy
- Custom security attributes
- Licenses
- Cross-tenant synchronization
- Microsoft Entra Connect
- Custom domain names
- Mobility (MDM and WIP)
- Password reset

All applications Owned applications Deleted applications

Start typing a display name or application (client) ID to filter these results... Add filter

13 applications found

Display name
Adobe Document Generation
CoE Audit Log
Graph API Example
Inspection Router
Microsoft CRM Portals
Portals-06f3712f-0bda-4a57-a1f6-2a5d2829572f
Portals-5992e0fc-cd82-4090-9fe1-644505ce364f
PowerPlatformALMService
PowerPlatformALMServiceDestination
PowerPlatformCustomConnector
qnamaker12345-bot
Service Principal Demo
travelbot123-bot

App Registration – Overview page

Dashboard >

PowerPlatformALMAccelerator

Overview

Quickstart | Integration assistant

Manage

- Branding & properties
- Authentication
- Certificates & secrets
- Token configuration
- API permissions
- Expose an API
- App roles
- Owners
- Roles and administrators
- Manifest

Support + Troubleshooting

- Troubleshooting
- New support request

Get Started Documentation

Build your application with the Microsoft identity platform

The Microsoft identity platform is an authentication service, open-source libraries, and application management tools. You can create modern, standards-based authentication solutions, access and protect APIs, and add sign-in for your users and customers. [Learn more](#)

Call APIs Sign in users in 5 minutes Configure for your organization

App Registration – API Permissions

Dashboard > PowerPlatformALMAccelerator

PowerPlatformALMAccelerator | API permissions

Search | Refresh | Got feedback? | ...

Manage

- [Overview](#)
- [Quickstart](#)
- [Integration assistant](#)
- [API permissions](#) 1
- [Expose an API](#)
- [App roles](#)
- [Owners](#)
- [Roles and administrators](#)
- [Manifest](#)

Support + Troubleshooting

- [Troubleshooting](#)
- [New support request](#)

Configured permissions

Applications are authorized to call APIs when they are granted permissions by users/admins as part of the consent process. The list of configured permissions should include all the permissions the application needs. [Learn more about permissions and consent](#)

API / Permissions name	Type	Description	Admin consent req...	Status
User.Read	Delegated	Sign in and read user profile	No	

To view and manage consented permissions for individual apps, as well as your tenant's consent settings, try [Enterprise applications](#).

Add a permission 2

Grant admin consent for arohmvp365

Permissions to Dynamics 365

Dashboard > PowerPlatformALMAccelerator

PowerPlatformALMAccelerator | API permissions

Search | Refresh | Got feedback? | ...

Manage

- [Overview](#)
- [Quickstart](#)
- [Integration assistant](#)
- [API permissions](#) 1
- [Expose an API](#)
- [App roles](#)
- [Owners](#)
- [Roles and administrators](#)
- [Manifest](#)

Support + Troubleshooting

- [Troubleshooting](#)
- [New support request](#)

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User.Read	Delegated	Sign in and read user profile	No	

To view and manage consented permissions for individual apps, as well as your tenant's consent settings, try [Enterprise applications](#).

+ Add a permission 2

Grant admin consent for arohmvp365

Request API permissions

Microsoft APIs 3 APIs my organization uses My APIs

Commonly used Microsoft APIs

Microsoft Graph	Take advantage of the tremendous amount of data in Office 365, Enterprise Mobility + Security, and Windows 10. Access Microsoft Entra ID, Excel, Intune, Outlook/Exchange, OneDrive, OneNote, SharePoint, Planner, and more through a single endpoint.
Azure Communication Services	Rich communication experiences with the same secure Cloud platform used by Microsoft Teams
Azure Cosmos DB	Fast NoSQL database with open APIs for any scale.
Azure Data Explorer	Perform ad-hoc queries on terabytes of data to build near-real-time and complex analytics solutions
Azure DevOps	Integrate with Azure DevOps and Azure DevOps server
Azure Key Vault	Manage your key vaults as well as the keys, secrets, and certificates within your Key Vaults
Azure Rights Management Services	Allow validated users to read and write protected content
Azure Service Management	Programmatic access to much of the functionality available through the Azure portal
Azure Storage	Secure, massively scalable object and data lake storage for unstructured and semi-structured data
Data Export Service for Microsoft Dynamics 365	Export data from Microsoft Dynamics CRM organization to an external destination
Dynamics 365 Business Central	Programmatic access to data and functionality in Dynamics 365 Business Central
Dynamics CRM	Access the capabilities of CRM business software and ERP systems
Dynamics ERP	Programmatic access to Dynamics ERP data

The screenshot shows two windows side-by-side. On the left is the 'PowerPlatformALMAccelerator | API permissions' page, which includes a sidebar with 'API permissions' selected. The main area shows 'Configured permissions' with a table for Microsoft Graph. On the right is the 'Request API permissions' dialog box for Dynamics CRM. Step 1 highlights the 'Delegated permissions' section. Step 2 highlights the 'user_impersonation' permission under 'Permissions'. Step 3 highlights the 'Add permissions' button.

Permissions to Power Apps-Advisor

The screenshot shows two windows side-by-side. On the left is the 'Accelerator | API permissions' page, which includes a sidebar with 'API permissions' selected. The main area shows 'Configured permissions' with a table for Dynamics CRM. On the right is the 'Request API permissions' dialog box for Microsoft APIs. Step 1 highlights the 'Add a permission' button. Step 2 highlights the 'APIs my organization uses' tab. Step 3 highlights the 'PowerApps-Advisor' application in the list.

Select Delegated permissions

ARORIMV365 (ARORIMV365.O...)

Request API permissions

[All APIs](#)

 PowerApps-Advisor
https://gov.api.advisor.powerapps.us

What type of permissions does your application require?

Delegated permissions

Your application needs to access the API as the signed-in user.

Application permissions

Your application runs as a background service or daemon without a signed-in user.

Request API permissions

[All APIs](#)

 PowerApps-Advisor
https://gov.api.advisor.powerapps.us

What type of permissions does your application require?

Delegated permissions

Your application needs to access the API as the signed-in user.

Application permissions

Your application runs as a background service or daemon without a signed-in user.

Select permissions

Start typing a permission to filter these results

i The "Admin consent required" column shows the default value for an organization. However, user consent can be customized per permission, user, or app. This column may not reflect the value in your organization, or in organizations where this app will be used.

Permission	Admin consent required
<input checked="" type="checkbox"/> Analysis.All ⓘ <input type="checkbox"/> Analysis.All	Yes
<input type="checkbox"/> Analysis.All ⓘ <input type="checkbox"/> Analysis.All	No

Permissions to Azure DevOps

Request API permissions

Select an API

Microsoft APIs APIs my organization uses My APIs

Commonly used Microsoft APIs

API / Permissions name	Type	Description
+ Add a permission	Grant admin consent for arohmvp365	
<ul style="list-style-type: none"> ▽ Dynamics CRM (1) user_impersonation Delegated Access Common Data Service as organization 		
<ul style="list-style-type: none"> ▽ Microsoft Graph (1) User.Read Delegated Sign in and read user profile 		
<ul style="list-style-type: none"> ▽ PowerApps-Advisor (1) Analysis.All Delegated Analysis.All 		

To view and manage consented permissions for individual apps, as well as your tenant's consent

Request API permissions

2

⚠ You are editing permission(s) to your application, users will have to consent even if they've already done so.

1

The "Admin consent required" column shows the default value for an organization. However, users will be used. [Learn more](#)

3

Microsoft Graph

Take advantage of the tremendous amount of data in Office 365, Enterprise Mobility + Security, and Windows 10. Access Microsoft Entra ID, Excel, Intune, Outlook/Exchange, OneDrive, SharePoint, Planner, and more through a single endpoint.

Azure Communication Services

Rich communication experiences with the same secure CPaaS platform used by Microsoft Teams

Azure Cosmos DB

Fast NoSQL database with open APIs for any scale.

Azure Data Explorer

Perform ad-hoc queries on terabytes of data to build near real-time and complex analytics solutions

Azure DevOps

Integrate with Azure DevOps and Azure DevOps server

Azure Key Vault

Manage your key vaults as well as the keys, secrets, and certificates within your Key Vaults

Azure Rights Management Services

Allow validated users to read and write protected content

Azure Service Management

Programmatic access to much of the functionality available through the Azure portal

Azure Storage

Secure, massively scalable object and data lake storage for unstructured and semi-structured data

Data Export Service for Microsoft Dynamics 365

Export data from Microsoft Dynamics CRM organization to an external destination

Dynamics 365 Business Central

Dynamics CRM

Dynamics ERP

Request API permissions

[All APIs](#)



Azure DevOps

<https://app.vssps.visualstudio.com/> [Docs](#)

What type of permissions does your application require?

Delegated permissions

Your application needs to access the API as the signed-in user.

Application permissions

Your application runs as a background service or as the signed-in user.

Select permissions



Start typing a permission to filter these results



The "Admin consent required" column shows the default value for an organization. However, user consent can be granted at the permission, user, or app. This column may not reflect the value in your organization, or in organizations where this is different.

Permission

Admin cons

Other permissions (1)



user_impersonation ⓘ

Have full access to Visual Studio Team Services REST APIs

No

> vso

[Add permissions](#)

[Discard](#)

Dashboard > arohmvp365

PowerPlatform

[Search](#)

[Overview](#)

[Quickstart](#)

[Integration assistant](#)

[Manage](#)

[Branding & properties](#)

Request API permissions

Select an API

Microsoft APIs

[APIs my organization uses](#)

My APIs

Apps in your directory that expose APIs are shown below

azure dev

Name

Azure DevOps

Application (client) ID

499b84ac-1321-427f-aa17-267ca6975798

Name	Application (Client) ID
Azure DevOps	499b84ac-1321-427f-aa17-267ca6975798

Grant admin consent for Tenant name

Dashboard > PowerPlatformALMAccelerator

PowerPlatformALMAccelerator | API permissions

Grant admin consent confirmation.

Do you want to grant consent for the requested permissions for all accounts in arohmvp365? This will update any existing admin consent records this application already has to match what is listed below.

Configured permissions

Applications are authorized to call APIs when they are granted permissions by users/admins as part of the consent process. The list of configured permissions should include all the permissions the application needs. [Learn more about permissions and consent](#)

API / Permissions name	Type	Description	Admin consent requ...	Status
✓ Azure DevOps (1)				
user_impersonation	Delegated	Have full access to Visual Studio Team Services REST APIs	No	...
✓ Dynamics CRM (1)				
user_impersonation	Delegated	Access Common Data Service as organization users	No	...
✓ Microsoft Graph (1)				
User.Read	Delegated	Sign in and read user profile	No	...
✓ PowerApps-Advisor (1)				
Analysis.All	Delegated	Analysis.All	Yes	⚠ Not granted for arohmvp365

Actions:

1. Select the API permissions section (highlighted with a red box).
2. Click the "Grant admin consent for arohmvp365" button (highlighted with a red box).
3. Click the "Yes" button in the confirmation dialog (highlighted with a red box).

PowerPlatformALMAccelerator | API permissions

Successfully granted admin consent for the requested permissions.

The "Admin consent required" column shows the default value for an organization. However, user consent can be customized per permission, user, or app. This column may not reflect the value app will be used. [Learn more](#)

Configured permissions

Applications are authorized to call APIs when they are granted permissions by users/admins as part of the consent process. The list of configured permissions should include all the permissions the application needs. [Learn more about permissions and consent](#)

API / Permissions name	Type	Description	Admin consent requ...	Status
✓ Azure DevOps (1)				
user_impersonation	Delegated	Have full access to Visual Studio Team Services REST APIs	No	Granted for arohmvp365
✓ Dynamics CRM (1)				
user_impersonation	Delegated	Access Common Data Service as organization users	No	Granted for arohmvp365
✓ Microsoft Graph (1)				
User.Read	Delegated	Sign in and read user profile	No	Granted for arohmvp365
✓ PowerApps-Advisor (1)				
Analysis.All	Delegated	Analysis.All	Yes	Granted for arohmvp365

To view and manage consented permissions for individual apps, as well as your tenant's consent settings, try [Enterprise applications](#).

App Registration – Certificates & Secrets

- Best practice is to keep secrets into **Azure Key Vault**, but we can use App Registrations secrets for this purpose too.

- Dd

The screenshot shows the Azure portal interface for managing an app registration named "PowerPlatformALMAccelerator". The "Certificates & secrets" tab is selected (1). Under the "Client secrets" tab (2), a new secret is being added (3). The "Add a client secret" dialog box is open, showing the "Description" field set to "PPALM" (4) and the "Expires" field set to "730 days (24 months)". The "Add" button is highlighted with a red circle (5).

The screenshot shows the "Certificates & secrets" tab selected in the "PowerPlatformALMAccelerator" app registration (1). The "Client secrets" tab is active (2). A single client secret named "PPALM" is listed, with its value "FUYVQ..." and secret ID "387d31e7-0b99-4f1c-bdad-fcd59bc3102" displayed. The "Copied" status is shown next to the secret ID.

Copy the Client Secret (Value) and Secret ID into a notepad file for next future steps

App Registration – Redirect URIs

PowerPlatformALMAccelerator

Overview (1)

Essentials

- Display name: PowerPlatformALMAccelerator
- Application (client) ID: 453190cc-efda-4bc5-bdc0-5c08933dd7f3
- Object ID: 50e89cc7-8c19-4454-93f0-5eb187bf569
- Directory (tenant) ID: 09c9310a-d1e5-412b-9a8a-06b3ab1fb021
- Supported account types: My organization only

Get Started Documentation

Build your application with the Microsoft identity platform

The Microsoft identity platform is an authentication service, open-source libraries, and application management tools. You can create modern, standards-based authentication solutions, access and protect APIs, and add sign-in for your users and customers. [Learn more](#)

- Under Authentication, Select Add a platform

PowerPlatformALMAccelerator | Authentication

Platform configurations

Depending on the platform or device this application is targeting, additional configuration may be required such as redirect URIs, specific authentication settings, or fields specific to the platform.

Add a platform (2)

Supported account types

Who can use this application or access this API?

Accounts in this organizational directory only (arohmvp365 only - Single tenant)

Accounts in any organizational directory (Any Microsoft Entra ID tenant - Multitenant)

[Help me decide...](#)

Advanced settings

Allow public client flows (1)

Enable the following mobile and desktop flows:

Yes No

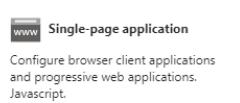
- App collects plaintext password (Resource Owner Password Credential Flow) [Learn more](#)
- No keyboard (Device Code Flow) [Learn more](#)

- Select Web from the configure platforms

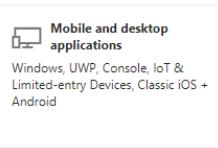
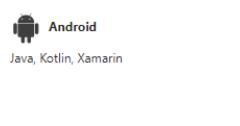
Configure platforms

X

Web applications



Mobile and desktop applications



Type the Redirect URLs

<https://global.consent.azure-apim.net/redirect>.

Configure Web

X

< All platforms

Quickstart Docs

* Redirect URIs

The URIs we will accept as destinations when returning authentication responses (tokens) after successfully authenticating or signing out users. The redirect URI you send in the request to the login server should match one listed here. Also referred to as reply URLs. [Learn more about Redirect URIs and their restrictions](#)

https://global.consent.azure-apim.net/redirect



Front-channel logout URL

This is where we send a request to have the application clear the user's session data. This is required for single sign-out to work correctly.

e.g. https://example.com/logout

Implicit grant and hybrid flows

Request a token directly from the authorization endpoint. If the application has a single-page architecture (SPA) and doesn't use the authorization code flow, or if it invokes a web API via JavaScript, select both access tokens and ID tokens. For ASP.NET Core web apps and other web apps that use hybrid authentication, select only ID tokens. [Learn more about tokens](#).

Select the tokens you would like to be issued by the authorization endpoint:

- Access tokens (used for implicit flows)
- ID tokens (used for implicit and hybrid flows)

Configure

Cancel

Dashboard > PowerPlatformALMAccelerator

PowerPlatformALMAccelerator | Authentication

Search

Got feedback?

Overview

Quickstart

Integration assistant

Manage

Branding & properties

Authentication

Certificates & secrets

Token configuration

API permissions

Expose an API

App roles

Owners

Platform configurations

Depending on the platform or device this application is targeting, additional configuration may be required such as redirect URIs, specific authentication settings, or fields specific to the platform.

Add a platform

Web

Redirect URIs

The URIs we will accept as destinations when returning authentication responses (tokens) after successfully authenticating or signing out users. The redirect URI you send in the request to the login server should match one listed here. Also referred to as reply URLs. [Learn more about Redirect URIs and their restrictions](#)

https://global.consent.azure-apim.net/redirect

Quickstart Docs



Install Azure DevOps extensions

- GO to Azure Portal
- Search for Azure DevOps Organization

The screenshot shows the Microsoft Azure portal's search interface. The search bar at the top contains the text "azure de". Below the search bar, there are several filter buttons: All, Services (99+), Marketplace (22), Documentation (99+), and Microsoft. A search result titled "Azure DevOps organizations" is displayed, with its icon and name highlighted by a red box. Other results listed include "Azure Deployment Environments", "Dev centers", "Projects", and "Marketplace".

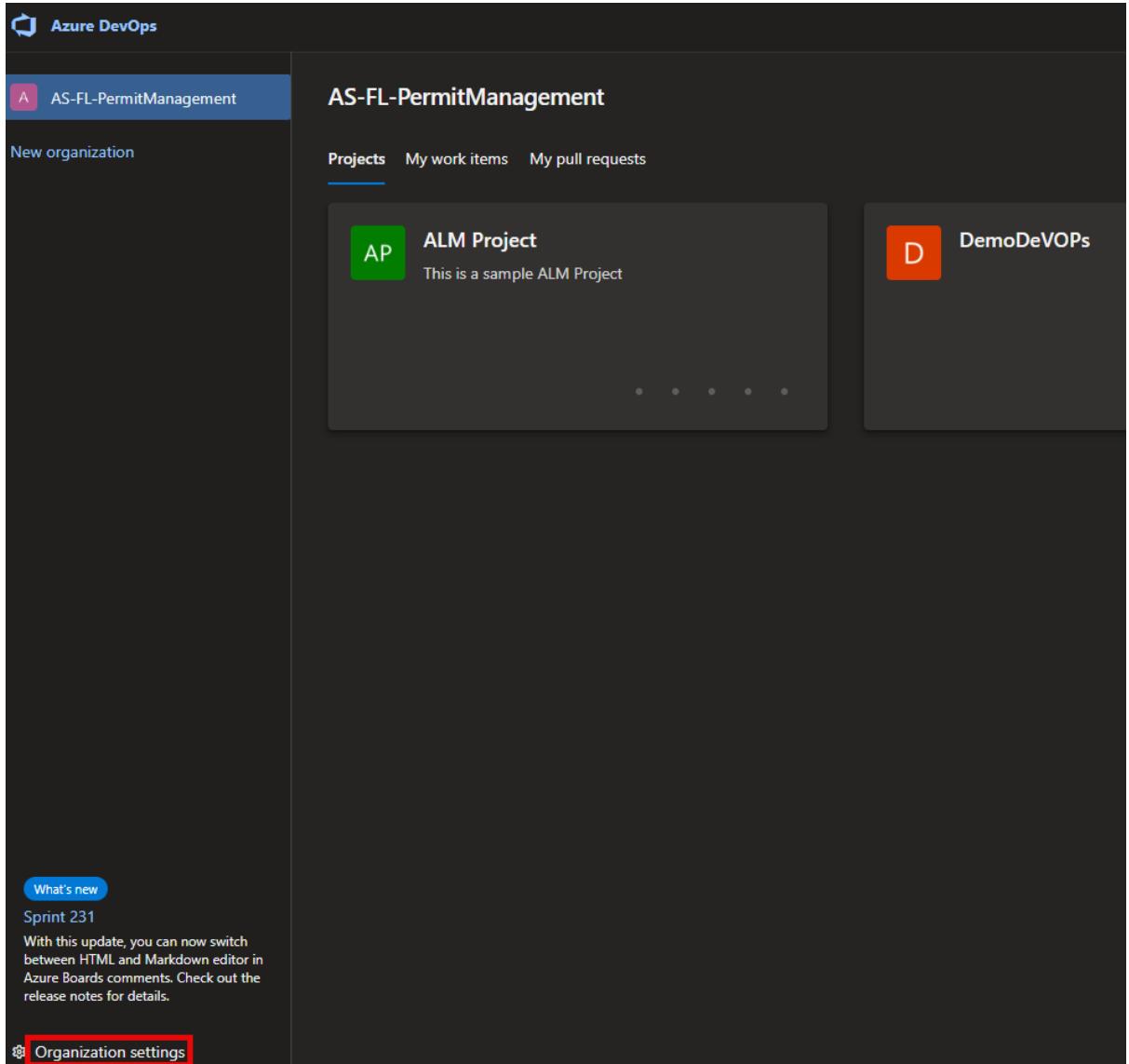
- Select My Azure DevOps Organization link

The screenshot shows the Microsoft Azure portal's "Azure DevOps" dashboard. On the left, there is a sidebar with various service links. In the center, there is a large graphic illustrating Azure DevOps services like CI/CD, monitoring, and data management. Below the graphic, the text "Azure DevOps" is displayed, followed by the subtext "Plan smarter, collaborate better, and ship faster with a set of modern dev services". At the bottom of the dashboard, there is a section titled "My Azure DevOps Organizations" which includes links for "Get started using Azure DevOps" and "Billing management for Azure DevOps". The "My Azure DevOps Organizations" link is highlighted with a red box.

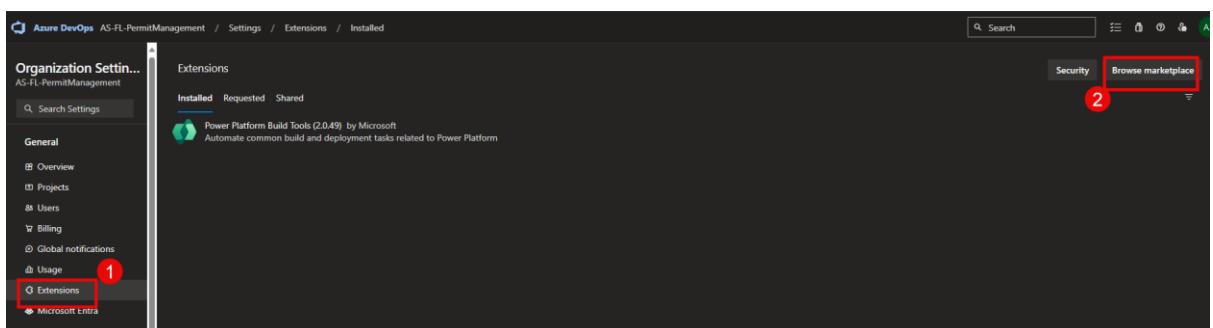
- Select the Azure DevOps Organization

The screenshot shows the Azure DevOps portal's "Azure DevOps Organizations" page. On the left, there is a user profile section for "Aroh Shukla" with a large green circular icon containing the letters "AS". Below the profile, there is a dropdown menu showing "arohmvp365" and a location indicator for "Singapore". On the right, there is a list of organizations. The first organization, "dev.azure.com/AS-FL-PermitManagement (Owner)", is highlighted with a red box. The page also includes a "Create new organization" button and a "New project" link.

- Select on **Organization Settings**

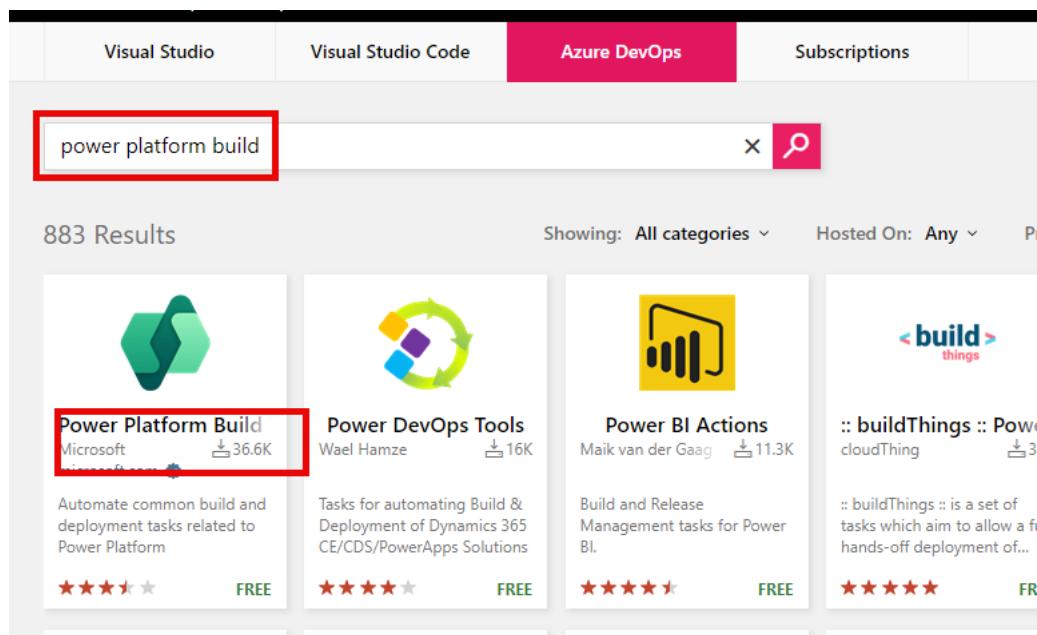


- Under **Extensions** Search for **Power Platform Built Tools** by clicking on **Browse marketplace**



I have already installed previously its exists.

- If does not exist, similar clicked on Browe marketplace and search for power platform build tools as shown and add.



Give Power App Management permission to your app registration

- Use PowerShell Command to **Grant Power App Management permissions** to your app registration so that the pipelines can perform the actions they need to in your environments.
- To do that, run the following PowerShell cmdlet as an interactive user that has Power Apps administrative privileges.
- You only need to run this **command once**, after you create your **app registration**.

```

Administrator:~ Windows PowerShell
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

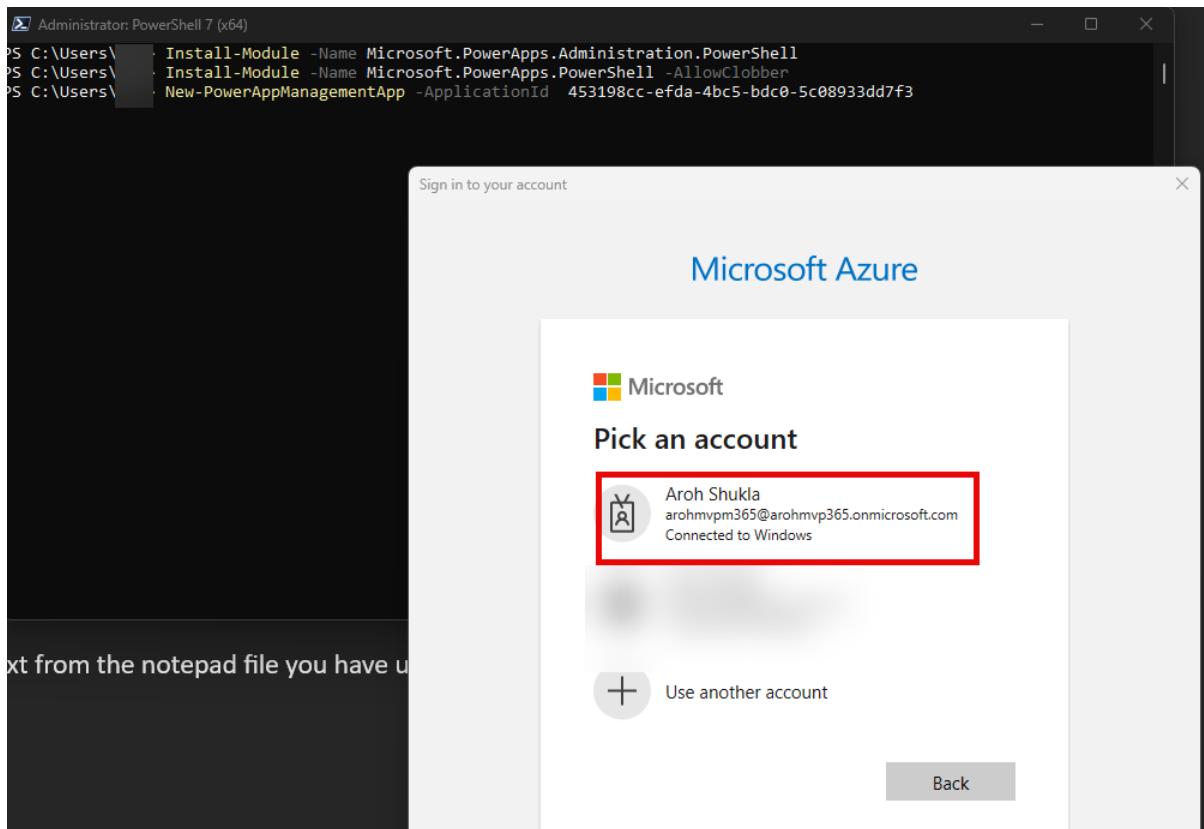
Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\windows\system32> Install-Module -Name Microsoft.PowerApps.Administration.PowerShell
PS C:\windows\system32> Install-Module -Name Microsoft.PowerApps.PowerShell -AllowClobber

You are installing the modules from an untrusted repository. If you trust this repository, change its
InstallationPolicy value by running the Set-PSRepository cmdlet. Are you sure you want to install the modules
from ' PSGallery'?
[N] No [?] Help (default is "N"): Y
PS C:\windows\system32>

```

Next from the notepad file you have used, copy the Application ID and execute in PowerShell



```
PS C:\Users\ > Install-Module -Name Microsoft.PowerApps.Administration.PowerShell
PS C:\Users\ > Install-Module -Name Microsoft.PowerApps.PowerShell -AllowClobber
PS C:\Users\ > New-PowerAppManagementApp -ApplicationId 453198cc-efda-4bc5-bdc0-5c08933dd7f3

applicationId
-----
453198cc-efda-4bc5-bdc0-5c08933dd7f3

PS C:\Users\ASK>
```

NOTE:

- a) You may received some errors at this link: Give Power App Management permission to your app registration [Configure the ALM Accelerator using the admin app - Power Platform | Microsoft Learn](#)

*Install-Module -Name Microsoft.PowerApps.Administration.PowerShell
Install-Module -Name Microsoft.PowerApps.PowerShell -AllowClobber
New-PowerAppManagementApp -ApplicationId <the Application (client) ID you copied when you created the app registration>*

```
PS C:\windows\system32> New-PowerAppManagementApp -ApplicationId 453198cc-efda-4bc5-bdc0-5c08933dd7f3
New-PowerAppManagementApp : The term 'New-PowerAppManagementApp' is not recognized as the name of a cmdlet,
Function, script file, or operable program. Check the spelling of the name, or if a path was included, verify
that the path is correct and try again.
At line:1 char:1
+ New-PowerAppManagementApp -ApplicationId 453198cc-efda-4bc5-bdc0-5c08 ...
+ ~~~~~
+ CategoryInfo          : ObjectNotFound: (New-PowerAppManagementApp:String) [], CommandNotFoundException
+ FullyQualifiedErrorId : CommandNotFoundException
```

- b) What is required is set the PowerShell Executive policy, close and restart the PowerShell commandlet.

Set-ExecutionPolicy -Scope CurrentUser -ExecutionPolicy RemoteSigned –Force

OR

Set-ExecutionPolicy -Scope CurrentUser -ExecutionPolicy Unrestricted –Force

- c) Also upgrade PowerShell 5.1 (default) to PowerShell 7th version.

<https://learn.microsoft.com/en-us/powershell/scripting/install/installing-powershell-on-windows?view=powershell-7.4>

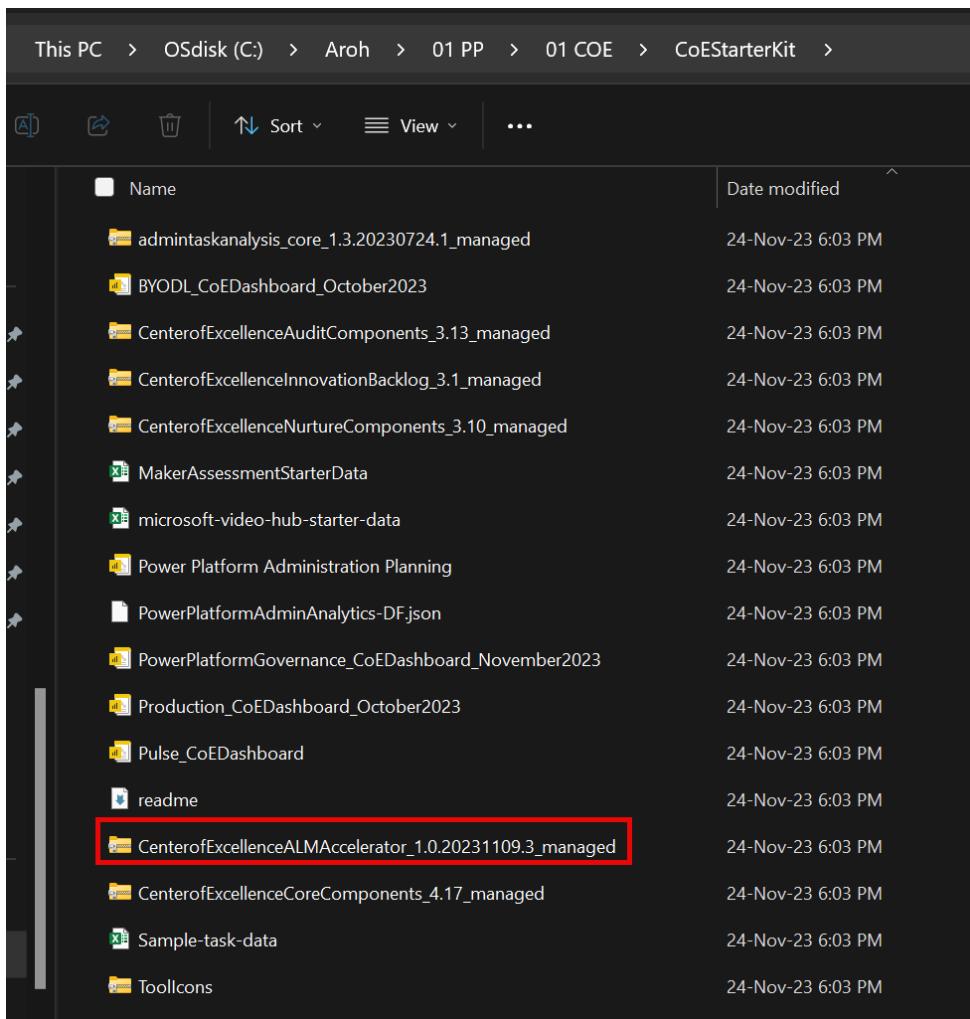
- d) After Installing the PowerShell 7th edition. The New-PowerAppManagementApp starts working.

Import the solution and configure the app

- Import the ALM Accelerator canvas app into your Power Platform environment, and then configure the included custom connector for Azure DevOps.

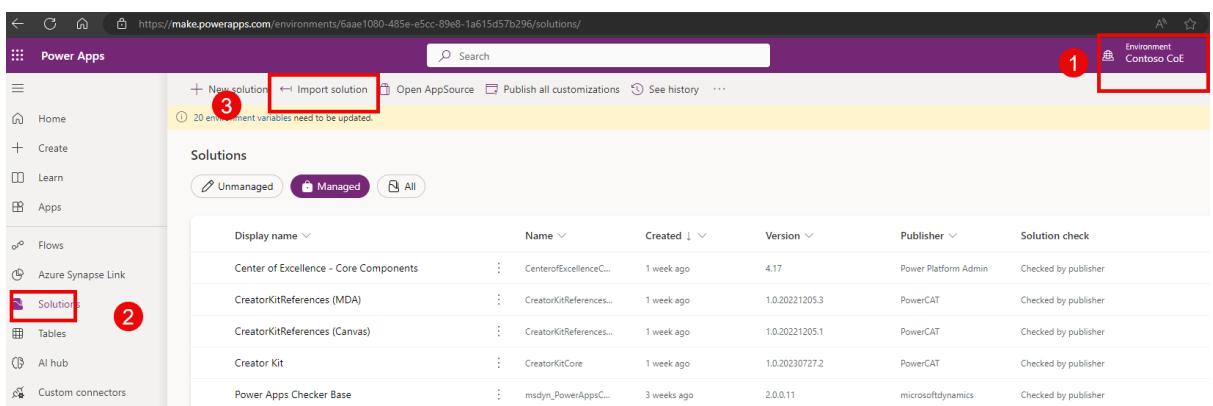
Install the ALM Accelerator in Dataverse

- Download the latest managed solution file from GitHub. Scroll down to Assets and select CenterofExcellenceALMAccelerator_<latest version>_managed.zip.

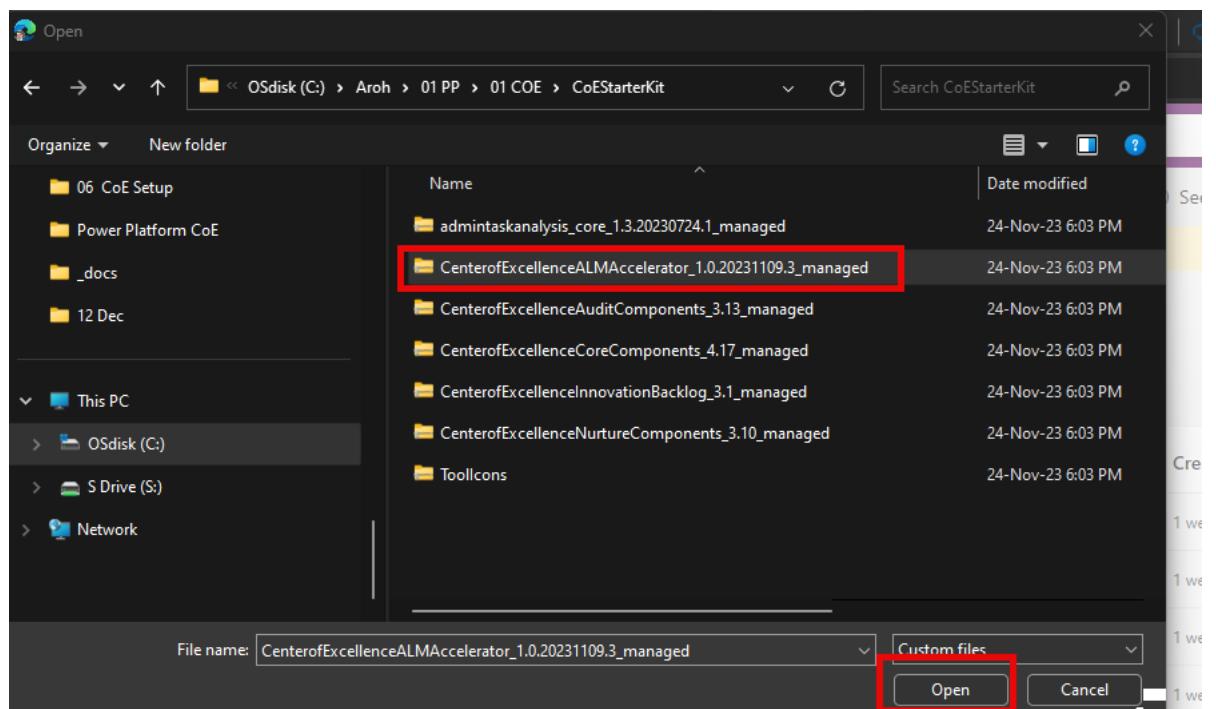


Name	Date modified
admintaskanalysis_core_1.3.20230724.1_managed	24-Nov-23 6:03 PM
BYODL_CoEDashboard_October2023	24-Nov-23 6:03 PM
CenterofExcellenceAuditComponents_3.13_managed	24-Nov-23 6:03 PM
CenterofExcellenceInnovationBacklog_3.1_managed	24-Nov-23 6:03 PM
CenterofExcellenceNurtureComponents_3.10_managed	24-Nov-23 6:03 PM
MakerAssessmentStarterData	24-Nov-23 6:03 PM
microsoft-video-hub-starter-data	24-Nov-23 6:03 PM
Power Platform Administration Planning	24-Nov-23 6:03 PM
PowerPlatformAdminAnalytics-DF.json	24-Nov-23 6:03 PM
PowerPlatformGovernance_CoEDashboard_November2023	24-Nov-23 6:03 PM
Production_CoEDashboard_October2023	24-Nov-23 6:03 PM
Pulse_CoEDashboard	24-Nov-23 6:03 PM
readme	24-Nov-23 6:03 PM
CenterofExcellenceALMAccelerator_1.0.20231109.3_managed	24-Nov-23 6:03 PM
CenterofExcellenceCoreComponents_4.17_managed	24-Nov-23 6:03 PM
Sample-task-data	24-Nov-23 6:03 PM
Toolicons	24-Nov-23 6:03 PM

- Sign in to Power Apps, and then select the environment you want to host the ALM Accelerator app.
- In the left side panel, select Solutions.
- Select Import solution > Browse, and then browse to the location of the managed solution you downloaded and select the file.



Display name	Name	Created	Version	Publisher	Solution check
Center of Excellence - Core Components	CenterofExcellenceC...	1 week ago	4.17	Power Platform Admin	Checked by publisher
CreatorKitReferences (MDA)	CreatorKitReferences...	1 week ago	1.0.20221205.3	PowerCAT	Checked by publisher
CreatorKitReferences (Canvas)	CreatorKitReferences...	1 week ago	1.0.20221205.1	PowerCAT	Checked by publisher
Creator Kit	CreatorKitCore	1 week ago	1.0.20230727.2	PowerCAT	Checked by publisher
Power Apps Checker Base	msdyn_PowerAppsC...	3 weeks ago	2.0.0.11	microsoftdynamics	Checked by publisher



- Select Next, and then select Next again.

Import a solution

Environment

Contoso CoE

Select a file

Browse for the solution file to import.

CenterofExcellenceALMAccelerator_1.0.20231109.3_managed.zip



Try pipelines for effortless imports

Use pipelines to simplify and automate the deployment process in your organization. Pipelines is a feature of Managed Environments.

[Learn more](#)

Import a solution

Environment
Contoso CoE

Details

Name
CenterofExcellenceALMAccelerator

Type
Managed

Publisher
Power CAT

Version
1.0.20231109.3

Patch
No

Advanced settings ▾

Next Cancel

- On the Connections page, select or create a connection to connect the CDS DevOps connection to Dataverse.
- When you create a connection for HTTP with Microsoft Entra, use Microsoft Graph for both parameters.

Import a solution

Environment
Contoso CoE

⟳ Refresh

Connections

Re-establish connections to activate your solution. If you create a connection you must Refresh. You will not lose your import progress.

4 updates needed

 CDS DevOps * cat_CDSDevOps	 Microsoft Dataverse Center of Excellence... cat_sharedcommondataserviceprapps_...	 HTTP with Azure AD * cat_sharedwebcontents_0df3a	 Power Apps for Makers * cat_sharedpowerappsformakers_c4...
 arohmvp365@arohmvp365.onmicrosoft...	 arohmvp365@arohmvp365.onmicrosoft...	 arohmvp365@arohmvp365.onmicrosoft...	 arohmvp365@arohmvp365.onmicrosoft...

Import

Cancel

Power Apps

Search

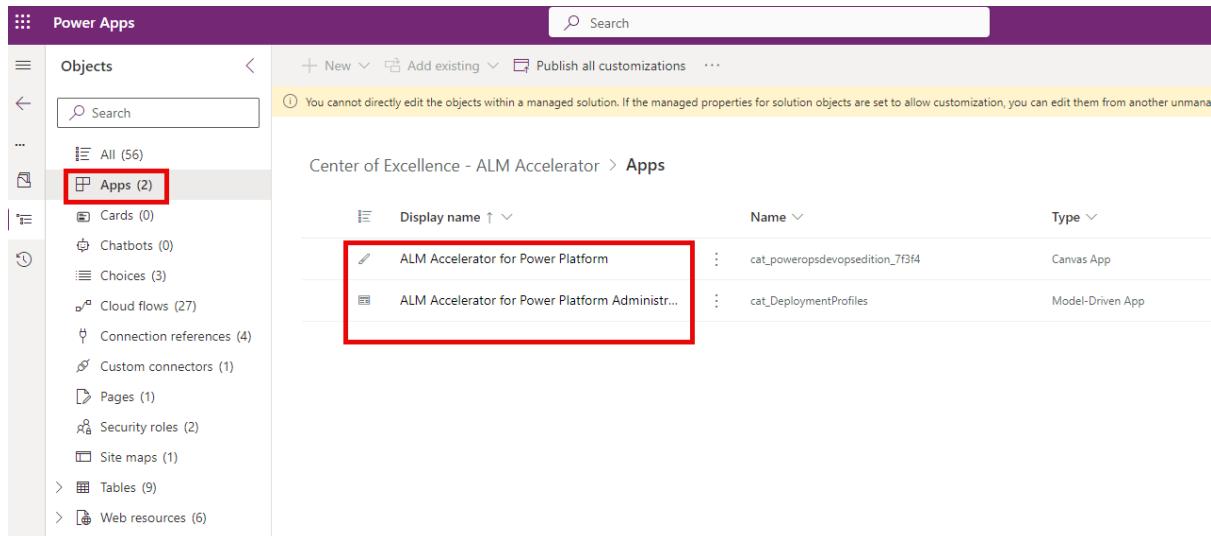
Contoso CoE

① 20 environment variables need to be updated.
② Currently importing solution "Center of Excellence - ALM Accelerator".

Display name	Name	Created	Version	Publisher	Solution check
Center of Excellence - Core Components	CenterofExcellenceC...	1 week ago	4.17	Power Platform Admin	Checked by publisher
CreatorKitReferences (MDA)	CreatorKitReferences...	1 week ago	1.0.20221205.3	PowerCAT	Checked by publisher
CreatorKitReferences (Canvas)	CreatorKitReferences...	1 week ago	1.0.20221205.1	PowerCAT	Checked by publisher
Creator Kit	CreatorKitCore	1 week ago	1.0.20230727.2	PowerCAT	Checked by publisher
Power Apps Checker Base	msdyn_PowerAppsC...	3 weeks ago	2.0.0.11	microsoftdynamics	Checked by publisher
Power Apps Checker	msdyn_PowerAppsC...	3 weeks ago	2.0.0.11	microsoftdynamics	Checked by publisher
Contextual Help Base	msdyn_ContextualH...	3 weeks ago	1.0.0.0	microsoftdynamics	Checked by publisher
Contextual Help	msdyn_ContextualH...	3 weeks ago	1.0.0.0	microsoftdynamics	Checked by publisher

Verify the All ALM accelerator artifacts

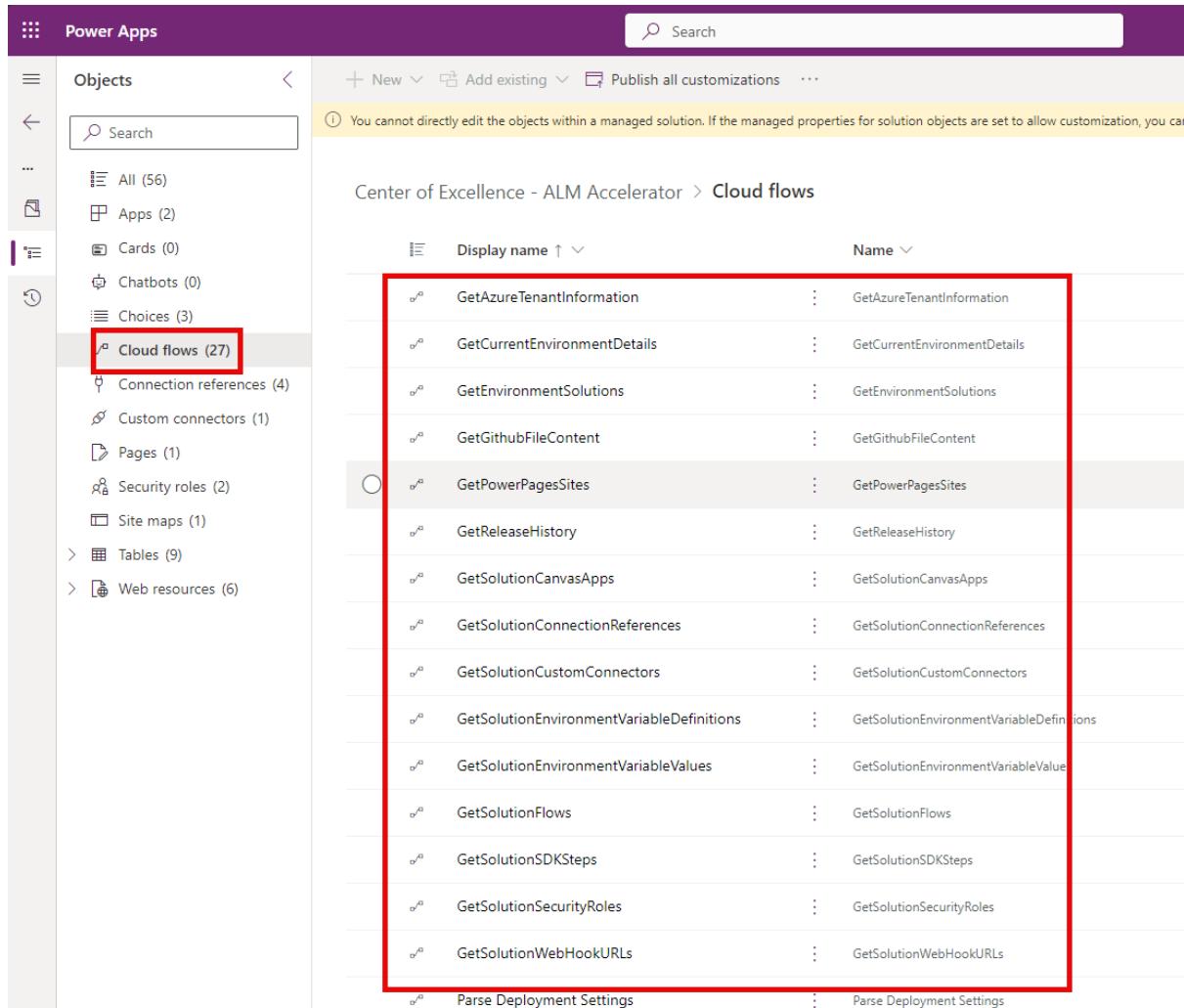
2 Apps



The screenshot shows the 'Objects' screen in the Power Apps admin center. The left sidebar lists categories like 'All (56)', 'Cards (0)', 'Chatbots (0)', etc., with 'Apps (2)' highlighted by a red box. The main area shows a table with columns 'Display name', 'Name', and 'Type'. Two entries are listed:

Display name	Name	Type
ALM Accelerator for Power Platform	cat_poweropsdevopsedition_7f3f4	Canvas App
ALM Accelerator for Power Platform Adminstr...	cat_DeploymentProfiles	Model-Driven App

Multiple Cloud flows



The screenshot shows the 'Objects' screen in the Power Apps admin center. The left sidebar lists categories like 'All (56)', 'Cards (0)', 'Chatbots (0)', etc., with 'Cloud flows (27)' highlighted by a red box. The main area shows a table with columns 'Display name' and 'Name'. A large red box highlights the entire list of 27 cloud flows:

Display name	Name
GetAzureTenantInformation	GetAzureTenantInformation
GetCurrentEnvironmentDetails	GetCurrentEnvironmentDetails
GetEnvironmentSolutions	GetEnvironmentSolutions
GetGitHubFileContent	GetGitHubFileContent
GetPowerPagesSites	GetPowerPagesSites
GetReleaseHistory	GetReleaseHistory
GetSolutionCanvasApps	GetSolutionCanvasApps
GetSolutionConnectionReferences	GetSolutionConnectionReferences
GetSolutionCustomConnectors	GetSolutionCustomConnectors
GetSolutionEnvironmentVariableDefinitions	GetSolutionEnvironmentVariableDefinitions
GetSolutionEnvironmentVariableValues	GetSolutionEnvironmentVariableValues
GetSolutionFlows	GetSolutionFlows
GetSolutionSDKSteps	GetSolutionSDKSteps
GetSolutionSecurityRoles	GetSolutionSecurityRoles
GetSolutionWebHookURLs	GetSolutionWebHookURLs
Parse Deployment Settings	Parse Deployment Settings

Custom connector – Needs to be configured

The screenshot shows the 'Objects' section in the Power Apps admin center. A red box highlights the 'Custom connectors (1)' item in the left navigation menu. In the main pane, a table lists one custom connector:

Display name ↑	Name ↓
CustomAzureDevOps	cat_5Fcustomazuredevops

A couple of security roles

The screenshot shows the 'Objects' section in the Power Apps admin center. A red box highlights the 'Security roles (2)' item in the left navigation menu. In the main pane, a table lists two security roles:

Display name ↑	Name ↓	Type
ALM Power App Access	ALM Power App Access	Security Role
ALM Power App Deployment Configuration	ALM Power App Deployment Configuration	Security Role

A couple of tables.

Power Apps

Objects

Search

You cannot directly edit the objects within a managed solution. If the managed properties for solution objects are set to allow customization, you can edit them from another unmanaged solution.

Center of Excellence - ALM Accelerator > Tables

Table	Name	Type	Managed	Customizable	Tags
App User Setting	cat_appusersetting	Standard	Yes	Yes	Standard
Deployment Environment	cat_deploymentenvironment	Standard	Yes	Yes	Standard
Deployment Profile	cat_deploymentprofile	Standard	Yes	Yes	Standard
Deployment Request	cat_deploymentrequest	Standard	Yes	Yes	Standard
Deployment Solution Profile	cat_deploymentsolutionpr...	Standard	Yes	Yes	Standard
Deployment Step	cat_deploymentstep	Standard	Yes	Yes	Standard
Deployment User Setting	cat_deploymentusersetting	Standard	Yes	Yes	Standard
Release History	cat_releasehistory	Standard	Yes	Yes	Standard
User Setting	cat_usersetting	Standard	Yes	Yes	Standard

All (56) Apps (2) Cards (0) Chatbots (0) Choices (3) Cloud flows (27) Connection references (4) Custom connectors (1) Pages (1) Security roles (2) Site maps (1) Tables (9) Web resources (6)

Configure the DevOps custom connector

- Select Data > Custom Connectors > CustomAzureDevOps.

Power Automate

Objects

Search

You cannot directly edit the objects within a managed solution. If the managed properties for solution objects are set to allow customization, you can edit them from another unmanaged solution.

Center of Excellence - ALM Accelerator > Custom connectors

Display name ↑	Name	Type
CustomAzureDevOps	cat_5fcustomazuredevops	Custom Connector

All (56) Apps (2) Cards (0) Chatbots (0) Choices (3) Cloud flows (27) Connection references (4) Custom connectors (1) Pages (1) Security roles (2) Site maps (1) Tables (9) Web resources (6)

- Select Edit.

Power Automate

Connector Name: CustomAzureDevOps

Details Share

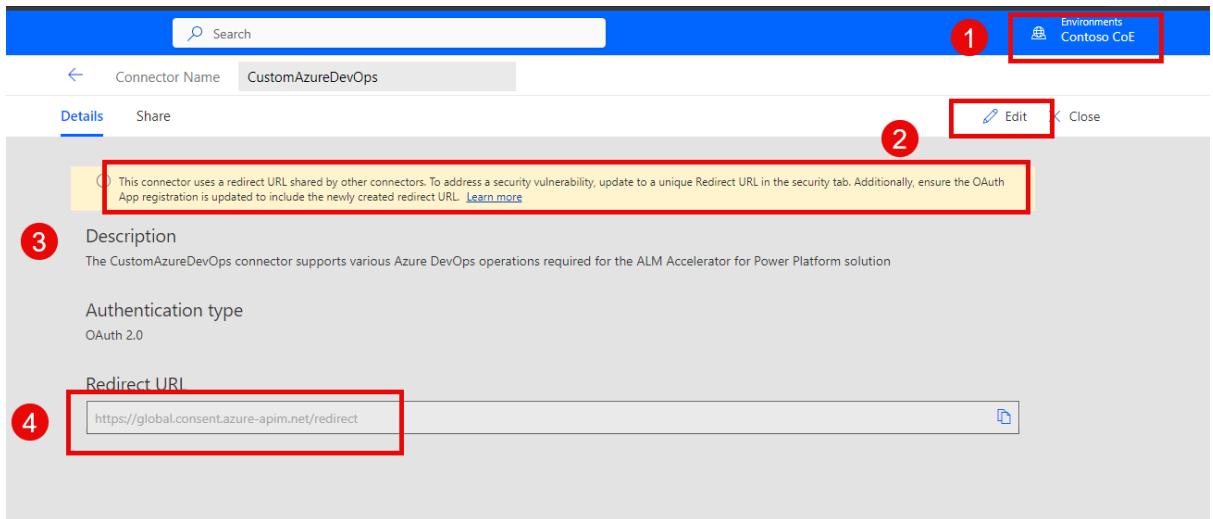
Edit Close

Description: The CustomAzureDevOps connector supports various Azure DevOps operations required for the ALM Accelerator for Power Platform solution.

Authentication type: OAuth 2.0

Redirect URL: https://global.consent.azure-apim.net/redirect/cat_5fcustomazuredevops_5fe64269285d0046

Home Create Templates Learn My flows Approvals Solutions Process mining AI hub Desktop flow activity Connections



General

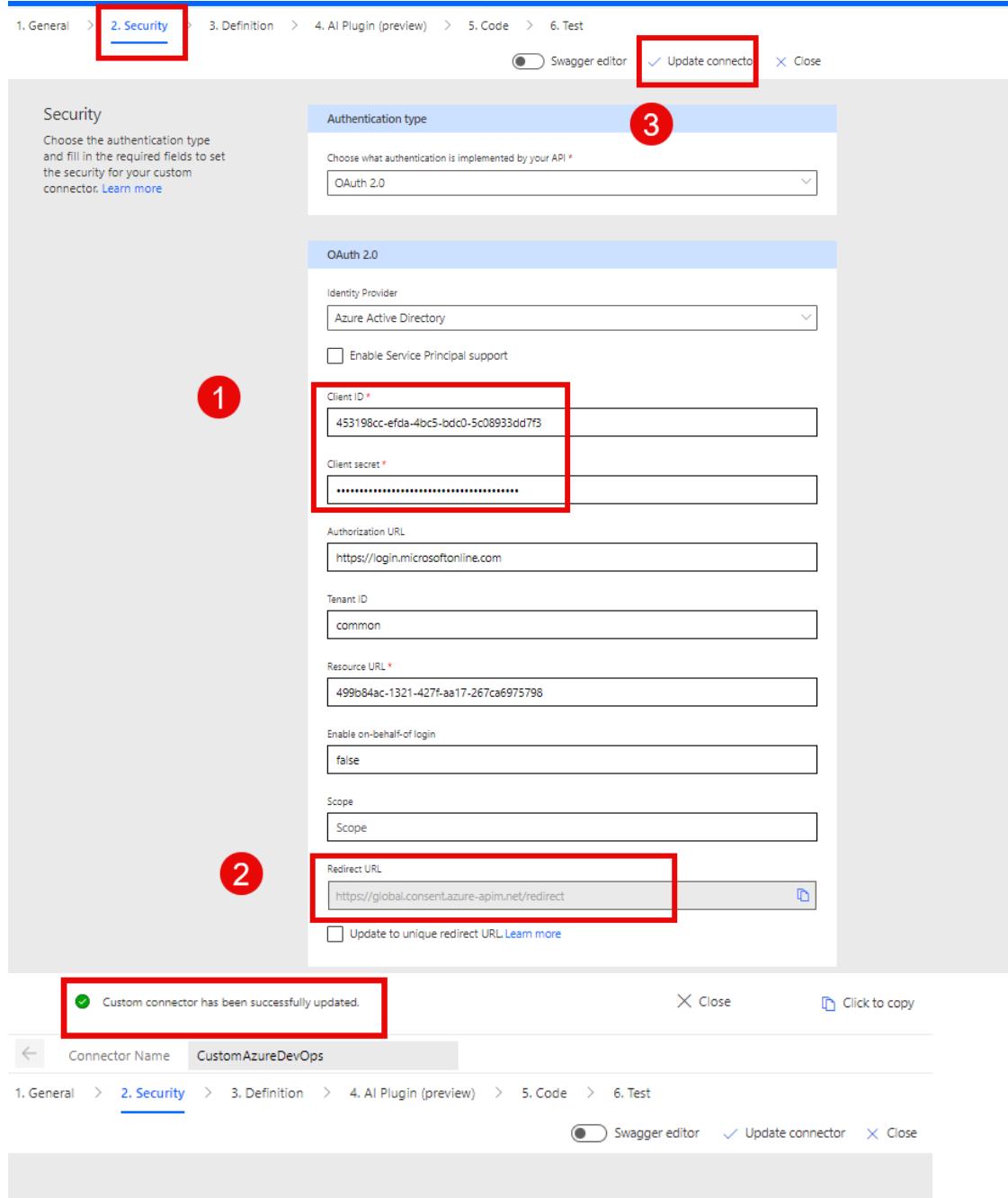
This screenshot shows the 'General' tab configuration page for the 'CustomAzureDevOps' connector. The top navigation bar includes a 'Connector Name' dropdown for 'CustomAzureDevOps', a '1. General' tab (highlighted with a red box), and a '2. Security' tab. Below the tabs, there are sections for 'General information' and 'General information' (repeated). The 'General information' section contains fields for 'Icon background color' (#007ee5), 'Description' (The CustomAzureDevOps connector supports various Azure DevOps operations required for the ALM Accelerator for Power Platform solution), and a checkbox for 'Connect via on-premises data gateway' (unchecked). The 'General information' section also includes fields for 'Scheme' (set to 'HTTPS') and 'Host' (set to 'dev.azure.com'). The 'Base URL' field is empty. Numbered callouts (1, 2, 3, 4) point to the 'General' tab, the 'Icon background color' field, the 'Description' field, and the 'Host' field respectively.

Security, select **Edit**, and then set the following values

- On the **Security** tab, select **Edit**, and then set the following values:

Name	Value
Authentication Type	OAuth 2.0
Identity provider	Microsoft Entra ID
Client ID	The Application (client) ID you copied when you created the app registration
Client secret	The Application (client) secret value you copied when you created the app registration
Tenant ID	Leave the default value, common
Resource URL	The DevOps Application (client) ID you copied when you added permissions to your app registration

- Enter details of **Client ID**, **Client Secret** and click on **Update Connector**

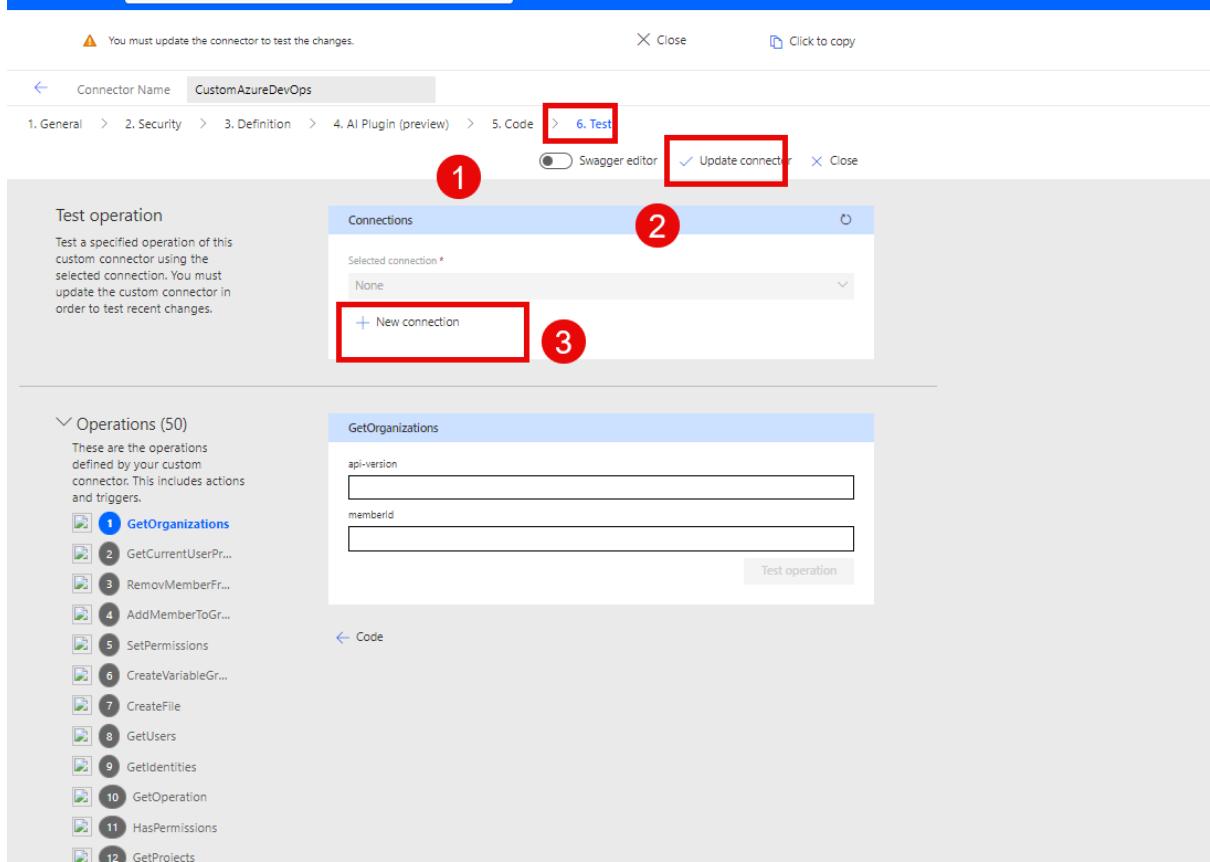


Definition

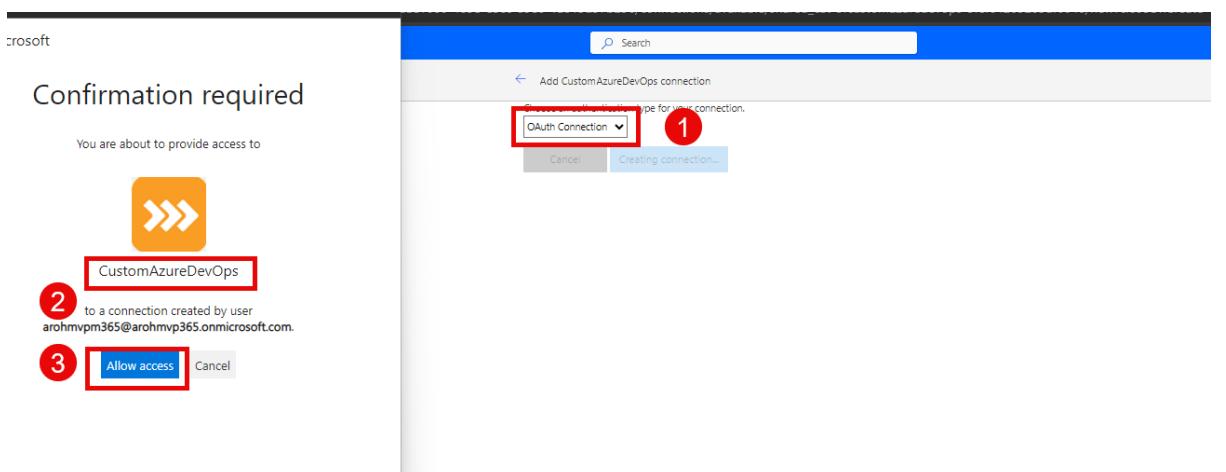
The screenshot shows the 'CustomAzureDevOps' connector definition page. The '3. Definition' tab is selected and highlighted with a red box. The left sidebar lists 50 actions under 'Actions (50)', with actions 1 through 11 highlighted by a red box. The main panel displays the 'General' settings for the 'GetOrganizations' operation, including summary, description, operation ID, visibility, and a request configuration section with verb (GET), URL (https://dev.azure.com/_apis/accounts), path, and query parameters.

Test

- Click on new connection.



- Select OAuth connection and select the Allow Access



- 200 means the custom connector is working fine

Test operation

Test a specified operation of this custom connector using the selected connection. You must update the custom connector in order to test recent changes.

Operations (50)

These are the operations defined by your custom connector. This includes actions and triggers.

GetOrganizations (1)

Request Response

(200)

Headers

Body

```
{
  "activityId": "41c1b160-a9a2-4dfe-b1b2-df3e73881ef2",
  "cache-control": "no-cache, no-store, must-revalidate",
  "content-encoding": "gzip",
  "content-type": "application/json; charset=utf-8; ani-version=0.0"
}
```

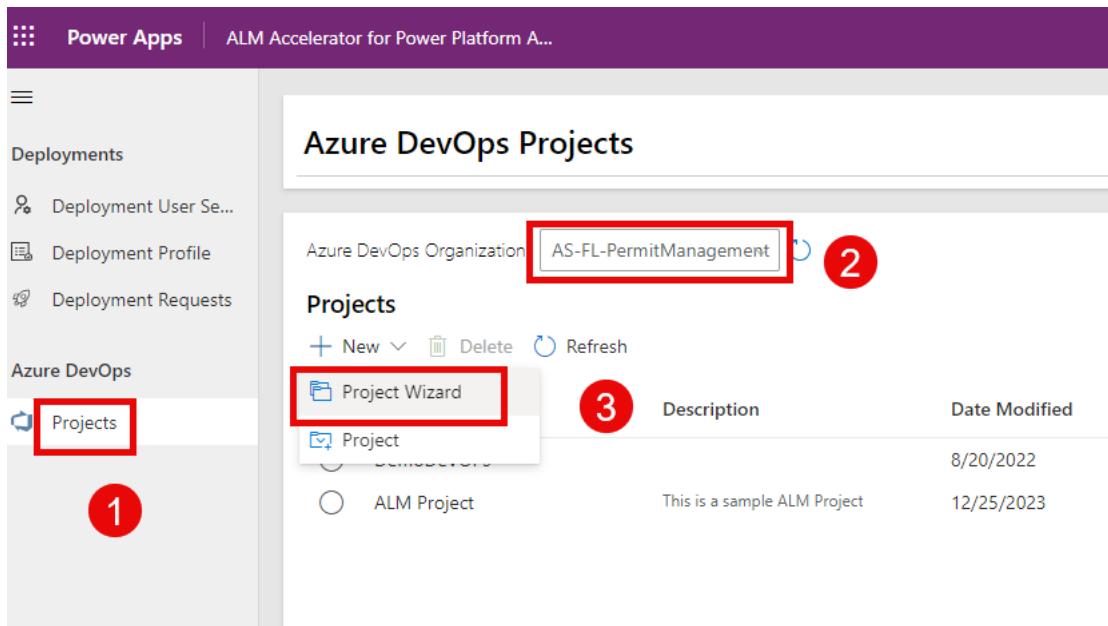
Set up your first Azure DevOps project for use with the ALM Accelerator

Use the included wizard to set up your Azure DevOps project to deploy Power Platform solutions using the ALM Accelerator. You can configure an existing empty project or create one.

1. Open the **ALM Accelerator administration app**.

Display name ↑	Name	Type
ALM Accelerator for Power Platform	cat_poweropsdevopsedition_7f3f4	Canvas App
ALM Accelerator for Power Platform Administr...	cat_DeploymentProfiles	Model-Driven App

2. In the left side panel, select **Projects** in the **Azure DevOps** group.
3. If you're prompted to update **Release Tags**, select **Okay**.
4. Select your Azure DevOps organization in the list.
5. In the **Projects List**, select **New**.
6. Select **Project Wizard**.



7. In the **Project** step, enter the name of your project. Optionally, enter a description and enable preview features.

Setup new ALM Accelerator Project

Follow the steps below to setup a complete ALM Accelerator Project

Project

Pipeline Templates

Service Connections

Generic Pipelines

Use a new or existing project?

Select an existing empty project or create a new Project for use with ALM Accelerator.

Each Project can host multiple Power Platform solutions.

Each Project will have an Default Team. Members of the Project Team will have access to the solutions in the project.

Consider creating Projects per Team, Department, Power Platform Project

Project Name: Leave Request App

Project Description: Its a sample Leave Request App with ALM Accelerator

Project Process: Basic (Default)

Or

Select an existing project:

Enable Preview Features (i)

Next **Cancel**

8. Select **Next**.
9. In the **Pipeline Templates** step, select **Next** to install templates in your project.

The app installs the pipeline templates into a new repository in the project. Alternatively, you can configure the project to use templates from a project that already has them installed.

Setup new ALM Accelerator Project

X

Follow the steps below to setup a complete ALM Accelerator Project

Project

Pipeline Templates

Service Connections

Generic Pipelines

Install Pipeline Templates

ALM Accelerator requires a Pipeline Template Repository to be configured

You can select to install the latest pipeline templates or a specific version into a new repository or select an existing Pipeline Repository.

Installation of the pipeline templates takes 1 - 2 minutes to complete. You can continue once the install process has started.

Install latest or choose a previous version

Version: CenterofExcellenceALMAccelerator-January2024

Install previous version? (i)

Create a new repository or select an existing

Install into new 'coe-alm-accelerator-templates' repository

Select existing Project hosting Pipeline Templates

Select existing Repository hosting Pipeline Templates

Next Cancel

10. In the **Service Connections** steps, select the environments for which you want to create a service connection.

You can select multiple environments and create service connections for all of them at the same time. To use different app registrations for your environments, create a service connection for each app registration individually.

Setup new ALM Accelerator Project

X

Follow the steps below to setup a complete ALM Accelerator Project

The screenshot shows the 'Create Service Connections' step of the ALM Accelerator Project setup. On the left, a vertical navigation bar lists four steps: 'Project' (selected), 'Pipeline Templates', 'Service Connections', and 'Generic Pipelines'. The 'Service Connections' step is currently active, showing configuration fields for a service connection.

Create Service Connections

Configure Service Connections by entering required information on the left and click "Add". Once all Service Connections have been configured, click "Next".

Select Environment: Prod - ALM Accelerator (Sandbox) (prodalm.crm5....)

TenantId: (Input field)

ClientId: 453198cc-efda-4bc5-bdc0-5c08933dd7f5 (Input field)

ClientSecret: (Input field with red border)

Share with all Pipelines

Add button

Service Connection Options (Listed in a red-bordered box):

- Dev - ALM Accelerator
https://devalm.crm5.dynamics.com/
- Test - ALM Accelerator
https://testalm.crm5.dynamics.com/
- Prod - ALM Accelerator
https://prodalm.crm5.dynamics.com/

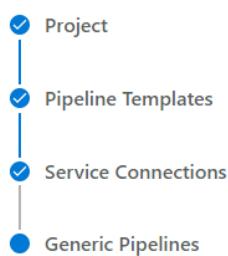
Next button (highlighted with a red box)

Cancel button

11. After you configure a service connection for an app registration, select **Add**.
12. After you've configured all the service connections, select **Next**.
13. In the **Generic Pipelines** step, select **Next** to create the pipelines and variable group and set the Azure DevOps permissions the project needs for ALM Accelerator functionality.

Setup new ALM Accelerator Project

Follow the steps below to setup a complete ALM Accelerator Project



Create Generic Pipelines

ALM Accelerator requires three generic pipelines to be available in a project.

`export-solution-to-git` is used for committing solutions to source control in the ALM Accelerator.

`export-solution-to-git-pipelines` is used for Pipelines extensions to commit solutions to source control.

`import-unmanaged-to-dev-environment` is used for importing a solution into development environment.

`delete-unmanaged-solution-and-components` is used for removing a solution from development environment.

Click Next to create the following generic Pipelines

`export-solution-to-git`

`export-solution-to-git-pipelines`

`import-unmanaged-to-dev-environment`

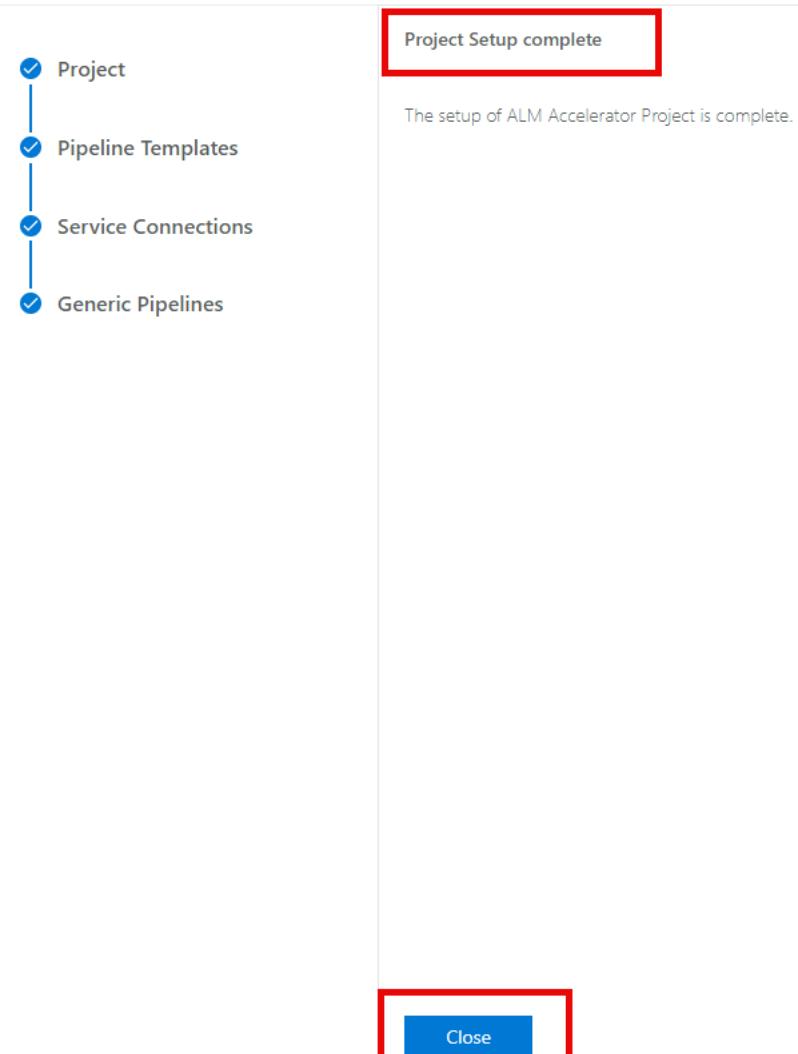
`delete-unmanaged-solution-and-components`

Next

Cancel

Setup new ALM Accelerator Project

Follow the steps below to setup a complete ALM Accelerator Project



View New Project Details at [ALM Accelerator for Power Platform Adm](#)

- You can view the project
- Team members
- Pipelines
- Repos

The screenshot shows the Power Platform admin center interface. The top navigation bar has 'Power Apps' and 'ALM Accelerator for Power Platform A...' selected. The main content area is titled 'Sandbox'. On the left, there's a sidebar with 'Deployments' and 'Azure DevOps' sections. The main area displays the 'ALM Accelerator for Power Platform Admin' section, which includes:

- Azure DevOps Projects**: Shows three projects: 'Leave Request App' (selected), 'DemoDevOPS', and 'ALM Project'. Each project has a name, description, and date modified.
- Team Members**: Shows one member: Arch Shukla (Email: archmvp365@archmvp365...).
- Pipelines**: Shows five pipelines: 'delete-unmanaged-solution-and-co...', 'export-solution-to-git-pipelines', 'export-solution-to-git', 'import-unmanaged-to-dev-environm...', and 'sync-pipeline-repo'. The last one is noted as 'ALM Accelerator Templates'.
- Repositories**: Shows one repository: 'Leave Request App' with 'refs/heads/main' as the Default Branch.
- Service Connections**: Shows four service connections: 'DEVALM', 'TESTALM', and 'PRODALM' (each with its corresponding environment URL: https://devalm.crm5.dynamics.com/, https://testalm.crm5.dynamics.com/, and https://prodalm.crm5.dynamics.com/).
- Variable Groups**: Shows one variable group: 'alm-accelerator-variable-group'.

Create an app user in your Dataverse environments – Dev, Test and Production

- Create an application user in your environments to allow the pipelines to connect to Dataverse. Do this in each environment you plan to use the ALM Accelerator to deploy to.
- Sign into the Power Platform admin centre.

- Select your **development environment**, and then select **Settings**.

The screenshot shows the Power Platform admin center interface. In the top navigation bar, the URL is <https://admin.powerplatform.microsoft.com/environments/environment/54db91ae-9abd-ea3f-b68a-039583a04a8e/hub?geo=Apac>. Below the URL, the title "Power Platform admin center" is displayed. The left sidebar has a "Environments" section highlighted with a red box. The main content area shows the details for the environment "Dev - ALM Accelerator". The "Details" table includes columns for Environment URL (devalm.crm5.dynamics.com), State (Ready), Region (Asia), Refresh cadence (Frequent), Type (Sandbox), Organization ID (db61a8b5-44a5-ee11-be33-002248586493), and Environment ID (54db91ae-9abd-ea3f-b68a-039583a04a8e). The "Settings" button in the top navigation bar is also highlighted with a red box.

- Select **Users + permissions > Application users**.

The screenshot shows the "Settings" page for the environment "Dev - ALM Accelerator". The left sidebar shows the "Environments" section. The main content area displays a tree view of settings categories. Under "Users + permissions", the "Application users" link is highlighted with a red box. Other items in the tree include "Product", "Business", and "Mobile configuration". A search bar at the top right is labeled "Search for a setting".

- Select **+ New app user**.

Power Platform admin center

Environments **New app user**

Environments > Dev - ALM Accelerator > Settings > Application users

Manage the non-interactive users in this environment so your apps can access Dataverse data. [Learn more](#)

Name	App ID	
Microsoft Microsoft Flow CDS Integration Service	0eda3b13-ddc9-4c25-b7dd-2f6ea073d6b7	A
Power Apps Checker Application	c9299480-c13a-49db-a7ae-cdfe54fe0313	A

- Select + Add an app, select the **app registration** you created earlier, and then select Add.

Create a new app user

App * **2**
+ Add an app

Business unit * **1**
orgfd6677e5

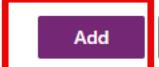
Security roles(0)

[←](#) Add an app from Microsoft Entra ID [×](#)

 Search by App Name or App ID

There could be multiple reasons why your app may not show up in the list.
[Learn more](#)

Name ↑	App ID
Adobe Document Generation	6e0fdcc0-2d09-4...
CoE Audit Log	5a10db9f-8094-...
Graph API Example	c284a370-3dfd-4...
Inspection Router	1ab25fa6-45e8-4...
Microsoft CRM Portals	a7799226-b2a9-...
Portals-06f3712f-0bda-4a57-a1f6-2a5d2829572f	dee2f6c5-d6f7-4...
Portals-5992e0fc-cd82-4090-9fe1-644505ce364f	5d29ff66-2bc2-4...
PowerPlatformALMAccelerator	453198cc-efda-4...
PowerPlatformALMService	abb5bfe8-0854-...
PowerPlatformALMServiceDestination	e3288672-f7ad-4...
PowerPlatformCustomConnector	50a2c39d-c4bd-...
qnamaker12345-bot	4eb50c1a-20bd...
Service Principal Demo	e2c842a8-9185-...
travelbot123-bot	2cee70a5-7ad4...

**Add****Cancel**

- Select the Business Unit.
- Select the pencil icon to the right of **Security roles**, and then select security roles for the app user.

- We recommend you give the app user **system administrator** security role privileges, so the user can perform the required functions in each environment.

Power BI Embedded App Access
Power BI workspace admin
Power BI workspace contributor
Power BI workspace viewer
Power Platform Dataflows Service Role
Process Mining Application
Process Mining User
Service Deleter
Service Reader
Service Writer
Solution Checker
Support User
SupportUserCustomAPI Role
Synapse Link Service Access
Sync Permissions
 System Administrator
System Customizer
Teams Chat Sync App Access
Tour Author
Tour Consumer

Save Cancel

- Select Create.

Create a new app user

App *

Business unit *

Security roles(1)

System Administrator

- Repeat these steps in your validation, test, and production environments.

Environments						
Name		App ID	State	App type	Security roles	Business unit
 # PowerPlatformALMAccelerator		453190cc-efda-4bc5-bdc0-5c08933dd7f3	Active	Custom	1	orgfd6677e5
Microsoft Microsoft Flow CDS Integration Service		0eda3b13-ddc9-4c25-b7dd-2f6ea073d6b7	Active	Custom	2	orgfd6677e5
Power Apps Checker Application		c9299480-c13a-49db-a7ae-cdf54fe0313	Active	Custom	3	orgfd6677e5

Test

Screenshot of the Microsoft Entra ID interface showing the addition of an app from Microsoft Entra ID.

The main pane displays the "Application users" list for the environment "Test -ALM Accelerator". A red box highlights the application "PowerPlatformALMAccelerator" in the list.

The right pane shows a search results list for "PowerPlatformALMAccelerator". A red box highlights the entry "# PowerPlatformALMAccelerator".

Application users (Main Pane)

Name	App ID	State	App type	Security roles
Power Apps Checker Application	c9299480-c13a-49db-a7ae-cdfe54fe0313	Active	Custom	3

Search Results (Right Pane)

Name	App ID
Adobe Document Generation	6e0fdcc0-2d09-4...
CoE Audit Log	5a10db9f-8094-...
Graph API Example	c284a370-3dfd-4...
Inspection Router	1ab25fa6-45e8-4...
Microsoft CRM Portals	a7799226-b2a9-...
Portals-06f3712f-0bda-4a57-a1f6-2a5d2820572f	dee26c5-d6f7-4...
Portals-5992e0fc-cd82-4090-9fe1-644505ce364f	5d29ff66-2bc2-4...
# PowerPlatformALMAccelerator	453198cc-efda-4...
PowerPlatformALMServiceDestination	e3288672-7fad-4...
PowerPlatformCustomConnector	50a2c39d-c4bd-...
qnamaker12345-bot	4eb50c1a-20bd-...
Service Principal Demo	e2c842a8-9185-...
travelbot123-bot	2cee70a5-7ad4-...

Success Message (Bottom Left)

'# PowerPlatformALMAccelerator' has been successfully added to this environment.

Environment Settings (Bottom Right)

Environments > Test -ALM Accelerator > Settings > Application users

Manage the non-interactive users in this environment so your apps can access Dataverse data. [Learn more](#)

Name	App ID	Type
# PowerPlatformALMAccelerator	453198cc-efda-4bc5-bdc0-5c08933dd7f3	A
Power Apps Checker Application	c9299480-c13a-49db-a7ae-cdfe54fe0313	A

Prod

The screenshot shows the Microsoft Entra ID portal interface. On the left, there's a sidebar with options like 'Environments', 'Prod - ALM Accelerator' (which is highlighted with a red box), 'Settings', and 'Application users'. The main area shows a table of applications with columns: Name, App ID, State, App type, and Security roles. A single row for 'Power Apps Checker Application' is listed. To the right, a search bar and a list of available applications are shown. One application, 'PowerPlatformALMAccelerator', is highlighted with a red box and has its details shown in a preview pane. At the bottom right of the preview pane are 'Add' and 'Cancel' buttons.

Name	App ID	State	App type	Security roles
Power Apps Checker Application	c9299480-c13a-49db-a7ae-cdf54fe0313	Active	Custom	3

The screenshot shows the Power Platform admin center interface. The left sidebar includes 'Environments', 'Prod - ALM Accelerator' (highlighted with a red box), 'Settings', and 'Application users'. The main content area displays a success message: '# PowerPlatformALMAccelerator' has been successfully added to this environment. Below this, it shows the same list of applications as the previous screenshot, with the newly added app now visible. The 'PowerPlatformALMAccelerator' row is highlighted with a red box.

Name	App ID	State	App type
# PowerPlatformALMAccelerator	453198cc-efda-4bc5-bdc0-5c08933dd7f3	Active	Custom
Power Apps Checker Application	c9299480-c13a-49db-a7ae-cdf54fe0313	Active	Custom

Set up makers to use the ALM Accelerator app

Configure user permissions

<https://learn.microsoft.com/en-gb/power-platform/guidance/alm-accelerator/setup-app-user-permissions>

- Makers can use the **ALM Accelerator app** to increase their productivity when they're developing solutions in Power Platform.
- Before your makers can use the app, you need to set up **their user accounts in Microsoft Dataverse and Azure DevOps**.

Dataverse user setup

1. Sign in to the [Power Platform admin center](#), and then select the environment in which the maker accounts exist.

2. In the **Access** section under **Teams**, select **See all**.

Details	See all	Edit
Environment URL devalm.crm5.dynamics.com	State Ready	Region Asia
Refresh cadence Frequent	Type Sandbox	Security group Not assigned
Organization ID db61a8b5-44a5-ee11-be33-002248586493	Environment ID 54db91ae-9ab9-ea3f-b68a-039583a04a8e	

Auditing

Manage

Auditing enabled Retain audit logs for Free up capacity

Access

- Security roles See all
- Teams **See all**
- Users See all
- S2S apps See all
- Business Units (Preview) See all

3. Select **Create team**.

+ Create team

Environments > Dev - ALM Accelerator > Settings > Teams

Manage teams to share business objects and collaborate across business units in a secure and easy manner. [Learn more](#)

Name ↑	Modified	Business unit	Team type	Administrator
orgfd6677e5	2023-12-16T18:47:04Z	orgfd6677e5	Owner	Aroh Shukla

4. Enter a **Team name**, and then select a **Business unit** and **Administrator**.

5. Select **Microsoft Entra ID Security Group** as the **Team type**.

Dashboard > arohmvp365 | Groups >

Groups | All groups
arohmvp365 - Microsoft Entra ID

New group Download groups Refresh Manage view Delete Got feedback?

Azure Active Directory is now Microsoft Entra ID. [Learn more](#)

alm

Search mode Contains

1 group found

Name	Object Id	Group type	Membership type	Email
DT Dev Team - ALM Accelerator	e94a5268-22b3-4d3c-bf8e-c49df142c234	Security	Assigned	

[Video to Administer applications users, security roles, teams and users in PP AC](#)
Teams in Dataverse- Power Platform | Microsoft Learn

Users, Roles & Teams management PPAC migration

Business Impact

- Provide a centralized admin experience to manage users/security roles and Teams

Why is this important?

- Legacy Web client has been deprecated
- Admin functionalities were not done in UCI
- Customers are confused and irritated for not being able to manage roles in UCI
- Support Project UNO users/roles/teams unification plan

How did we do it?

- Identified UCI areas and migrate them

The screenshot shows the Power Platform admin center interface. The left sidebar has a tree view with 'Environments' selected, followed by 'Analytics', 'Resources', 'Help + support', 'Data integration', 'Data (preview)', 'Data policies', and 'Admin centers'. The main content area is titled 'Environments > CAN 731 > Settings'. It contains a search bar and several sections: 'Product' (Behavior, Features, Languages, Privacy + Security), 'Business' (Business closures, Calendar, Connection roles, Currencies), 'Users + permissions' (Business units, Hierarchy security, Mobile configuration, Positions), 'Application users' (Business units (Preview), Column security profiles, Hierarchy security, License to role mapping), 'Security roles' (All legacy settings, Dynamics 365 for Outlook), 'Data' (Announcements, Auto-numbering, Automatic record creation policies, Bulk deletion), 'Encryption' (Data encryption, Environment encryption), 'Resources' (Document management settings, Microsoft Social Engagement, Microsoft Teams Integration, Outlook), and 'Audit and logs' (Audit settings, Audit summary view, Entity and field audit settings, System jobs). The 'Application users' section is highlighted with a yellow box.

Application user

The screenshot shows the Power Platform admin center interface. The left sidebar has a tree view with 'Environments' selected, followed by 'Advisor (Preview)', 'Analytics', 'Billing', 'Settings', 'Resources', 'Help + support', 'Data integration', and 'Data (preview)'. The main content area is titled 'Environments > Dev - ALM Accelerator > Settings'. It contains a search bar and several sections: 'Product' (Behavior, Collaboration, Features, Languages), 'Business' (Business closures, Calendar, Connection roles, Currencies), 'Users + permissions' (Business units, Hierarchy security, Mobile configuration, Positions), and 'Application users' (Business units (Preview), Column security profiles, Hierarchy security, License to role mapping). The 'Application users' section is highlighted with a red box.

Power Platform admin center

The screenshot shows the Power Platform admin center interface. On the left, there's a navigation sidebar with options like Home, Environments, Advisor (Preview), Analytics, Billing, Settings, Resources, and Help + support. The main area shows the 'Environments' section for 'Dev - ALM Accelerator'. A red box highlights the 'Application users' link under 'Settings'. Below it, a table lists three app users: '# PowerPlatformALMAccelerator' (App ID: 453198cc-efda-4bc5-bdc0-5c08933dd7f3, State: Active, App type: Custom), 'Microsoft Microsoft Flow CDS Integration Service' (App ID: 0eda3b13-ddc9-4c25-b7dd-2f6ea073d6b7, State: Active, App type: Custom), and 'Power Apps Checker Application' (App ID: c9299480-c13a-49db-a7ae-cdf54fe0313, State: Active, App type: Custom). A note at the top says 'Manage the non-interactive users in this environment so your apps can access Dataverse data.' with a 'Learn more' link.

Security role assignment

Power Platform admin center

The screenshot shows the 'Settings' page in the Power Platform admin center. The left sidebar has the same navigation as before. The main area shows the 'Environments > Dev - ALM Accelerator > Settings' path. A search bar is present. The settings are organized into categories: Product (Behavior, Collaboration, Features, Languages), Business (Business closures, Calendar, Connection roles, Currencies), Users + permissions (Application users, Business units (Preview), Column security profiles, Hierarchy security, License to role mapping, Mobile configuration, Plug-ins), Positions (Teams, Security roles, Users), and Admin centers. A red box highlights the 'Security roles' link under the 'Positions' category.

Basic Role >> Manage User

Power Platform admin center

Home Environments Analytics Billing Settings Resources Help + support Data integration Data (preview) Policies Admin centers

Copy Edit Delete Members Audit report

Environments > Dev - ALM Accelerator > Settings > Security roles

Manage security roles within this environment so that people can access their data. [Learn more](#)

Display only parent security roles On

Role ↑	Business unit	Managed	Modified on	
AIB Roles	...	orgfd6677e5	Yes	12/17/2023 6:40 AM
AIB SML Roles	...	orgfd6677e5	Yes	12/17/2023 6:40 AM
App Deployment Orchestration Role	...	orgfd6677e5	Yes	12/17/2023 4:09 AM
App Opener	...	orgfd6677e5	Yes	12/17/2023 3:56 AM
Approvals Administrator	...	orgfd6677e5	Yes	12/28/2023 3:54 PM
Approvals User	...	orgfd6677e5	Yes	12/28/2023 3:54 PM
Sync ingestion	...	orgfd6677e5	Yes	12/17/2023 6:53 AM
Basic User	...	orgfd6677e5	Yes	12/17/2023 6:40 AM
BizQAApp	...	orgfd6677e5	Yes	12/17/2023 6:55 AM
Bot Author	...	orgfd6677e5	Yes	12/17/2023 4:30 AM

1 Basic User 2 Members

center

+ Add people

Environments > Dev - ALM Accelerator > Settings > Security roles > Basic User > Members

Add or remove people from the Basic User security role. [Learn more](#)

Business unit
orgfd6677e5

Name ↑	Type	Username
Aroh Shukla	Individual	arohmvp365@arohmvp365.onmicrosoft.com
Dev Team - ALM Accelerator	Microsoft Entra ID Security Group	--

Add people

Choose the people who should be added to the role.

Search for a name, email address or team name

AW Alex Wilber
AlexW@arohmvp365.onmicrosoft.com

Add Cancel

Power Platform admin center

Home + Add people

Environments: **Dev - ALM Accelerator** > Settings > Security roles > Basic User > Members

Add or remove people from the Basic User security role. [Learn more](#)

Business unit: orgfd6677e5

Name ↑	Type	Username
Alex Wilber	Individual	AlexW@arohmvp365.onmicrosoft.com
Aroh Shukla	Individual	arohmvp365@arohmvp365.onmicrosoft.com
Dev Team - ALM Accelerator	Microsoft Entra ID Security Group	--

Create Teams

Power Platform admin center

Home

Environments

Environments > Dev - ALM Accelerator > **Settings**

Search for a setting

- ▽ **Product** Behavior, Collaboration, Features, Languages
- ▽ **Business** Business closures, Calendar, Connection roles, Currencies
- ▽ **Users + permissions** Application users
- Business units (Preview)
- Column security profiles
- Hierarchy security
- License to role mapping
- Mobile configuration
- Plug-ins
- Positions
- Security roles
- Teams**
- Users

- ▽ **Audit and logs** Audit log management, Audit settings, Audit summary view, Entity and field audit settings
- ▽ **Templates**

The screenshot shows the Power Platform admin center interface. On the left, there's a navigation sidebar with options like Home, Environments, Advisor (Preview), Analytics, Billing, Settings, Resources, and Help + support. The main area shows the 'Environments > Dev - ALM Accelerator > Settings > Teams' path. At the top right, there's a '+ Create team' button, which is highlighted with a red box. Below it, a table lists one existing team: 'orgfd6677e5' (Modified: 2023-12-16T18:47:04Z, Business unit: orgfd6677e5, Team type: Owner, Administrator: Aroh Shukla).

6. Search for and select the name of the **Microsoft Entra ID Security Group** that you want to have access to the ALM Accelerator app.

The screenshot shows the 'New team' creation dialog. It has fields for Team name (set to 'Dev Team - ALM Accelerator'), Description (empty), Business unit (orgfd6677e5), Administrator (Aroh Shukla), Admin # (empty), Team type (set to 'Microsoft Entra ID Security Group'), Group name (containing 'Dev Team - ALM Accelerator'), and Membership type (set to 'Members and guests'). At the bottom right, there are 'Next' and 'Cancel' buttons, with the 'Next' button highlighted with a red box.

7. Select members for **Membership type**.

8. Select **Next**.

9. Select the **ALM Power App Access** and **Basic User** roles, and then select **Save**.

Manage security roles

Manage Team security roles

Business unit: *

orgfd6677e5

Role ↑

- AIB Roles
- AIB SML Roles
- App Deployment Orchestration Role
- App Opener
- Approvals Administrator
- Approvals User
- Async ingestion
- Basic User
- BizQAApp
- Bot Author
- Bot Contributor
- Bot Transcript Viewer
- Bulk Archival Role
- BusinessApplicationPlatformRole
- Cards Basic Role
- Cards Role

Save **Cancel**

in center

+ Create team ⏪ Refresh

✓ Security roles updated for team Dev Team - ALM Accelerator successfully

Environments > Dev - ALM Accelerator > Settings > Teams

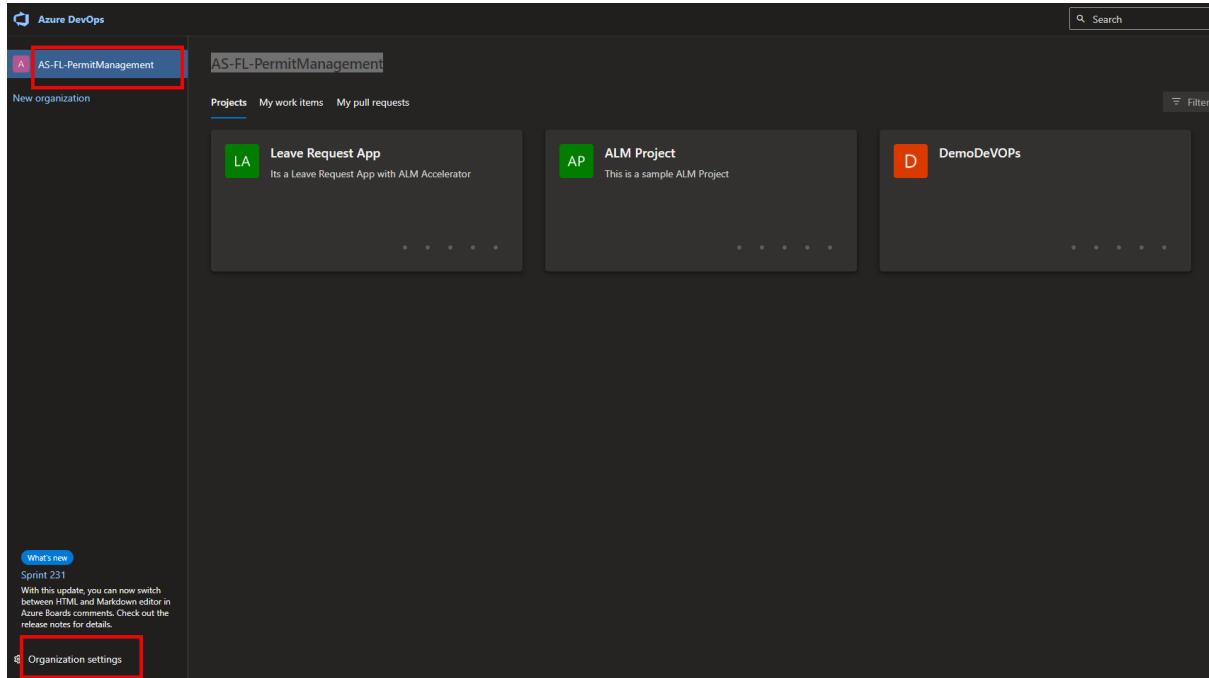
Manage teams to share business objects and collaborate across business units in a secure and easy manner. [Learn more](#)

Name ↑	Modified	Business unit	Team type	Administrator
Dev Team - ALM ...	2024-01-07T03:00:37Z	orgfd6677e5	Microsoft Entra ID Security Group	Aroh Shukla
orgfd6677e5	2023-12-16T18:47:04Z	orgfd6677e5	Owner	Aroh Shukla

Azure DevOps user setup Setup Configuration

NOTE:

Adding the user and security group at Azure DevOps main project - AS-FL-PermitManagement



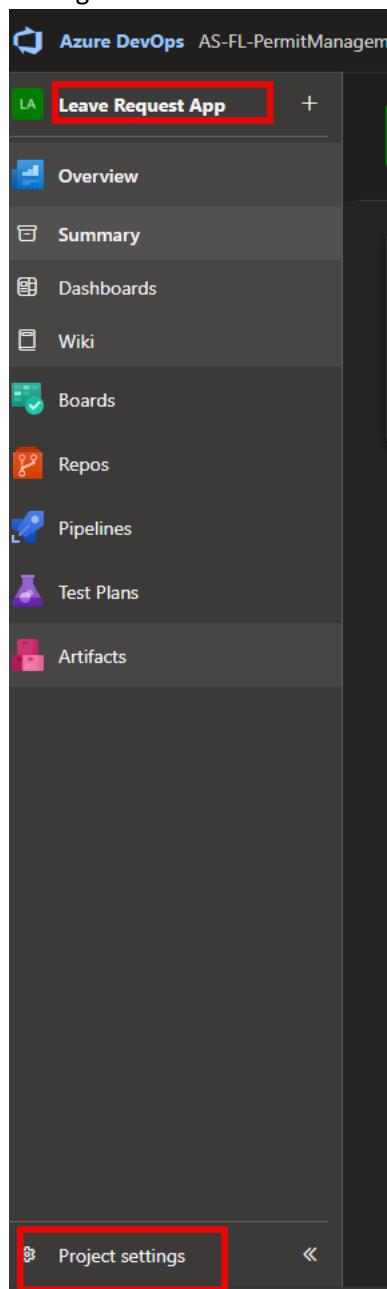
Group rules

The image contains two screenshots of the Azure DevOps 'Users' page. The top screenshot shows the 'Add new users' dialog, which is used to add a new user or service principal. It includes fields for 'Users or Service Principals' (with 'Alex Wilber' listed), 'Access level' (set to 'Basic'), 'Add to projects' (with 'Leave Request App' selected), and 'Azure DevOps Groups' (with 'Azure DevOps Groups' selected). There is also a checkbox for 'Send email invites (to Users only)'. The bottom screenshot shows the main 'Users' list, where a group named 'Dev Team - ALM Accelerator' is highlighted.

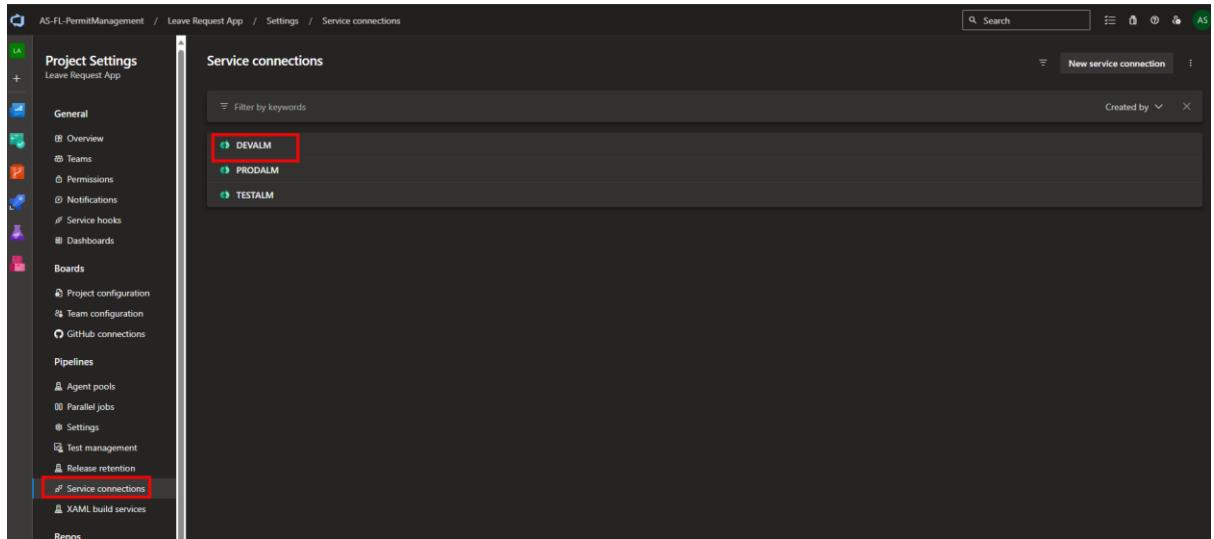
1. Sign in to Azure DevOps.

The image shows the Azure DevOps profile page for 'Aroh Shukla'. The profile section includes a large green circular icon with 'AS', the name 'Aroh Shukla', the email 'arohmvp365@arohmvp365.onmicrosoft.com', and a dropdown menu showing 'arohmvp365'. Below the profile, there is a location 'Singapore' and an email address 'arohmvp365@arohmvp365.onmicrosoft.com'. The main content area is titled 'Azure DevOps Organizations' and shows the organization 'dev.azure.com/AS-FL-PermitManagement (Owner)'. Under the 'Projects' section, there is a list of projects: 'ALM Project', 'DemoDeVOPs', and 'Leave Request App', with 'Leave Request App' highlighted by a red box. There are also 'Actions' and 'Open in Visual Studio' buttons for each project.

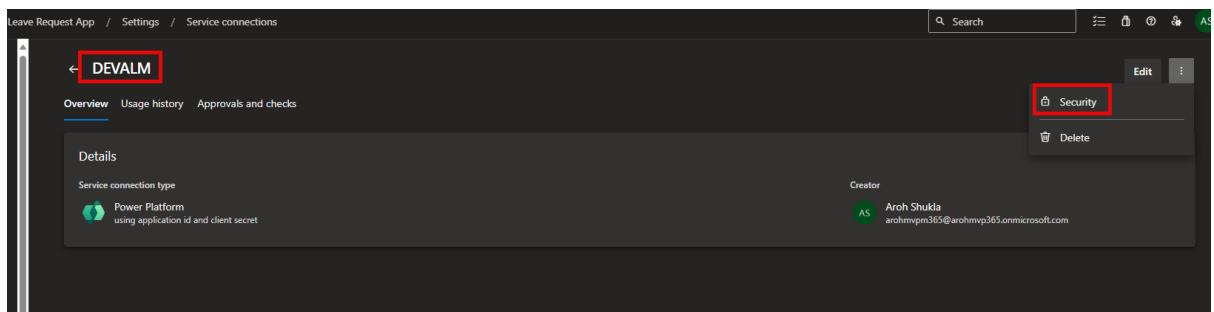
2. Open your project, and then in the lower-left corner, select **Project settings** to access project settings.



3. Select **Service connections**, and then in the **Service Connections** list, select the service connection to be shared with users.



4. Select **More (...)** in the upper-right corner, and then select **Security**.



5. In the **User or group** list, select the group or user you want to provide user permissions to.

6. Select the **User** for the **Role**, and then select **Add**.

The screenshot shows the 'User permissions' section of the Azure DevOps Security settings. A modal window titled 'Add User' is displayed, prompting for a user or group ('User or group') and a role ('Role'). The user 'AW Alex Wilber' is selected, and the role 'User' is chosen. Both the user input field and the 'User' role selection are highlighted with a red box.

The screenshot shows the 'Project settings' page for the 'Leave Request App' under 'AS-FL-PermitManagement'. The 'Service connections' section is selected. In the 'User permissions' table, two users are listed: 'AW Alex Wilber' and 'AS Aroh Shukla'. Both users have the 'Administrator' role assigned. The row for 'AW Alex Wilber' has 'Inherited' access, while the row for 'AS Aroh Shukla' has 'Assigned' access. Both rows are highlighted with a red box.

Repeat these steps for each service connection you want to share.

Test

← Security TESTALM

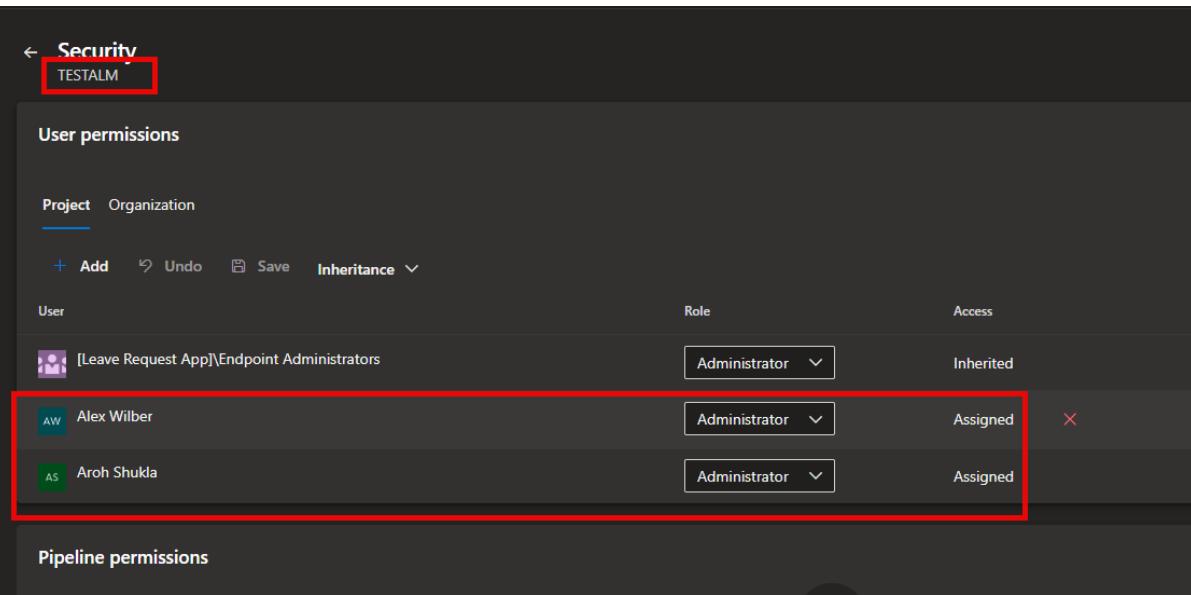
User permissions

Project Organization

+ Add ⌛ Undo 📁 Save Inheritance ▾

User	Role	Access
[Leave Request App]\Endpoint Administrators	Administrator	Inherited
AW Alex Wilber	Administrator	Assigned
AS Aroh Shukla	Administrator	Assigned

Pipeline permissions



Prod

AS-FL-PermitManagement / Leave Request App / Settings / Service connections

Project Settings
Leave Request App

General

- Overview
- Teams
- Permissions
- Notifications
- Service hooks
- Dashboards

Boards

- Project configuration
- Team configuration
- Github connections

Pipelines

- Agent pools
- Parallel jobs
- Settings
- Test management
- Release retention
- Service connections**
- YAML build sources

User permissions

Project **Organization**

+ Add Undo Save Inheritance

User Role Access

User or group	Role	Access
[Leave Request App]\Endpoint Administrators		Inherited
Aroh Shukla		Assigned

Add User

User or group: **Alex Wilber**

Role: **Administrator**

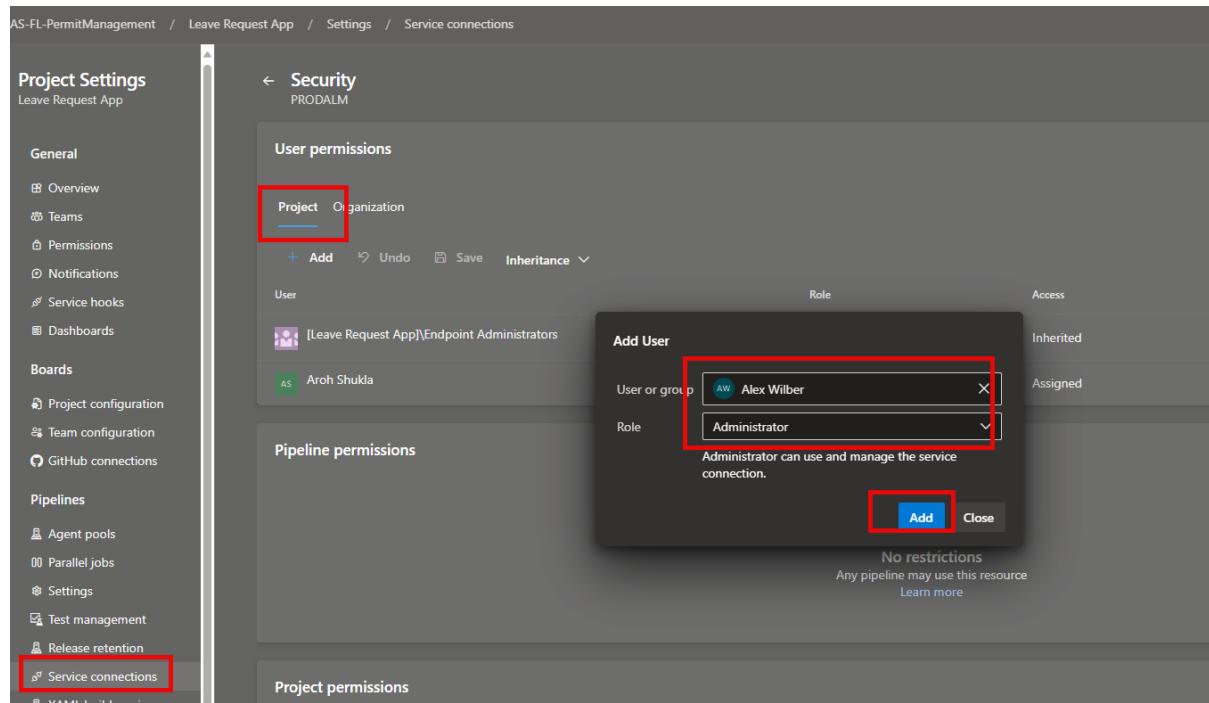
Administrator can use and manage the service connection.

Add Close

No restrictions
Any pipeline may use this resource
Learn more

Pipeline permissions

Project permissions



AS-FL-PermitManagement / Leave Request App / Settings / Service connections

Project Settings
Leave Request App

General

- Overview
- Teams
- Permissions
- Notifications
- Service hooks
- Dashboards

Boards

- Project configuration
- Team configuration
- Github connections

Pipelines

- Agent pools
- Parallel jobs
- Settings
- Test management
- Release retention
- Service connections**
- YAML build sources

User permissions

Project **Organization**

+ Add Undo Save Inheritance

User Role Access

User or group	Role	Access
[Leave Request App]\Endpoint Administrators		Inherited
Aroh Shukla		Assigned

Add User

User or group: **Alex Wilber**

Role: **Administrator**

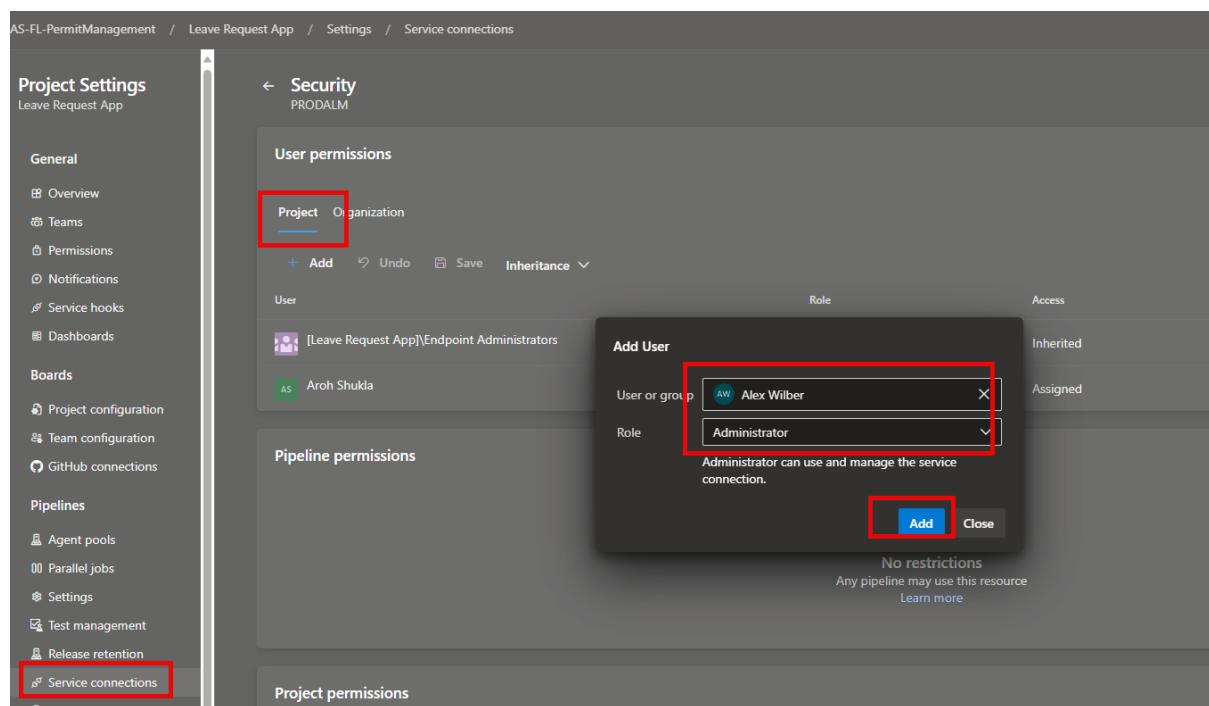
Administrator can use and manage the service connection.

Add Close

No restrictions
Any pipeline may use this resource
Learn more

Pipeline permissions

Project permissions



User	Role	Access
[Leave Request App]\Endpoint Administrators	Administrator	Inherited
Alex Wilber	Administrator	Assigned
Aroh Shukla	Administrator	Assigned

Permissions for downstream environments

- The ALM Accelerator has different scenarios that need to list the environments it can deploy solutions to. The signed-in user needs different roles in each environment.
- The ALM Accelerator uses the Power Apps for Makers connector to list the environments users have access to either because they have the Environment Maker role or because they are owner or co-owner of an app in the environment and have permission to edit any app.
- When you change a user's role in an environment, a sync process takes place. It might take some time to propagate the changes. To test whether the changes have been synced, create a test canvas app that calls the Power Apps for Maker connector and validate the list of environments it retrieves.

Summary of covered above.

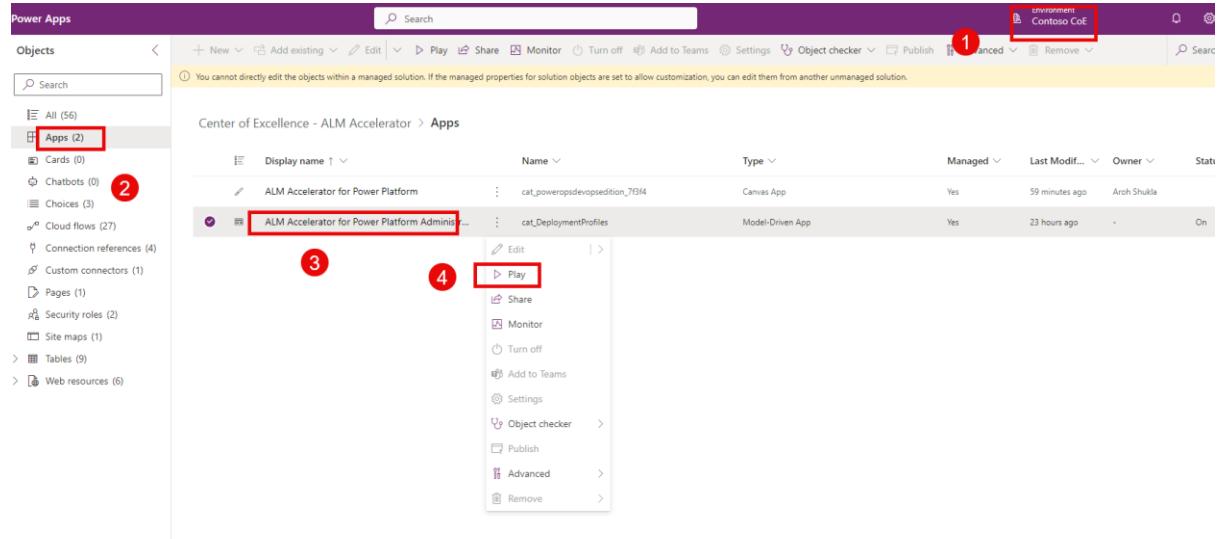
1. Overview ALM Accelerator for Power Platform
2. ALM Accelerator Licensing requirements
3. Azure App Registration
4. Installing Azure DevOps Extensions
5. Troubleshooting and resolving Power Apps management permissions
6. Installation and Configure ALM Accelerator
7. Configure Azure DevOps Custom connector
8. Setup your first Azure DevOps project with ALM Accelerator
9. Create an app user in your Dataverse environments

Configure the ALM Accelerator

In next few sections we will configure ALM Accelerator apps

Model Driven App- Configure deployment user settings

- Open the ALM Accelerator for Power Platform admin app



Azure DevOps Project

- You can view all Azure DevOps projects

The screenshot shows the ALM Accelerator for Power Platform Admin interface with the title "Sandbox". The left sidebar has sections for Deployments, Azure DevOps (with Projects highlighted), and Deployments. The main area is titled "Azure DevOps Projects" and shows the following components:

- Azure DevOps Organization:** AS-FL-PermitManagement
- Projects:** A list of projects including "Demodesk" and "ALM Project". The "ALM Project" row is highlighted.
- Team Members:** A list of team members including Aroh Shukla.
- Pipelines:** A list of pipelines including "Export from Power Platform Dev".
- Repositories:** A list of repositories including "ALM Project".
- Service Connections:** A list of service connections including "PowerPlatformALMServiceSource" and "PowerPlatformALMServiceDestination".
- Variable Groups:** A list of variable groups.

- You can create your own Projects

The screenshot shows the Power Apps interface with a purple header bar containing the text "Power Apps | ALM Accelerator for Power Platform A...". On the right side of the header, the word "SANDBOX" is displayed. The main content area is titled "Azure DevOps Projects". On the left, there's a sidebar with sections for "Deployments" (Deployment User Se..., Deployment Profile, Deployment Requests) and "Azure DevOps" (Projects). The "Projects" section is highlighted with a red box. In the center, there's a table titled "Projects" with columns for "Project", "Description", and "Date Modified". A new project row is being added, with the "Project" field set to "AS-FL-PermitManagement" and the "Description" field set to "This is a sample ALM Project". The "Date Modified" field shows "8/20/2022". At the top of the table, there are buttons for "+ New", "Delete", "Refresh", and "Project Wizard". The "Project Wizard" button is also highlighted with a red box.

Deployments

Deployment User Settings

- select **Deployment User Settings** and select **New**

The screenshot shows the Power Apps interface with a purple header bar containing the text "Power Apps | ALM Accelerator for Power Platform A...". On the right side of the header, the word "SAN" is displayed. The main content area is titled "Active Deployment User Settings". On the left, there's a sidebar with sections for "Deployments" (Deployment User Se..., Deployment Profile, Deployment Requests) and "Azure DevOps" (Projects). The "Deployment User Se..." section is highlighted with a red box. In the center, there's a table with a single row showing the email address "arohmvp365@arohmvp365.onmicrosoft...". Above the table, there are buttons for "Show Chart", "+ New" (highlighted with a red box), "Delete", "Refresh", "Visualize this view", and "Email a Link".

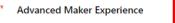
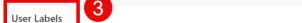
- Set all options as shown and Select SAVE

Sandbox

Save  Save & Close  New  Flow 

4
New Deployment User Setting - Unsaved

General

Name	Advanced Maker Experience 	1	
Owner	Aroh Shukla (Offline) 		
User Functions 			
Import Solutions	Allowed	Delete Solutions	Allowed
Manage Solutions	Allowed	Drillthrough Status	Allowed
Profile Creation	Allowed	Profile Updates	Allowed
Advanced Deploy	Allowed	Advanced Promote	Allowed
Bypass Prepare	Allowed	Bypass Prepare Default	Allowed
Deployment Configuration	Allowed	Show All Solutions	Allowed
Bypass Approval	Allowed	Bypass Approval Default	Allowed
Commit Portals	Allowed	Commit Portals Default	Allowed
Publish Customizations	Allowed	Publish Customizations Default	Allowed
Allow Import Managed	Allowed	Import Managed Default	Allowed
User Labels 			3
Deploy Solution	DEPLOY SOLUTION	Commit Solution	COMMIT SOLUTION
Import Solution	IMPORT SOLUTION	Delete Solution	DELETE SOLUTION.

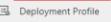
SANDBOX

Try the new look        

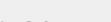
Power Apps | ALM Accelerator for Power Platform A...

Deployments 

Name	Delete S...	Import ...	Manage...	Profile ...	Profile ...	Advanc...	Advanc...	Drillthr...	Bypass ...	Show Al...	Publis...	Owner ...	Creator
Advanced Maker Experience 	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	 Aroh Sh... 1/1/2021	
archmvpmp365@archmvp365.onmicrosoft...												 Aroh Sh... 1/1/2021	

Deployment Profile 

Deployment Requests 

Azure DevOps 

Projects 

- select **Deployment User Settings** and select **New**

New Deployment User Setting - Unsaved

General

Name	Maker experience
Owner	Aroh Shukla (Available)
User Functions	
Import Solutions	Not Allowed
Manage Solutions	Allowed
Profile Creation	Not Allowed
Advanced Deploy	Not Allowed
Bypass Prepare	Not Allowed
Deployment Configuration	Not Allowed
Bypass Approval	Not Allowed
Commit Portals	Not Allowed
Publish Customizations	Allowed
Allow Import Managed	Not Allowed
User Labels	
Deploy Solution	DEPLOY SOLUTION
Import Solution	...
Delete Solutions	Not Allowed
Drillthrough Status	Not Allowed
Profile Updates	Not Allowed
Advanced Promote	Not Allowed
Bypass Prepare Default	Allowed
Show All Solutions	Not Allowed
Bypass Approval Default	Not Allowed
Commit Portals Default	Not Allowed
Publish Customizations Default	Allowed
Import Managed Default	Not Allowed
Commit Solution	SAVE SOLUTION
Delete Solution	...

- You can see 2 different user settings at the **Deployment User Settings** page

Deployments

Deployment User Se... **Advanced Maker Experience**

Deployment Profile

Deployment Requests

Azure DevOps

Projects

Show Chart | New | Delete | Refr

Active Deployment User Settings

Name ↑	Delete S...
Advanced Maker Experience	Allowed
arohmvp365@arohmvp365.onmicrosoft...	
Maker experience	Not All...

Configure deployment profiles

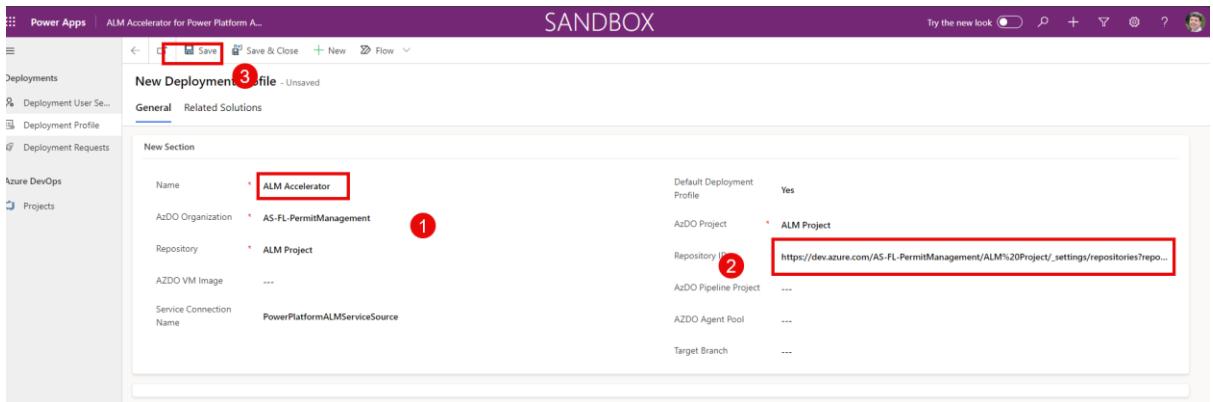
Create a profile for your solutions so that you can apply source control and deploy them automatically.

- Select + New

The screenshot shows the 'Active Deployment Profiles' view in the Power Apps portal. On the left, there's a navigation sidebar with 'Deployments' (selected), 'Deployment User Se...', 'Deployment Profile' (highlighted with a red box), and 'Deployment Requests'. The main area shows a table with columns for 'Name' and 'Organization'. At the top, there are buttons for 'Show Chart', '+ New' (highlighted with a red box), 'Delete', 'Refresh', 'Visualize this view', 'Email a Link', and a dropdown for 'Organization'.

- Get all the **Azure DevOps details** from ALM project that you have worked earlier

The screenshot shows the 'ALM Project' settings in Azure DevOps. The left sidebar has sections like 'General' (number 1), 'Boards', 'Pipelines', 'Repos' (number 2), 'Artifacts', and 'Storage'. The main area shows 'All Repositories' (number 3) with a list containing 'ALM Project'. On the right, there's a 'Repository Settings' section with various toggle switches and descriptions. The URL in the browser is https://dev.azure.com/AS-FL-PermitManagement/ALM%20Project/_settings/repositories?repo=eea0ce50-fb65-47b6-87dc-2d7300e54b96.



2 Settings are now configured

1. Deployment User Settings

Active Deployment User Settings									
	Name ↑	Delete S...	Import ...	Manage...	Profile ...	Profile ...	Advanc...	Advanc...	Drillthr.
	Advanced Maker Experience	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed
	arohmvp365@arohmvp365.onmicrosoft...								
	Maker experience	Not All...	Not All...	Allowed	Not All...	Not All...	Not All...	Not All...	Not All...

2. Deployment Profile

Active Deployment Profiles					
	Name ↑	Organization	Project	Repository	Pipeline Project
	ALM Accelerator	AS-FL-PermitManagement	ALM Project	ALM Project	1/2/2024 12:22 PM

3. Deployment Requests will be empty as of now as we not created any deployment pipelines yet

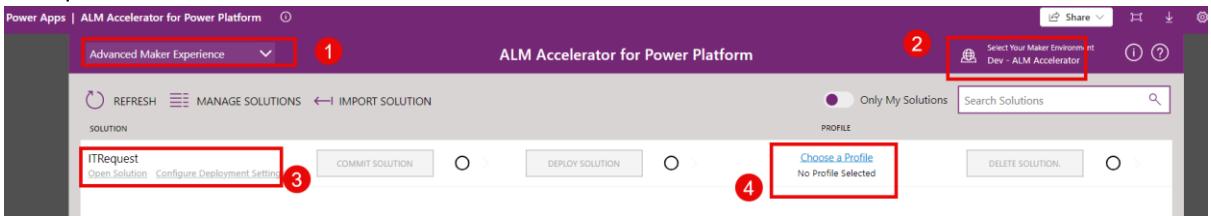
Active Deployment Requests					
Solution Name	Request Type	Deployment Profile	Build ID	Deployment Step	Source

Canvas App – ALM Accelerator for Power Platform

- You can select different types of profiles such as **Advanced Maker Experience, Maker Experience** and you can select **different environment** you can manage.

- Select environment you want to deploy. For our example we will choose Dev – ALM Accelerator environment

- **ITRequest Solution**



- **Select a deployment profile**



- **Create a new profile by clicking + button.**

SOLUTION PROFILE X

GPAS Solution

Select a Profile

Organization +

No Profile Selected

Solution Project

No Profile Selected

Solution Repository

No Profile Selected

Solution Target Branch

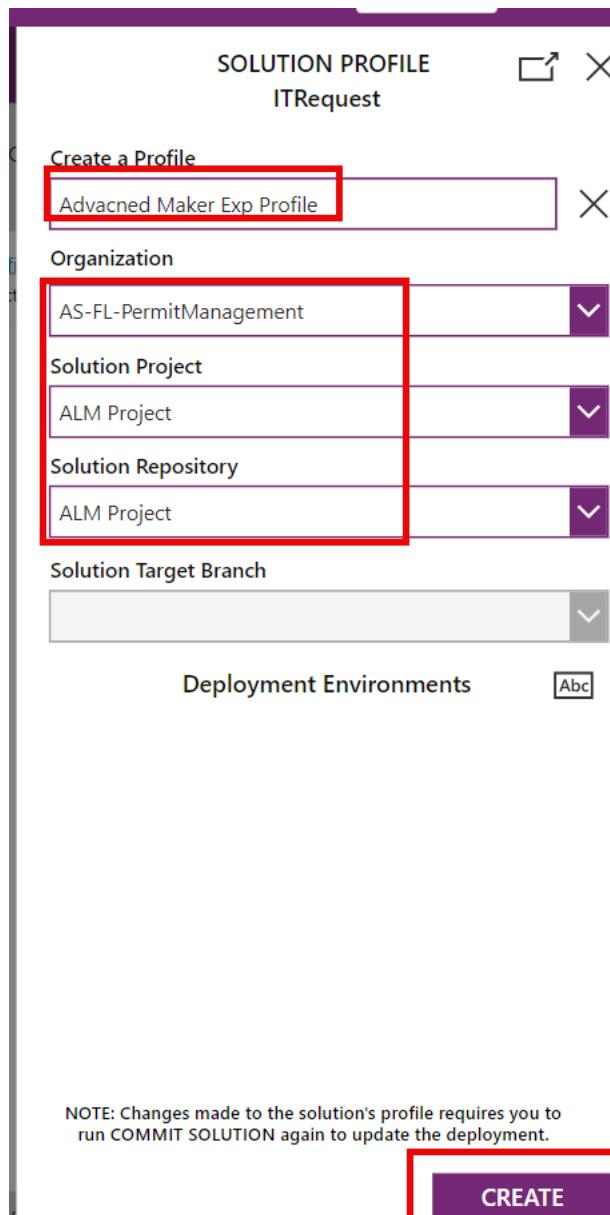
No Profile Selected

Deployment Environments Abc

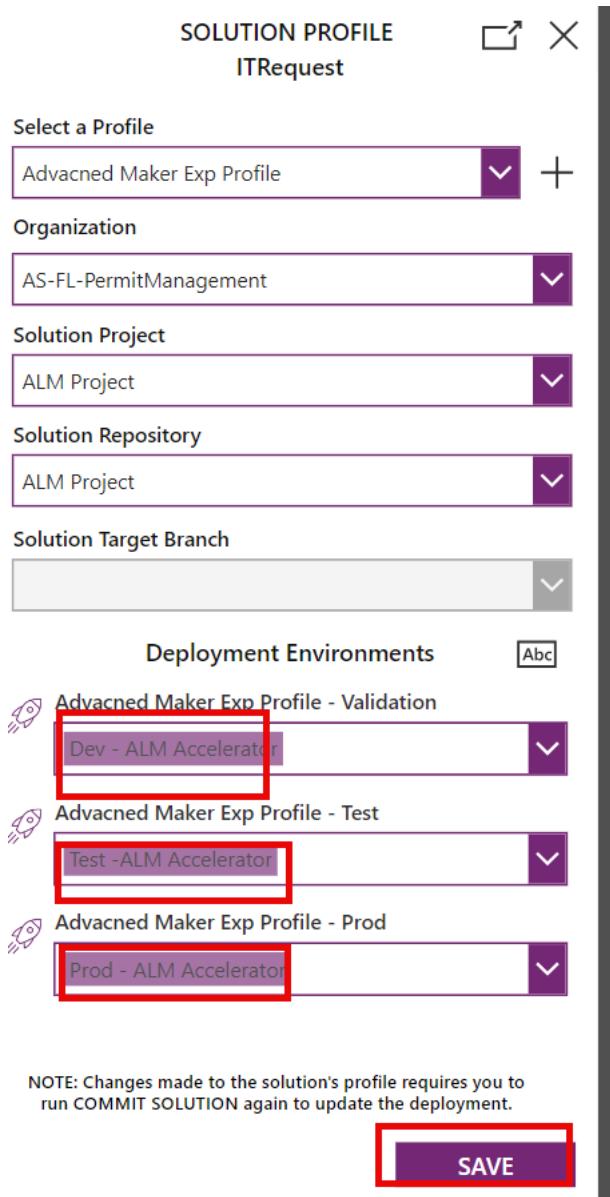
NOTE: Changes made to the solution's profile requires you to run COMMIT SOLUTION again to update the deployment.

SAVE

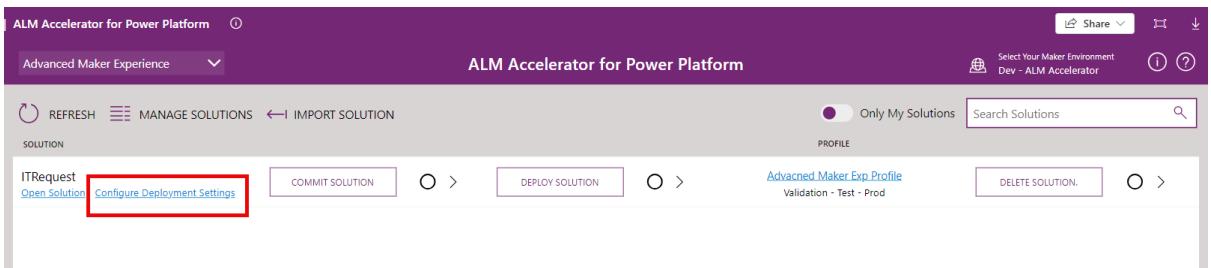
- Create a new profile, select Organization, Solution Project, Solution Repository and click on CREATE button.



- Under **Deployment environment** section, select current environment,
 - Validation – Dev – ALM Accelerator
 - Test - Test – ALM Accelerator
 - Prod - Test – ALM Acceleratorand click SAVE.



- Click on **Configuration Deployment settings**



- Verify and Configure Environment to configure – Validation**

You need to verify all connection references, environment variables, Canvas apps for this environment

Select an Environment to Configure

Validation

Connection References Environment Variables Canvas Apps Group Teams Flows Custom Connectors WebHooks Power Pages Plugin Steps

In order for your solution to be deployed successfully your connection(s) must be shared with the deployment user. Select 'Share' to agree to share your connection(s) before saving your deployment settings.

Approvals ITRequest-40520 contoso_sharedapprovals_40520

Connected Approvals Share AI Share ABC + X

Share AI

Canvas App

Select an Environment to Configure

Validation

Connection References Environment Variables **Canvas Apps** Group Teams Flows Custom Connectors WebHooks Power Pages Plugin Steps

Bypass App Consent ⓘ Owner Sharing Permissions

IT Request - ALM Published arohmvp365@arohmvp365.onmicrosoft.com INSG-IT Can View +

NOTE: Changes made to the deployment settings requires you to run COMMIT SOLUTION again to update the deployment.

SAVE AND CLOSE

Sharing

INSG-IT

Can View

Flows

ALM Accelerator for Power Platform ⓘ

CONFIGURE DEPLOYMENT SETTINGS (ITRequest)

Select an Environment to Configure

Validation

Connection References Environment Variables Canvas Apps Group Teams **Flows** Custom Connectors WebHooks Power Pages Plugin Steps

Kickstart Flow Activated arohmvp365@arohmvp365.onmicrosoft.com Team Sharing Activate Flow

Team Sharing

Activate Flow

- **Verify and Configure Environment to configure – Test**

Select an Environment to Configure

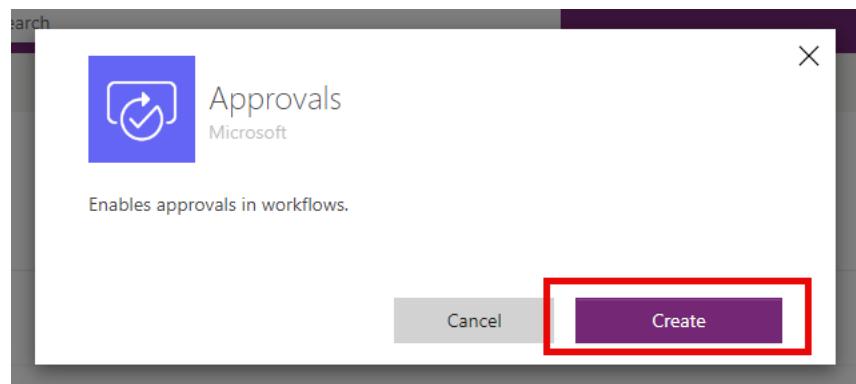
Test Upgrade Solution

Connection References Environment Variables Canvas Apps Group Teams Flows Custom Connectors WebHooks Power Pages Plugin Steps

In order for your solution to be deployed successfully your connection(s) must be shared with the deployment user. Select 'Share' to agree to share your connection(s) before saving your deployment settings.

Approvals ITRequest-40520 contoso_sharedapprovals_40520	Not Connected	<input type="checkbox"/> Share All <input type="button" value="?"/> <input type="checkbox"/> Share <input type="text" value="Abc"/> <input type="button" value="+"/> <input type="button" value="X"/> <input type="button" value="?"/>
--	----------------------	---

Create Approval connection



Select an Environment to Configure

Test Upgrade Solution

Connection References Environment Variables Canvas Apps Group Teams Flows Custom Connectors WebHooks Power Pages Plugin Steps

In order for your solution to be deployed successfully your connection(s) must be shared with the deployment user. Select 'Share' to agree to share your connection(s) before saving your deployment settings.

Approvals ITRequest-40520 contoso_sharedapprovals_40520	Connected	<input checked="" type="checkbox"/> Share All <input type="button" value="?"/> <input checked="" type="checkbox"/> Share <input type="text" value="Abc"/> <input type="button" value="+"/> <input type="button" value="X"/> <input type="button" value="?"/>
--	-----------	---

Canvas Apps

ALM Accelerator for Power Platform

CONFIGURE DEPLOYMENT SETTINGS (ITRequest)

Select an Environment to Configure

Test Upgrade Solution

Connection References Environment Variables **Canvas Apps** Group Teams Flows Custom Connectors WebHooks Power Pages Plugin Steps

Bypass App Consent <input type="checkbox"/>	Owner <input type="text" value="arohmvp365@arohmvp365.onmicrosoft.com"/>	Sharing <input type="text" value="INSG-IT"/> <input type="button" value="▼"/> <input type="button" value="Y"/> <input type="button" value="≡"/>	Permissions <input type="text" value="Can View"/> <input type="button" value="▼"/> <input type="button" value="+"/>
---	--	---	---

Flows

Select an Environment to Configure

Test

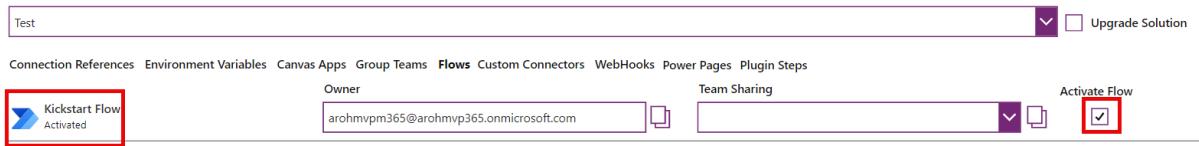
Connection References Environment Variables Canvas Apps Group Teams Flows Custom Connectors WebHooks Power Pages Plugin Steps

Kickstart Flow Activated

Owner: arohmvp365@arohmvp365.onmicrosoft.com

Team Sharing:

Activate Flow



- Verify and Configure Environment to configure – Test

Select an Environment to Configure

Prod

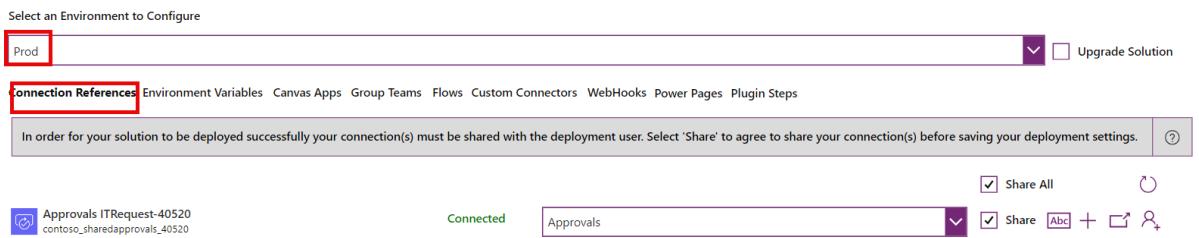
Connection References Environment Variables Canvas Apps Group Teams Flows Custom Connectors WebHooks Power Pages Plugin Steps

In order for your solution to be deployed successfully your connection(s) must be shared with the deployment user. Select 'Share' to agree to share your connection(s) before saving your deployment settings.

Approvals ITRequest-40520 contoso_sharedapprovals_40520

Connected Approvals

Share All Share + ?



Canvas Apps

Select an Environment to Configure

Prod

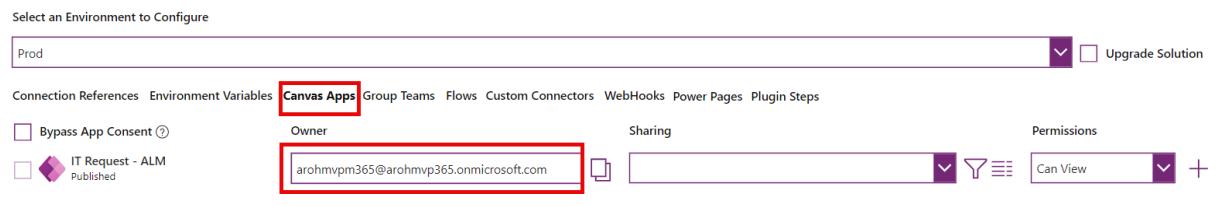
Connection References Environment Variables **Canvas Apps** Group Teams Flows Custom Connectors WebHooks Power Pages Plugin Steps

Bypass App Consent IT Request - ALM Published

Owner: arohmvp365@arohmvp365.onmicrosoft.com

Sharing:

Permissions: Can View



Flows

ALM Accelerator for Power Platform

CONFIGURE DEPLOYMENT SETTINGS (ITRequest)

Select an Environment to Configure

Prod

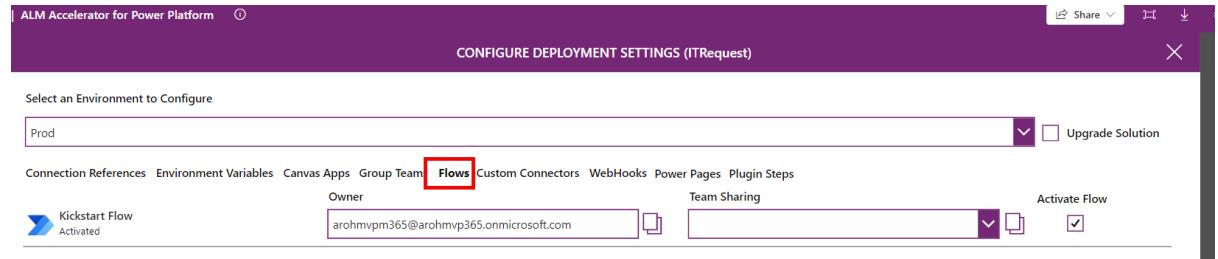
Connection References Environment Variables Canvas Apps Group Team **Flows** Custom Connectors WebHooks Power Pages Plugin Steps

Kickstart Flow Activated

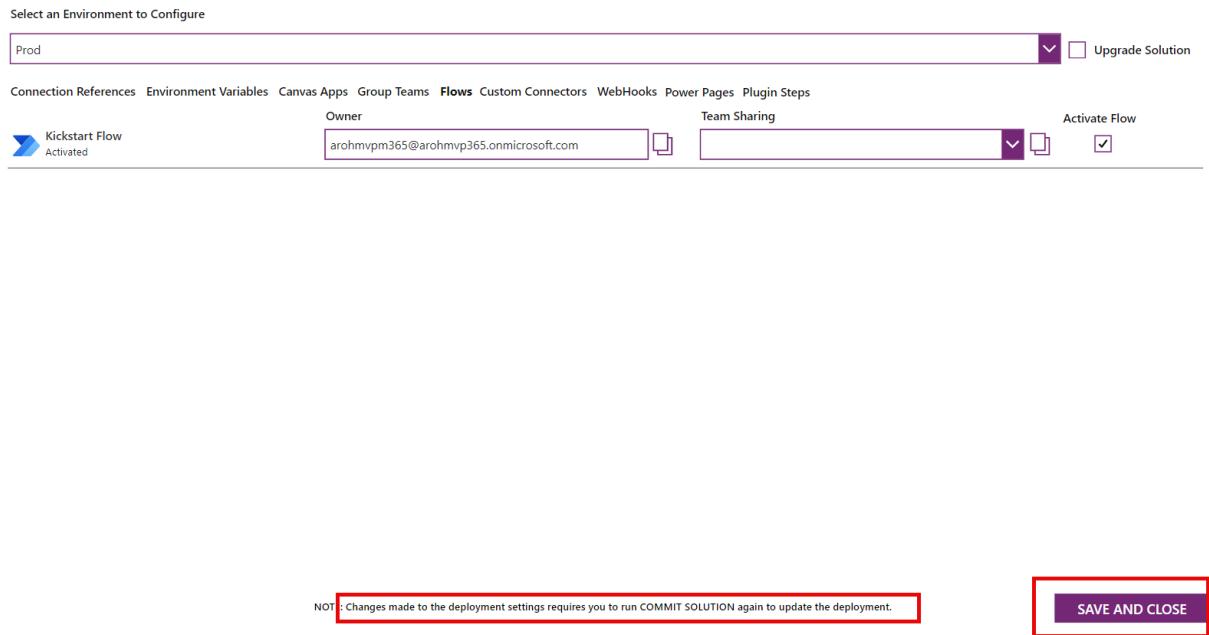
Owner: arohmvp365@arohmvp365.onmicrosoft.com

Team Sharing:

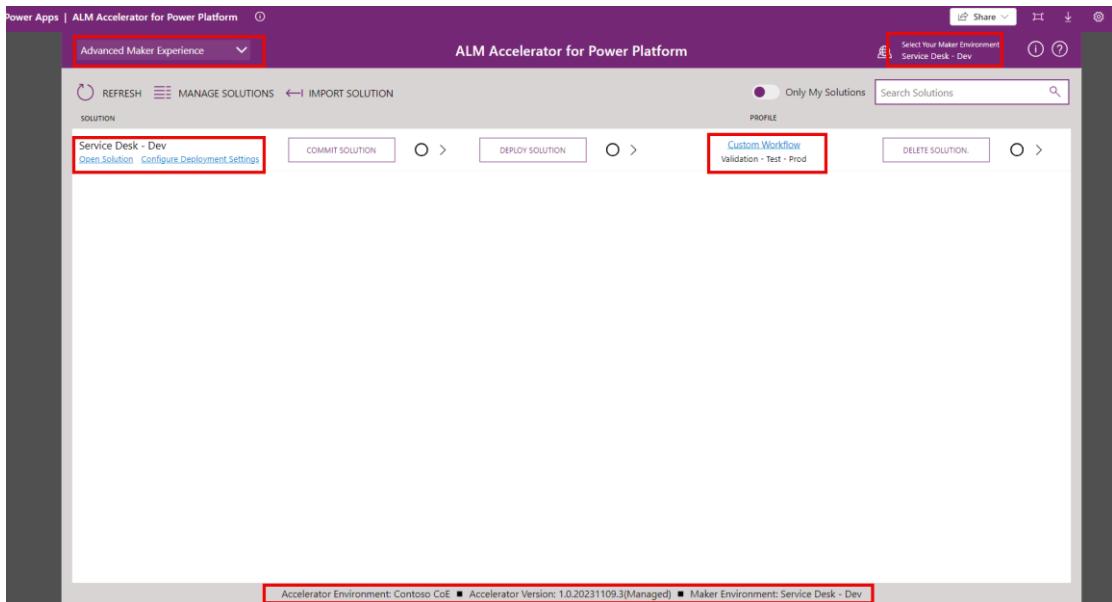
Activate Flow



Save and Close



- You can view the Solution from **Validation to Test to Production** without going to Azure DevOps and be done for Maker.



- At Azure DevOps, we create new branches for Dev, Test and Prod.

Azure DevOps Branches page showing the following details:

Branch	Commit	Author	Authored Date	Behind Ahead	Status	Pull Req...
dev	02c7c4c5	Aroh Shukla	Dec 26, 2023	0 0	failed	★
main	02c7c4c5	Aroh Shukla	Dec 26, 2023	0 0	passed	★
prod	02c7c4c5	Aroh Shukla	Dec 26, 2023	0 0	passed	★
test	02c7c4c5	Aroh Shukla	Dec 26, 2023	0 0	passed	★

- Commit Solution
 - Enter Notes what change happened.
 - Scope will be Solution and Settings, Solution Only, Settings Only, Power Pages
 - Based on main branch or any branch you have set at Azure Dev Op
 - Commit Solution

ALM Accelerator for Power Platform - COMMIT SOLUTION

ITRequest

Selected Profile: [dropdown]

Enter Notes: Added new drop down 2

Scope: Solution and Settings 3

Show Advanced Create New Branch

Branch: dev 3

Include Power Pages

Accelerator Environment: Contoso CoE ■ Accelerator Version: 1.0.20231109.3(Managed) ■ Maker Environment: Dev

1. COMMIT SOLUTION

2. Enter Notes

3. Branch: dev

4. COMMIT SOLUTION

References

1. ALM Accelerator for Power Platform
[ALM Accelerator for Power Platform - Power Platform | Microsoft Learn](#)

The screenshot shows the Microsoft Learn page for Application lifecycle management (ALM) with Microsoft Power Platform. The page is structured into several main sections:

- About ALM with Power Platform**: Contains sections like Overview, What is ALM?, CONCEPT (with 'ALM basics with Power Platform' highlighted), and REFERENCE (with 'Tools and apps used for ALM').
- Understand and work with solutions**: Contains sections like CONCEPT (with 'Solutions' highlighted) and Understand solution layers.
- Implement healthy ALM**: Contains scenarios: Scenario 0: ALM for a new project; Scenario 1: Citizen development ALM; Scenario 2: Moving from a single environment; Scenario 3: Moving from unmanaged to managed solutions; Scenario 4: Use DevOps for automation; Scenario 5: Support team development; Scenario 6: Embrace citizen developers.
- ALM automation**: Contains sections like OVERVIEW (with 'Use Power Platform Build Tools for Azure DevOps' highlighted) and Deploy solutions using pipelines.
- Related docs**: Includes links to Create apps in Power Apps, What is Microsoft Dataverse?, Work with solutions, Power Platform admin guide, Power Platform Center of Excellence (CoE) Kit, Best practices and guidance when using Microsoft Dataverse, and Canvas apps coding standards and guidelines.

Three numbered red circles point to specific sections:

- 1 points to 'ALM basics with Power Platform' under the 'About ALM with Power Platform' section.
- 2 points to 'Use Power Platform Build Tools for Azure DevOps' under the 'ALM automation' section.
- 3 points to 'CoE: Set up ALM Accelerator' under the 'ALM automation' section.

2. [Application lifecycle management \(ALM\) with Microsoft Power Platform - Power Platform | Microsoft Learn](https://learn.microsoft.com/en-us/power-platform/alm/)

3. Power Platform Deployment using Azure DevOps – Dhruvin
[Power Platform Deployment using Azure DevOps - Episode 01 | Prerequisites and App Registration \(youtube.com\)](#)
4. Power Platform/Azure Dev Ops by Henry
[Power Platform/Azure Dev Ops - ALM Intro \(youtube.com\)](#)