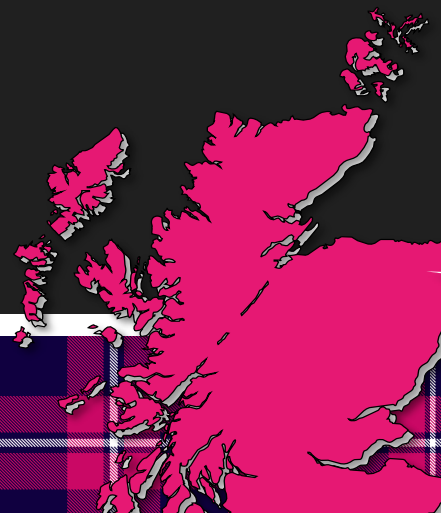
#ScottishSummit2024

Build, Deploy, and Scale Power Apps with pipelines for Power Platform



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Who are you?

- Tell us a bit about yourself
- Where do you work?
- What is your role?
- Have you used Pipelines before?
- What do you expect of today?

Daniel Laskewitz

- 💼 Senior Cloud Advocate @ Microsoft
- 💻 I'm part of Microsoft 365 & Power Platform Community (previously PnP)
- 🧙‍♀️ I maintain Power Platform Samples, Snippets and Prompts
- 🥑 Co-Organizer of the PowerAddictsNL

Sharing is caring 💞

@Laskewitz
Laskewitz.io
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@DanielLaskewitz

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Albert-Jan Schot

- 💼 I work at BLIS.digital as the CTO
- 💻 I'm part of Microsoft 365 & Power Platform Community (previously PnP)
- ⌨️ I co-manage CLI for Microsoft 365
- 🥑 Co-Organizer of the DIWUG
- 🥑 Co-Organizer of the PowerAddictsNL

}Do epic 💩

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Planning

- 10:00 - 10:30 👋 Intro
- 10:30 - 11:15 Lab 1
- 11:15 - 11:30 🍵 Break
- 11:30 - 12:15 Lab 2
- 12:15 - 13:00 🍜 Lunch
- 13:00 - 14:00 Lab 3
- 14:00 - 14:15 🍵 Break
- 14:15 - 15:15 Lab 4
- 15:15 - 15:45 Recap
- ⭐ Bonus lab 5

Terminology

The boring basics

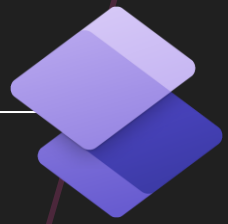
Power Platform

Power Apps
Intelligent Apps

Power Automate
Process automation

Power BI
Business analytics

Copilot Studio
Intelligent Copilots



Power Pages
External websites

Data connectors

AI Builder

Microsoft Dataverse

Power Fx

Managed Environments

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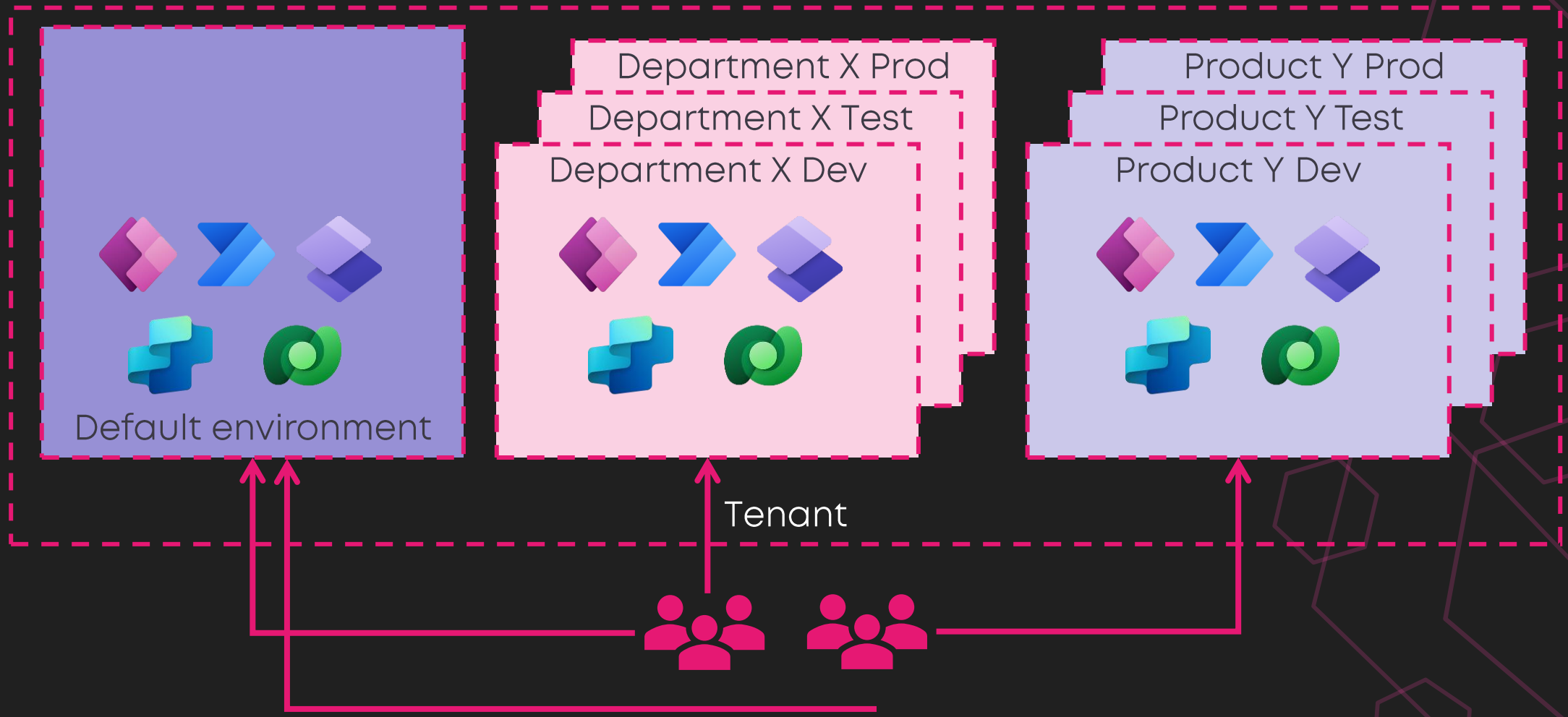
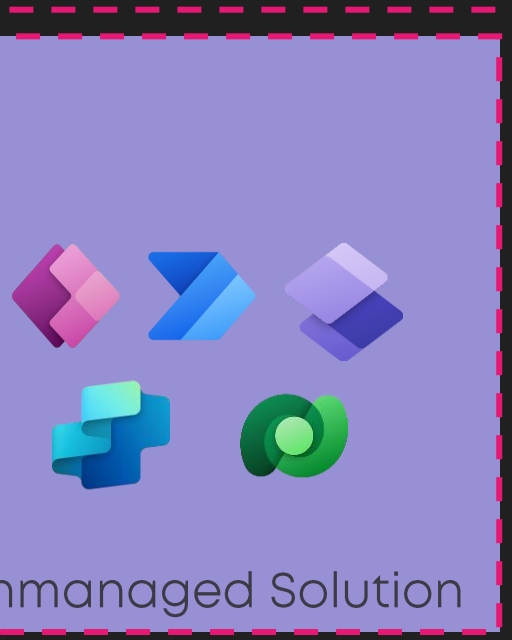
Environments



Solutions



Unmanaged Solution

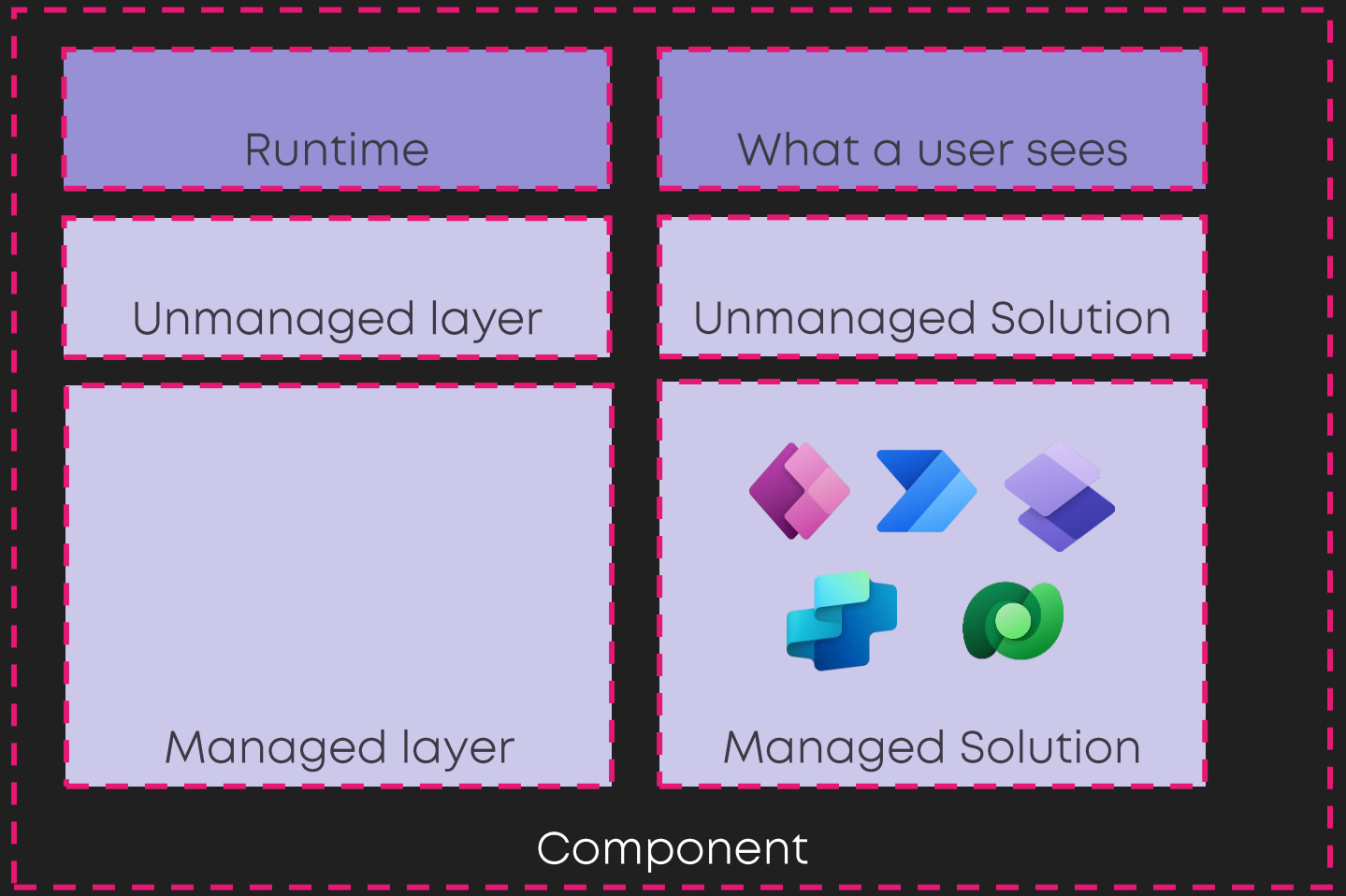
Managed Solution

Environment A

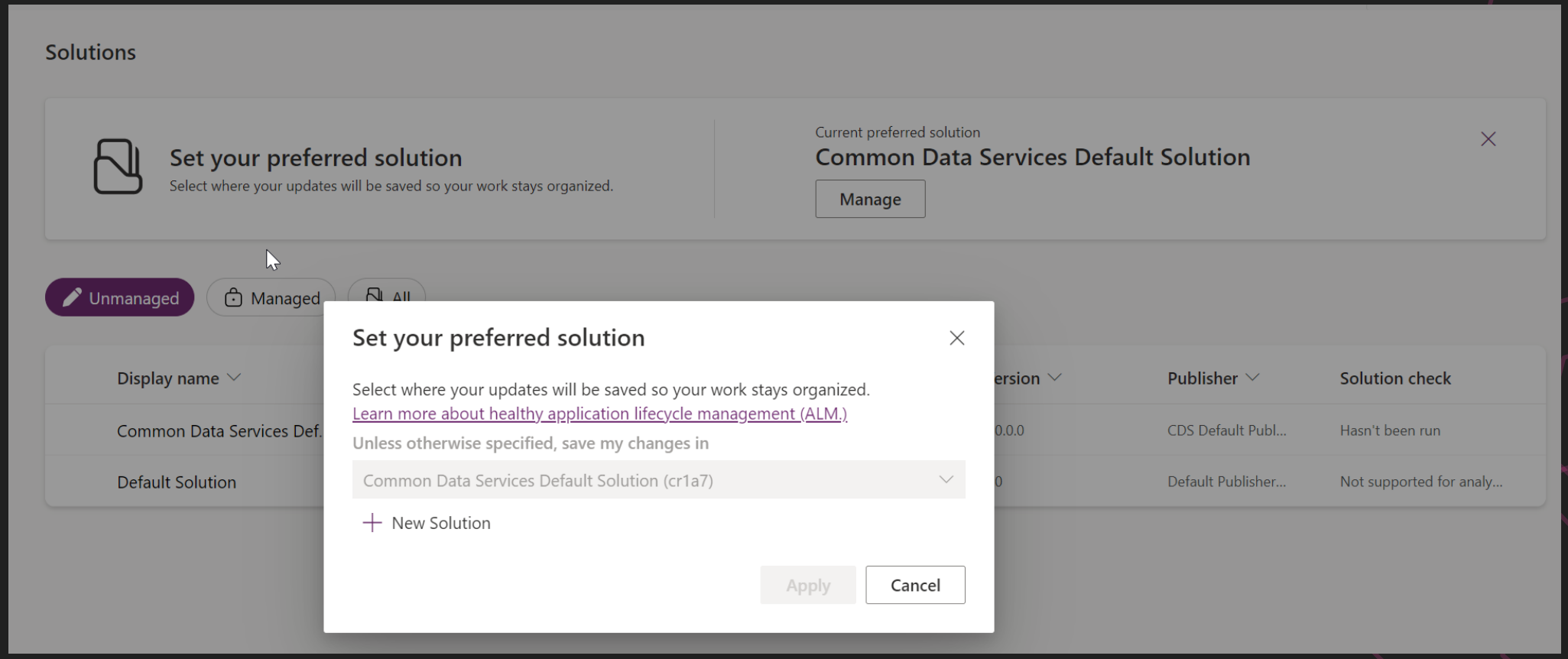
Managed Solution

Environment B

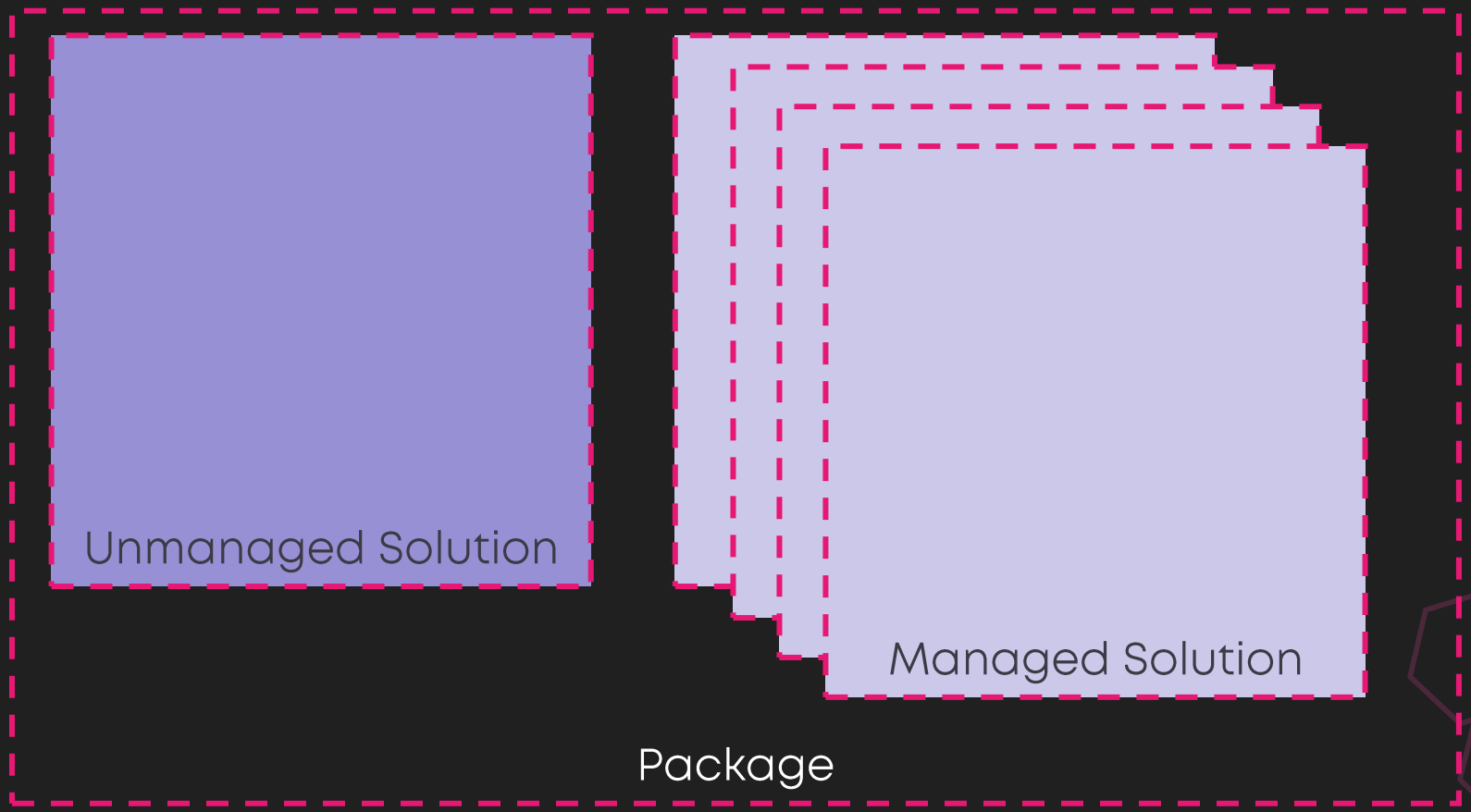
Solution layers



Preferred solutions



Packages vs Solutions



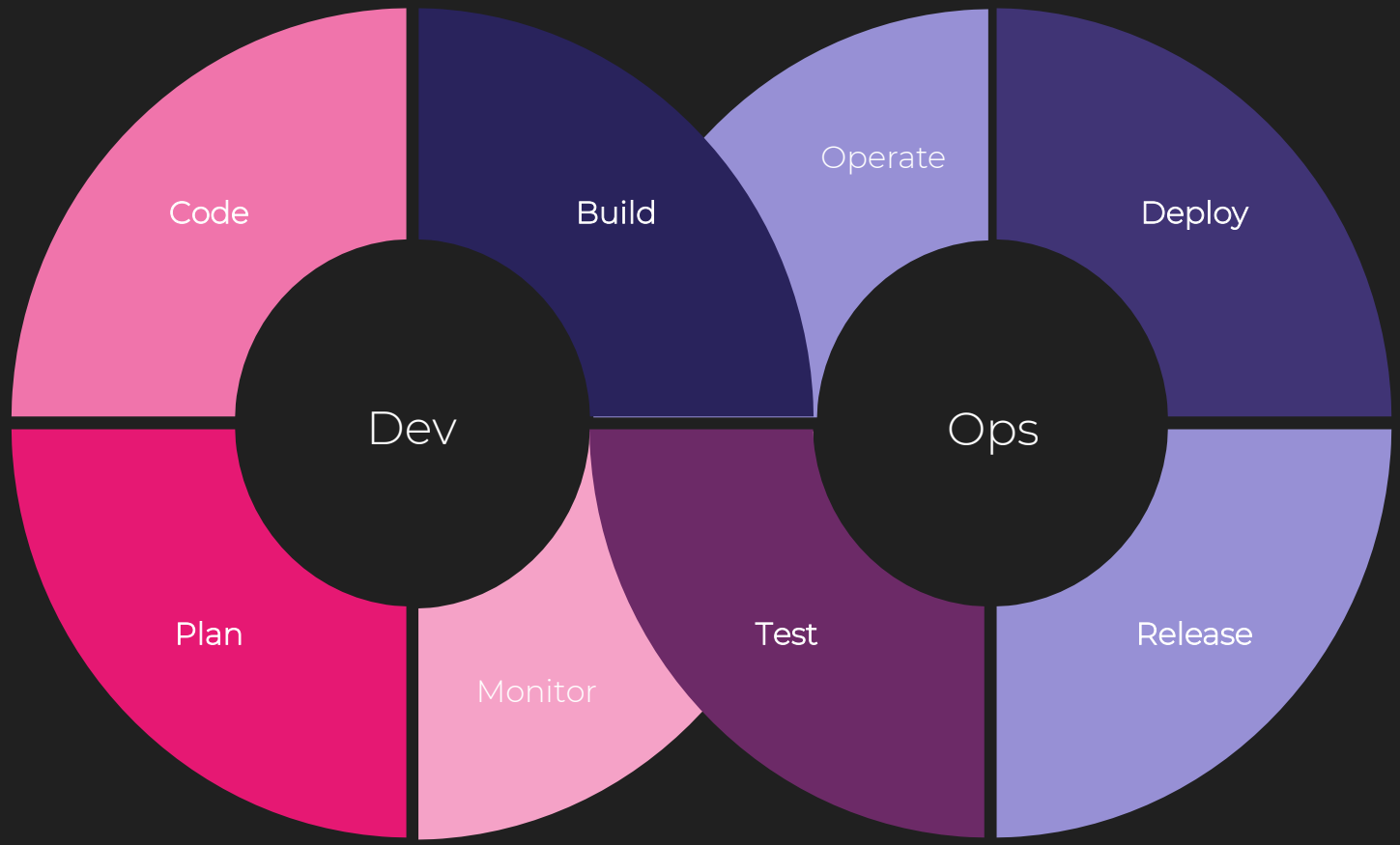
Command Line Interface

```
Microsoft PowerPlatform CLI
Version: 1.21.4+g4869036

Usage: pac [admin] [application] [auth] [canvas] [connector] [help] [modelbuilder] [org] [package] [paportal] [pcf] [
pipeline] [plugin] [solution] [telemetry] [virtual-agent]

  admin                     Work with your Power Platform Admin Account
  application               Commands for listing and installing available Dataverse applications from AppSource
  auth                      Manage how you authenticate to various services
  canvas                    Operating with Power Apps .msapp files
  connector                 (Preview) Commands for working with Power Platform Connectors
  help                      Show help for the Microsoft Power Platform CLI
  modelbuilder              Code Generator for Dataverse APIs and Tables
  org                       Work with your Dataverse Organization
  package                   Commands for working with Dataverse package projects
  paportal                  Commands for working with Power Pages website
  pcf                       Commands for working with Power Apps component framework projects
  pipeline                  Work with Pipelines
  plugin                    Commands for working with Dataverse plug-in class library
  solution                  Commands for working with Dataverse solution projects
  telemetry                 Manage telemetry settings
  virtual-agent             Commands for working with Power Virtual Agent bots
```

DevOps principles



Outerloop options

1. Power Platform Build Tools for Azure DevOps
2. GitHub actions for Power Platform
3. ALM Accelerator for Power Platform
4. Pipelines for Power Platform

Licensing requirements

- Developer environments aren't required to be Managed Environments. They can be used for development and testing with the developer plan.
- The pipelines host should be a production environment, but the pipelines host doesn't have to be a Managed Environment.
- All other environments used in pipelines must be enabled as Managed Environments.
- Licenses granting premium use rights are required for all Managed Environments.

Environment purpose	Environment type	Standalone license required
Host	Production	No
Development	Developer	No
QA	Developer	No
Production	Production	Yes

⚠ Lab setup

- Each user has 3 environments
  - UserID-Dev
  - UserID-QA
  - UserID-Prod

- In a typical scenario you would have a separate environment where one would install the pipeline host!

https://aka.ms/SS24-Pipelines

Getting started

Setup and configure

There we go

Power Platform pipelines package

- Platform host The default tenant-wide platform host, which can be configured by makers.
- Custom host Admins configure a custom host to centrally govern citizen-led and pro-dev-led projects.
- Ensure that you have the latest Power Platform pipelines package in your custom host

What you will learn

In this lab, you will go though the following tasks:

- ✅ Log into make.preview.powerapps.com with your account
- ✅ Deploy the pipelines solution to your UserXX-Prod environment

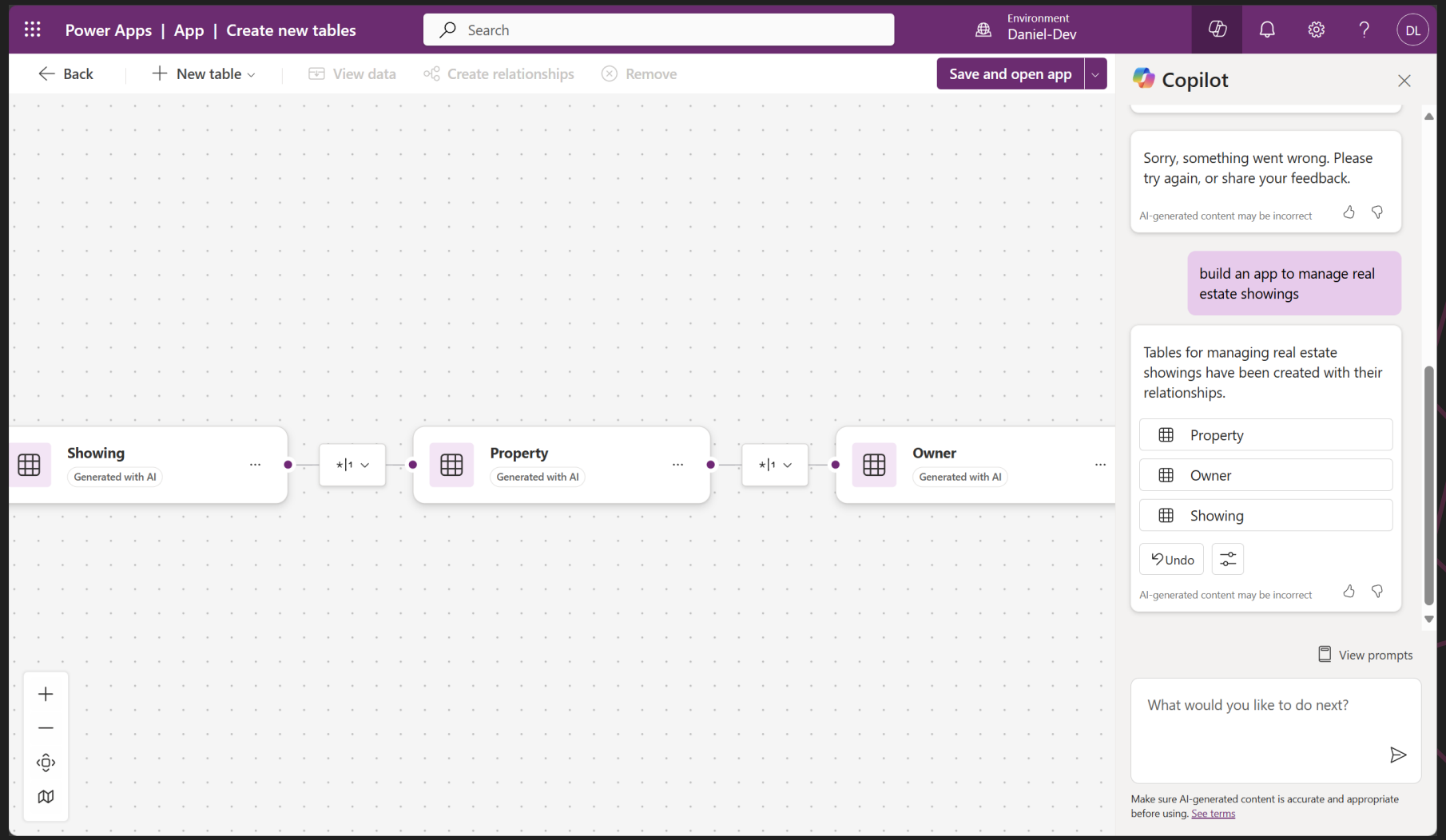
https://aka.ms/SS24-Pipelines

Getting started

Develop

Building blocks

DEMO: Get started with Copilot in Power Apps



https://aka.ms/SS24-Pipelines

Develop 👩‍💻

What you will learn

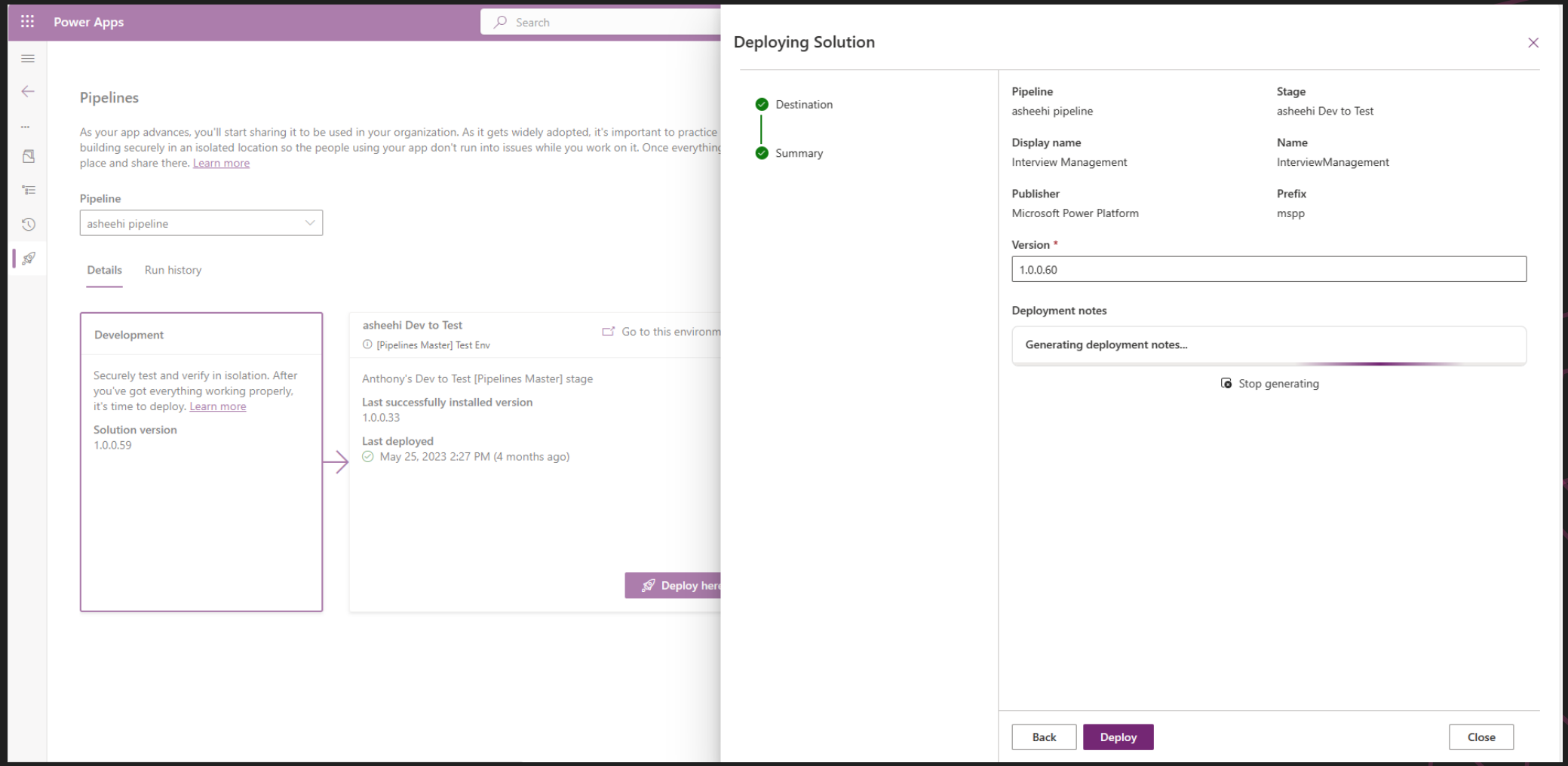
In this lab, you will go though the following tasks:

- ✅ Create A Solution
- ✅ Setting your preferred solution
- ✅ Creating A Canvas App With Power Apps Copilot

Deploy

The magic 🪄

Deployment notes (US ONLY)



What you will learn

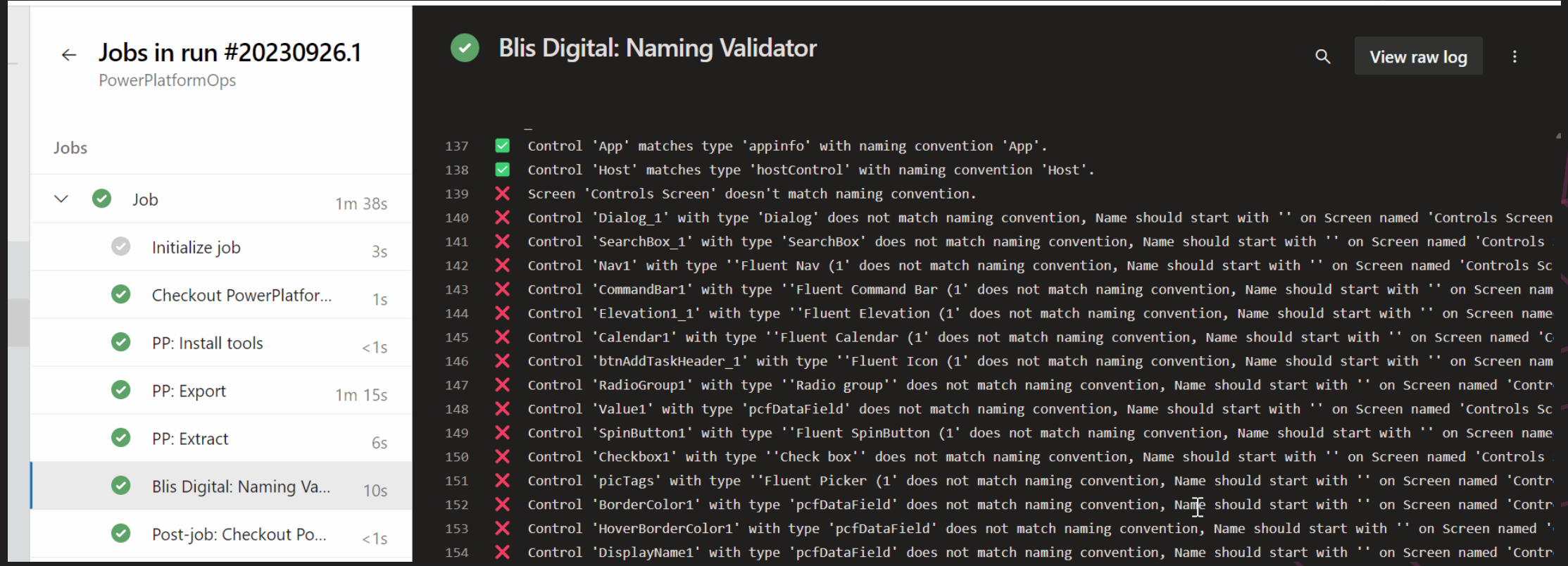
In this lab, you will go though the following tasks:

- ✅ Create your first pipeline
- ✅ Run the deployment to the QA environment

Enterprise Scale

Approvals ✅

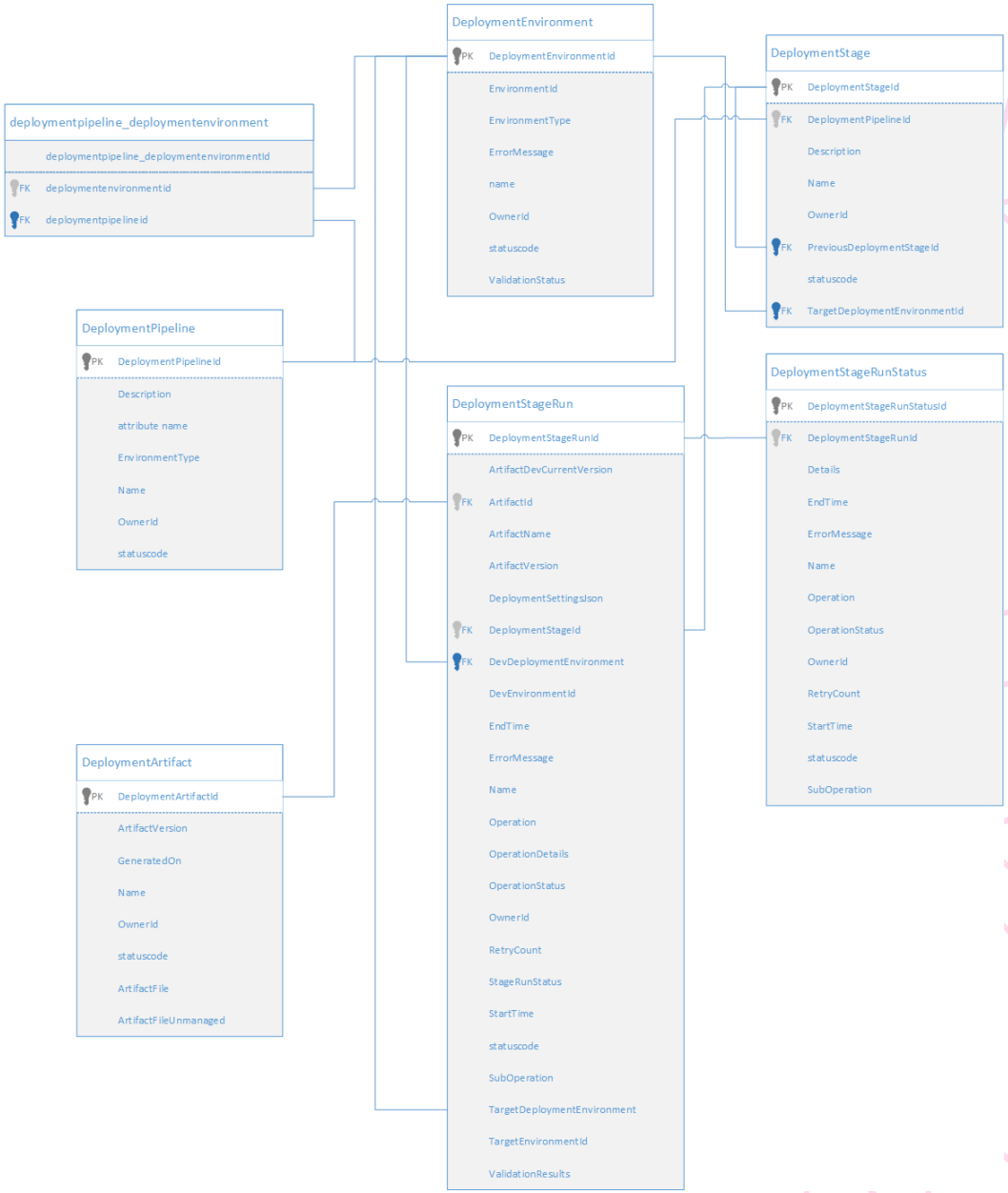
DEMO: Azure DevOps



Pipeline table reference

Table and entity overview used by Power Platform Pipelines.

**For brevity, common columns found on all tables are not included here*



Flow triggers for Pipelines

Gated Extension	Action Name	Step completed Trigger	Unbound action
Pre-export step required	OnDeploymentRequested	N/a	UpdatePreExportStepStatus
Is delegated deployment	OnApprovalStarted	OnDeploymentCompleted	
	OnApprovalCompleted		
Predeployment step required	OnPreDeploymentStarted	OnPreDeploymentCompleted	UpdatePreDeploymentStepStatus
	OnPreDeploymentCompleted		
	OnDeploymentStarted		
	OnDeploymentCompleted		

Trigger conditions

Specific Pipeline

```
@equals(triggerOutputs()?['body/OutputParameters/DeploymentPipelineName']
, 'Contoso Pipeline')
```

Specific stage

```
@equals(triggerOutputs()?['body/OutputParameters/DeploymentStageName'],
'Contoso UAT')
```

Specific stages (contains)

```
@contains(triggerOutputs()?['body/OutputParameters/DeploymentStageName'],
'QA')
```

Status fields

UpdatePreExportStepStatus, UpdateApprovalStatus, and PreDeploymentStepStatus:

- 10 is the pending status set by the system.
- 20 for completing the step.
- 30 for rejecting the step. The deployment won't proceed and status will be set to failed. You can also add both maker facing and admin facing comments to indicate the reason for rejection.

What you will learn

In this lab, you will go through only one task:

- ✅ Extend the previous pipeline with Approvals

Low code & Code first

Next level ⭐

What you will learn

In this lab, you will go though the following tasks:

- ✅ Create a GitHub account
- ✅ Create a GitHub repository
- ✅ Create a Power Automate cloud flow to store source code in a GitHub repository

Outerloop options

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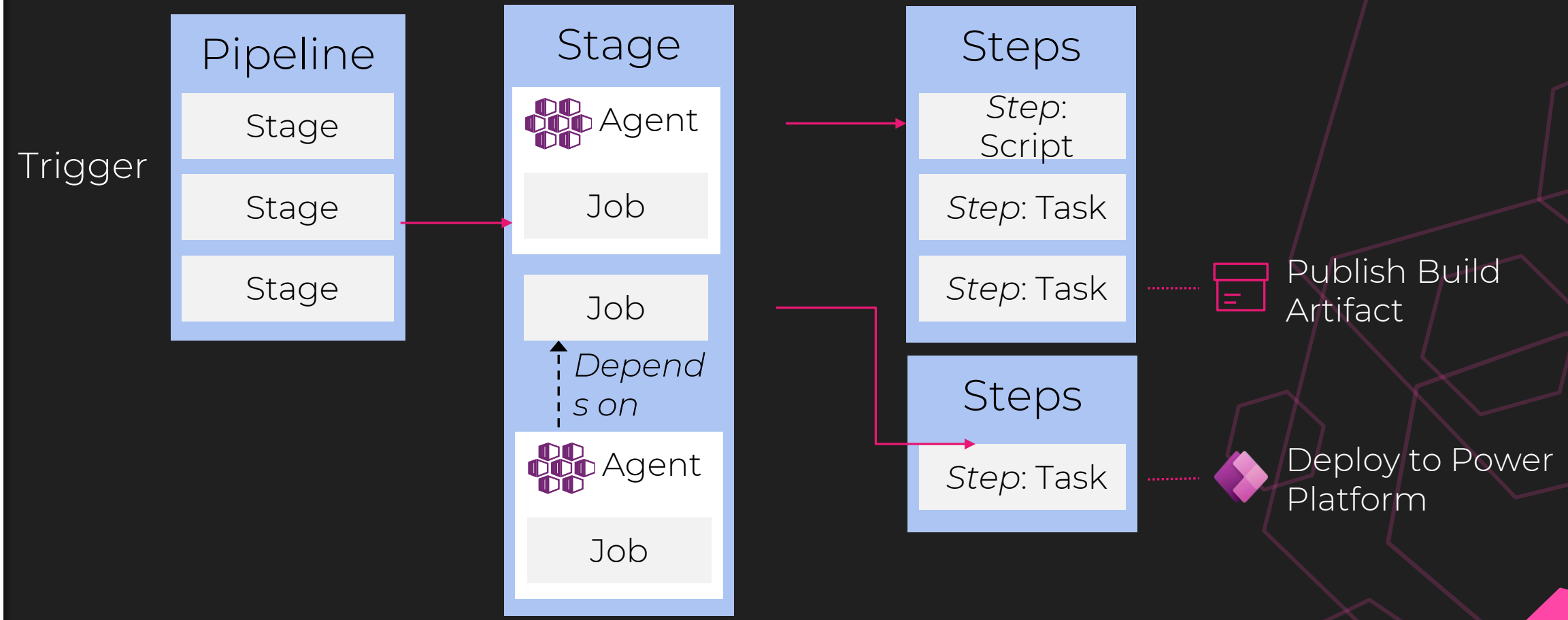
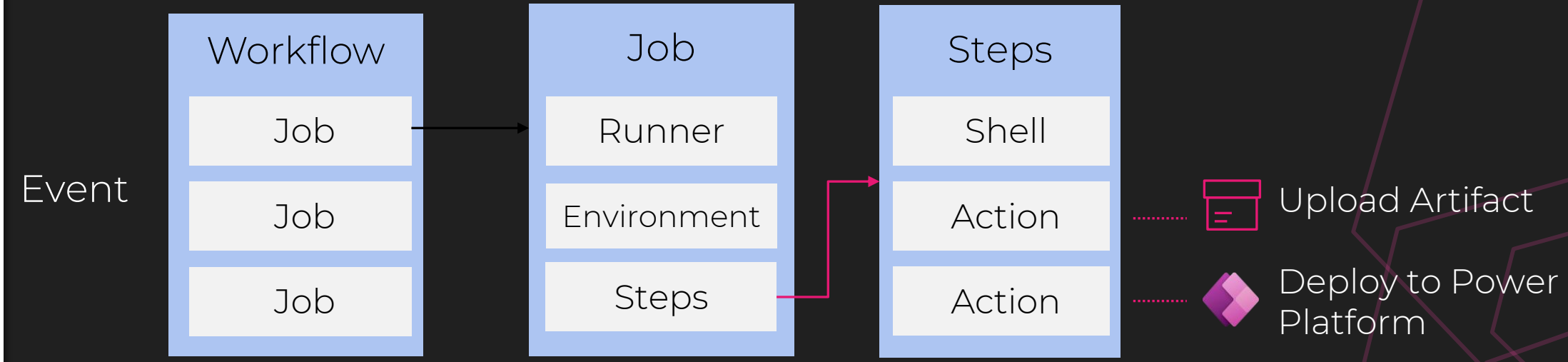
Azure DevOps key concepts



Git key concepts

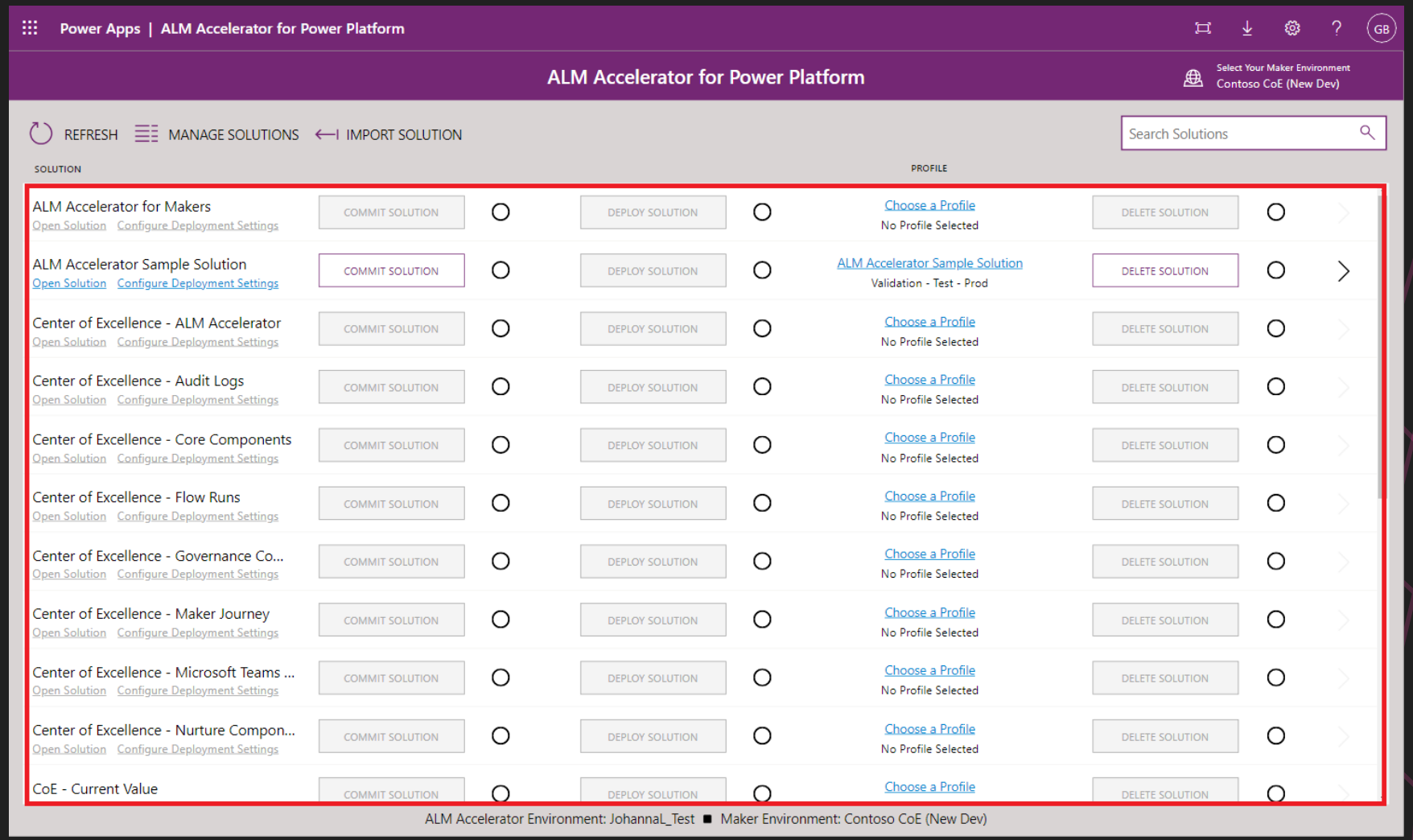


Pipeline definitions

Why use YAML?

- Versioning
- Flexibility
- Standardization
- Reusability

ALM Accelerator



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Low code & Code first

Next level ⭐

Recap

- ✅ Setup and configure for pipelines
- ✅ Develop Intelligent Apps with Copilot
- ✅ Deploy through a pipeline
- ✅ Enterprise Scale
- ✅ Low Code & Code First - Better together

Resources

- Power Platform Build Tools for Azure DevOps
- GitHub actions for Power Platform
- ALM Accelerator for Power Platform
- Pipelines for Power Platform
- Licensing and requirements
- Extending pipelines
- Dataverse Pipeline entities / structure

It’s a wrap