

WorkshopPLUS

Power Platform for Administrators

Power Platform Policies

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Objectives

After completing this Learning, you will be able to:

1

Understand....

- ✓ What Power Platform Data Loss Prevention Policies are
- ✓ Who can Create and managed DLP policies
- ✓ How DLP policies are enforced and visible to users
- ✓ What granular DLP controls are
- ✓ DLP management interfaces

2

Understand....

- ✓ What tenant isolation policy is
- ✓ Different configuration scenarios for tenant isolation

3

Understand....

- ✓ What Customer lockbox is
- ✓ Workflow of customer lockbox once it is configured

4

Understand....

- ✓ What Enterprise policies are

5

Understand....

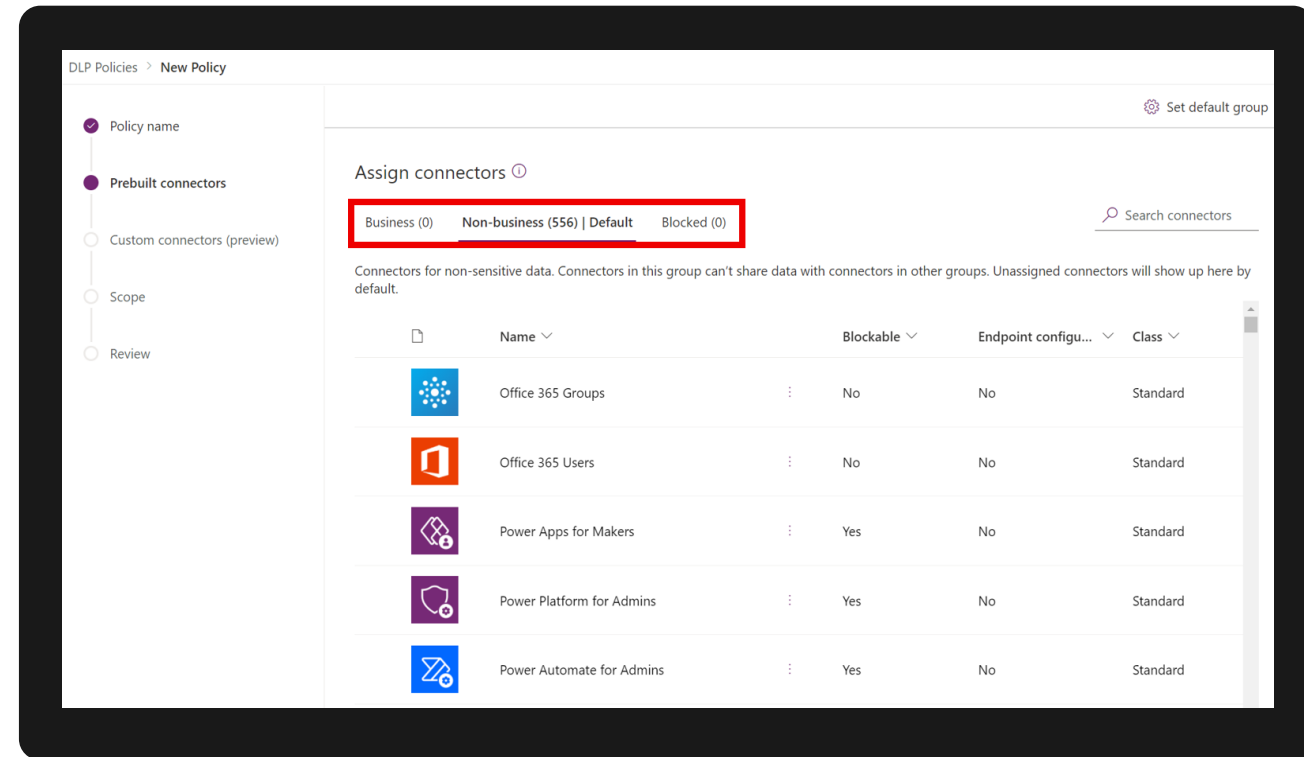
- ✓ What Billing policies are
- ✓ How Billing policies are configured



Understand Data Loss Prevention Policies

What are Data Loss Prevention (DLP) policies?

- Power Platform DLP policies allow you to control data flows across data connectors when used within Power Apps and Power Automate.
- Simply put, DLP enables admins to isolate business data from personal use data within Power Platform.



Connector Classification

Connectors can be classified across the following groups using DLP policies:

Business

- A given Power App or Power Automate resource can use one or more connectors from **Business** group
- If a Power App or Power Automate resource uses a **Business** connector, it **cannot** use any **Non-business** connector

Non-business

- A given Power App or Power Automate resource can use one or more connectors from **Non-business** group
- If a Power App or Power Automate resource uses a **Non-business** connector, it **cannot** use any **Business** connector

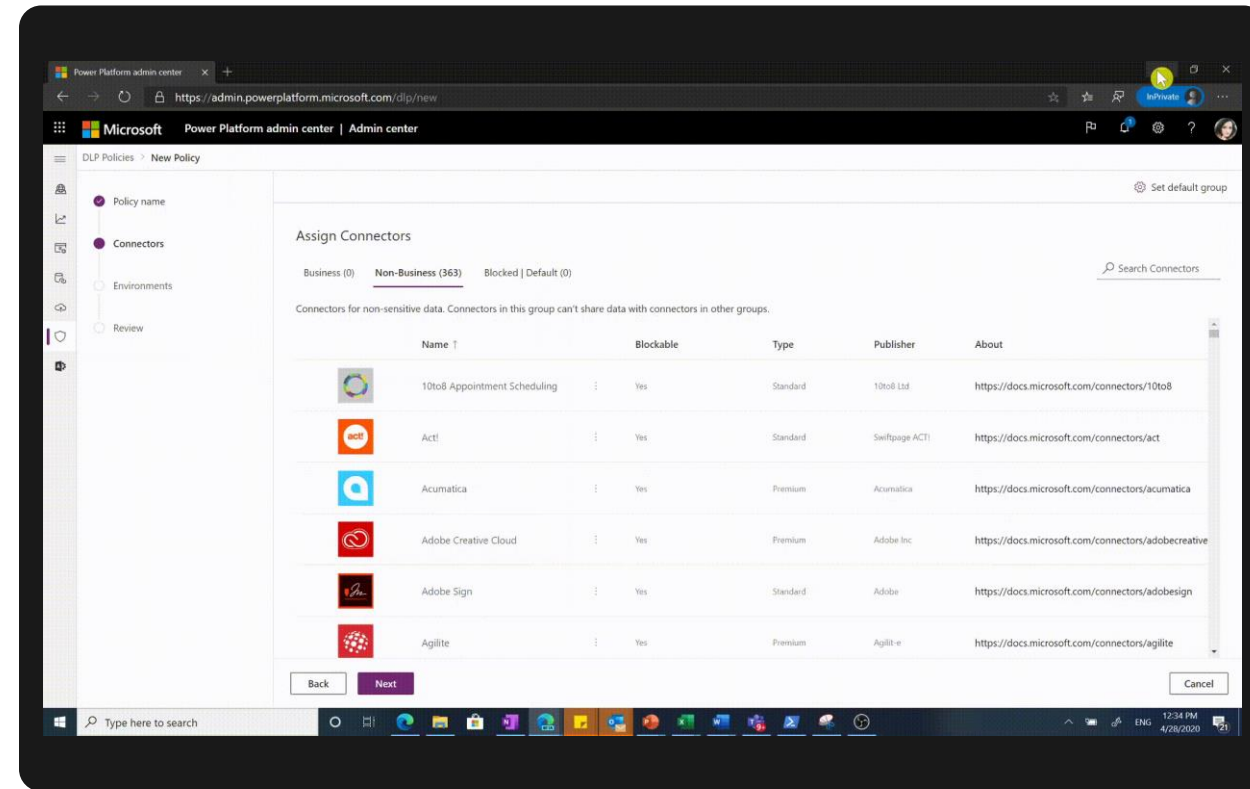
Blocked

- Any Power App or Power Automate resource cannot use any connector from a **Blocked** group
- All Microsoft owned premium connectors and third-party connectors (standard and premium) can be blocked
- All Microsoft owned standard connectors and Microsoft Dataverse cannot be blocked

Default Connector Group

The following grouping logic is applied to new connectors added to Power Platform:

- Power Platform connector ecosystem keeps evolving and new connectors are added.
- If new connectors are added after DLP policy creation, admins have not had a chance to explicitly categorize them
- These new connectors are automatically added to **Default connector** group identified for them
- Admins can set the **Default connector** group for new connectors in a DLP policy to – Business or Non-business or Blocked
- Admins can review these new connectors retrospectively and classify them explicitly as appropriate
- There are templates in Power Automate for administrators to get alerts when new connectors are added - [Monitor new connectors - Microsoft Power Platform - Power Platform | Microsoft Learn](#)



Tenant and Environment Policies

Power Platform DLP allows admins to create two types of policies



Tenant level DLP policies

- Supported only for Power Platform, D365 and Global Administrator roles
- Can be applied to one, more than one or all environments at a time
- Can be created without associating any environment
- Can be edited and viewed by any tenant admin
- Connector settings are visible to all relevant environment admins but are not editable by them
- Cannot be used to manage custom connector policies since they are scoped to a specific environment



Environment level DLP policies

- Supported for **Environment Admin role** associated with the environment
- Can be applied to **only one environment** at a time
- Specifying the environment is mandatory to create the policy
- Can be edited and viewed by any environment admin (of the environment) and tenant admins
- Can be used to manage custom connectors for their environment

DLP Policy Scopes

Tenant policies have three scope settings

All environments

- By default, tenant level policies will be applied to all environments created in the tenant.

All except selected environments

- Tenant admins can choose to exclude specific environments to apply the policy.

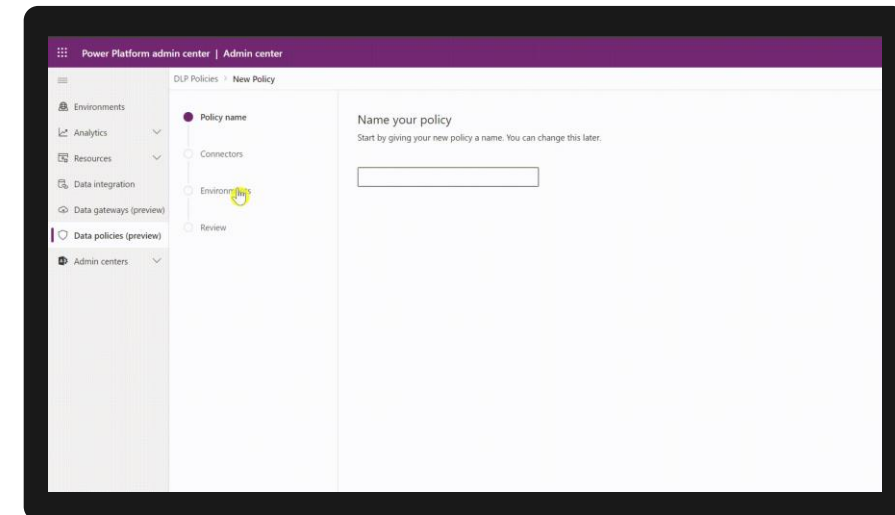
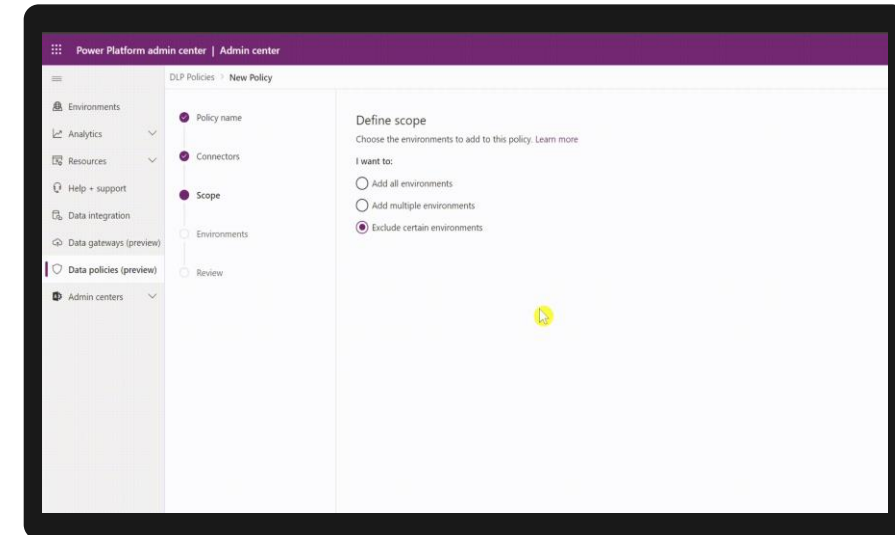
Only selected environments

- Tenant admins can choose to include only specific environments to apply the policy.

Environment policies have one scope setting

One environment only

Environment admins can choose to apply the policy on one environment at a time.

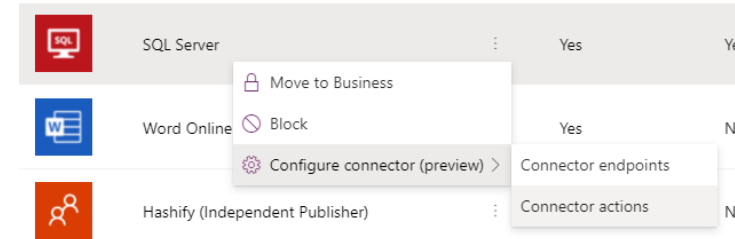


Connector Action Control

Granular DLP Controls

- You can use connector action control to **allow or block individual actions** within a given connector.
- On the Connectors page, right-click the connector, and then select Configure connector > Connector actions.
- You can also set the **default value** (Allow or Deny) for any new connector actions that will be added to the connector in the future.

Possible to use PowerShell as well to configure Connector Actions for DLP policies. See more [here](#)



Connector actions

SQL Server	
Action	Allowed
Delete row (V2)	<input type="checkbox"/> No
Execute a SQL query (V2)	<input checked="" type="checkbox"/> Yes
Execute stored procedure (V2)	<input checked="" type="checkbox"/> Yes
Get row (V2)	<input checked="" type="checkbox"/> Yes
Get rows (V2)	<input checked="" type="checkbox"/> Yes
Insert row (V2)	<input type="checkbox"/> No
Transform data using Power Query	<input type="checkbox"/> No
Update row (V2)	<input type="checkbox"/> No
Get tables (V2)	<input type="checkbox"/> No

Default connector action settings

- ☐ Allow new connector actions
- ☒ Block new connector actions

Endpoint Filtering (Preview)

Granular DLP Controls

- Endpoint filtering allows admins to govern at a fine grain which specific endpoints will be allowed versus blocked at a tenant or environment level.
- This feature is available for HTTP, HTTP with Azure AD, HTTP Webhook, SQL Server, Azure Blob Storage, and SMTP connection endpoints (soon also for Dataverse (legacy)).
- Possible to use PowerShell as well to configure Endpoint Filtering for DLP policies. See more info [here](#)

The screenshot displays the Microsoft Endpoint Filtering interface. At the top, a table lists connectors with their status. A context menu is open for the 'Word Online' connector, showing options: 'Move to Business', 'Block', and 'Configure connector (preview)'. The 'Configure connector (preview)' option is selected, leading to a sub-menu with 'Connector endpoints' and 'Connector actions'.

Connector	Status
SQL Server	Yes
Word Online	Yes
Hashify (Independent Publisher)	No

Configure endpoints

SQL Server ⓘ

Create a list of rules to limit access to endpoints in order of priority. Enter endpoints in Server name, database name format, or use pattern matching with "*". [Learn more](#)

+ Add endpoint

Order	Action	Endpoint	Move up	Move down
1	Allow	myazuresql.database.windows.net*		
2	Deny	*		

Custom Connector Parity

Power Platform allows you to create and share custom connectors which can be included in tenant and environment level Data Loss Prevention (DLP) policies.


- Environment admins can now see all custom connectors in their environments in DLP wizard in PPAC and classify individual custom connectors by name for environment-level DLP policies.
- Tenant admins see a new tab called **Custom connectors** in DLP wizard in PPAC which allows them to specify an ordered list of Allow and Deny URL patterns for custom connectors.
- The rule for * will always be the last entry in the list which applies to all custom connectors not matched by any previous rule.
- Admins can tag the * pattern to Blocked/Business/Non-business/Ignore. By default, the pattern is set up as Ignore for new DLP policies.

① You can now apply Data Loss Prevention policies on custom connectors. Please ensure that they are classified in the appropriate group.

Assign connectors ①

Business (0) Non-business (557) | Default Blocked (0) offid

Connectors for non-sensitive data. Connectors in this group can't share data with connectors in other groups. Unassigned connectors will show up here by default.

	Name ▾		Blockable ▾	Endpoint configur... ▾	Class ▾
	Office 365 Management API	:	Yes	No	Custom

DLP Policies > Edit Policy

- ✓ Policy name
Tenant
- ✓ Prebuilt connectors
- ✓ Custom connectors (preview)**
- ✓ Scope
- ✓ Environments
- ✓ Review

① If you have already added a custom connector to this policy, they will not be evaluated by any rules created here. Please use the 'Remove-CustomConnectorFromPolicy' cmdlet to remove the custom connectors from the policy for these rules to take effect.

+ Add connector pattern Search

Custom connector patterns

Create a list of rules to limit access to custom connectors in order of priority. Enter a full custom connector URL pattern, or use pattern matching with "*" [Learn more](#)

Order	Data group		Pattern	Move up	Move down
1 ▾	Business	:	https://myapi.azurewebsites.net/*		
2	Ignore	:	*		①

Custom DLP Governance Error Message

- You can use Power Platform DLP PowerShell commands to set a custom link to lead end users to your organization's governance documentation and include a governance contact, when they are prompted by governance controls.
- For instance, when the governance error message content is set, it will appear in Power Apps Data Loss Prevention policy runtime enforcement messages.

PowerShell

```
New-PowerAppDlpErrorSettings -TenantId 'TenantId' -ErrorSettings @{
  ErrorMessageDetails = @{
    enabled = $True
    url = "https://contoso.org/governanceMaterial"
  }
  ContactDetails= @{
    enabled = $True
    email = "admin@contoso.com"
  }
}
```

This app isn't opening correctly

It looks like this app isn't compliant with the latest data loss prevention policies.

Your organization's governance reference material: <https://contoso.org/governanceMaterial>

Your organization's governance contact: admin@contoso.com

More

#	Experience	Availability
1	User launches an app created using Power Apps that's not DLP compliant	Generally available
2	Maker shares a Power Apps canvas app but doesn't have share privilege	Generally available
3	Maker shares a Power Apps canvas app with 'Everyone' but doesn't have privilege to share with 'Everyone'	Generally available
4	Maker saves an app created using Power Apps that's not DLP compliant	Generally available
5	Maker saves a Power Automate flow that's not DLP compliant	Generally available

DLP Resource Exemption

- You can use Power Platform DLP PowerShell commands to exempt or unexempt Apps and Flows from DLP policies.
- For example, by using following commands you can exempt App from specified DLP policy.
- **NOTE:** Currently, there is no UI to be able to see all Apps and Flows excluded from the policies, so admins would need to track and monitor excluded resources – you can retrieve list of exempt resources via PowerShell.

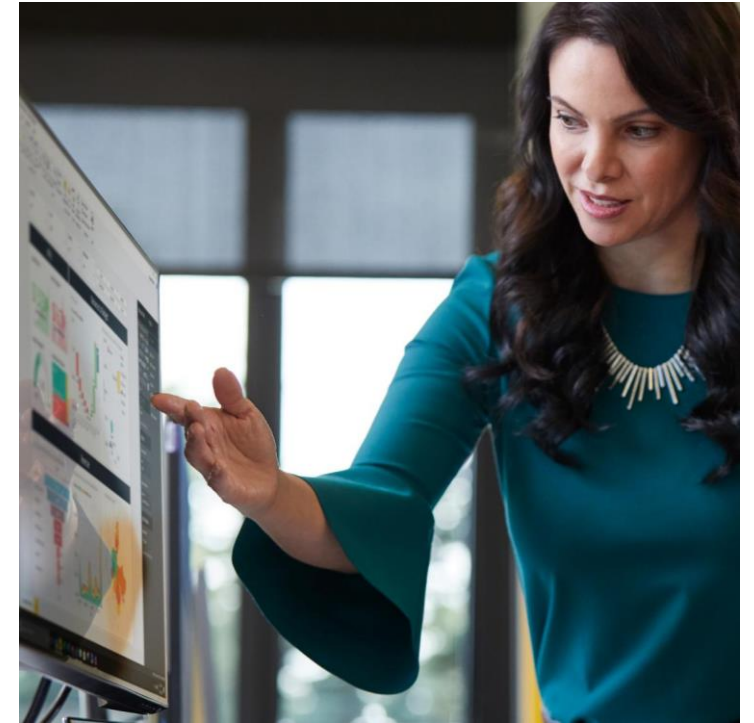
```
$app = Get-AdminPowerApp -AppName 1846330f-68cd-44b3-a1ec-acdb51aa5a2b -EnvironmentName 1ebffc16-89da-4a0a-  
$exemptApp = [pscustomobject]@{  
    id = $app.Internal.id  
    type = $app.Internal.type  
}  
$exemptApp = [pscustomobject]@{  
    exemptResources = @($exemptApp)  
}  
New-PowerAppDlpPolicyExemptResources -TenantId d5ff2245- -PolicyName 4f1cb78a-c99e-4e97-b998-93f85eeab11a -NewDlpPolicyExemptResources $exemptApp
```

Demonstration

Create tenant level Data Loss Prevention policy

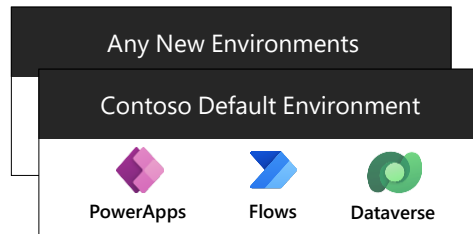
Consider demoing the following:

1. Open PPAC
2. Click **Data Policies** from the left menu
3. Click New Policy
4. Set policy name as "**Tenant Policy**"
5. In the connectors list (Non-Business) filter all non-blockable connectors by settings filter for **Blockable** column with value **No**
6. Select all connector (about 24) and move them to **Business** group and click **Next**
7. Do not change anything in Custom Connectors page just click **Next**
8. On the Scope page select "**Add all environments**" and click **Next**
9. In the last page click "**Create policy**"

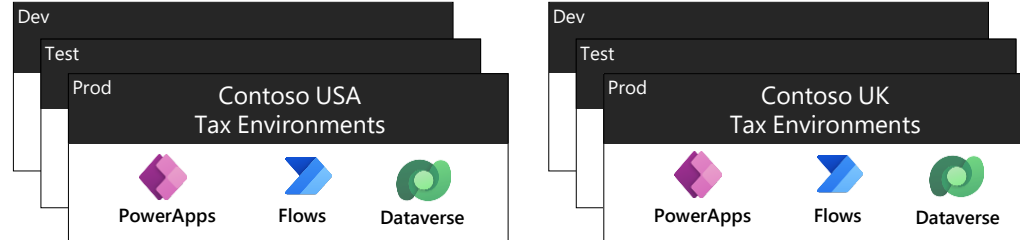


Example - Contoso Corp DLP policies

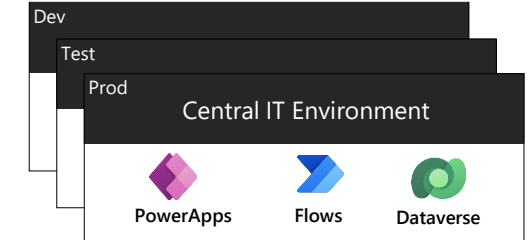
1. MOST RESTRICTIVE DLP (Tenant policy, All envs except)



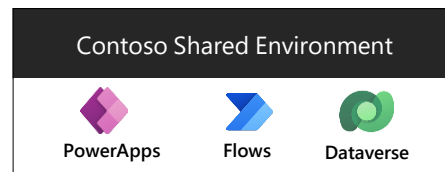
3. CONTOSO TAX DLP (Tenant policy, Include envs)



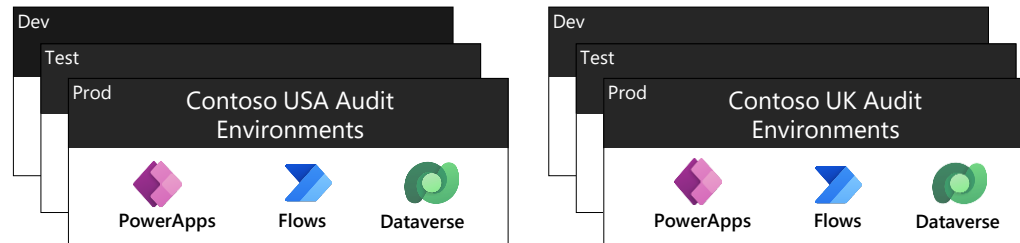
5. CENTRAL IT DLP (Tenant policy, Include envs)



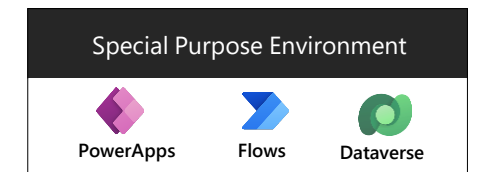
2. LESS RESTRICTIVE DLP (Tenant policy, Include envs)



4. CONTOSO AUDIT DLP (Tenant policy, Include envs)



6. SPECIAL PURPOSE DLP (Environment policy)



Centralize DLP Policy management using tenant level policies. Use restrictive policies on shared environments like default environment. Create minimal number of policies per environment. There is no strict hierarchy between tenant and environment policies.

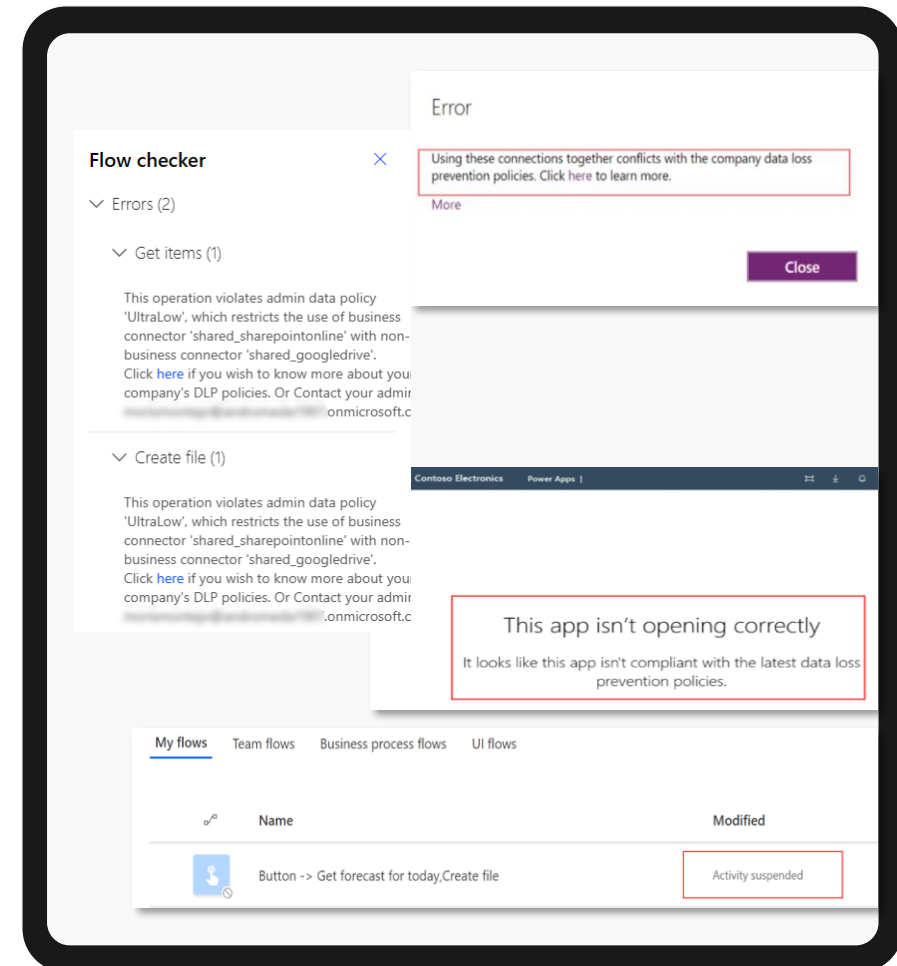
DLP Policy Enforcement

Design-time

- Power Apps makers see an error upon using connectors that don't belong together or are blocked using DLP policies. Apps violating DLP policies cannot be saved at design time unless DLP violation is resolved.
- Power Automate makers see a warning while saving a flow using connectors that don't belong together or are blocked using DLP policies. You can save the flow but **not able to run**

Run-time

- If DLP policy changes impact an existing Power App negatively and it becomes non-compliant, then users are no longer able to launch it and get an error.
- If DLP policy changes impact an existing Power Automate negatively and it becomes non-compliant, then it is automatically marked as suspended users are no longer able to execute it. Power Automate suspension may take ~5 mins to come into effect after policy changes.



Multiple Policy Impact on Environments

If multiple tenant or environment level policies are applied simultaneously on an environment, then the **most restrictive rules accrue**.

Blocked connectors

- If a connector is marked as 'blocked' in **any** one DLP policy applied to the environment, then the net outcome is that this connector is blocked from usage within the environment.
- It doesn't matter if other DLP policies applied to the environment mark it as business or non-business.

Business/Non-Business connectors

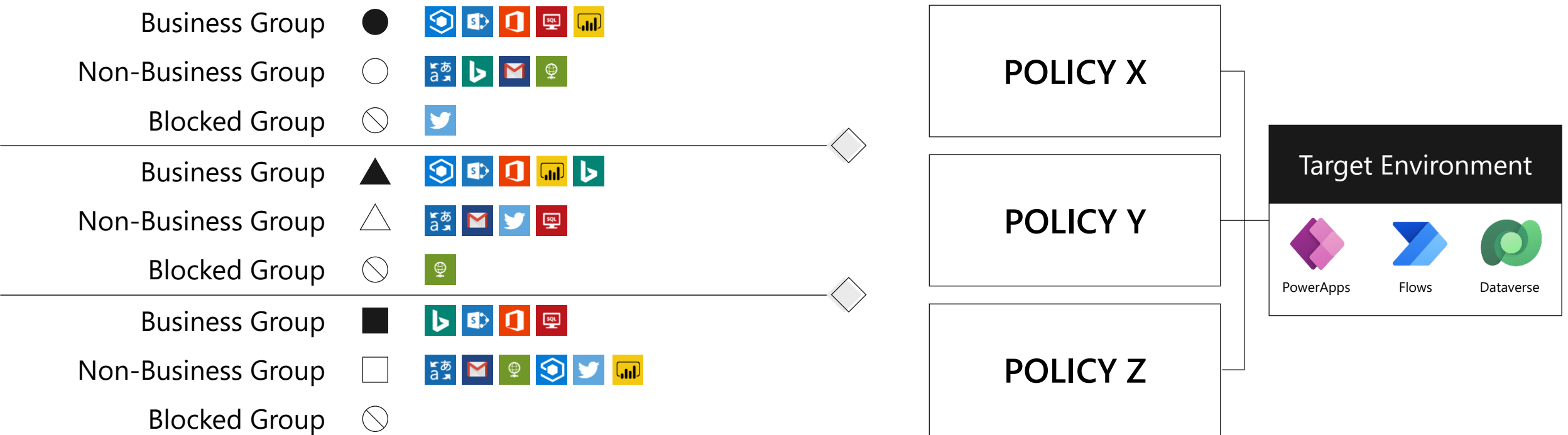
If all DLP policies applied to the environment mark a certain set of connectors as business or non-business, then the most restrictive groupings define what connectors can be used together vs. Not.

For example

Policy X = B {1,2,3} NB {4,5} ; Policy Y = B {3,4,5} NB {1,2}

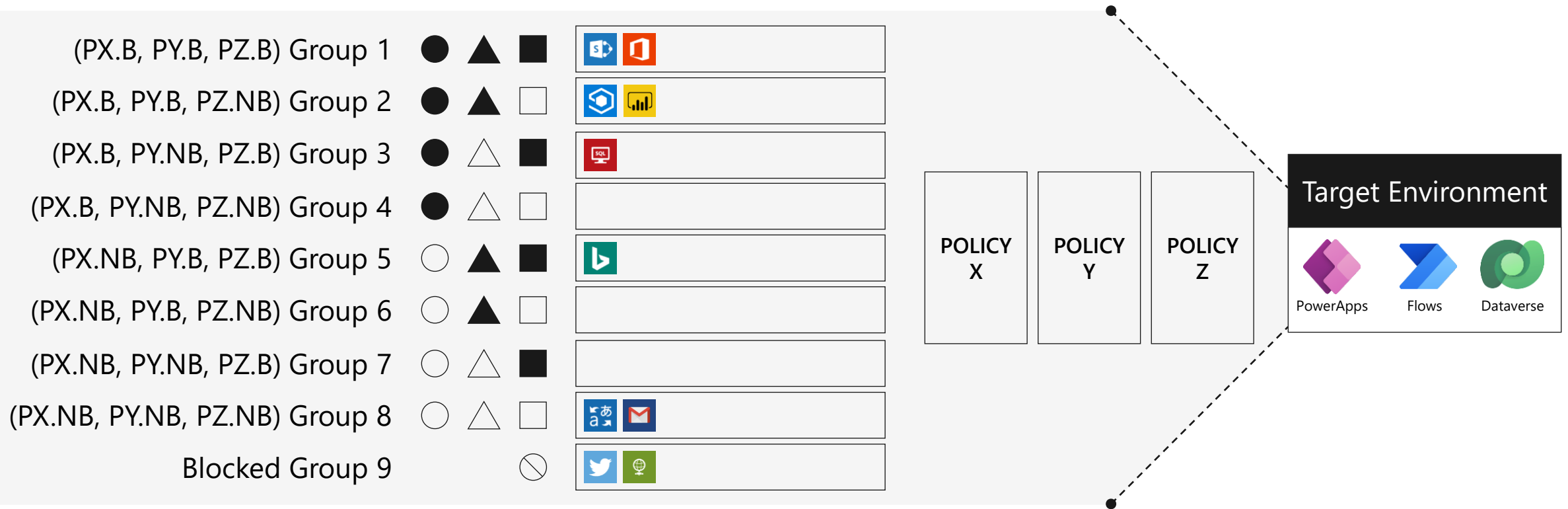
Then – Net outcome : {1,2} {3} {4,5}

Multiple DLP Policies – Example Scenario



Multiple DLP policies applied to the same environment grouping connectors across Business/Non-business/Blocked. This set up makes the outcome of what connectors can be used together – Fragmented and hard to predict

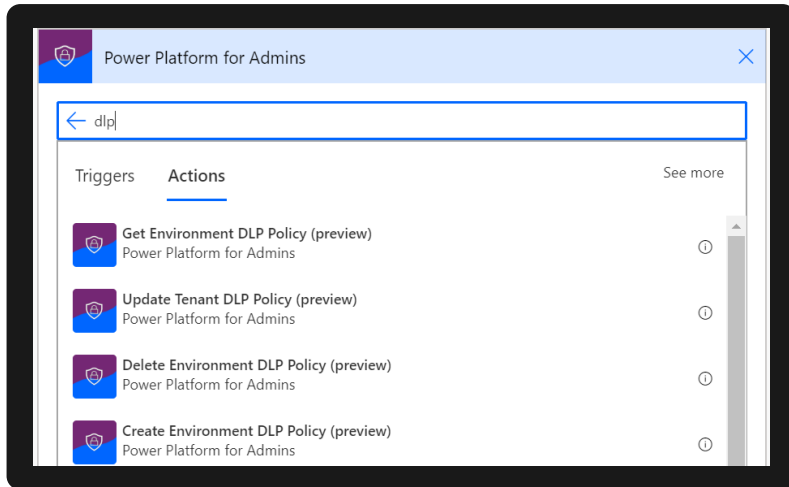
Multiple DLP Policies – Net Outcome



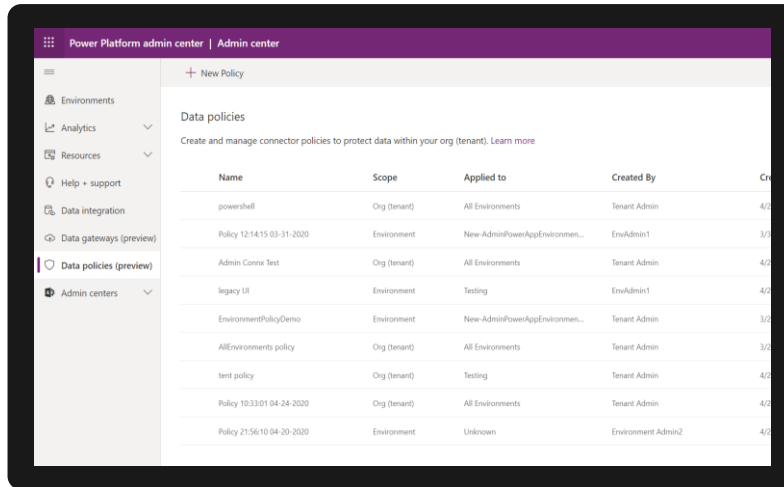
All blocked connectors map to blocked. For business/non-business - 3 policies will fragment connector grouping outcome into as many as $3^2 = 8$ different sets

For predictable outcomes use minimal number of DLP policies per environment

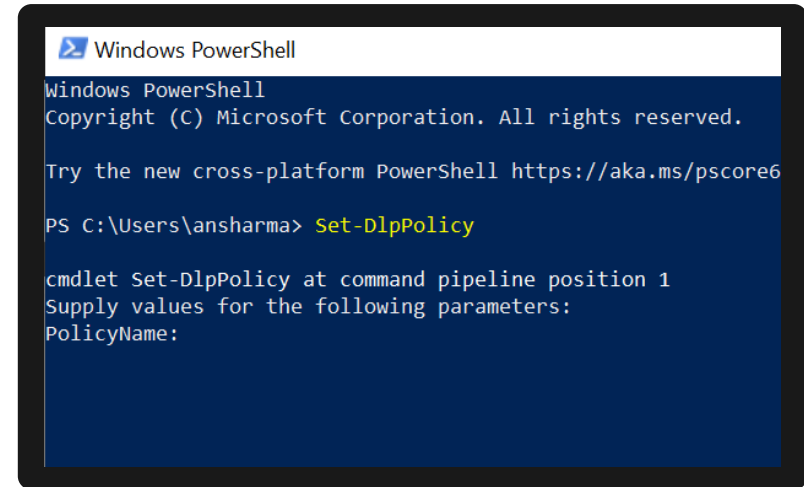
DLP Management Interfaces



Power Platform for Admins
Connector



Power Platform
Admin Center



Power Apps
PowerShell

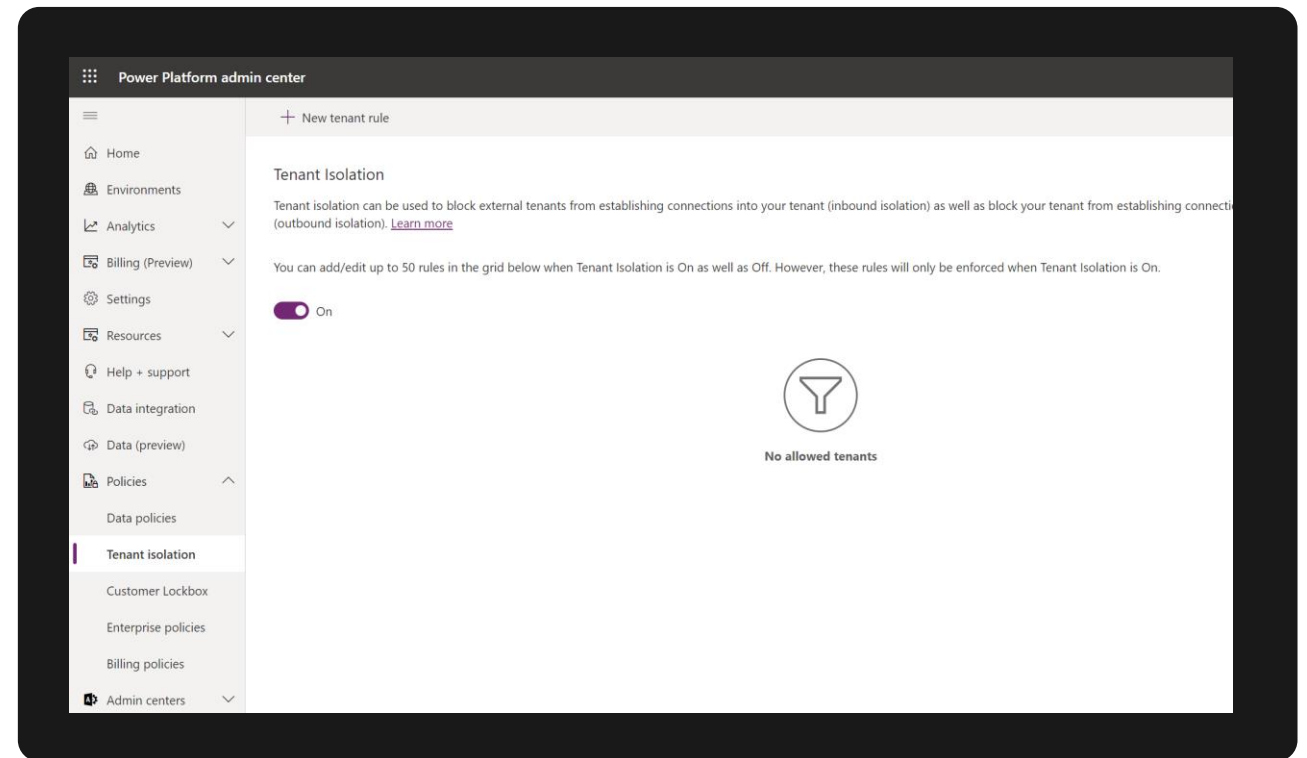
Tenant Isolation

Tenant Isolation

This restriction only applies to PowerApps and Power Automate

Tenant isolation allows admins to effectively govern the movement of tenant data from Azure AD authorized data sources to and from their tenant.

- Currently in preview and available in Power PPAC > **Policies** > **Tenant isolation**. (Default setting is off).
- New Tenant Rule can be created for Inbound and/or Outbound Restriction once Tenant Isolation is turned on.
- Tenant domain or ID to be added to the Allowed list, you can use * for all tenants.
- Users who create or edit a resource affected by the tenant isolation policy will see a [related error message](#).
- Existing Apps or flows that are in violation of the tenant isolation policy won't run successfully.
- [Additional information](#).



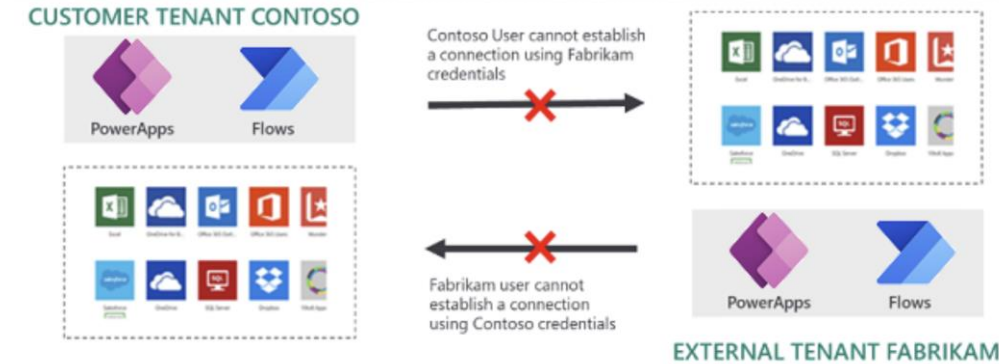
Configuration scenarios

This restriction only applies to PowerApps and Power Automate

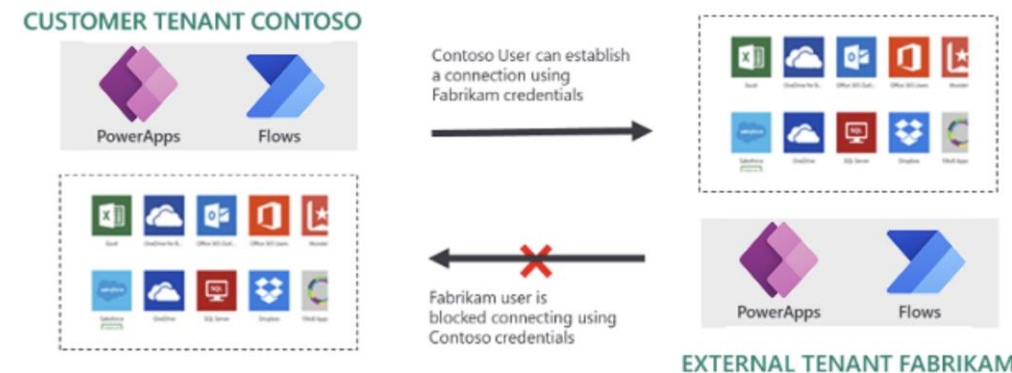
- **Two-way tenant isolation (inbound and outbound connection restriction).**
 - Two-way tenant isolation will block connection establishment attempts to your tenant from other tenants. Additionally, two-way tenant isolation will also block connection establishment attempts from your tenant to other tenants.
- **Tenant isolation with allowlists**
 - One-Way tenant isolation or inbound isolation will block connection establishments attempts to your tenant from other tenants.
 - **Scenario: Outbound allowlist** – Fabrikam is added to outbound allowlist of the Contoso tenant.
 - **Scenario: Bidirectional allowlist** – Fabrikam is added to the inbound and outbound allowlists of the Contoso tenant

Note: a connection attempt initiated by a guest user from their host tenant targeting data sources withing the same host tenant is not evaluated by the tenant isolation rules.

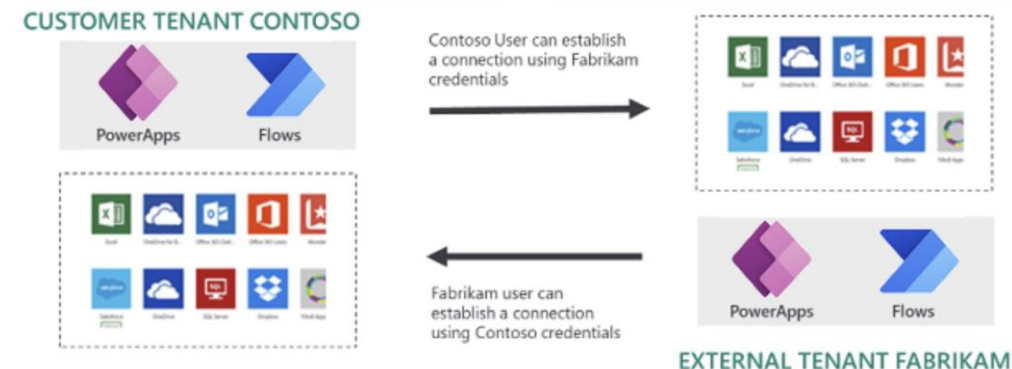
Two-way tenant isolation (inbound and outbound connection restriction).



Scenario: Outbound allowlist



Scenario: Bidirectional allowlist

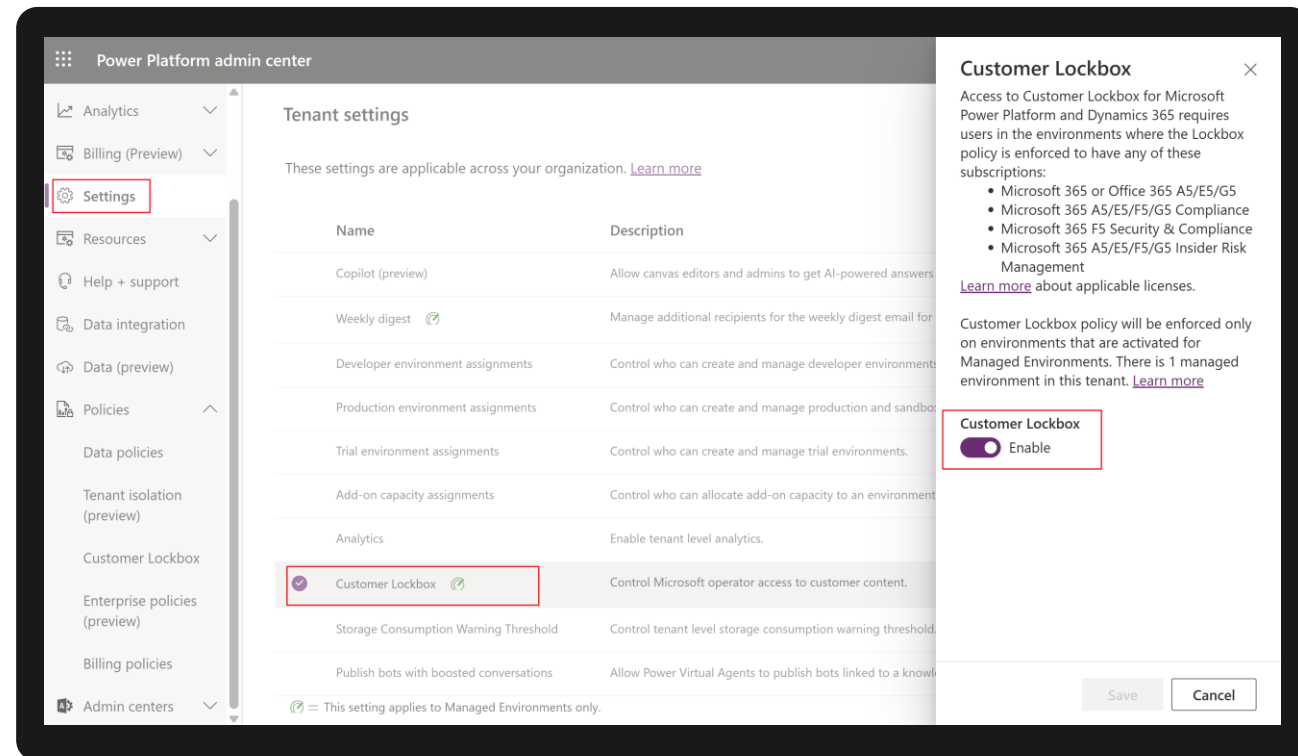


Customer Lockbox

Customer Lockbox

Most operations, support, and troubleshooting performed by Microsoft personnel (including sub-processors) don't require access to customer data. With Power Platform Customer Lockbox, we provide an interface for the customers to review and approve (or reject) data access requests in the **rare** occasion when data access to customer data is needed. It's used in cases where a Microsoft engineer needs to access customer data, whether in response to a customer-initiated support ticket or a problem identified by Microsoft.

- Power Platform applications and services store customer data in several Azure storage technologies. When Customer Lockbox is enabled for an environment, customer data associated with the respective environment is protected by the lockbox policy, irrespective of the storage type.
- To enable, go to **PPAC** > **Settings** > **Customer Lockbox**
- Enabling Customer Lockbox will enforce the policy **only for Managed Environments**.
- All updates to a lockbox request are recorded and made available via audit logs - [Audit lockbox requests](#).



Customer Lockbox - Workflow

- 1. Org has an **issue** and **opens case** with **MS Support**.
- 2. MS reviews/troubleshoots the case and **determines access to customer data is needed** – MS triggers internal process for access to customer data, irrespective of lockbox policy being enabled or not.
- 3. A **lockbox request is generated** if the respective environment is protected by lockbox policy. **Email is sent** to Global Admin and Power Platform Admin.
- 4. The approver signs into PPAC and **approves** the request. *The request times out within four days, and no access is granted to MS.*
- 5. After request is approved, MS obtains **elevated permissions** and fixes the issue. *MS engineers have 8 hours to fix the issue, after which access is revoked.*

Approve this lockbox request from Microsoft by March 21, 2022 4:28 UTC

Your organization has enabled lockbox in the "LockboxEnabled" environment.

The lockbox request is pending approval in the Power Platform admin center. When it's approved, a Microsoft engineer will be given direct access to your environment's data during a brief access period to troubleshoot or resolve specific technical issues.

[Review the request >](#)

If the lockbox request has already been approved in the Power Platform admin center, you may disregard this email.

Request details

Support request ID	294161770
Environment	LockboxEnabled
Status	ApprovalActionRequested
Date and time of request	March 17, 2022 4:28 UTC
Request expiration	March 21, 2022 4:28 UTC
Access period	8h

Enterprise Policies

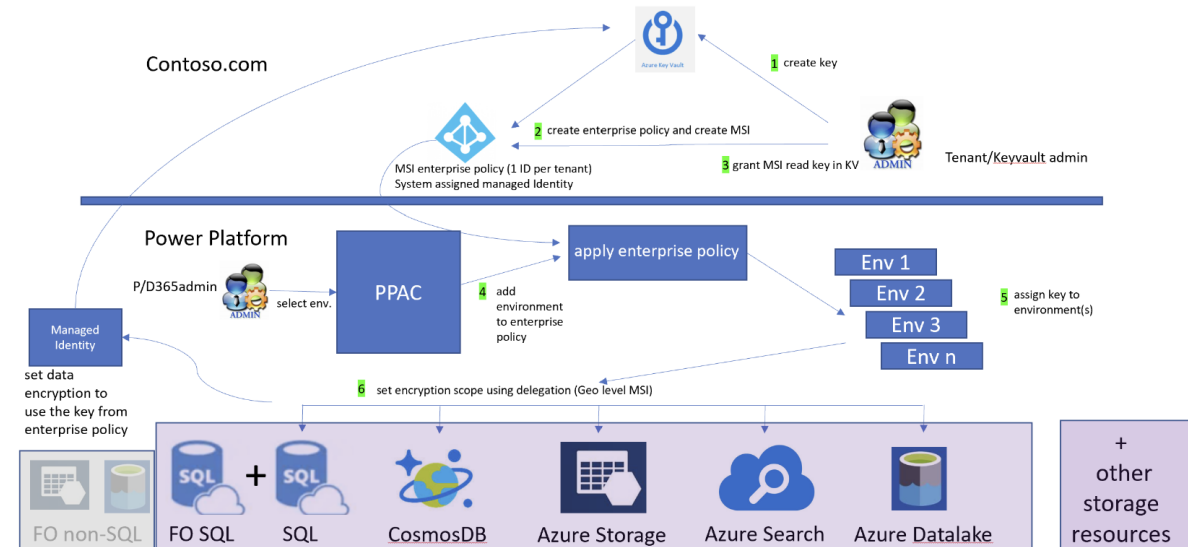
Enterprise Policies – CMK – what is it?

CMK = Customer Managed Key

- Customers have **data privacy** and **compliance requirements** to secure their data by **encrypting their data at-rest**.
- Data is secure from exposure in an event where a copy of the database is stolen.
- With **data encryption at-rest**, the stolen database data is protected from being restored to a different server without the **encryption key**.
- All customer data stored in Power Platform is **encrypted at-rest** with strong **Microsoft-managed encryption keys by default**.
 - Microsoft stores and manages the database encryption key for all data, so customers don't have to.
- What benefits does a Power Platform customer managed key (CMK) provide?
 - Added data protection control to self-manage the database encryption key associated with Microsoft Dataverse environment(s).
 - Allows you to **rotate** or **swap** the encryption **key on demand**.
 - Allows you to **prevent Microsoft's access** to your customer data when you revoke the key access to our services at any time.



Customer Managed Key (CMK)



Currently, all your customer data stored only in the following apps and services can be encrypted with customer-managed key.

- Dataverse (Custom solutions and Microsoft services)
- [Power Automate](#) 1
- Chat for Dynamics 365
- [Dynamics 365 Sales](#)
- Dynamics 365 Customer Service
- Dynamics 365 Customer Insights
- Dynamics 365 Omnichannel
- Dynamics 365 Commerce (Finance and operations)
- Dynamics 365 Field Service
- Dynamics 365 Retail
- Dynamics 365 Finance (Finance and operations)
- Dynamics 365 Intelligent Order Management (Finance and operations)
- Dynamics 365 Project Operations (Finance and operations)
- Dynamics 365 Supply Chain Management (Finance and operations)
- Dynamics 365 Fraud Protection (Finance and operations)

Configuring Enterprise Policies

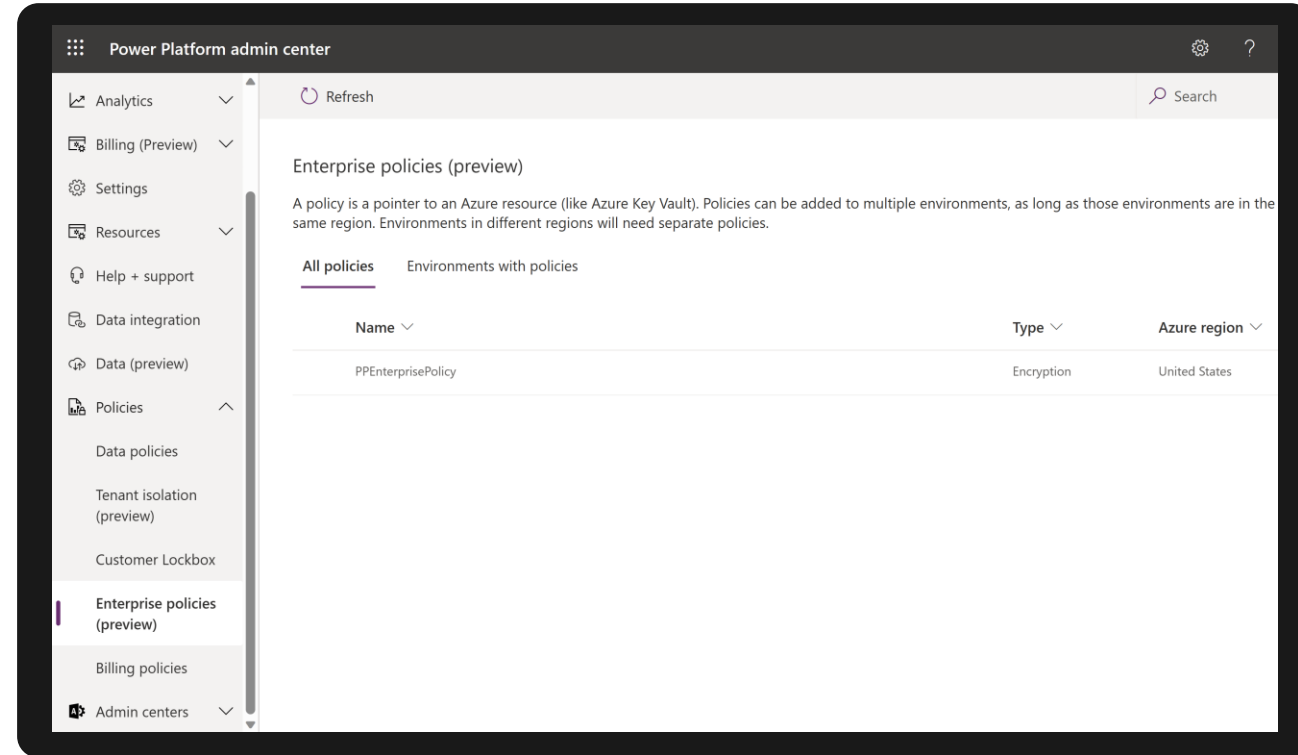
Understand the potential risk when you manage your key - As with any business-critical application, personnel within your organization who have administrative-level access must be trusted. Before you use the key management feature, you should understand the risk when you manage your database encryption keys. It's conceivable that a malicious administrator (a person who is granted or has gained administrator-level access with intent to harm an organization's security or business processes) working within your organization might use the manage keys feature to create a key and use it to lock your environments in the tenant.

Prerequisites

- An Azure subscription that includes Azure Key Vault.
- Global tenant admin or an Azure AD with contributor permission to the Azure AD subscription and permission to create an Azure Key Vault and key. This is required to set up the key vault.
- Power Platform administrator must be assigned to either the Power Platform or Dynamics 365 Service administrator Azure AD role.

Steps to configure - the following steps link to detailed step by step documentation:

1. [Create encryption key and grant access](#)
2. [Enable the Power Platform enterprise policies service for your Azure subscription](#)
3. [Create enterprise policy](#)
4. [Grant enterprise policy permissions to access key vault](#)
5. [Grant the Power Platform admin privilege to read enterprise policy](#)
6. [Add an environment to the enterprise policy to encrypt data](#)

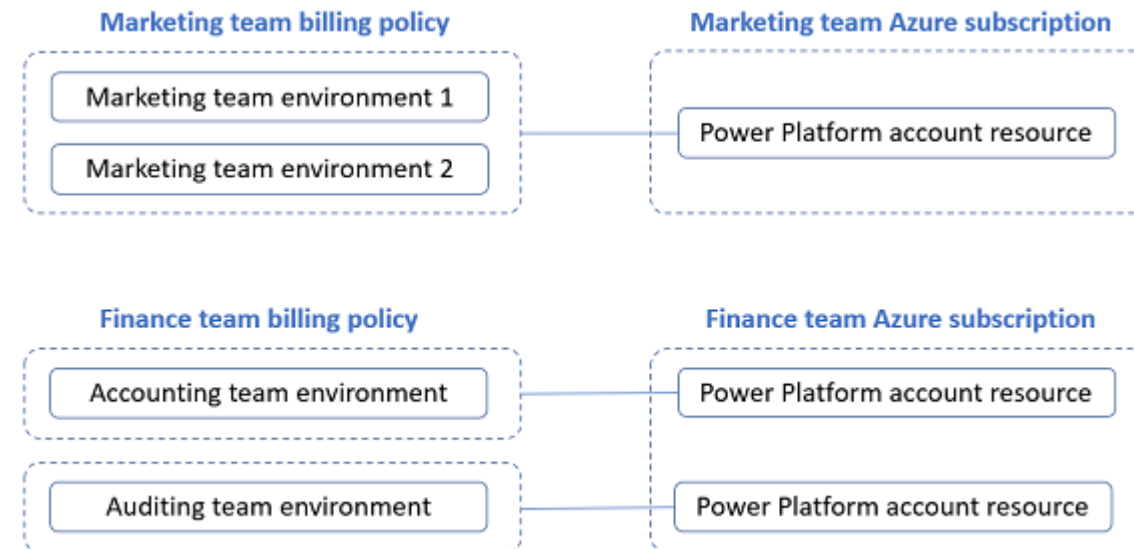
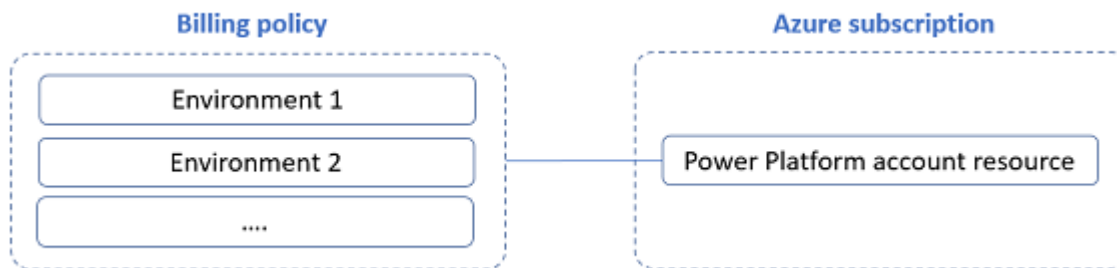


Billing Policies

What is a billing policy?

A billing policy creates a link between one or more environments and an Azure subscription. [Used for PAYGO licensing models.](#)

- It **consists** of:
 - Details of the **Azure subscription**
 - A **list of environments** that are **linked** to the **Azure subscription**
- Can be created in either **PPAC** or within Power Apps and Power Automate.
- When a policy is created, a corresponding Azure resource (called a **Power Platform account resource**) is created in the Azure subscription associated with that billing policy.
- Any **usage charges** for Power Apps, Power Automate, Dataverse, and Microsoft Power Platform requests will appear under the Power **Platform account resource** on the **Azure subscription's bill**.
- When an environment is linked to Azure via a billing policy, it becomes a **pay-as-you-go environment**.
 - An environment can only be linked to one billing policy at a time.
 - Environments can be removed from a policy at any time
 - It goes back to a regular environment.
 - *If a user has a premium per user license – it is used instead of PAYG*



Setup billing policy/PAYGO

In order to set up pay-as-you-go billing for an environment, you first need an active Azure subscription that you can link to that environment. We recommend to configure this in PPAC.

Who can set these up?

- Power Platform Admin, Dynamics 365 Admin, Global Admin.
- Environment Admin – Can only link environments they are admins for and only to policies they create.

Steps to configure

1. [First, procure or create an Azure subscription you can use](#)
2. Navigate to [Billing policies in PPAC](#) and click **New Billing Policy**.
3. Provide a name for your new billing policy, and then select **Next**.
4. Add Azure subscription details
 1. Choose the **azure subscription** to bill from the drop-down list.
 2. Specify a **resource group** with that subscription.
 3. Specify a **region**
5. Select **Next**
6. Choose **environments to link** to the new billing policy.
7. Select one or more environments and click **Add to Policy**

Note: Only production or sandbox environments are available to add currently.

8. Review and confirm.

Optional: View the billing policy's Power Platform Account resource in the Azure Portal. Navigate to <https://portal.azure.com/> > select the subscription > resource group > select view hidden types above resource list > You'll see a Power Platform account resource with the same name as the billing policy created.



Billing policies

A billing policy is a group of one or more environments that you can configure to bill to Azure. [Learn more.](#)

Billing policies > New billing policy

- Name
- Bill to Azure
- Environments
- Review

Name
Start by giving your billing policy a name

HRDepartmentBillingPolicy

Billing policies > New billing policy

- Name
- Bill to Azure
- Environments
- Review

+ Add to policy

Add environments

Choose the environments to include in this billing policy.

Available (2) Added to policy (0)

Name	Id
HR_Department_Environment_2	5d1347
HR_Department_Environment	c4b9d3

Billing policies > New billing policy

- Name
- Bill to Azure
- Environments
- Review

Add environments

Choose the environments to include in this billing policy.

Available (0) Added to policy (2)

Name	Id
HR_Department_Environment_2	5d1347
HR_Department_Environment	c4b9d3

Billing policies > New billing policy

- Name
- Bill to Azure
- Environments
- Review

Review and create billing policy

Billing policy name

HRDepartmentBillingPolicy

Edit

Azure subscription

Microsoft Azure Sponsorship 2 (a882c41d-2bcd-46e2-8a92-727615daf9ec)

Edit

Resource group

rg_HRDepartmentApps

Edit

Region

Asia

Edit

Environments

2 environment(s) selected

Edit

Back

Create billing policy

+ New billing policy Download reports

Billing policies

A billing policy is a group of one or more environments that you can configure to bill to Azure. [Learn more.](#)

Name	Status	Type	Azure Resource ...	Created on
HRDepartmentBillingPolicy	Enabled	TenantOwned	HRDepartmentBillin...	10/24/2021

Questions?

Lab 1 and 2

Lab Description

Lab 1. Create DLP Policy in Power Platform Admin Center

Lab 2. Create DLP Policy using PowerShell

