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Em caso de dúvidas ou questões acesse nosso site (Power Platform Connect) https://microsoft.github.io/powerplatformconnect/



Governance and ALM with Power Platform

V1.8 from Oct 09, 2024

Agenda

Innovation challenges for IT teams

Establishing a low-code Center of Excellence (CoE)

Power Platform governance pillars

- Security
- Management
- Monitoring

CoE Starter Kit Overview

Next steps





Innovation challenges for IT teams

Surging digital demand

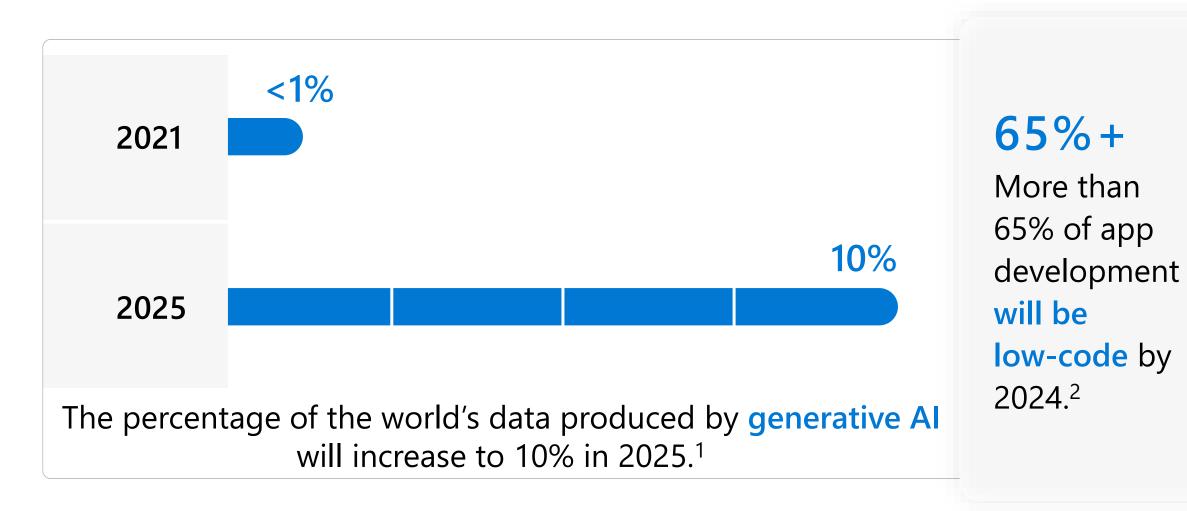




new apps need to be built by 2025

of digital work can be automated with current tech

The union of low code and AI is a game changer



^{1.} Source: Gartner® Press Release ,Gartner Identifies the Top Strategic Technology Trends for 2022, October 18, 2021. GARTNER is a registered trademark and service mark of Gartner, 2nc. and/or its affiliates in the U.S. and internationally and is used herein with permission. All rights reserved.

^{2.} Source: Gartner 2019 Magic Quadrant for Enterprise Low Code Application Platforms

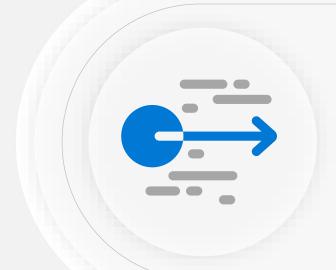
Not enough developers



developer shortfall

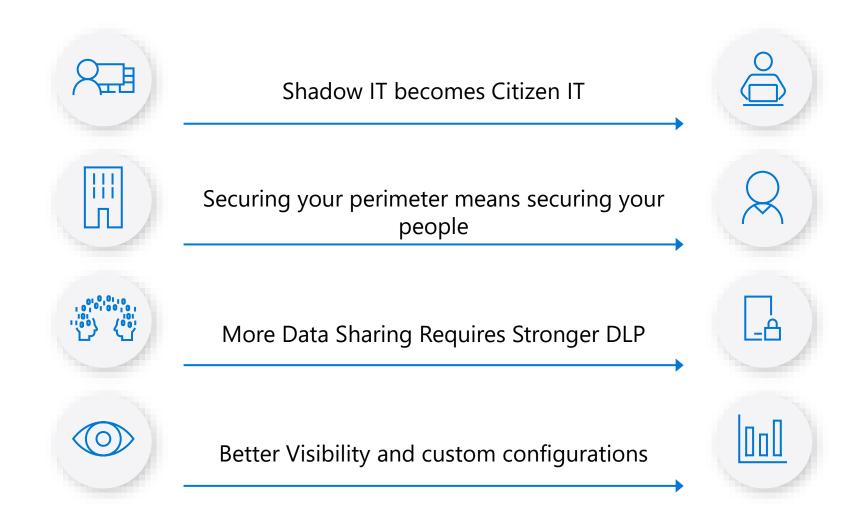


of companies struggle to hire tech talent



Accelerate developers and empower new makers

The growing number of developers creates a new norm



Do any of these challenges sound familiar to you?



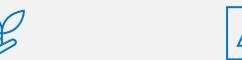
Business data security concerns regarding connectors



Security risks regarding "shadow IT"



Staff turnover challenges regarding app or flow ownership



Environment health regarding trial setup



Compliancy issues regarding GDPR



Information risk management



Maintenance challenges regarding app and flow distribution



ALM support regarding apps being created/deployed



Governance is key to an enterprise scale low-code

How to apply governance controls without hinder innovation?

Power Platform





development

Power Automate
Workflow
automation



agents



Every Developer (Low Code)

Secure













Data Encryption

Data n Loss Prevention User Security Data Privacy Government Hosting

Compliance Standards

Manage Monitor



Unified Administration



Platform Maintenance



Activity Logging/Signals



Center of Excellence



Adoption Best Practices IT Admins

Ops personnel

Fusion teams

Power platform empowers IT admins with governance capabilities



Makes governance a mandate



Helps Develop & Implement a Strategy

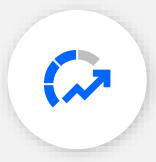


Allows flexibility when needed

Empowering admins with full visibility and the tools needed to balance business productivity with governance

Power Platform governance pillars

Security, management and administration built with IT Leaders in mind



Secure

Data security, data integrity, compliance standards, environment differentiation, highly secure environments for government



Manage

Environment management and administration, manage Apps, Flows, Portals; Database management and integration.



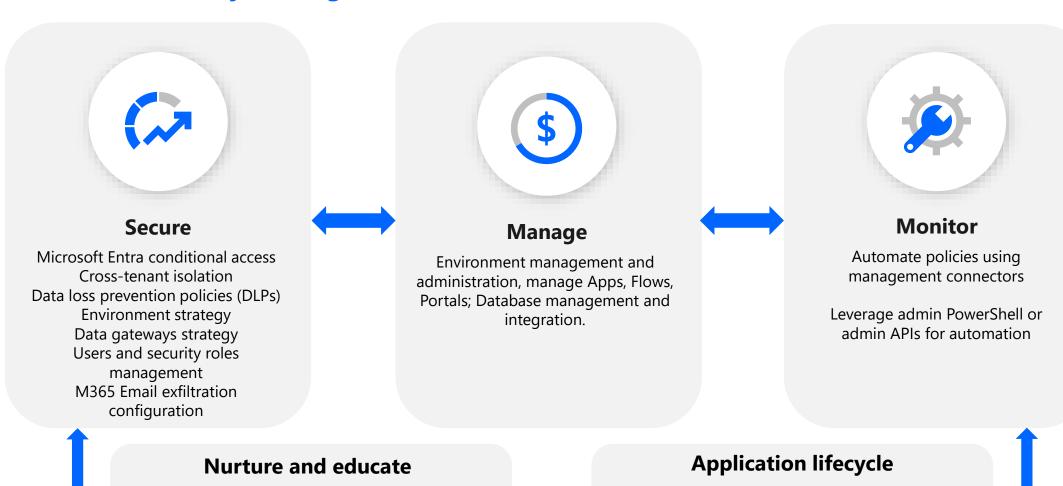
Monitor

Activity logging and oversight of standards, admin analytics, proactive monitoring, scaling growth through CoE, adoption best practices

Power Platform provides a low-code approach to rapidly build apps, flows and bots for any device, while seamlessly allowing for security, management and monitoring with ease.

Power Platform governance pillars (applied)

Security, management and administration built with IT Leaders in mind



- Establish a CoE
- Educate new makers
- Foster best practices

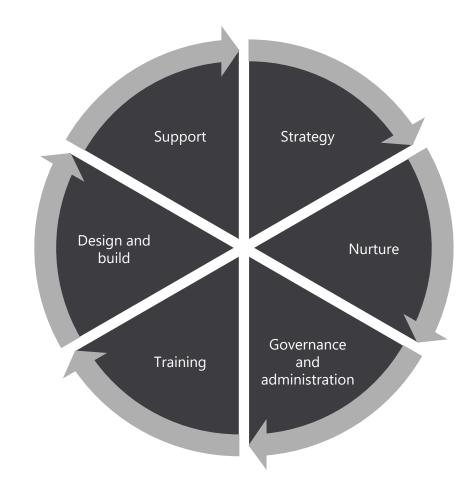
- Solution management
- ALM best practices
- ALM automation (DevOps)



Establishing a low-code Center of Excelence (CoE)

What is a Center of Excellence?

- A team, shared facility or entity that provides leadership, best practices, research, support and/or training for a focus area
- It is a coordinating function that often sits between IT and business groups.
- Helps form a strategy for adopting & supporting low-code.
- Establishes the **guard-rails**, **best practices** & **standard** to be followed.
- Designed to drive innovation and improvement with longevity.
- Ensures consistency & defines standards to be followed.



The benefits of a Center of Excellence

Create value and foster innovation faster through:



Community

Promote
Awareness, self
service, use cases,
& business
outcomes



Governance

Environments, Master Data, Security, DLP, Architecture



Self Service

Training, resources, best practices, reusable components



Empowerment

On Demand UX, Dev, Support, Solution Architecture Establishing a Center of Excellence

 A key principle is to clarify why you're setting up a CoE, what it aims to accomplish and the key business outcomes you hope to achieve.

 Designed to drive innovation and improvement, as a central function it can break down **geographic and** organisational silos – a powerful way for organisations to align around business goals rather than individual department metrics.



Center of Excellence members



Power Apps and flow Makers

Anyone, creating an app or a flow for personal productivity, increasing department efficiency or creating apps and flows that are shared across organization and/or externals.



Application Lifecycle Management & DevOps users

Employees taking care of those apps and flows seen as business critical, setting up and supporting environments for development and testing purposes. Offering surrounding platform services for agile software development across organization



IT-Department / Data Protection Officer

Members of all departments related to a cloud platform service to operate, maintain and secure all platform related services + surrounding areas.

Responsible for operation wide data security and data loss prevention



Support & Training Engineers

Help maintain app support
across organization for
business critical (line-ofbusiness) apps.
Support nurturing a low-code
platform by ensuring
readiness and community
wide shared skills inside an
organization

Center of Excellence roles and responsibilities



Low Code Strategy

Align Power Platform strategy with Digital Transformation strategy Drive innovation Key Decision makers Business Value Adoption and Change management

Empower new ways of working



Power Platform Admin team

Environment Strategy
DLP Policies
Data integration / migration
guidelines
Guardrails
License management



Power Platform Nurture team

App-in-a-day / Hackathons
Solution envisioning
Community of Practice
Evangelize Platform



Power Platform Re-Usable Assets & Automation ...

Automation / Azure
DevOps
Application & Architecture
review
Library of common utilities,
patterns and templates
App Catalog



User support team

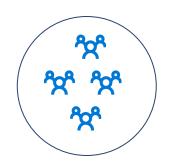
Help Desk guidance / FAQ

Ticketing process

Support Process &

Resources

Center of Excellence delivery models

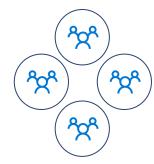


Centralized

A central team that can pick up development of apps based on organizational properties

CoE responsibilities

- Governance
- DevOps
- Change Management
- Support

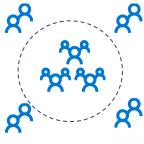


Decentralized

Multiple teams deliver apps consistently within organization guidelines

CoE responsibilities

- Governance
- ? DevOps
- Change Management
- Support

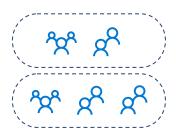


Matrix

Centralized team of specialists and low-code / business user teams

CoE responsibilities

- Governance
- DevOps
- Change Management
- Support



BizDevOps

Business teams delivers end-to-end solutions

CoE responsibilities

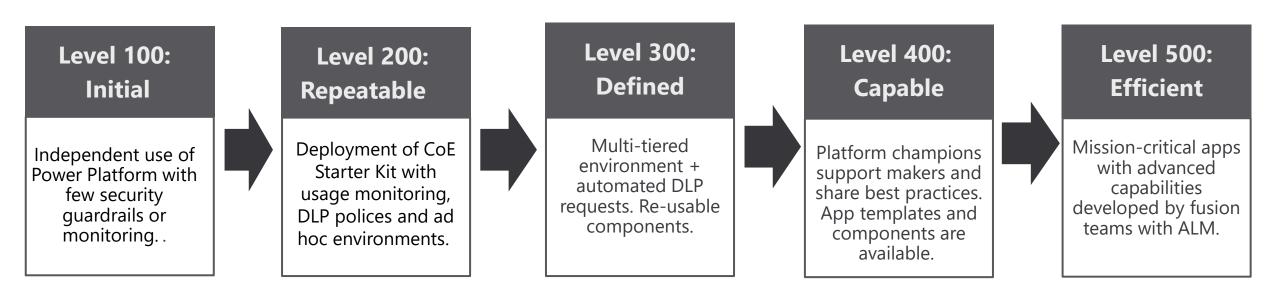
- Governance
- DevOps
- Change Management
- Support 3

Align your CoE to the Power Platform adoption maturity model

WHAT: The model identifies consistent themes, patterns, practices, and behaviors that underpin the progress of successful organizations as they implement Power Platform.

WHY: An effective CoE doesn't happen overnight. The model offers a practical roadmap for incremental growth and proven results.

HOW: Explore maturity model goals and opportunities

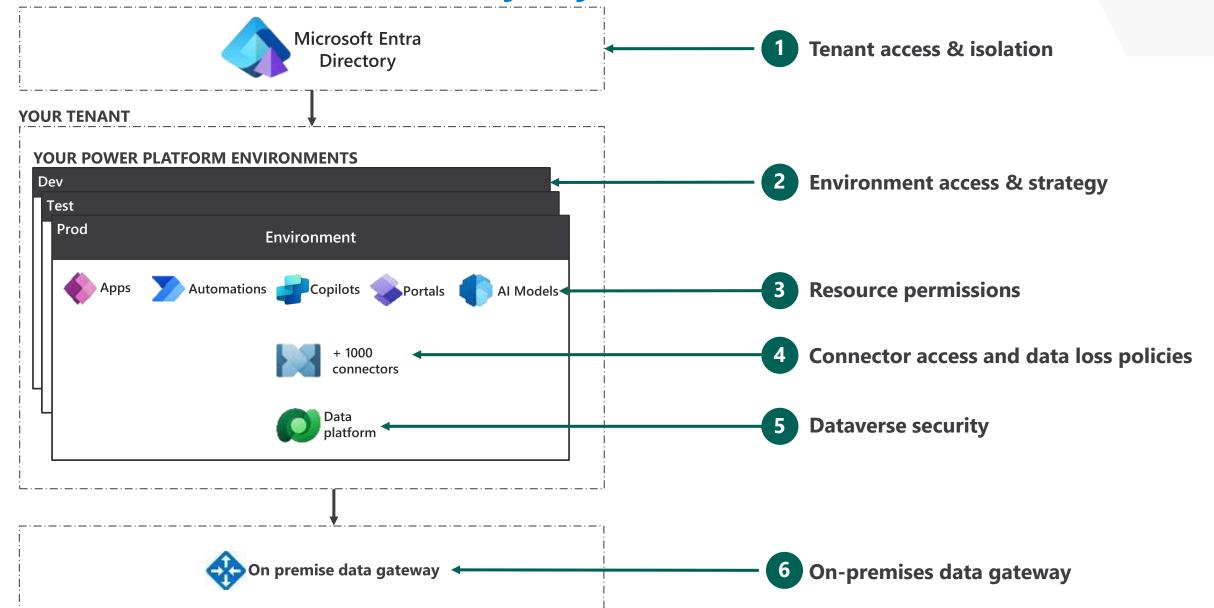




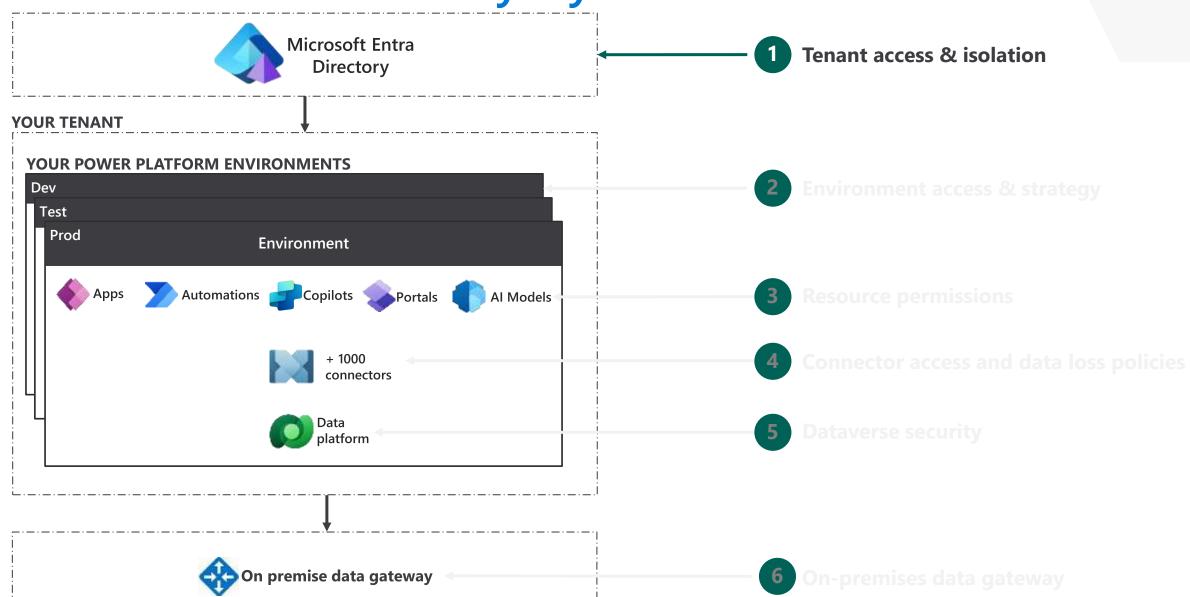
Governance pillar Secure



Power Platform security layers



Power Platform security layers



Tenant level service admin roles

M365 admin roles that can perform administrative tasks on Power Platform.



Global Administrator

Full administration to all services in tenant including Power Platform e.g. Environment, User, License and capacity, Security, Analytics, Support, Data Gateways, Data Loss Policies, Data integration.



Power Platform Administrator Dynamics 365 Administrator*

Full administration access for Power Platform e.g. Environment, User, Security, Analytics, Support, Data Gateways, Data Loss Policies, Data integration. License management needs M365 Global admin privilege.



Delegated Admin

Full administration to all services in tenant
Used for partners to provide support to customers

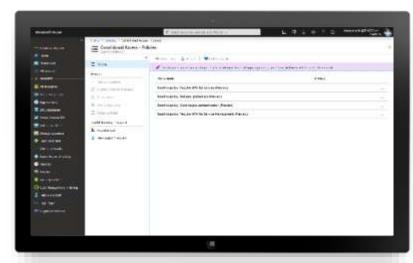
Full support for Power Platform

Learn more <u>here</u>.

Identity management with Microsoft Entra

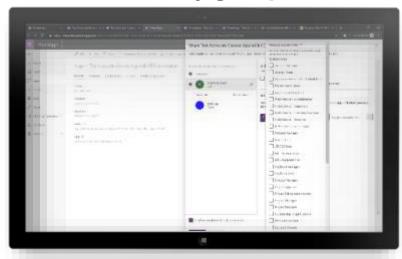
Optional features that can ease user and license management

Conditional service access



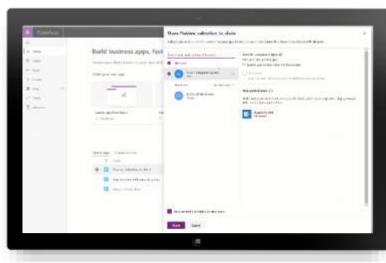
Session and conditional access policies to manage timeout and access requirements. Requires
Microsoft Entra Premium

Security groups



Use security groups to manage/share apps and data access and assign licenses

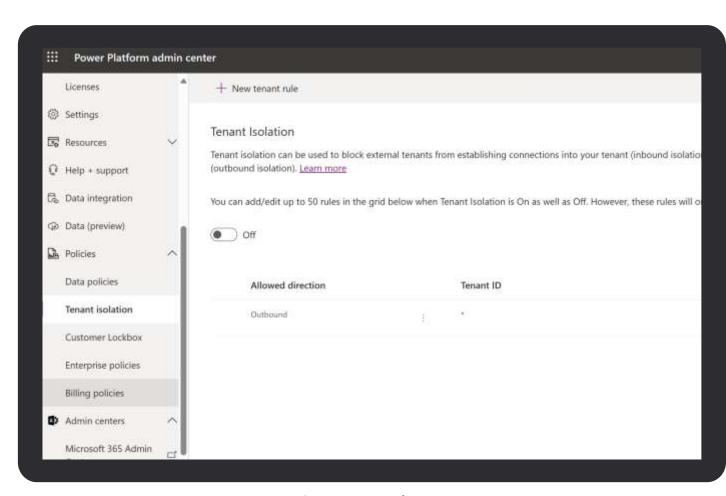
B2B collaboration



Share apps with external users with Microsoft Entra B2B collaboration.

Tenant isolation

Can be used to block external tenants from establishing connections into your tenant (inbound isolation) as well as block your tenant from establishing connections to external tenants (outbound isolation).



Learn more <u>here</u>.

Email exfiltration blocking for O365 Outlook Connector

Power Platform has the capability to insert specific SMTP headers in email messages sent through Power Automate and Power Apps and using M365 Exchange/Outlook connectors. You can use these SMTP headers to set up appropriate exfiltration rules



SMTP header "x-ms-mail-application" to identify – *Microsoft Power Automate* or *Microsoft Power Apps* – as the client



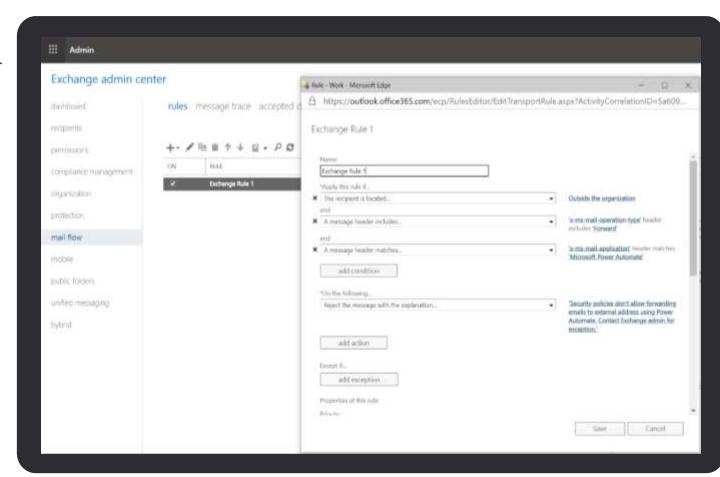
SMTP header "x-ms-mail-operation-type" to identify – *Forward*, *Reply* or *Send* – as message operation.



Exchange *mail flow rules* can be set up to filter appropriate message.

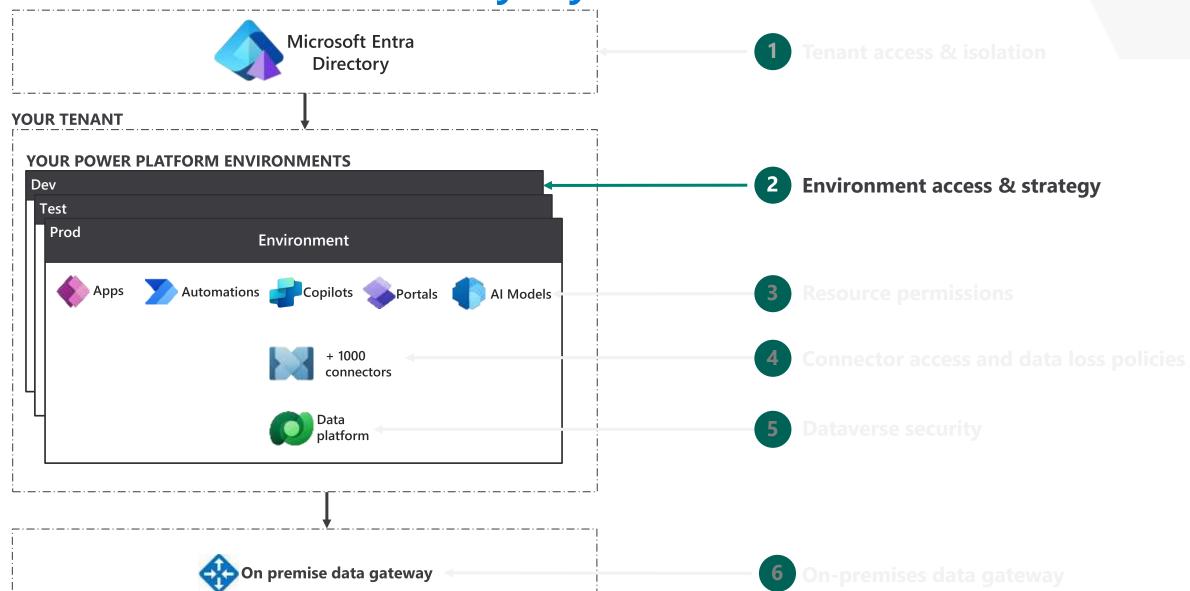


Individual apps or flows can be exempted by using *User-Agent ID* in the SMTP header



Learn more <u>here</u>.

Power Platform security layers



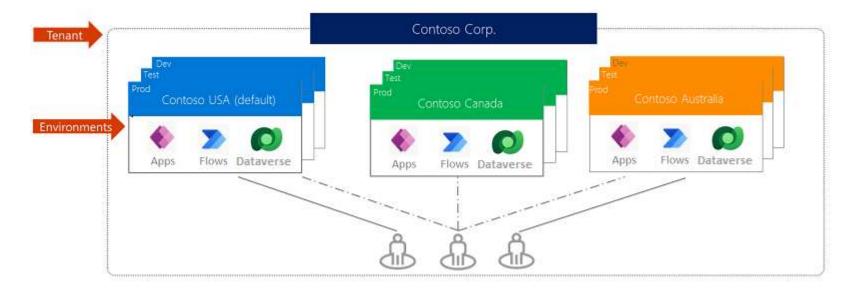
Environment overview

A space to **store**, **manage**, and **share** your organization's business data, apps, chatbots, and flows.

It also serves as a **container** to separate apps that might have **different roles**, **security** requirements, or **target** audiences.

How you choose to use environments depends on **your organization** and the apps you're trying to build.

You can also **move resources** between environments through **solutions**.



Learn more <u>here</u>.

Environment strategy

To follow **ALM principles**, are required dedicated environments for at least **development**, **testing** and **production**

Some organizations might also need **more environments**, for example for UAT and SIT testing Consider separate development environments to **help isolate changes** from one work effort being checked in before it's complete

Power Platform updates are applied by regions, so additional consideration must be taken in global organizations

The level of **complexity**, how **critical** the app is, and **users impacted** by the application are all important measures of how to **provision environments** to support all the scenarios.

The environment strategy will shape and direct the DLP strategy

GB of data capacity, so manage custom environments wisely.

Learn more <u>here</u>.

Environment types

Туре	Creator	Description	
Default	Auto-created	A single default environment is automatically created for each tenant and shared by all users (who are Environment Makers).	
Production	Licensed user, subject to tenant level setting	This is intended to be used for permanent work in an organization. Production environments are what you should use for any environments on which you depend.	
Sandbox	Licensed user, subject to tenant level setting	Sandbox environments are used for development and testing, separate from production.	
Trial	Licensed user, subject to tenant level setting	Trial environments are intended to support short-term testing needs and are automatically cleaned up after a short period of time.	
Developer	Licensed user	Developer environments are created by users who have the free <u>Power Platform</u> <u>Developer Plan</u> license. They're special environments intended only for use by the owner	
Dataverse for Teams	Auto-created	Dataverse for Teams environments are automatically created for a Team in Teams when you create an app in Teams using the Power Apps app for the first time or install a Power Apps app from the app catalog.	
Support	Microsoft support engineer	It is an environment created in your tenant by Microsoft under your direct instructions, for purposes of preventing, detecting, or repairing problems affecting the operation of your online service.	

Environment creation requirements

You can create environments in the Power Platform admin center or using PowerShell

Environment can be created either with or without Dataverse database

To create an environment, all the following must be **true:**

- The user has a license that allows environment creation
- Environment creation is allowed in tenant level (if user is not Global, Power Platform or Dynamics Admin)
- For production and sandbox environments, the tenant must have at least 1GB of database storage capacity available
- For trial (subscription-based) environments, each offer-based trial (also known as "admin trial") subscription entitles the tenant to three subscription-based trial environments. <u>Only tenant-level admins are able to provision trial (subscription-based) environments.</u>
- For trial (standard) environments, the user needs a license providing per-user entitlement for trial environments (refer to the table above). This applies to tenant-level admins, as well.

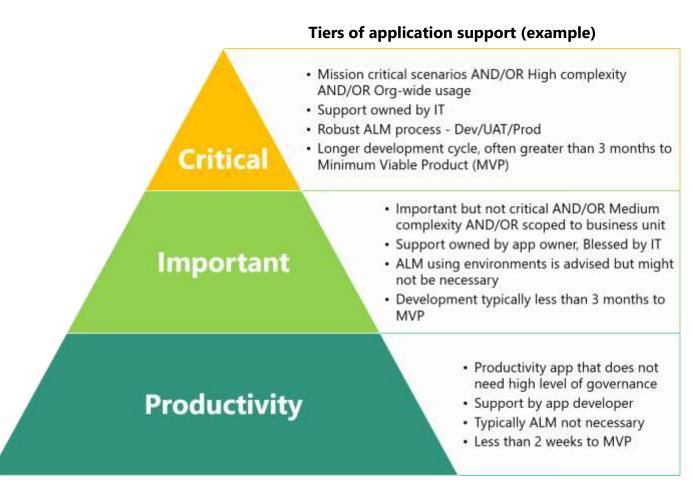
License	Trial	Production
Microsoft 365 Plans	No	No
Dynamics 365 Teams Plans	No	No
Power Platform Developer Plan	No	No
Dynamics 365 trial	Yes (one)	No
Dynamics 365 Plans	Yes (one)	Yes
Power Apps plan	Yes (one)	Yes
Power Apps trial	Yes (one)	Yes
Power Virtual Agents trial plan	Yes	No
Power Virtual Agents plan	No	Yes

NOTE! Global and Power Platform Administrators can create environments without any license

Environment strategy

Factors that influence environment strategy:

- Defined tiers of application support
- Capacity
- Admin involvement



Learn more here.

Environment strategy

Scenarios

Everyone is a maker. Communicate with everyone that **Default** isn't for development of critical apps

Only one user has access. **Developer** environments are completely locked for any other user except the user who subscribed to the community plan. Applications can be moved out of the environment if needed.

Approved users have access. **Shared** environments for user and team productivity scenarios, with an approved maker list.

Dedicated environments for critical projects and workloads. Developers have environment maker access in the development environment, but only user access in the test and production environments. End users only have end user access to the production solution so no one can modify the production applications.

Shared test and production environments for important but medium complex apps. Individual projects and business units have their own development environment to protect data, but solutions are deployed to shared test and production environments. Developers are end users in the test environment, and end users only have basic user access to solutions and data in the production environment.

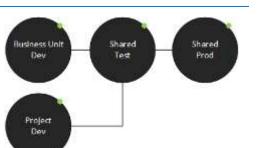
Environments







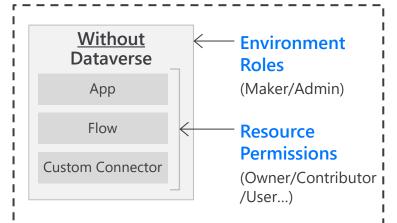




Learn more here.

Environment security

There are two types of environment security



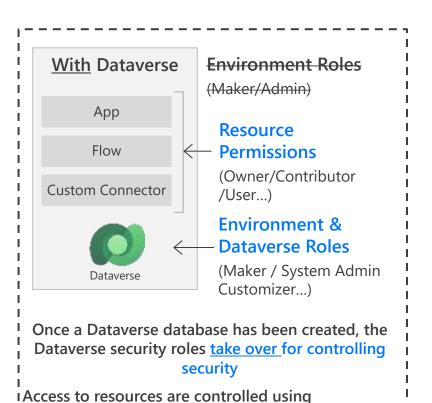
Access to resources are controlled using

- Environment roles (Maker/Admin)
- Resource permissions for apps/flows/custom connectors/etc.

Environment Admin can perform all administrative actions like

- View/manage resources
- Add/remove a user or group from roles
 - Create DLP policies
- Provision Dataverse database to envs

Environment Maker can create resources within an environment and distribute apps and flows they build using share functionality



Resource permissions for apps/flows/custom

Learn more about Dataverse security roles from here

Dataverse security roles

connectors/etc.

Environment security

Key out-of-box security roles you need to know



- Complete ability to customize and administer the environment
- Full read-write access to data in the database
- The role cannot be modified
- Care should be taken in assigning this to the right people



System Customizer

- Full permission to customize the environment
- Data access is focused only on data owned by the user
- Role can be modified but it is not recommended to modify



- Create new resources in the environment including apps, connections, gateways and flows
- There is no default privileges to data included
- Role can be modified but it is not recommended to modify

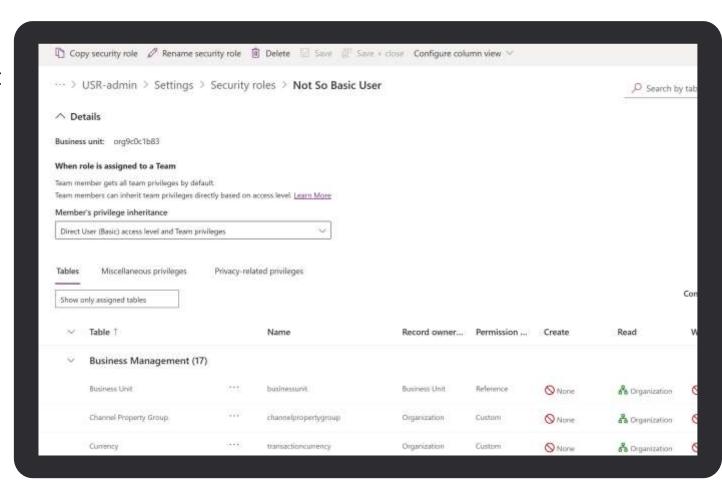


- Basic user role, with ability to run apps and perform common tasks but no ability to customize the system
- The data access is focused on Read access to most Common Data Model core entities with full access to records owned by the user (i.e. 'self' privileges)
- Good role to copy to make a custom security role for users

Environment security

Customizing Security Roles

If your app uses a custom table, its privileges must be explicitly granted in a security role before your app can be used. You can either add these privileges in an existing security role or create a custom security role.

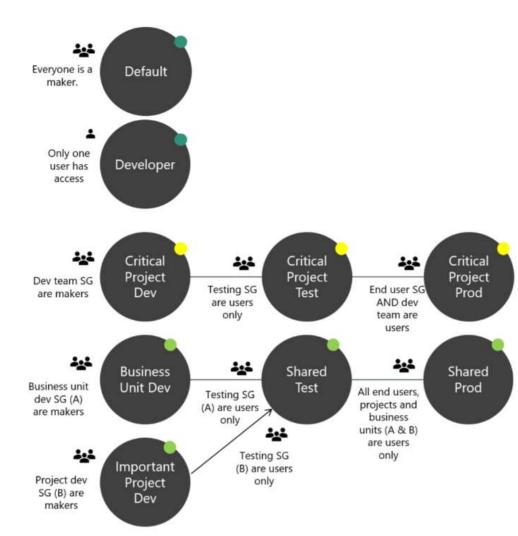


Learn more <u>here</u>.

Environment security

Strategy for establishing secure environments

- ✓ Assign your admins the Power Platform service admin role.
- ✓ Restrict the creation of net-new trial and production environments to admins.
- Treat the default environment as a '<u>Personal</u> <u>productivity</u>' environment.
- Establish a process for requesting access to or creation of environments.
 - Dev/Test/Production environments for specific business groups/ applications.
 - Individual-use environments for POCs and trainings.
- Establish Tenant and Environment level Data Loss
 Prevention (DLP) policies.



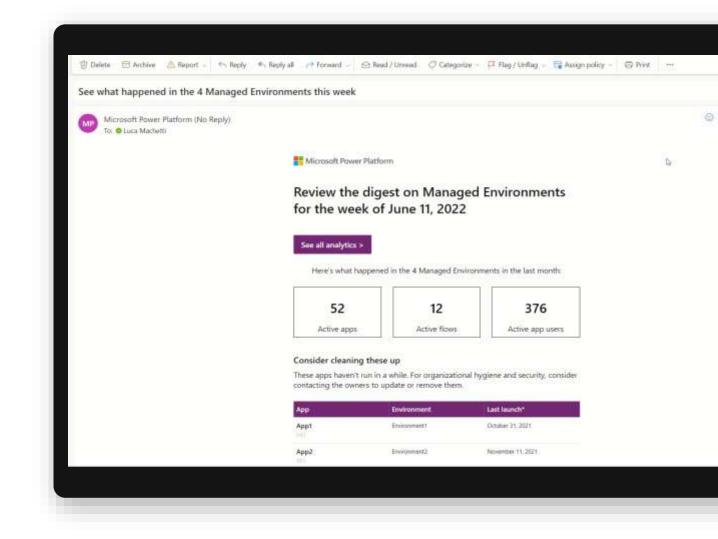
Managed environments

Managed Environments is a suite of capabilities that allows admins to **manage Power Platform at scale** with more control, less effort, and more insights..

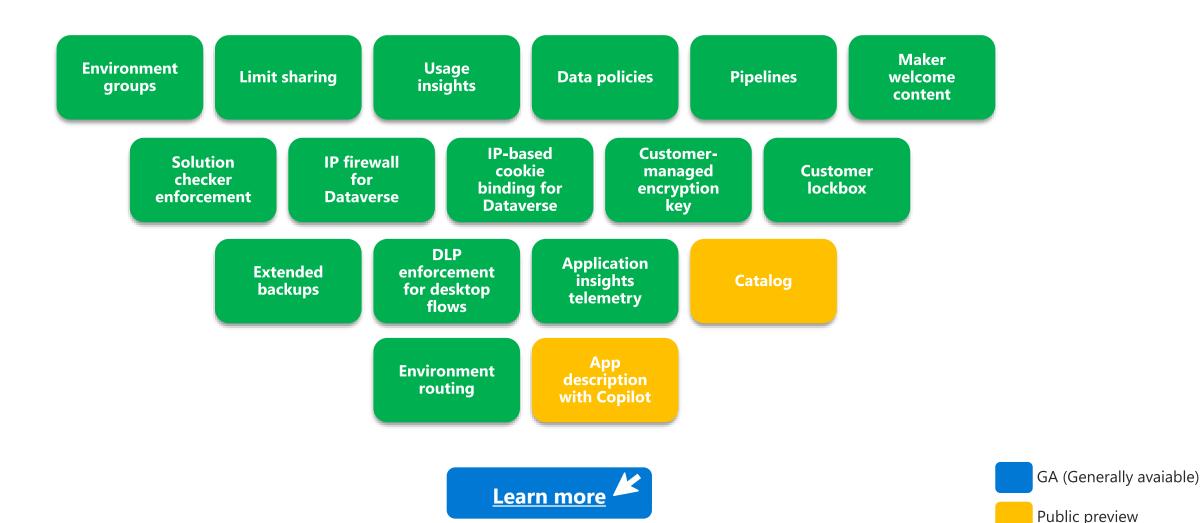
More visibility into the apps and automations in your organization

More control over which apps are deployed and who builds them

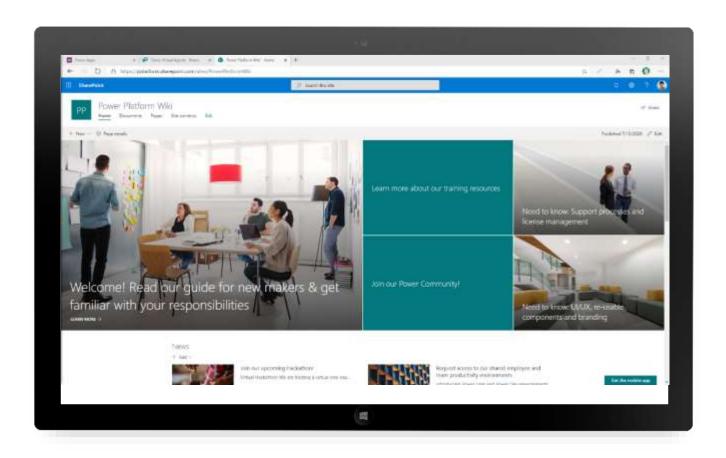
Less effort to manage and govern your entire application estate



Managed environments features



Clearly communicate your strategy to your makers





Purpose of **Default**, **shared** team and employee productivity environments



Purpose of **Trial** and **Developer** environments

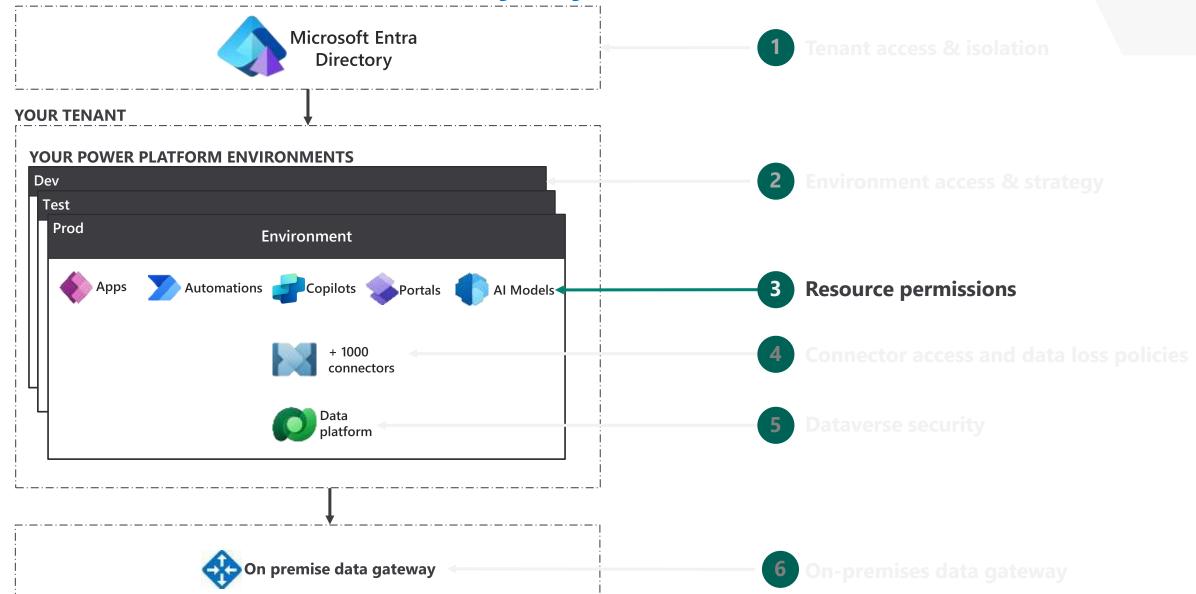


Process of requesting **custom** environments



Responsibilities of a maker: keep the tenant tidy, share wisely and protect organization data

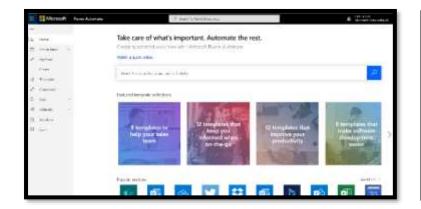
Power Platform security layers



Resource level access

Resources can be shared in the following modes by the makers

- Access to co-own components edit, share, use
- Flow co-ownership sharing also shares connections in the flow implicitly with owners
- Access to run components use only





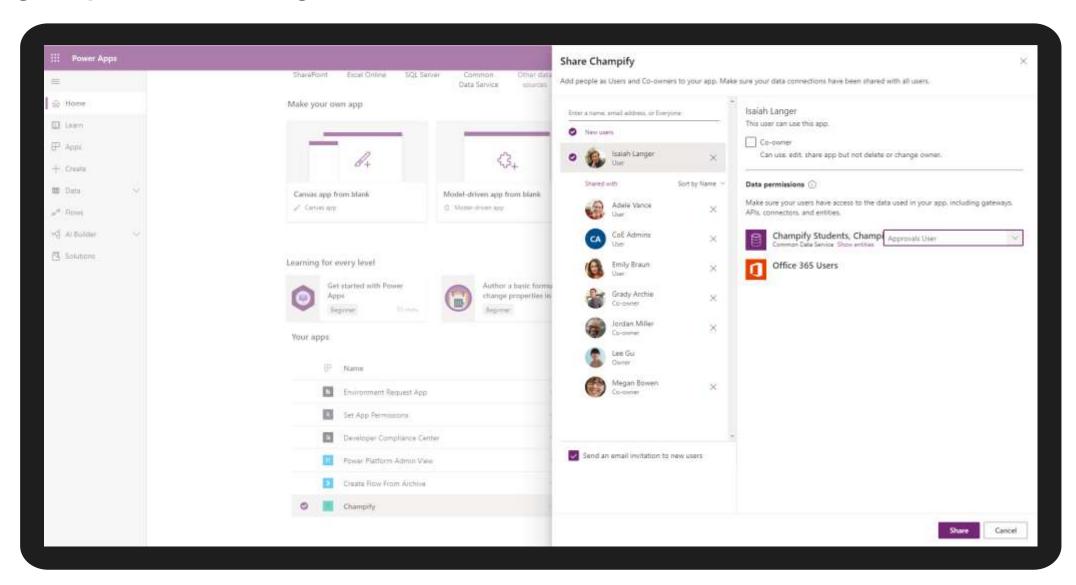


Power Automate

Power Apps

Copilot Studio

Sharing Component and Granting Data Access



Sharing Component and Granting Data Access

Important considerations

Canvas Apps

• If your app contains **premium components**, such as a map or address input components, users must have a Power Apps license to use the app. To request licenses for the users of your app, select Request licenses to submit a license request to your admin.



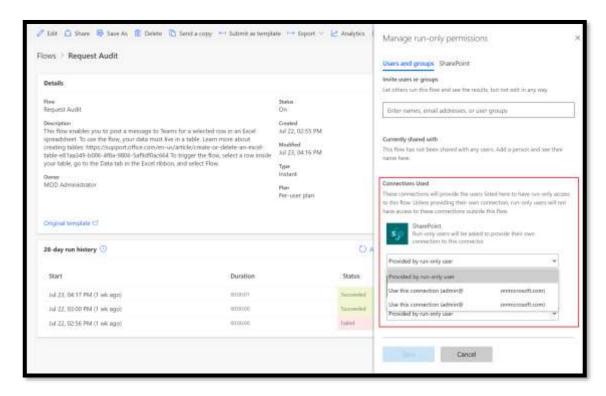
- For a shared app to function as you expect, you must also **manage permissions** for the **data source or sources on which the app is based**, such as **Microsoft Dataverse** or **Excel**. You might also need to **share other resources on which the app depends**, such as **flows**, **gateways**, or **connections**.
- Some connections (such as SQL Server with SQL or Windows authentication) are implicitly shared (fixed) with the app
 when you share the app with other users. Other connections require users to create their own connections and
 explictly grant security privileges (such as security roles for the Dataverse, OneDrive for Business, SQL Server with
 Microsoft Entra authentication

Sharing Component and Granting Data Access

Important considerations

Cloud flows

- Automated and scheduled flows can be shared adding another users, groups and a Sharepoint list as an owners (full access).
- Instant flows can be shared with run-only permissions.
- Cloud flows can be owned or shared with Microsoft Entra ID service principal application users to provide flexibility and stability in how organizations administer Power Automate flows
- Another way of sharing a cloud flow is **sending a copy** of it for another user.



Sharing Component and Granting Data Access

Recommended documentation

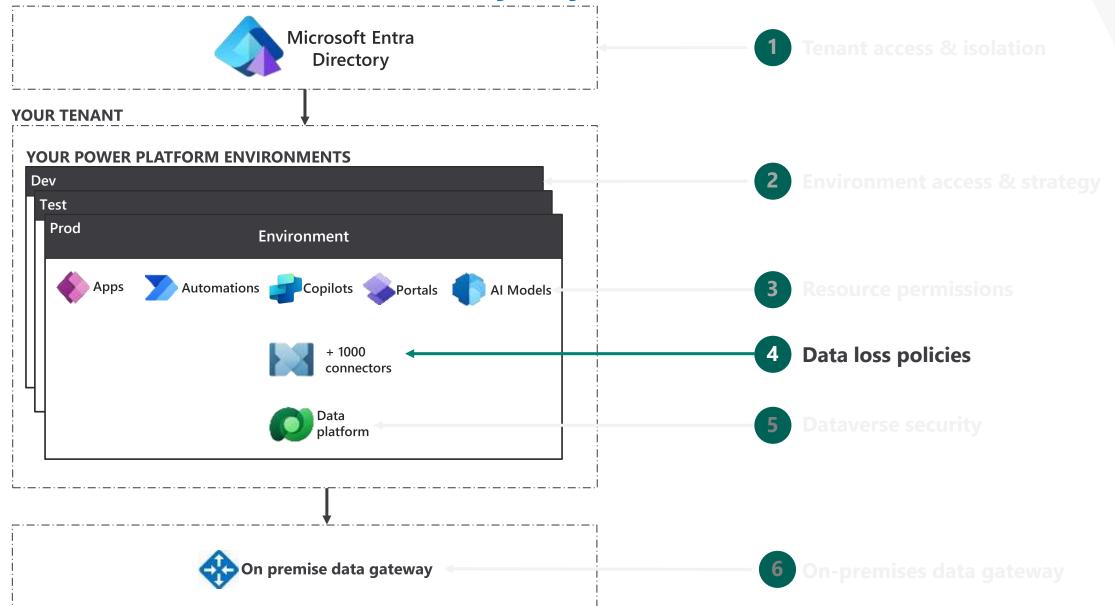
Canvas Apps

Overview of connectors for canvas apps
Share a canvas app with your organization
Share resources used by canvas apps

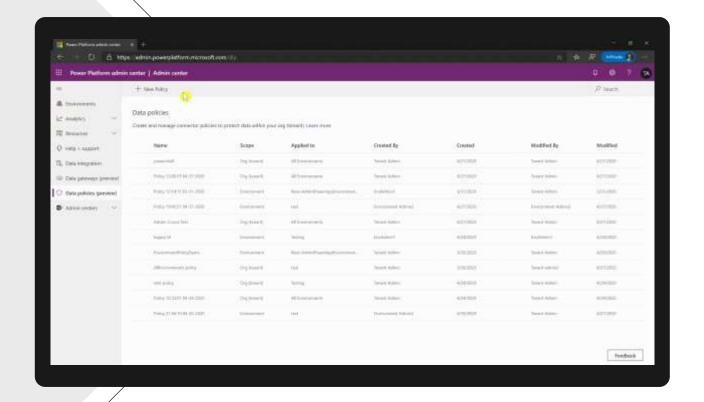
Power Automate

Share a cloud flow
Support for service principal owned flows

Power Platform security layers



Power Platform DLP policies allow you to control data flows across data connectors when used within Power Apps and Power Automate.





Connector Classification

Connectors can be classified across 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 Nonbusiness 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 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



Tenant and Environment Policies

Power Platform DLP allows admins to create two types of policies



Tenant level DLP policies

- Supported only for Power Platform Administrator,
 D365 Administrator or Global administrator roles
- Can be applied to one, more than one or all environments at a time
- Can be edited and viewed by any tenant admin
- Connector settings are visible to all relevant environment admins but are not editable by them
- Can be used to manage custom connector patterns



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 connector patterns

DLP Policy Scope

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

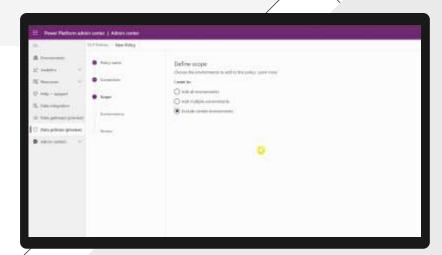
Only selected environments

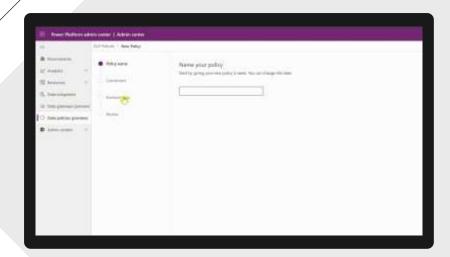
Tenant admins can choose to include only specific environments to apply the policy

Environment policies have one setting

One environment only

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





DLP Policy Enforcement



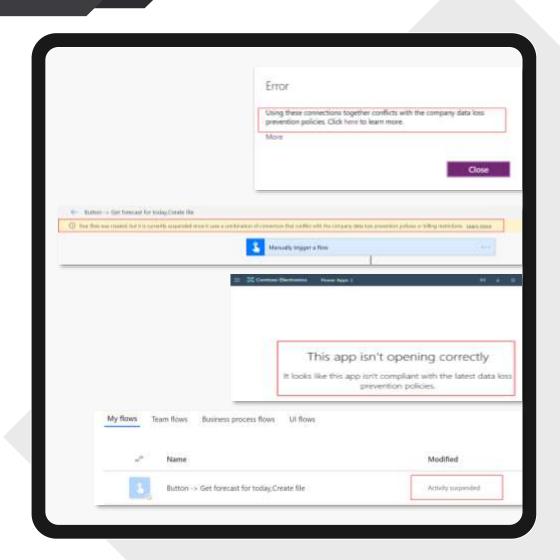
Design-time

- 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 below together or are blocked using DLP policies Flow will be saved but marked as 'Suspended' and will not execute unless DLP violation is resolved.



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.

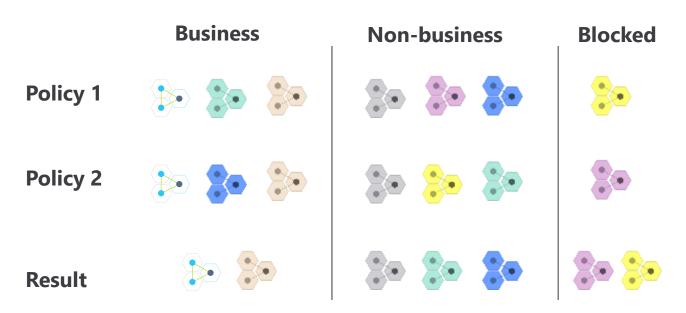


4

Multiple Policy Impact on Environments

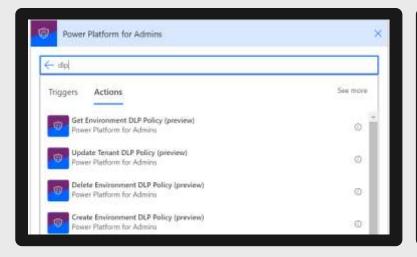
If multiple tenant or environment level policies are applied simultaneously on an environment, then the most restrictive rules accrue

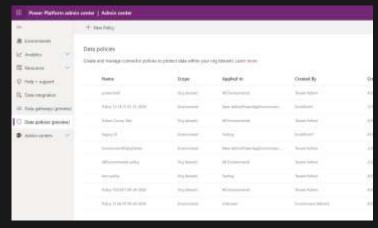
Multiple DLP policies applied to the same environment grouping connectors across Business/Non-business/Blocked

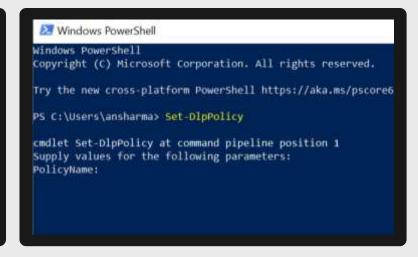


All blocked connectors map to blocked For predictable outcomes use minimal number of DLP policies per environment

DLP Management Interfaces





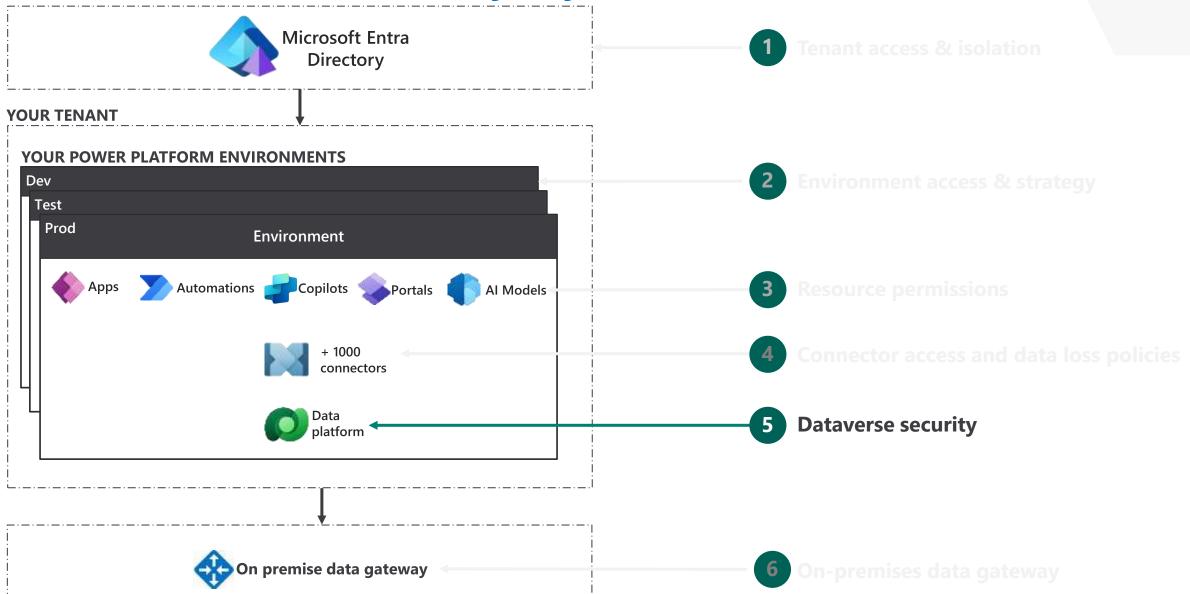


Power Platform for Admins Connector

Power Platform Admin Center

Power Apps Powershell

Power Platform security layers



Security Roles and Privileges

Roles

Define how different users access different types of records

Contain a set of privileges

Users can be assigned to multiple security roles

Security role privileges are cumulative

Privileges

Record-level privileges.

For each entity, permissions can be defined for Read, Create, Delete, Write, Assign, Share, Append and Append To.

Action/Task-based privileges.

Permissions can also be defined for non-entity related actions, e.g. publish articles.

Different level of accesses:

Global

Deep

Local

Basic

Record-level security

Table

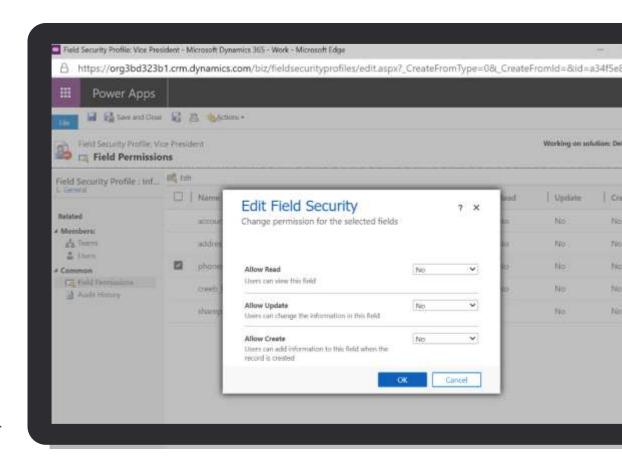
Privilege	Description
Create	Required to make a new record. Which records can be created depends on the access level of the permission defined in your security role.
Read	Required to open a record to view the contents. Which records can be read depends on the access level of the permission defined in your security role.
Write	Required to make changes to a record. Which records can be changed depends on the access level defined in your security role.
Delete	Required to permanently remove a record. Which records can be deleted depends on the access level of the permission defined in your security role.
Append	Required to associate a record with the current record. For example, if a user has Append rights on an opportunity, the user can add a note to an opportunity. Which records can be appended depends on the access level of the permission defined in your security role.
Append To	Required to associate the current record with another record e.g., a note can be attached to an opportunity if the user has Append To rights on the note. Which records can be appended to depends on the access level of the permission defined in your security role.
Assign	Required to give ownership of a record to another user. Which records can be assigned depends on the access level of the permission defined in your security role.
Share	Required to give access to a record to another user while keeping your own access. Which records can be shared depends on the access level of the permission defined in your security role.

Access Level

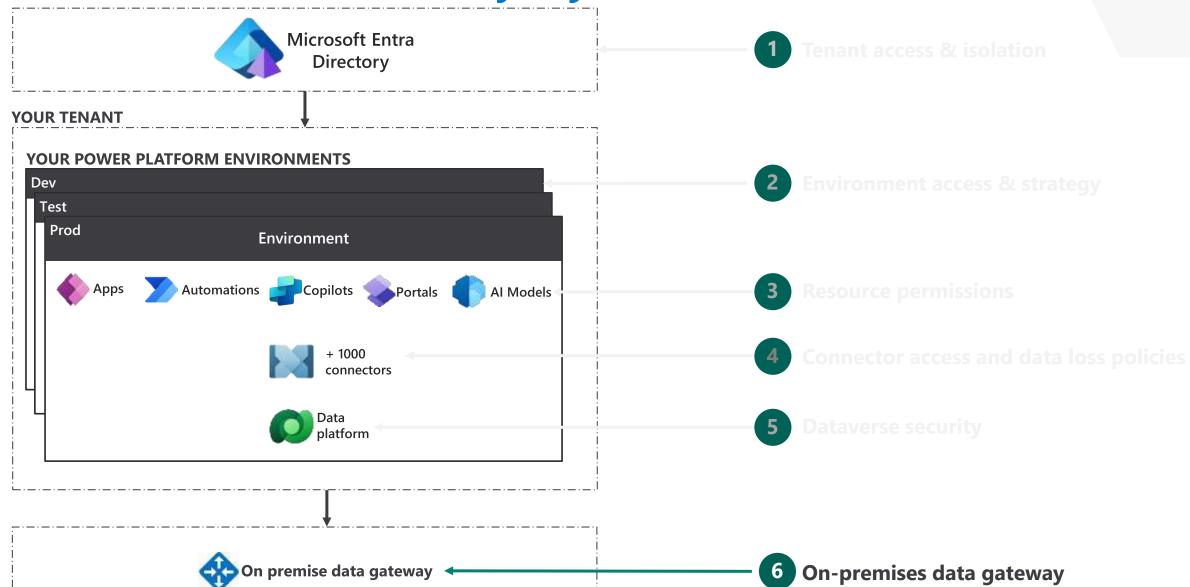
Access	Description
•	Global . This access level gives a user access to all records in the organization, regardless of the business unit hierarchical level that the environment or the user belongs to. Users who have Global access automatically have Deep, Local, and Basic access.
•	The application refers to this access level as Organization . Deep . This access level gives a user access to records in the user's business unit and all business units subordinate to the user's business unit. Users who have Deep access automatically have Local and Basic access, also.
<u>-</u>	The application refers to this access level as Parent: Child Business Units . Local . This access level gives a user access to records in the user's business unit.
	Users who have Local access automatically have Basic access, also.
<u> </u>	The application refers to this access level as Business Unit . Basic . This access level gives a user access to records that the user owns, objects that are shared with the user, and objects that are shared with a team that the user is a member of.
	This is the typical level of access for sales and service representatives.
0	The application refers to this access level as User . None . No access is allowed.

Field level security

- Control access to sensitive data
- Can be used in:
 - Client applications Web, mobile, Microsoft Dynamics for Outlook
 - Web service calls plugins, workflow, custom code
 - Reporting (via Filtered views)
- Enforce by security profile for:
 - Users and Teams
- Permission Scope:
 - Read
 - Create
 - Update
- Exceptions (do not support FLS)
 - Identifiers ownerld, contactld, accountld, etc
 - Security principal fields createdBy, modifiedBy, Owning Team/User
 - Timestamp
 - Codes state, status



Power Platform security layers





On-premise Gateway - Key Facts



Allows Power Apps and Power Automate to reach on-premises resources for hybrid integration scenarios.



Leverages Azure Service Bus relay technology to securely allow access to on-premises resources.



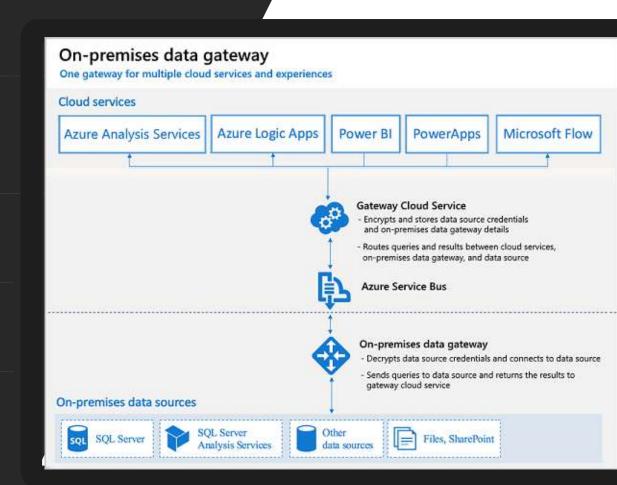
The gateway service must run on a local server in your on-premises location



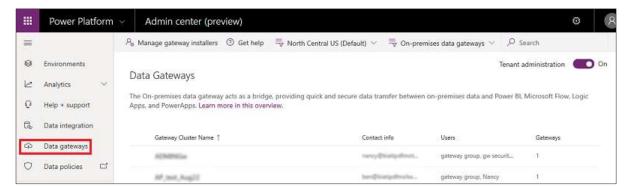
Setting up a data source on the gateway requires credentials that are encrypted securely. All access to data uses these creds



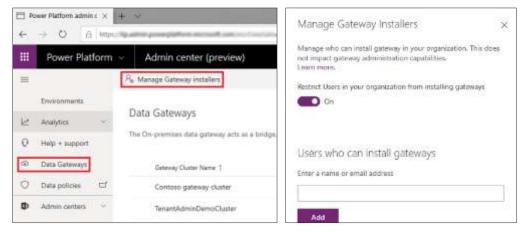
The gateway service creates an outbound connection to Azure Service Bus on ports: TCP 443(default), 5671, 5672, 9350 through 9354.



6 Capabilities



Manage gateways entirely in the Power Platform admin center. Learn more here.



Can use + Share Shared with Gateway Cluster Name T Can use the gateway to create apps and flows, and o Anna Eason Can manage gateway users, configuration, and assofresh office group 图 品 Contoso gateway cluster Data source type ① gw security group Nancy Bernard File System Apache Impala Informix MySQL Oracle Database ✓ PostgreSQL ✓ SharePoint SQL Server Teradata HTTP with Azure AD Share Cancel

Manage users

Enter a name or email address

Share this On-premises data gateway with others in your organization

Can use

Can use the gateway to create apps and flows.

Manage users in 3 different categories (admins, can use, and can use + share).

Learn more here.

Manage who can install the on-premises data gateway in your enterprise. Learn more <u>here</u>.

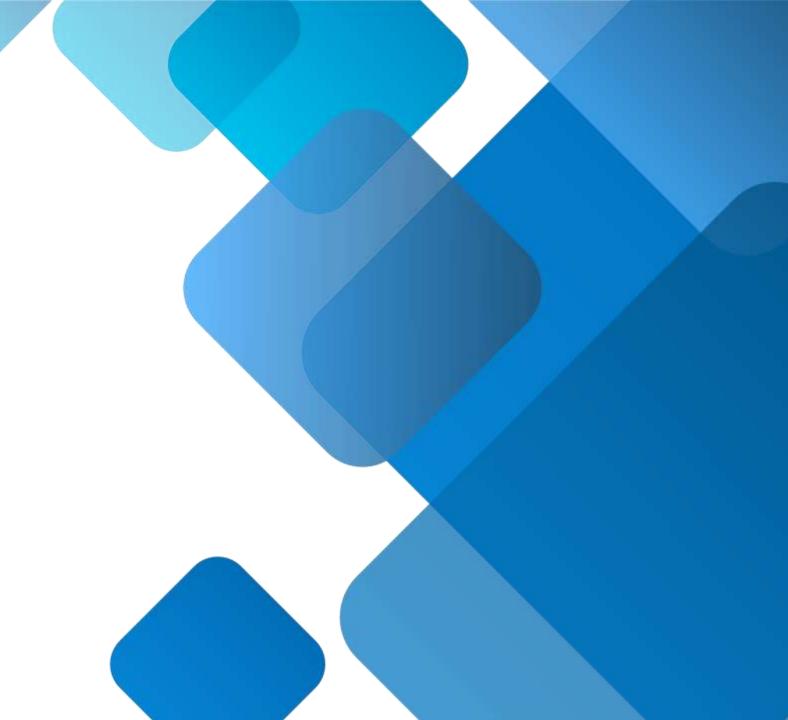
B Open gateways of Manage users (2) Get help

The On-premises data gateway acts as a bridge, providing quick and secure

Data Gateways



Governance pillar Monitor



Monitor and Manage the Power Platform



Set up and view activity logs in Microsoft Purview Logs



Gain Insights into capacity and storage consumption in adoption in Power Platform Admin Center



View out-of-the-box tenant and environment level Analytics for usage and adoption in Power Platform Admin Center and Power Apps / Automate portals



Monitor platform services and planned & unplanned platform changes/incidents

Activity logs in Microsoft Purview





Access Audit Logs

PowerApps, Power Automate, Dataverse audit records are available at

https://compliance.microsoft.com/aud tlogsearch



ACTIVITY LOGGING

Available with Office E3 or greater license and integrated with Office Security and Compliance center.



Must be <u>enabled</u> at the organization/tenant level.

Office provides API's to query this data, which is currently used by many SIEM vendors to use the Activity Logging data for reporting.

Monitor Activity Parameters for Power Apps & Automate





Created flow

Edited flow

Deleted flow

Edited permissions

Deleted permissions

Started a paid trial

Renewed a paid trial



Power Apps

Created app

Edited/save app (draft)

Published app

Deleted app

Restored an app from app version

Launched app

Marking app as featured

Marking app as hero

Edited app permissions

Deleted app permissions

Monitor Critical Activity Parameters of the Dataverse





Admin Activity Logged

- Publishing customizations
- Configuring instances by adding solutions to instance
- Team and user management who was added, deleted, access rights of user/team
- Deletes of attributes
- Backup and Restore actions
- Managing instances New instance added and delete instance

User Activity Logged

- Creates, Reads, Updates, Deletes on records and Dataverse metadata
- Dataverse record views
- Export to excel
- SDK calls
- Backend Microsoft support engineer CRUD activities
- Reports viewed

Monitoring Storage Capacity and Add-on's





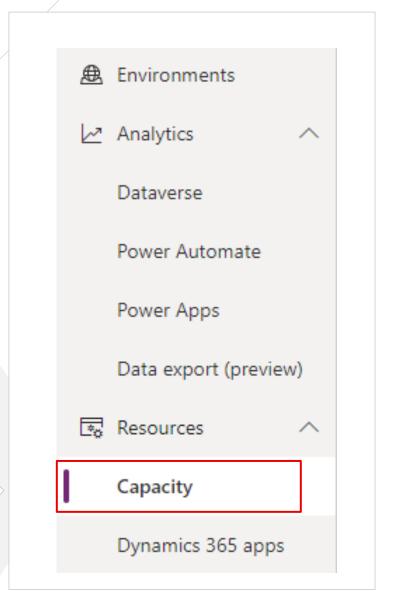
Gain Deeper Insight on Storage Capacity



Capacity management & enforcement

- Understand storage and consumption
- Access for environment admins, power platform service admins, D365 and global admins and individual users who have purchased a license

https://aka.ms/ppac



Capacity Page Details

Features available per tab

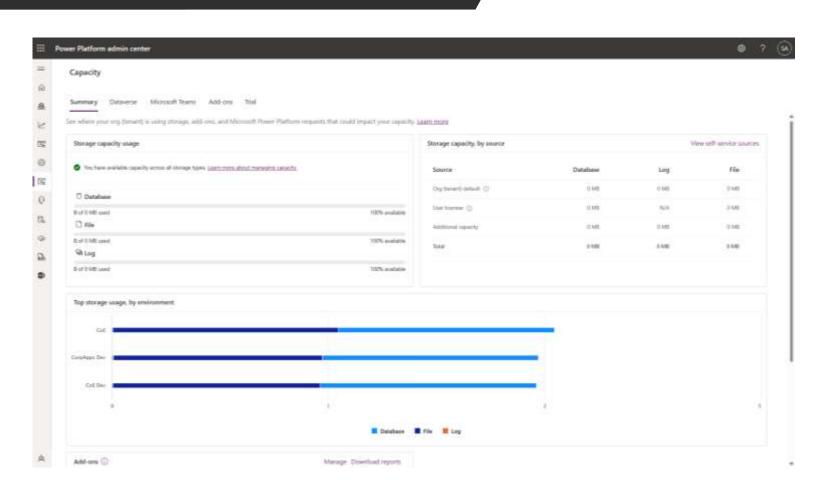
Summary: overview of store capacity usage

Dataverse: an environment breakdown of capacity usage

Microsoft Teams: database capacity of Microsoft Teams environments

Add-ons: assignment of capacity add-ons per environments (IA Builder credits, app passes, Power Pages logins)

Trial: list of trial environments, which does not consume capacity until converted to production



Capacity enforcements

Following storage capacity enforcements apply today



Tenant overall capacity need to be with-in the entitled limits. The PPAC experience will call out if that is not the case



Creating a new environment, copy and restore are the three operations that are enforced today in an event of capacity overuse



Min 1GB of available DB capacity is required for creating a new environment

Capacity enforcements

Overflow coverage by capacity type



Data

Available capacity can be used to cover log and **file** overflow usage.



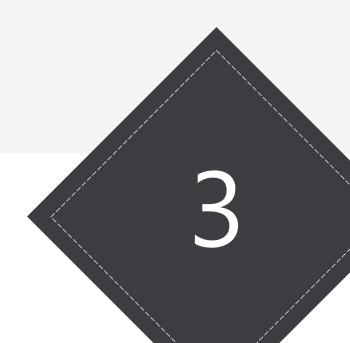
Available capacity can be used to cover log overflow usage.



Available capacity can **not** be used to cover overflow usage.

View Out of the box Analytics for usage and adoption





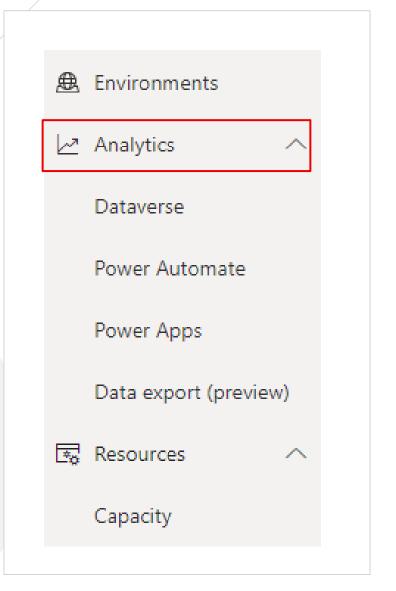
Gain Deeper Insight on Adoption, & Usage

https://aka.ms/ppac

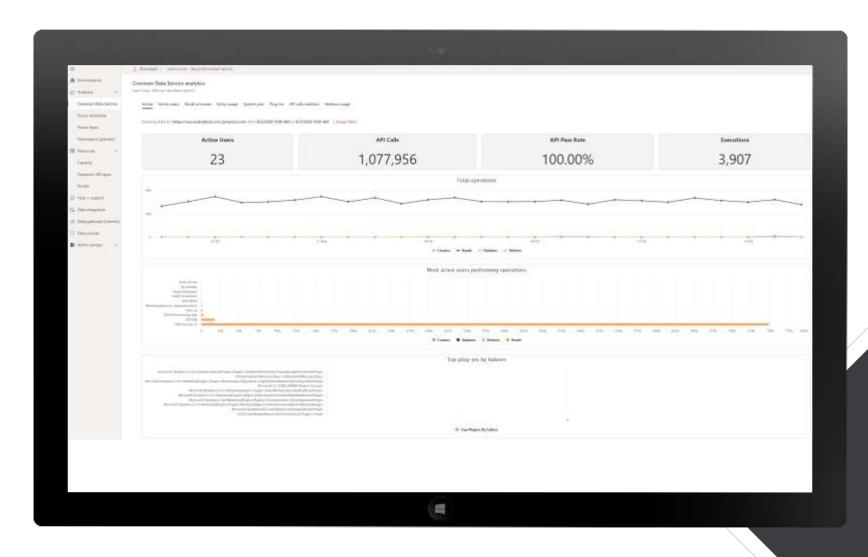


Admin analytics

- Tenant level analytics (preview)
- Environment level analytics
- Available from Power Platform admin center
- Access for environment admins, power platform service admins, D365 and global admins
- Data is stored for 28 days
- Data is refreshed daily



Monitoring Microsoft Dataverse



Click on Change Filters to select from a list of environments you have access to, as well as adjust the date range. The data will only be presented in the prior 28-day period.

Power Automate Environment level views

Analytics is available for a 7, 14, 28-day time periods and allows users to switch between environments.



Runs Viago Created Stront Shared Connector

Stroomy data for FowerAppAnalyticsTest (Upgrade) (orgs28c5c98) for the Last 28 Days. Change filters.



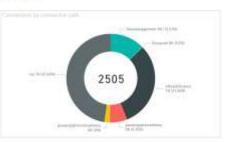




Rurs Usage Conted Errors Dared Connectors

Showing data for PowerAppAnalyticsTest (Upgrade) (orgaZScSc08) for the Last 28 Days: Charge filte





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photogram .	7	10	700
promportoral con-	P. C.	160	198
paragraphy-braken;	67		
Sympole	4.5	1	85.
94	All .	4.	394
Trial	- 11	400	2000

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Maker analytics for Power Automate – Individual flow level views

Flow Makers and Administrators can view details for each flow within their scope, for last 7, 14, 28 days with data refreshed every 4-6 hours

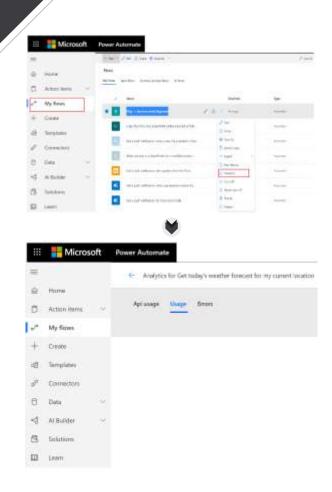
https://flow.microsoft.com



- API usage
- Runs by day
- Total number of runs for the flow
- Gain insights into when the flow is run with the flow run trends

Flow Health

- The number of errors per day
- Flow errors by type
- Understand the details of a specific error – Error source, action or trigger name, error status code, error count, last error occurrence, last error message and detail



Maker analytics for Power Apps – Individual app level views

App Makers and Administrators can view details for each app within their scope, for last 7, 14, 28 days with data refreshed every 4-6 hours

https://make.powerapps.com



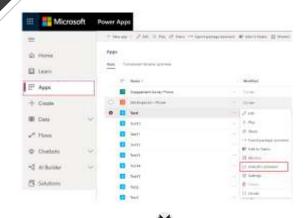
App Adoption and Usage

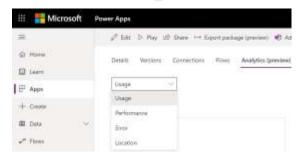
- Active Users How many users are using the app and daily active usage
- Location Where is the app usage and filter by country
- App Usage App launches with filters for device platform, player version, country



App Health

- Toast errors are errors which end users see
 - Errors per app in the environment,
 - Error trends across apps,
 - Overview across all apps for error breakdown by https status
- Performance Best and lest performing service(std and custom) in the environment

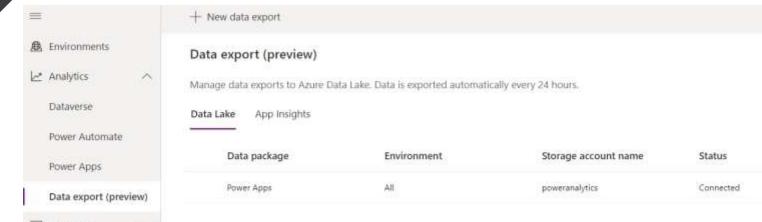


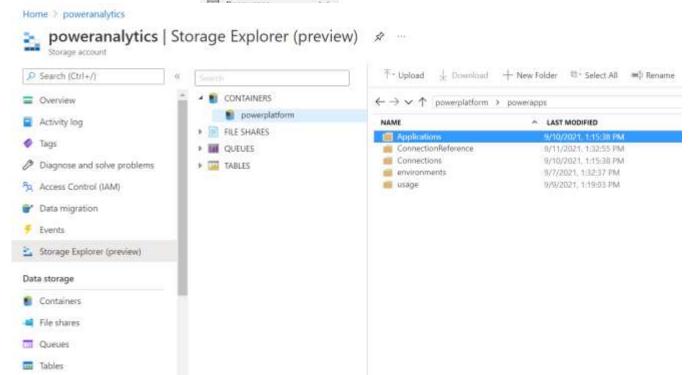


Data Export (preview)
Tenant level analytics

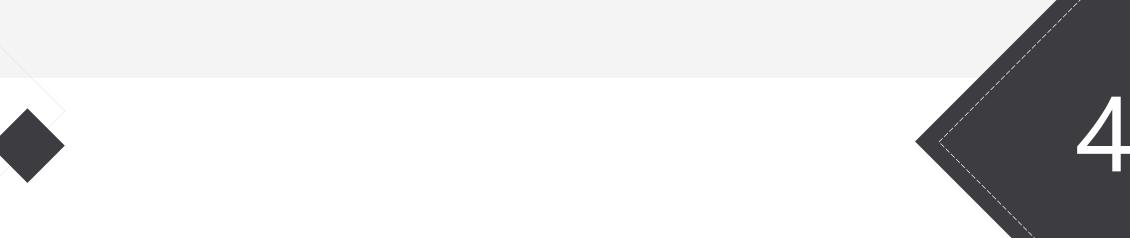
Export tenant level analytics to Azure Data Lake

Bring your own lake (BYOL)





Platform incidents



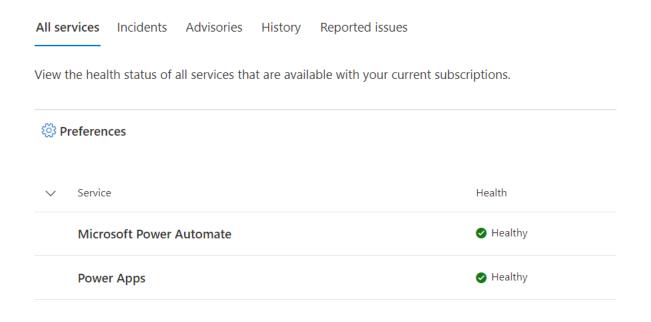


Monitoring platform status

Power Apps and Automate services platform status can been seen in both portals and Office 365 Service Health

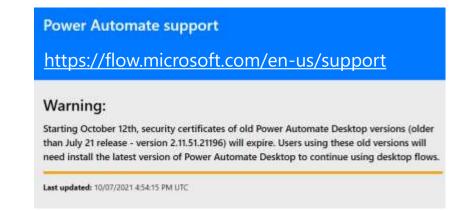
https://admin.microsoft.com/Adminportal/Home
?source=applauncher#/servicehealth

Service health



Power Apps Support https://powerapps.microsoft.com/en-us/support No known issues: Power Apps is running smoothly Search

Search support



Monitoring platform updates and changes

Each message gives you a high-level overview of a planned change and how it may affect your users, and links out to more detailed information to help you prepare. Learn more about managing

changes

Power Apps and Automate services platform updates and changes can be monitored in Office 365 Message Center

Message center Last sync to Planner: October 19, 2020, 3:24 PM Sync now

Inbox Archive Preferences 🌣 Planner syncing Search 3 items Service: Microsoft Power Automate, Microsoft Po... , +2 × X Message state ☆ Message title Service Last updated ↓ Act by Tag (Updated) Power Apps can now display images from Mic... Power Apps in Microsoft 365 Sha... Oct 5, 2021 NEW FEATURE USER IMPACT Upcoming changes to Power Apps per app plan licenses Power Apps Sep 24, 2021 ADMIN IMPACT (Updated) PowerApps/PowerAutomate Retirement of Di... ✓ Microsoft Power Automate in Microsof... Aug 26, 2021 Sep 25, 2021 MAJOR UPDATE ADMIN IMPACT +2



Establishing a low-code Center of Excelence (CoE) CoE Starter Kit

What is CoE Starter Kit



Existing offering:

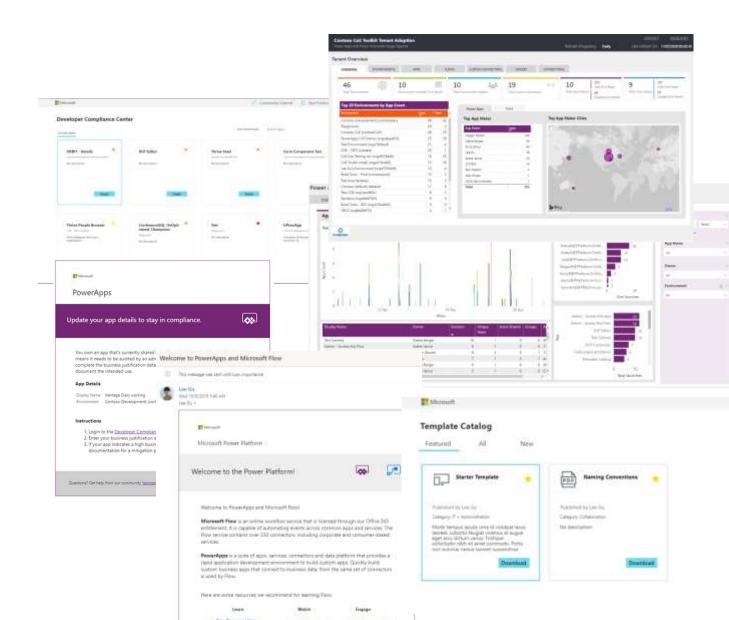
Admin Centre capabilities Extensibility via Connectors



Templates:

A templatized implementation of best practices

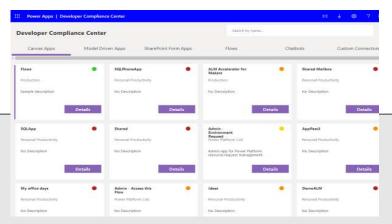
The **CoE Starter Kit** is a collection of components and tools designed to help you get started with developing a strategy for adopting and supporting the Power Platform.

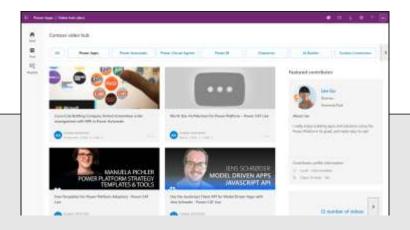


Building blocks

CoE Starter building blocks











Gain Insights into your Power Platform adoption



Governance

Establish Audit, Compliance and Archive processes



Nurture

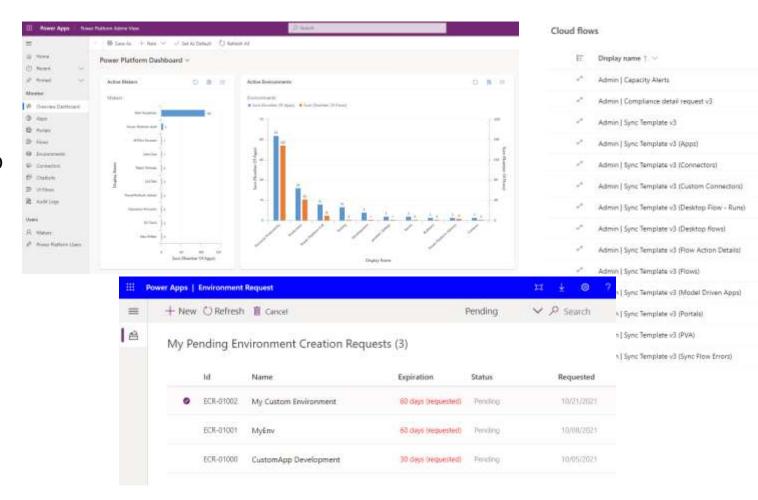
Accelerate your adoption with a thriving community

Admin Components - Core

CoE Starter Kit Building Blocks

These components provide the core to get started with setting up a CoE – including **Sync Flows** to gather information about all your resources into Dataverse tables and build Apps and reports on top of that to help you get more visibility of what apps, flows and makers are in your environment.

Core Components contains mainly assets relevant to admins but also provides foundation for some of the other CoE components like Governance and Nurture

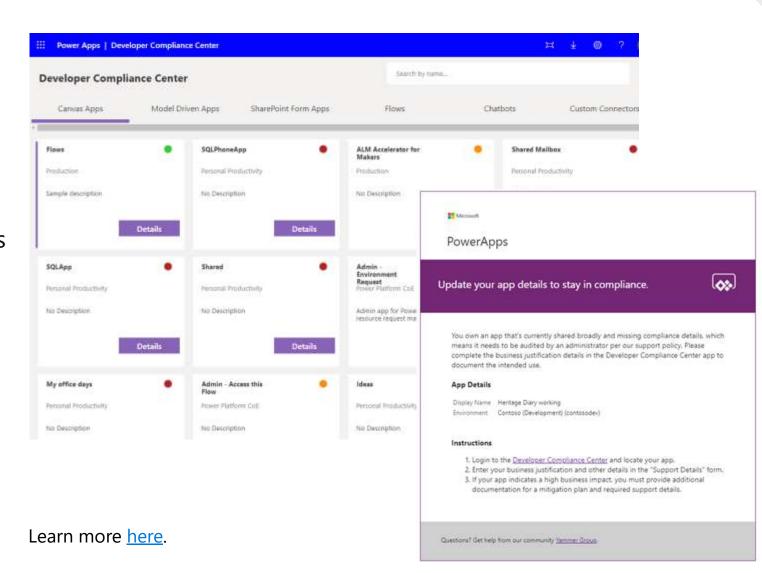


Learn more here.

Governance Components – Audit & Compliance

CoE Starter Kit Building Blocks

After you've become familiar with your environment and resources, you might start thinking about audit and compliance processes for your apps. You might want to gather additional information about your apps from your makers, or audit specific connectors or app usage. The apps and flows that are part of this solution help you get started.

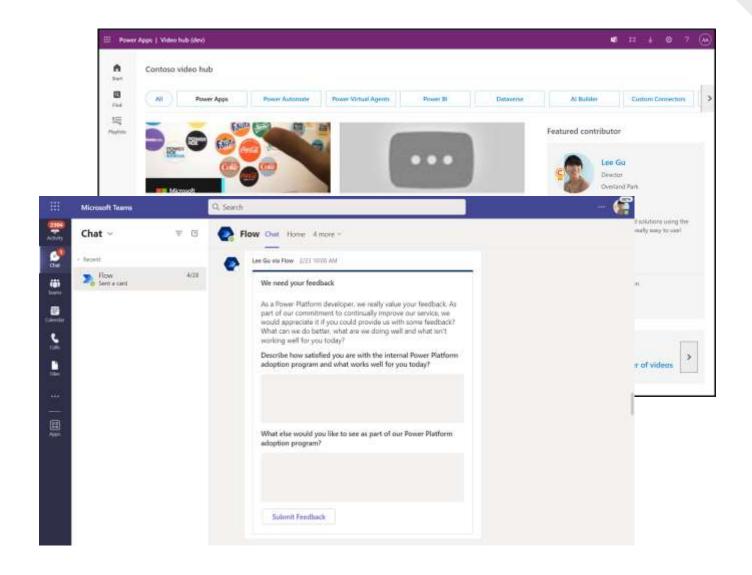


Nurture Components - Learning

CoE Starter Kit Building Blocks

An essential part of establishing a CoE is nurturing your makers and an internal community. You will want to share best practices and templates and onboard new makers – the assets part of this solution can help develop a strategy for this motion.

The Nurture Components solution contains assets relevant to everyone in the organization, admins, makers as well as end users of apps and flows.



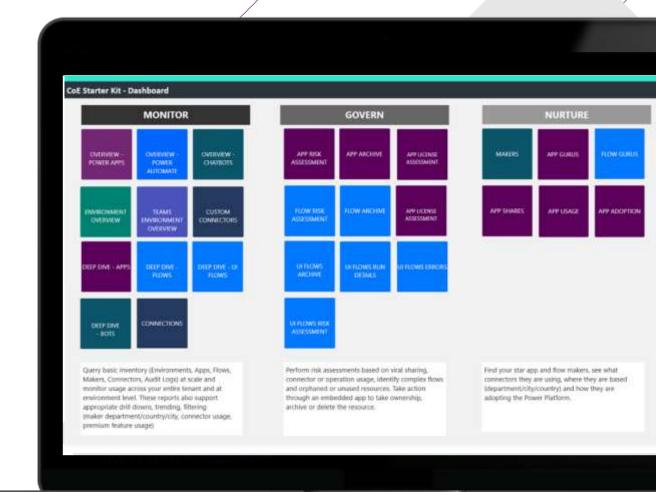
Power BI Dashboards

Provides a holistic view with visualizations and insights into resources in your tenant: Environments, Apps, Flows, Connectors, Connections, Audit Log, Makers etc.

Telemetry from the audit log is stored from the moment you set up the CoE Starter Kit, so over time you can look back and identify trends for longer than 28 days

The dashboard provides analytics and data for the following areas

- **Monitor** Oversight of tenant resources
- **Govern** Drive actions through insights
- Nurture Learn about your community



© Microsoft Corporation Power Platform

Reports Avaiable

Overview – Apps, Flows, Chatbots

A tenant-wide overview of resources

Environments

Shows you how many environments, environment makers, and Microsoft Dataverse instances you have

Microsoft Teams Environments

Shows you the number of Microsoft Teams environments, environment makers, and resources in those environments you have

Apps

An overview of apps in your environment

Cloud Flows

An overview of flows in your environment © Microsoft Corporation

App / Flow Connections

Shows which resources and makers are using which connectors and—at a high level—which resources and makers are using premium features.

App and Flow Risk Assessment

Identify overshared and overused resources, or resources that use specific connectors.

App License Assessment

View apps that use premium or standard features and drill down into connectors, departments or makers that are using premium connectors.

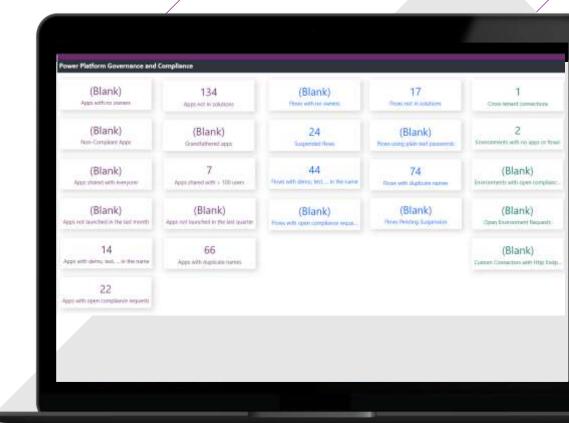
App, Flow and Desktop Flow Archive

Identify unused apps, flows and desktop flows by monitoring their archive score: in short, the higher the score, the more likely it is that you can safely archive the resource.

Compliance and Governance Dashboard

The **Compliance and Governance insights** page provides you with a tenant-wide overview of:

- •Apps and flows without an owner
- Apps and flows not in solutions
- Apps and flows with duplicate names
- •Apps and flows with test, demo, template in the name
- •Apps and flows with open <u>compliance details requests</u>
- •Apps currently not compliant with DLP policies or billing policies
- •Grandfathered apps
- •Apps shared with everyone and apps shared with more than 100 users
- •Apps not launched in the last month and in the last quarter
- Suspended flows
- •Flows using plain text passwords
- Cross-tenant connections
- •Environments with no apps or flows



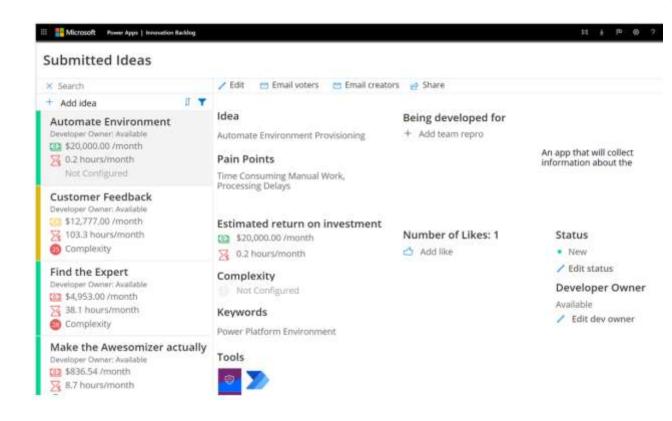
© Microsoft Corporation Power Platform

Additional components

Innovation Backlog - Ideas

Additional components

Use the Innovation Backlog app to ask users to submit ideas for apps and flows that need building and describe pain points with the current process. As users describe the process, they will provide information about personas involved, tools used, and measures for improvement. This information is then used to calculate an ROI and complexity score

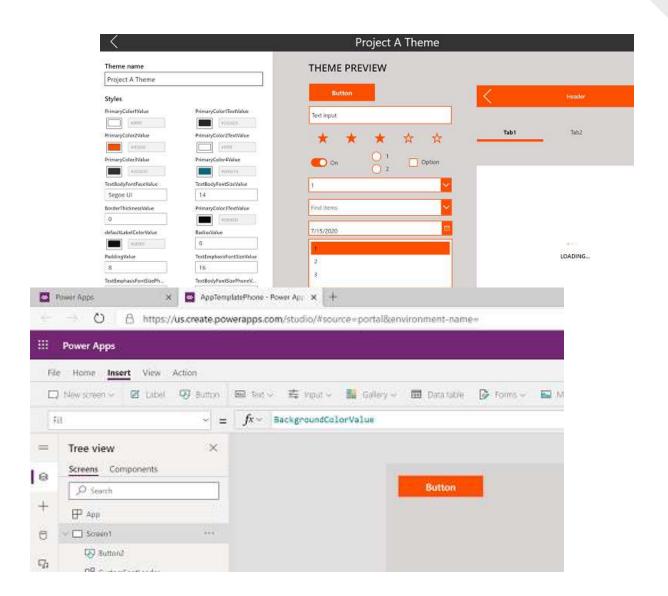


Theming Components - Branding

Additional components

You use theming components to create, manage, and share themes for canvas apps. A theme contains a collection of styles that define multiple design properties for controls and components such as colors, fonts, and borders. These styles are then applied automatically to controls and components when makers use the themed template app to create a new app.

The theming components solution doesn't have a dependency on other components of the CoE Starter Kit, so it can be used independently.



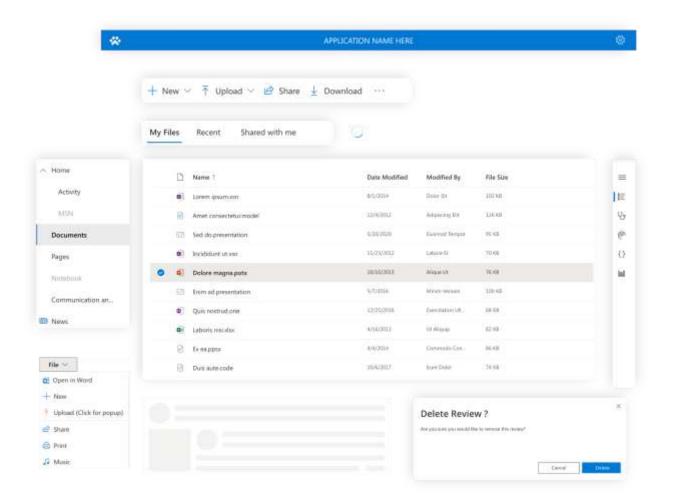
Content Creator Kit

Additional components

The Creator Kit helps create Power Apps experiences on the web and mobile platforms with convenient components that are ubiquitous in modern software. The kit contains a component library, several commonly used Power Apps component framework controls, a set of templates, and other utilities that increase developer productivity.

All controls and components included in the kit use the <u>Fluent</u>

<u>UI</u> framework to help you easily create consistent, beautiful, and effective user experiences for custom business applications.



Learn more <u>here</u>.

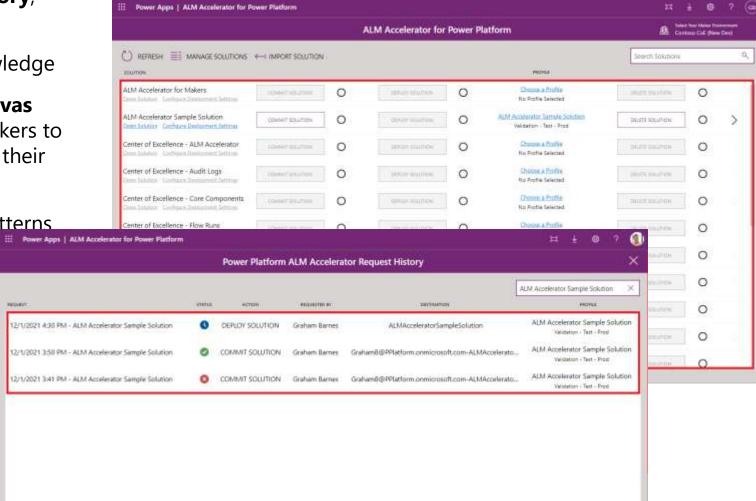
ALM Accelerator for Power Platform

Additional components

 Perform source control, enable version history, and deploy their solutions in Power Platform

- Its target users are makers with no ALM knowledge
- Uses Azure DevOps Pipelines through a canvas app to provide a simplified interface for makers to regularly commit and create pull requests for their development work

It as a **reference implementation** of ALM patterns and practices using other in-built platform capabilities and **can be customized**



Learn more <u>here</u>.

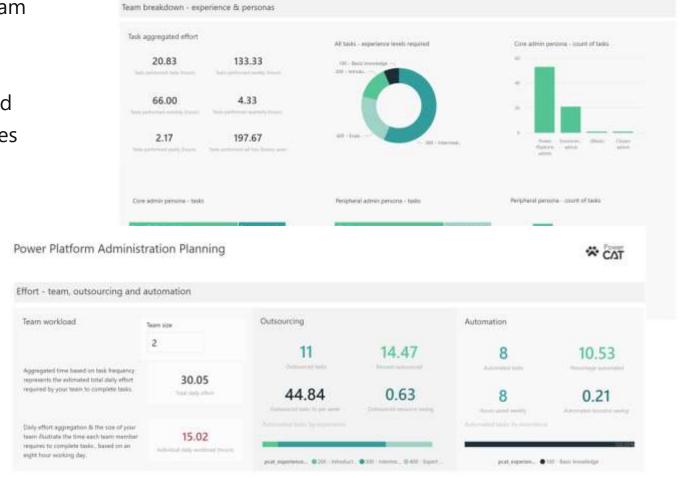
Administration Planning

CoE Starter Kit Standalone Add-ons

Behind the scenes, your IT and Center of Excellence team spends time configuring, managing and nurturing the adoption of Microsoft Power Platform. Understanding how that time is spent can help you plan who you need on your team and find the highest-impact opportunities to streamline the administrative effort.

Microsoft Power Platform administration planning is designed to help you:

- Better plan your team structure.
- Review where you spend time, and look for automation or innovation opportunities



Learn more <u>here</u>.

CoE Starter Kit – Extend

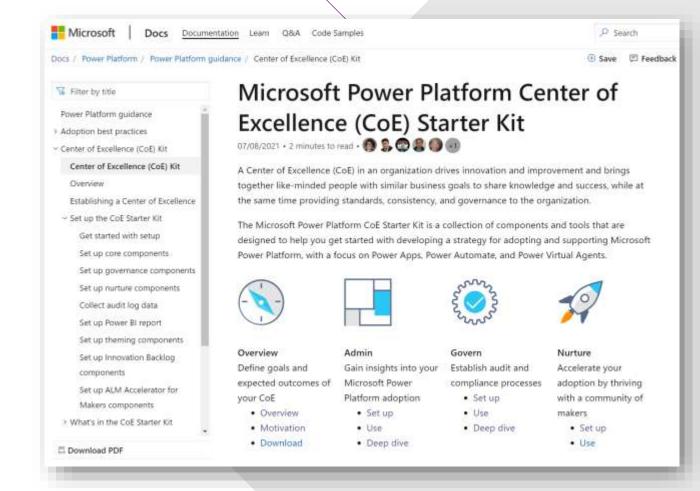
- · When you're ready to extend the CoE Starter Kit with your own ideas, you'll do so by making modifications to the solution components in your own **unmanaged** solution
- · Choose components from the CoE Starter Kit to add to your new solution
- · Extend the CoE Starter Kit by making modifications to the solution components in the context of your new unmanaged solution
- Deploy your solution to test and production. We recommend making modifications and installing updates pushed by our team to the solution in a development environment dedicated to this kit and hosting a production environment that has the real data. If data is being accessed and contributed by other users, it's a good idea to have separate development, test, and production environments.

Power Platform

CoE Starter Kit - Documentation

Center of Excellence Starter Kit documentation can be found from https://docs.microsoft.com/en-us/power-platform/guidance/coe/starter-kit

- Requirements and limitations
- Comparison of different CoE versions (Production / Dataverse for Teams)
- Setup and how to use instructions
- Guidelines how update and extend the toolkit
- Detailed documentation of each component like individual Flows, Apps etc. of the CoE

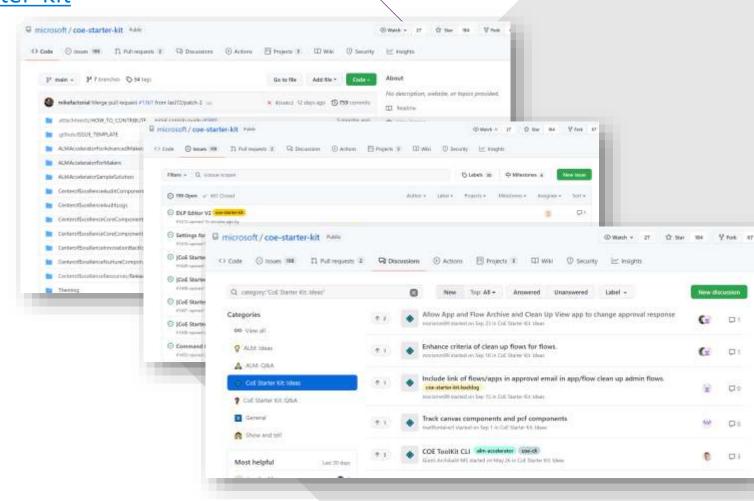


CoE Starter Kit – GitHub Repo

Center of Excellence Starter Kit GitHub Repository can be found from

https://github.com/microsoft/coe-starter-kit

- Download latest and previous version of CoE
- Report possible issues and get support (not officially supported by MS)
- · Request new features
- Have a discussions and share ideas
- Contribute



Power Platform

Before you go

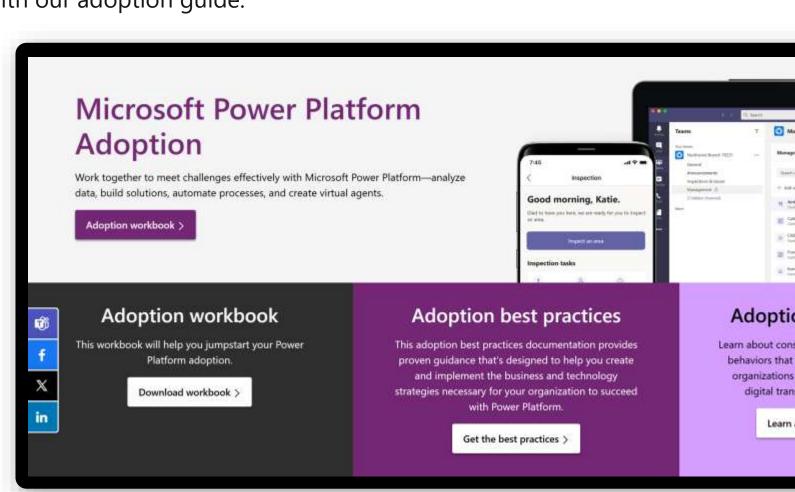
Plan your Power Platform adoption

Learn about your low-code maturity level

Learn how low-code can underpin your **successful digital transformation** and scale Microsoft Power Platform adoption to your **entire organization** with our adoption guide.

- Get guidance to help you create and implement the business and technology strategies to succeed with Power Platform.
- Learn about themes, patterns, practices and behaviors that underpin successful Power Platform implementations.
- Learn about how to kickstart your
 Center of Excelence (CoE).

Learn more!



Get training

Use online resources or organize a "in a Day" workshops

Microsoft Learn have **online learning paths** from beginner to advanced level. "In a Day" workshops let you have a hands-on experience of building great business apps without writing code.









Power Platform "In a Day" workshops

Stablish guidelines and best practices

Use official documentation as a starting point

These guidelines provides **best practices**, **implementation**, and **architecture guidance** information from the **Microsoft teams** that works with our enterprise customers.









Stablish guidelines and best practices

Address complex topics with Power Platform whitepapers

Get **in-depth information**, **solutions**, and **recommendations** to help you address complex scenarios and inform your decision-making.

Whitepaper	Description	
Develop a tenant environment strategy to adopt Power Platform at scale	Shows you how to align your Power Platform tenant environment strategy with the product capabilities and vision.	
Enterprise security with Power Platform	Shows you how to align Power Platform with your security practices.	
Activating Managed Environments	Explores the features of Managed Environments in Power Platform.	
Application modernization with Power Platform	Explores the benefits, strategies, and best practices of modernizing applications with Microsoft Power Platform.	
Migrating apps and flows from the default environment	Outlines considerations and best practices for migrating apps and flows from the default environment.	
Architecture white paper	Provides a comprehensive view of the capabilities of the Power Pages platform and how it scale, offer high reliability and availability, and protect business data	
Security white paper	Describes how Power Pages offers enterprise grade security and the tools and capabilities	

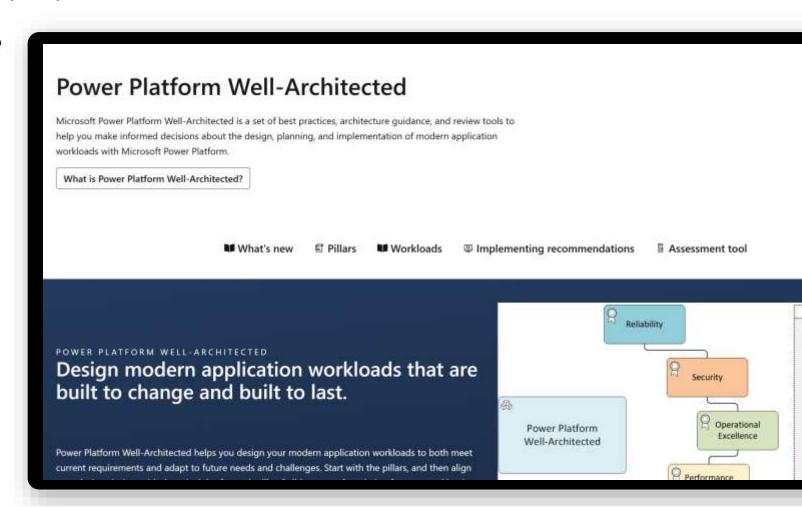
Stablish guidelines and best practices

Power Platform Well-Architected

A framework that can improve the quality of your Power Platform workloads

- A set of best practices, architecture guidance, and review tools to help you make informed decisions about the design, planning, and implementation of Power Platform workloads.
- Based on the methodology and guidance of the <u>Azure Well-</u> <u>Architected Framework</u>.
- Have an <u>assessment tool</u> to help identify areas of enhancement and iteratively improve your workloads.

Learn more!



Final thoughts

Recommendations

- Adopt governance process that are suitable for your project's characteristics or that are required by CoE team.
- Please refer to CoE documentation for internal standards such UI, coding, error handling, data storage e.g.
- If an internal standard was **not defined** by CoE team, work with them to **create one based** on the **guidelines** described on Power Platform documentation.
- 4) Please reach CoE team about your app or flow tier of support, which will determine ALM cycle, development and support responsibilities and Power Platform available resources.

Tiers of application support (example) . Mission critical scenarios AND/OR High complexity AND/OR Org-wide usage · Support owned by IT Robust ALM process - Dev/UAT/Prod Longer development cycle, often greater than 3 months to Minimum Viable Product (MVP) · Important but not critical AND/OR Medium complexity AND/OR scoped to business unit Support owned by app owner, Blessed by IT **Important** · ALM using environments is advised but might not be necessary · Development typically less than 3 months to · Productivity app that does not need high level of governance **Productivity** · Support by app developer · Typically ALM not necessary

· Less than 2 weeks to MVP

Continue sua jornada de conhecimento

Demonstrações técnicas de Power Platform

Eventos no **Microsoft Teams** conduzidos pelos especialistas em Power Platform da Microsoft Brasil. Para participar procure seu **gestor(a) de conta** (AE) ou **especialista** (SSP).



Desenvolvimento de aplicativos

Tópicos

Canvas Apps Microsoft Dataverse Model Driven Apps Power Pages

> **Duração** 03 horas

Saiba mais







Governança e ALM

Tópicos

Governança Segurança Monitoramento Centro de Excelência (CoE) ALM/DevOps

Duração

03 horas

Saiba mais



Hiper automação

Tópicos

Process e Task Mining
Cloud flows (DPA)
Desktop flows (RPA)
Gerenciamento e monitoramento
Hosted machines (VMs SaaS)
Automações e integrações

Duração

03 horas

Saiba mais



Criando copilots com Copilot Studio

Tópicos

Ecosistema Microsoft de copilots Visão geral do Copilot Studio Recursos baseados em IA generativa Automações e integrações

Duração

03 horas

Saiba mais

Continue sua jornada de conhecimento

Power Platform Connect

Site mantido pelos especialistas em **Power Platform** da **Microsoft Brasil**. Nele você encontrará:



Biblioteca de conteúdo
Coleção de links oficiais
das soluções que
compõem a Power
Platform

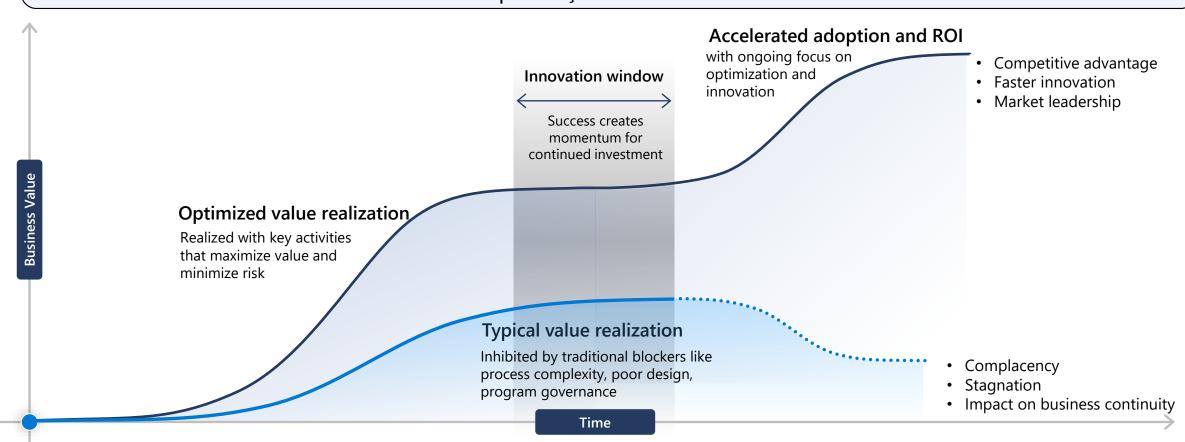


Eventos online Eventos online promovidos pela Microsoft ou seus parceiros.

https://microsoft.github.io/powerplatformconnect

Maximize seus investimentos com o Microsoft Unified

Acelere seu tempo de implantação com serviços liderados por especialistas, desde o planejamento até a implantação e muito mais



Conte com especialistas para construir seus aplicativos

Com acesso direto aos especialistas da Microsoft, você pode criar aplicativos personalizados usando o Power Platform para resolver desafios de negócios e automatizar processos de negócios

O que você quer alcançar...

- Estabeleça um modelo de governança e padrões e prepare-se para a IA
- Implantação bem-sucedida da plataforma de energia em toda a empresa
- Validação de processos de projeto e desenvolvimento de arquitetura de soluções

Como entregamos...

- Assistência na criação de um Centro de Excelência (COE) para governar a criação de aplicativos e acelerar a adoção em toda a organização
- Orientação prescritiva de especialistas para acelerar a implantação com workshops de Maker e Developer para melhorar as habilidades da equipe
- Revisões técnicas e funcionais para validar planos e abordar problemas e riscos

Saiba Mais

Visite **aka.ms/Enhanced-Solutions** para agendarmos uma sessão com objetivo de determinar como nossas **Soluções Aprimoradas** podem ajudá-lo a alcançar os resultados desejados



Obrigado!

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