



## Deployment and Use Guide: Storage Capacity Enforcement Solution

Oct 2023

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Code snippets, samples, or examples contained in this document as well as the solution components included with the Storage Capacity Enforcement solution are provided AS-IS without warranties of any kind. These are intended as a proof of concept version. Do not distribute. The descriptions of other companies' products in this document, if any, are provided only as a convenience to you. Any such references should not be considered an endorsement of support by Microsoft. Microsoft cannot guarantee their accuracy, and the products may change over time. Also, the descriptions are intended as brief highlights to aid understanding, rather than as thorough coverage. For authoritative descriptions of these products, please consult their respective manufacturers.

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## Solution Overview

This solution is intended to be used as an optional and complimentary set of components for the [Center of Excellence \(CoE\) Starter Kit](#). It provides customers with the capability of enforcing storage capacity limits by automating the assessment of consumed capacity vs. approved capacity and placing environments that are over approved capacity into [Administration Mode](#). Dataverse environments in this state can only be accessed by those users who have System Administrator or System Customizer security roles assigned to their accounts. For further details on administration mode and how it impacts end user access, please see Appendix A.



### Notifications

- **Close to capacity emails:** Notify environment owner and CoE Admins when environment exceeds 80% (adjustable) and less than 100% of approved capacity
- **Enforcement applied/removed emails:** Notify environment owner and CoE Admins when environment has capacity enforcement enabled or disabled
- **Enforcement removal in-app notifications:** Notify CoE admin of environment status when running the manual Flow to disable capacity enforcement from CoE Power Platform Admin View app



### Automation

- **100% capacity – Disable environment:** Environment consumed capacity reaches 100% of approved for any capacity type (database, file or log), a scheduled flow will place the environment into admin mode
- **Disabled environment < 80% capacity – Enable environment:** Disabled environment consumption is below 80% of approved capacity for all defined capacity types, a scheduled flow will disable admin mode allowing users access
- **Remove admin mode – Manual Flow in Power Platform Admin View:** Provides CoE admins with the option to remove admin mode from specific environments, directly from the Power Platform Admin View app



### Reporting & Audit

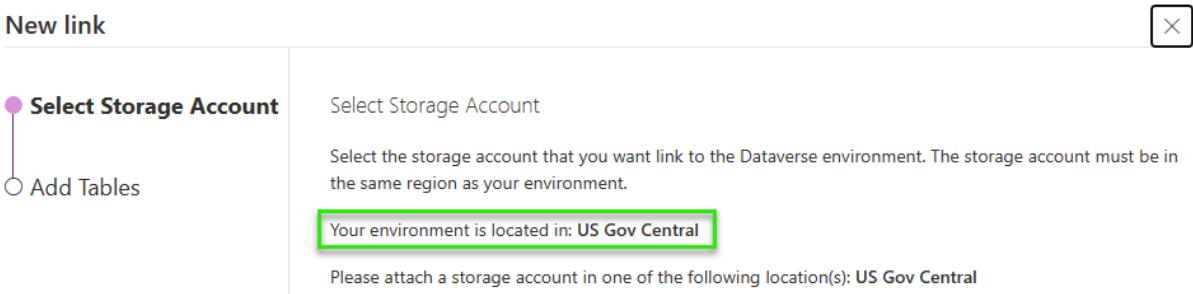
- **Power Platform Admin View App - Environment Views:**
  1. Environments Disabled by Capacity Enforcement
  2. Environments Excused from Capacity Enforcement
  3. Environments with No Storage Capacity Limits
  4. Environments without Environment Owner
- **Disabled environments | Storage Capacity Enforcement Power BI:** Additional page added to the existing CoE Power BI dashboard providing details on disabled environments, including:
  - Total disabled environment count
  - Number of environments disabled in past 30, 90 days
  - Count of disabled environments by environment type
  - Top 10 environments - % of approved capacity used
  - Datapoints for approved, consume and % used for database, file and log capacities per environment

## Pre-requisites

The following pre-requisites must be deployed and configured prior to deploying the Storage Capacity Enforcement solution.

- Install the [CoE Starter Kit: Core Components solution](#)
- Enable [In-app Notifications](#) for the **Power Platform Admin View** app in your CoE Starter Kit environment
- Azure Subscription
  - Create an [Azure Automation Account](#). It's recommended to create the Automation account in the same region as your CoE Starter Kit Dataverse environment.
  - **Tip:** To determine which region your environment is hosted in, you can use the [Synapse Link for Dataverse](#) setup wizard which provides this information on the initial setup page. **Please note that you don't have to complete Synapse Link for Dataverse setup and can close the wizard once you've identified the region. This step is just to get the region/datacenter details.**

Example:



**Important:** There is an additional cost associated with jobs executed using an Azure Automation Account. It's recommended to work with your Microsoft Account Team for an estimate, but you can also review the [Process automation pricing](#) and use the [Azure Pricing Calculator](#) to create a projected estimate. A single execution of the enable or disable runbook jobs averages 30 seconds of job run time but can take longer or shorter than this.

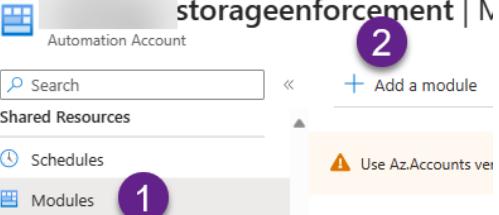
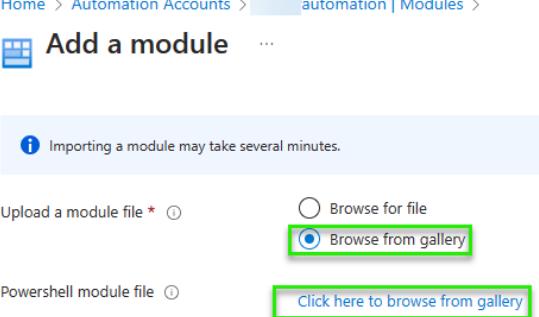
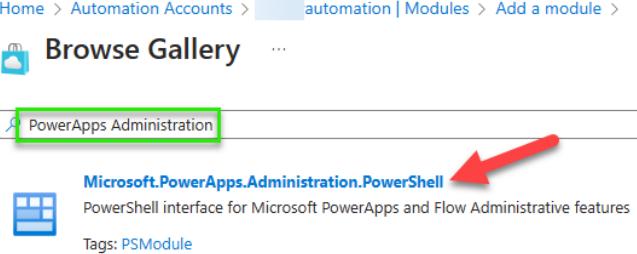
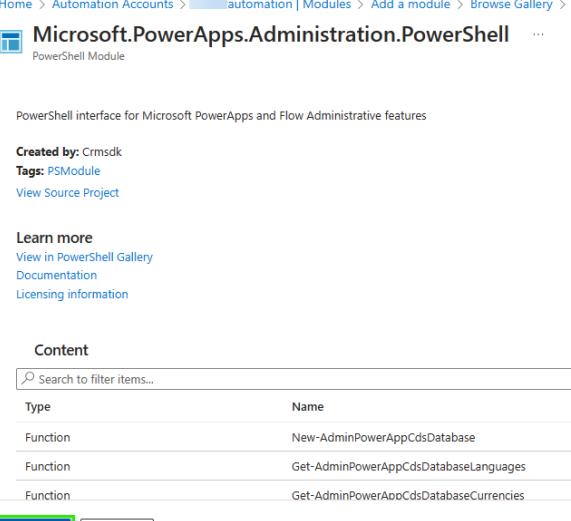
# Deployment Steps

## Setup Azure Automation

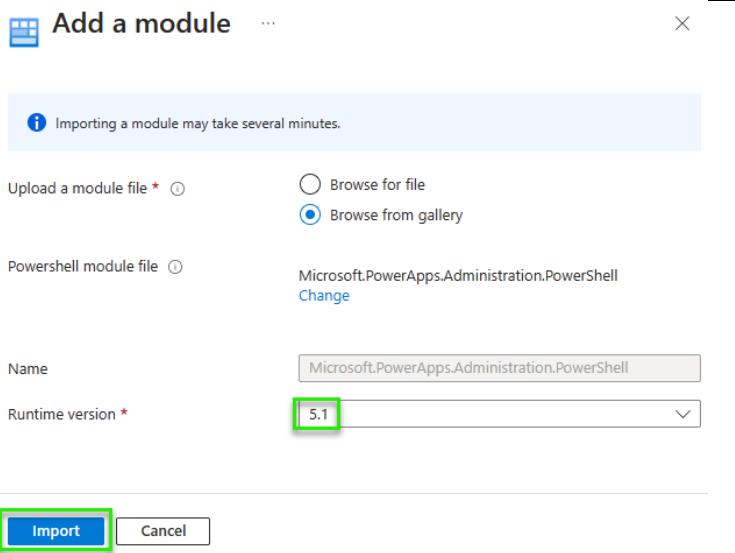
The steps below will provide you with details on how to create the Azure Automation Account credential and runbooks that support the PowerShell commands used to enable and disable admin mode for an environment.

### Add the PowerApps Administrative module

Prior to deploying the Azure Automation Runbooks, the PowerApps Administrative PowerShell module must be installed since the PowerShell cmdlets included with the runbooks leverage the commands in this module.

<ul style="list-style-type: none"><li>• Login to the Azure portal</li><li>• Browse to the Azure Automation Account that was created as part of the pre-requisites</li><li>• Click <b>Modules</b> in the left navigation</li><li>• Click <b>Add a module</b></li></ul>	
<ul style="list-style-type: none"><li>• Click <b>Browse from gallery</b> in the Upload a module file option</li><li>• For the PowerShell module file, click <b>Click here to browse from gallery</b></li></ul>	
<ul style="list-style-type: none"><li>• Type <b>PowerApps Administration</b> in the search bar</li><li>• Click on the <b>Microsoft.PowerApps.Administration.PowerShell</b> module</li></ul>	
<ul style="list-style-type: none"><li>• Click <b>Select</b></li></ul>	

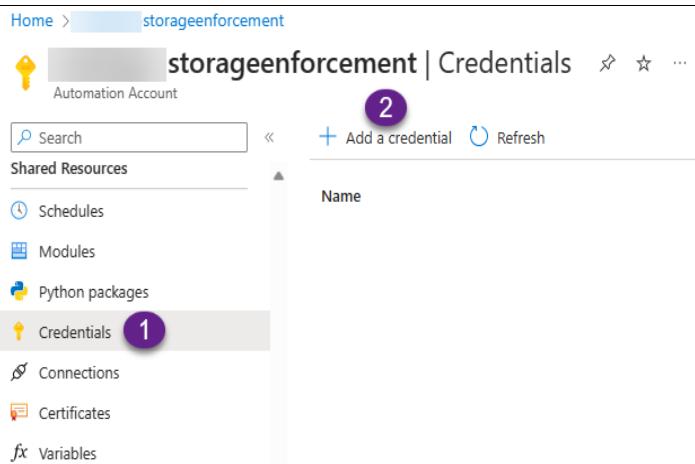
- Select 5.1 for the Runtime version
- Click Import



## Create the credential in the automation account

This section provides details on how to create the credential used to authenticate to Power Platform and run the enable and disable admin mode commands.

- Click **Credentials** in the left navigation
- Click **Add a credential**



- Add the credential for the service account that will be used to execute the enable/disable admin mode commands

**Important:** This account must have System Administrator rights for all environments that will be included in the Storage Capacity Enforcement solution. It's recommended to use an account that has the Power Platform Administrator role assigned. Using the Center of Excellence account that was created to support the flows included with the CoE solutions is recommended since it requires the same level of access.

## Import and Update Runbooks

- Extract the **StorageCapacityEnforcement.zip** file in a folder location on your system
- In the Azure Automation Account, locate the Process Automation section and click **Runbooks**
- Click **Import a runbook**

The screenshot shows the 'storageenforcement | Runbooks' page in the Azure portal. On the left, there's a sidebar with links like Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, and Runbooks (which has a purple circle '1' over it). At the top right, there are buttons for 'Create a runbook', 'Import a runbook' (which has a purple circle '2' over it), and 'Browse gallery'. Below these, there's a search bar and a table showing one runbook: 'AzureAutomationTutorialWithIdentity' (Name), 'Published' (Authoring status), and a green checkmark icon.

- Validate **Browse for file** is selected
- **Runbook file:** click **Select a file** and browse to the location where you exported the solution components
- Select the **pp\_storage\_enforcement.ps1** file and click **Open**
- **Name:** Provide a name for the runbook
- **Runbook type:** Select **PowerShell** from the dropdown
- **Runtime version:** Select **5.1**
- **Description:** Provide a general description for the runbook  
Ex. This runbook will be used to enable Power Platform environment admin mode for environments beyond approved capacity.
- Click **Import** to create the runbook

The screenshot shows the 'Import a runbook' dialog. It has fields for 'Runbook file' (set to 'pp\_storage\_enforcement.ps1'), 'Name' (set to 'pp\_storage\_enforcement'), 'Runbook type' (set to 'PowerShell'), 'Runtime version' (set to '5.1'), and a 'Description' box containing the text 'This runbook will be used to enable Power Platform environment admin mode for environments beyond approved capacity'. At the bottom, there are 'Import' and 'Cancel' buttons, with 'Import' being highlighted with a green border. A note below says: 'During runbook execution, PowerShell modules targeting 5.1 runtime version will be used. Please make sure the required PowerShell modules are present in 5.1 runtime version.'

- In the runbook update the credential **Name** to match the name you defined
- Update the **Endpoint** for your specific region

Regional Endpoint Values:

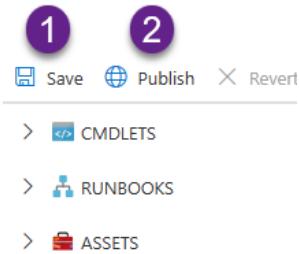
- Public/Commercial region: prod
- GCC region: usgov
- GCC High region: usgovhigh
- DoD region: dod

```

1  Param (
2      [Parameter(Mandatory=$true)]
3      [String] $EnvironmentName
4  )
5
6  $cred = Get-AutomationPSCredential -Name 'CoE Service Account'
7
8  try{
9      Add-PowerAppsAccount -Endpoint "dod" -Username $cred.UserName -Password $cred.Password
10     Set-AdminPowerAppEnvironmentRuntimeState -EnvironmentName $EnvironmentName
11 }

```

- Click **Save**
- Click **Publish**



- Repeat the import and update steps in this section for the **pp\_storage\_removeenforcement** runbook

### Optional: Runbook Validation

Use the optional steps below to validate that the enforcement and remove enforcement runbooks are working successfully.

- Login to Power Platform Admin Center
- Click to open an environment that's safe to place into admin mode
- Copy the **Environment ID** value

The screenshot shows the 'Environments' section of the Power Platform Admin Center. It displays the details for the environment 'Mig Test'. The 'Environment ID' field is highlighted with a green box and contains the value '-73efbd4c0f59'. Number 1 points to this field. Other details shown include 'Environment URL' (ippsplatform.us), 'State' (Ready), 'Refresh cadence' (Frequent), 'Type' (Sandbox), and 'Organization ID'.

- In the Azure Automation Account runbook page, click **Start** to execute the runbook
- Paste the **Environment ID** into the ENVIRONMENTNAME parameter field and click **OK**

The screenshot shows the 'pp\_storage\_enforcement' runbook in the Azure Automation account. Number 1 points to the 'Start' button. Number 2 points to the 'ENVIRONMENTNAME' parameter field, which contains the value '-8614-3f582ce79b5'. The 'OK' button at the bottom right is highlighted with a green box.

- Click the **Refresh** button in the command bar to see the updated status
- On the **Output** tab, you should see a 200 Success code once the job is completed

The screenshot shows the job details for 'pp\_storage\_enforcement' from July 3, 2023, at 11:37 AM. The 'Output' tab is selected, showing the job status as 'Completed' with a 'Code' of 200 and a 'Description' of 'OK'. The 'Headers' section shows the response headers: 'Strict-Transport-Security: max-age=15724800; includeSubDomains'.

- You can validate the environment is in Admin Mode, by opening the environment details in Power Platform Admin Center. You should see a message across the top as seen in the screenshot here.

## Deploy the Storage Capacity Enforcement solution

This section provides you with the steps to deploy and configure the Storage Capacity Enforcement solution.

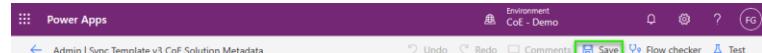
### Update existing CoE Starter Kit Core solution flows

There are some small updates needed for the existing Core solution flows which will prevent metadata and email records included with the Storage Capacity Enforcement solution from being accidentally deleted.

<p><b>Update Admin Sync Template v3 CoE Solution Metdata</b></p> <ul style="list-style-type: none"> <li>Login to the Power Apps Maker Portal</li> <li>Ensure you're in the environment which contains the CoE Starter Kit Core Solution components installed (see pre-requisites)</li> <li>In the Solutions menu, click to open the <b>Center of Excellence – Core Components</b></li> </ul>	
<ul style="list-style-type: none"> <li>Open the <b>Admin   Sync Template v3 CoE Solution Metadata</b> flow</li> <li>Edit the flow</li> </ul>	
<ul style="list-style-type: none"> <li>Click to expand <b>Add or update data &gt; Flows</b></li> <li>Expand the <b>Cleanup Deleted – Flows</b> action</li> <li>In the Filter Rows field, add the following text at the end of the field: <b>and not contains(admin_objectname,'Storage Capacity Enforcement')</b></li> </ul>	

- Click **Save** and close the flow

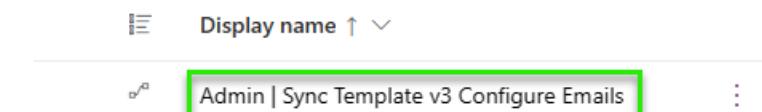
**Important:** Making changes to this flow will add an unmanaged layer. When updating the CoE Starter Kit core solution with a new release, you'll need to remove this unmanaged layer and reapply the changes outlined here in order to get the latest solution update for this flow.



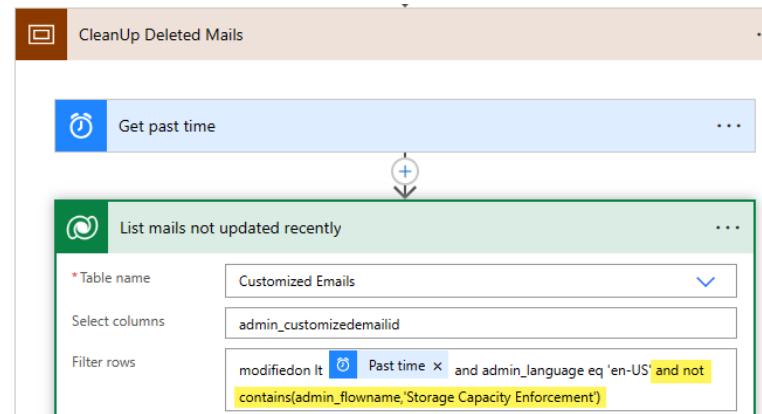
#### Update Admin|Sync Template v3 Configure Emails

- Open the **Admin | Sync Template v3 Configure Emails** flow
- Edit the flow

Center of Excellence - Core Components > Cloud flows

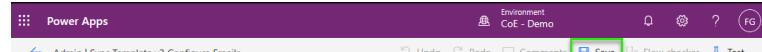


- Click to expand **Configure All or One Email > see if all or one email > If yes > CleanUp Deleted Mails**
- Expand the **List mails not updated recently** action
- In the Filter Rows field, add the following text at the end of the field:  
  
**and not contains(admin\_flowname,'Storage Capacity Enforcement')**



- Click **Save** and close the flow

**Important:** Making changes to this flow will add an unmanaged layer. When updating the CoE Starter Kit core solution with a new release, you'll need to remove this unmanaged layer and reapply the changes outlined here in order to get the latest solution update for this flow.

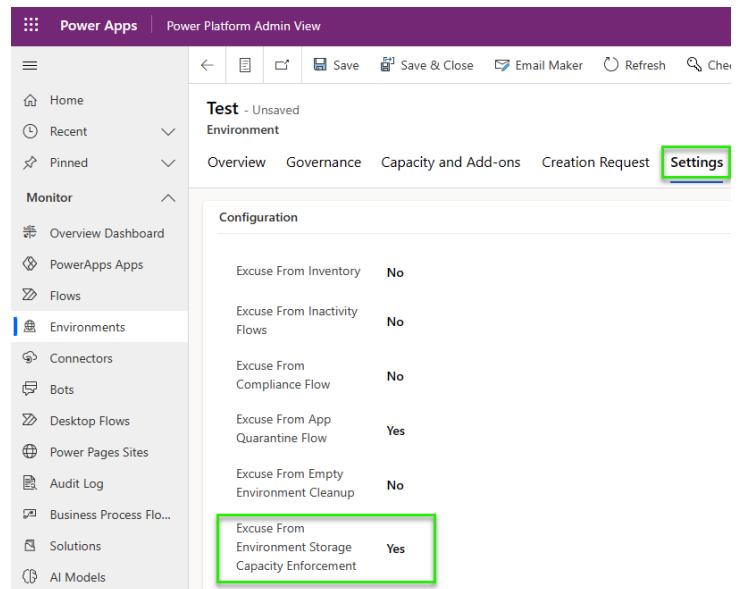


## Optional: Exclude environments from capacity enforcement

**! Important:** Before proceeding to the next step, if there are environments you would like to exclude from the Storage Capacity Enforcement solution, you should do so in this step. This will ensure those environments are not impacted. If you are currently using the [CoE Starter Kit Capacity Alerting solution](#) to define approved storage limits, those environments will be included as a part of the Storage Capacity Enforcement Solution and could be potentially impacted.

For any environment that you want to exclude, please use the **Excuse from Environment Storage Capacity Enforcement** option located in the Environment > Settings area of the **Power Platform Admin View** app.

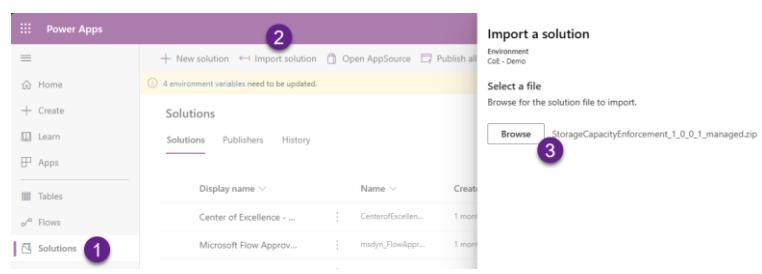
Additional details can be found [here](#).



## Import the solution and enable the flows

Follow the steps below to import the Storage Capacity Enforcement solution, run the initial setup flows and enable the primary solution flows.

- Login to the Power Apps Maker Portal
- Ensure you're in the environment which contains the CoE Starter Kit Core Solution components
- Browse to the Solutions area
- Import the **StorageCapacityEnforcement\_1\_0\_0\_3\_managed.zip** file



- Create a connection for the Storage Capacity Enforcement – Azure Automation account

**Note:** You can use either OAuth or Service Principal authentication, but the account must have permissions to the Azure Automation Account created as a pre-requisite.

**Important:** For GCC customers, the Azure Automation connector only authenticates with Azure Government subscriptions. Azure Commercial subscriptions are not currently supported.

#### Configure the environment variables

- Storage Capacity Azure Subscription ID:** Enter the [subscription ID](#) for the Azure subscription
- Storage Capacity Azure Resource Group:** Enter the name of the Azure Resource Group that's hosting the Azure Automation Account
- Storage Capacity Azure Automation Account Name:** Enter the name of the Azure Automation Account
- Storage Capacity Azure Runbook Enforcement:** Enter the name of the enforcement runbook created to enable admin mode
- Storage Capacity Azure Runbook Remove Enforcement:** Enter the name of the remove enforcement runbook created to disable admin mode

#### Import a solution

Environment  
CoE Aug 22



##### Connections

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

1 updates needed



Storage Capacity Enforcement - Azure...  
msft\_sharedazureautomation\_04db5

Select a connection ▾

+ New connection ▾

#### Import a solution

Environment  
CoE - Demo

##### Environment Variables

Enter information for each field, so your app works properly. You can edit your environment variables later.

5 updates needed

Storage Capacity Azure Runbook Enforcement

pp\_storage\_enforcement

Defines the name of the Azure Automation Account Runbook used enable admin mode as a part of the storage capacity enforcement solution

Storage Capacity Azure Resource Group

rw-east

Defines the name of the Azure Resource Group hosting the Automation Account resources used with the storage capacity enforcement solution

Storage Capacity Azure Automation Account

rw-storageenforcement

Defines the name of the Azure Automation Account used with the storage capacity enforcement solution

Storage Capacity Azure Runbook Remove Enforcement

pp\_storage\_removeenforcement

Defines the name of the Azure Automation Account Runbook used disable admin mode as a part of the storage capacity enforcement solution

Storage Capacity Azure Subscription ID

-584331a152e3

Defines the ID of the Azure Subscription hosting the resources for the storage capacity enforcement solution

Import

Cancel

Success Solution "Center of Excellence - Storage Capacity Enforcement" imported successfully.

Info 4 environment variables need to be updated.

#### Solutions

Solutions Publishers History

Display name ▾

Name ▾

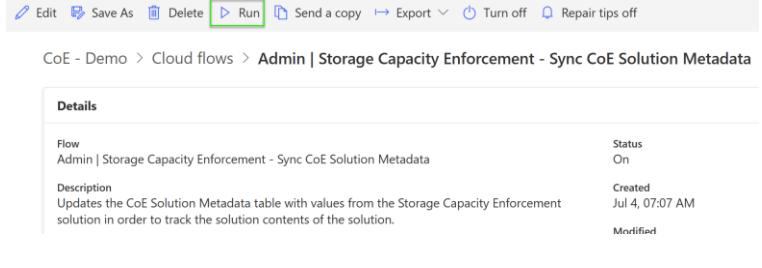
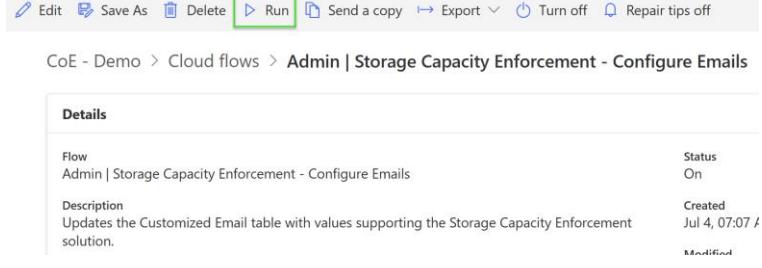
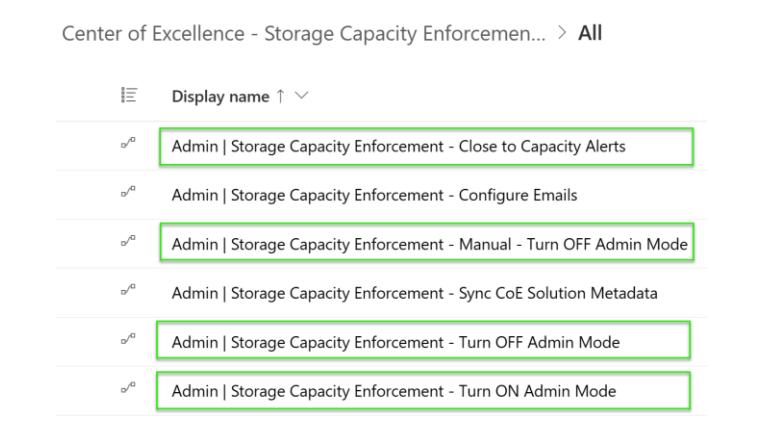
Created ▾

Center of Excellence - Storage Capacity Enfor...

⋮ StorageCapacityEnfo...

1 minute ago

- In the Solutions menu, click to open the **Center of Excellence – Storage Capacity Enforcement** solution once the import has completed

<ul style="list-style-type: none"> <li>Click on the <b>Admin   Storage Capacity Enforcement – Sync CoE Solution Metadata</b> cloud flow (Turn on if flow is currently off)</li> <li>Click <b>Run</b> to execute the flow and wait for it to complete</li> </ul> <p>Note: This flow is executed only during initial setup to create the underlying solution metadata. If you cannot turn on/run flow – edit the flow and check/add connections. Then try to turn on and run.</p>	 <p>CoE - Demo &gt; Cloud flows &gt; Admin   Storage Capacity Enforcement - Sync CoE Solution Metadata</p> <p><b>Details</b></p> <table border="1"> <thead> <tr> <th>Flow</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>Admin   Storage Capacity Enforcement - Sync CoE Solution Metadata</td> <td>On</td> </tr> <tr> <td>Description</td> <td>Updates the CoE Solution Metadata table with values from the Storage Capacity Enforcement solution in order to track the solution contents of the solution.</td> </tr> <tr> <td>Created</td> <td>Jul 4, 07:07 AM</td> </tr> <tr> <td>Modified</td> <td></td> </tr> </tbody> </table>	Flow	Status	Admin   Storage Capacity Enforcement - Sync CoE Solution Metadata	On	Description	Updates the CoE Solution Metadata table with values from the Storage Capacity Enforcement solution in order to track the solution contents of the solution.	Created	Jul 4, 07:07 AM	Modified	
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Created	Jul 4, 07:07 AM										
Modified											
<ul style="list-style-type: none"> <li>Go back to the solution and open the <b>Admin   Storage Capacity Enforcement - Configure Emails</b> cloud flow</li> <li>Click <b>Run</b> to execute the flow and wait for it to complete</li> </ul> <p>Note: This flow is executed only during initial setup to create the emails that support the solution</p>	 <p>CoE - Demo &gt; Cloud flows &gt; Admin   Storage Capacity Enforcement - Configure Emails</p> <p><b>Details</b></p> <table border="1"> <thead> <tr> <th>Flow</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>Admin   Storage Capacity Enforcement - Configure Emails</td> <td>On</td> </tr> <tr> <td>Description</td> <td>Updates the Customized Email table with values supporting the Storage Capacity Enforcement solution.</td> </tr> <tr> <td>Created</td> <td>Jul 4, 07:07 AM</td> </tr> <tr> <td>Modified</td> <td></td> </tr> </tbody> </table>	Flow	Status	Admin   Storage Capacity Enforcement - Configure Emails	On	Description	Updates the Customized Email table with values supporting the Storage Capacity Enforcement solution.	Created	Jul 4, 07:07 AM	Modified	
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Created	Jul 4, 07:07 AM										
Modified											
<h3>Turn on the Storage Capacity Enforcement Flows</h3> <p>Go back to the solution and turn on the following flows:</p> <ul style="list-style-type: none"> <li><b>Admin   Storage Capacity Enforcement – Close to Capacity Alerts</b></li> <li><b>Admin   Storage Capacity Enforcement – Manual Turn Off Admin Mode</b></li> <li><b>Admin   Storage Capacity Enforcement – Turn OFF Admin Mode</b></li> <li><b>Admin   Storage Capacity Enforcement – Turn ON Admin Mode</b></li> </ul> <p>Note: You do not have to run these flows manually after turning them on. These flows are triggered either by a weekly schedule or manually from the Power Platform Admin View app.</p>	 <p>Center of Excellence - Storage Capacity Enforcement... &gt; All</p> <table border="1"> <thead> <tr> <th>Display name ↑</th> </tr> </thead> <tbody> <tr> <td>Admin   Storage Capacity Enforcement - Close to Capacity Alerts</td> </tr> <tr> <td>Admin   Storage Capacity Enforcement - Configure Emails</td> </tr> <tr> <td>Admin   Storage Capacity Enforcement - Manual - Turn OFF Admin Mode</td> </tr> <tr> <td>Admin   Storage Capacity Enforcement - Sync CoE Solution Metadata</td> </tr> <tr> <td>Admin   Storage Capacity Enforcement - Turn OFF Admin Mode</td> </tr> <tr> <td>Admin   Storage Capacity Enforcement - Turn ON Admin Mode</td> </tr> </tbody> </table>	Display name ↑	Admin   Storage Capacity Enforcement - Close to Capacity Alerts	Admin   Storage Capacity Enforcement - Configure Emails	Admin   Storage Capacity Enforcement - Manual - Turn OFF Admin Mode	Admin   Storage Capacity Enforcement - Sync CoE Solution Metadata	Admin   Storage Capacity Enforcement - Turn OFF Admin Mode	Admin   Storage Capacity Enforcement - Turn ON Admin Mode			
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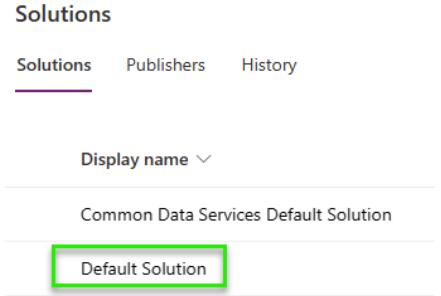
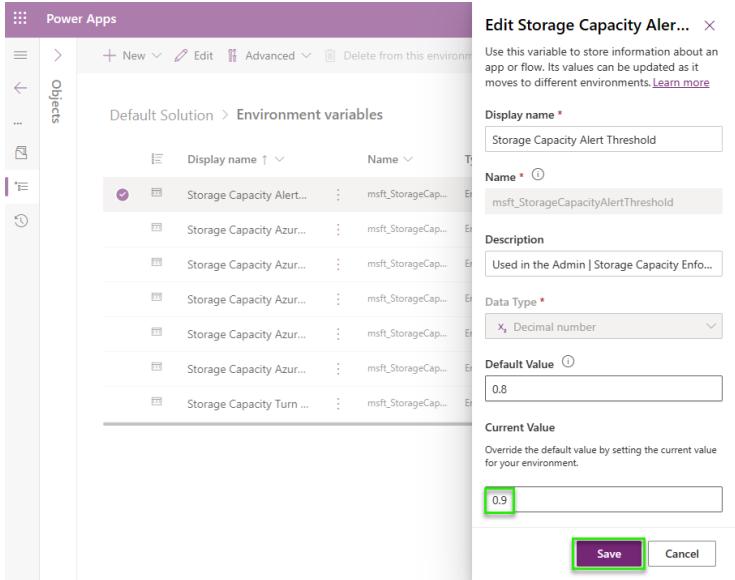
### Optional: Adjust the approved capacity thresholds

There are environment variables included with the solution which you can adjust to your preference:

**Storage Capacity Alert Threshold** - This is used in the *Admin | Storage Capacity Enforcement - Close to Capacity Alerts* flow and defines the percentage of consumed capacity compared to approved capacity of which any capacity type must be less than, otherwise the environment owner and CoE admins will receive an email alert letting them know the environment is close to 100% of approved capacity. The default value is 80% (or 0.8).

**Storage Capacity Turn OFF Admin Mode Threshold** - Used in the *Admin | Storage Capacity Enforcement - Turn OFF Admin Mode* flow and defines the percentage of consumed capacity compared to approved

capacity of which all capacity types for an environment must be less than in order to have admin mode disabled. The default value is 80% (or 0.8).

<ul style="list-style-type: none"> <li>• Login to the Power Apps Maker Portal</li> <li>• Ensure you're in the environment which contains the CoE Starter Kit Core Solution components</li> <li>• Browse to the Solutions area</li> <li>• Open the <b>Default Solution</b></li> </ul>	
<ul style="list-style-type: none"> <li>• Click <b>Environment variables</b> in the left navigation</li> <li>• Type <b>Storage Capacity</b> in the search to filter just the storage capacity solution environment variables</li> <li>• Click on the environment variable you'd like to change <ul style="list-style-type: none"> <li>○ Storage Capacity Alert Threshold</li> <li>○ Storage Capacity Turn OFF Admin Mode Threshold</li> </ul> </li> <li>• Add your desired value in the <b>Current Value</b> field (this overrides the Default Value) <ul style="list-style-type: none"> <li>○ Ex. Set the value to <b>0.9</b> if you'd like the threshold to be 90% of approved capacity</li> </ul> </li> <li>• Click <b>Save</b></li> <li>• Once the environment variable has been updated, you'll need to open the related Flow, turning it off and then back on in order for the changes to take effect</li> </ul>	

## Deploy the Power BI Dashboard

This section provides you with the steps to configure and publish a customized version of the CoE Starter Kit Power BI Dashboard. This version includes a *Disabled Environments* / *Storage Capacity Enforcement* page as well as customizations to the *Environment Capacity* page.

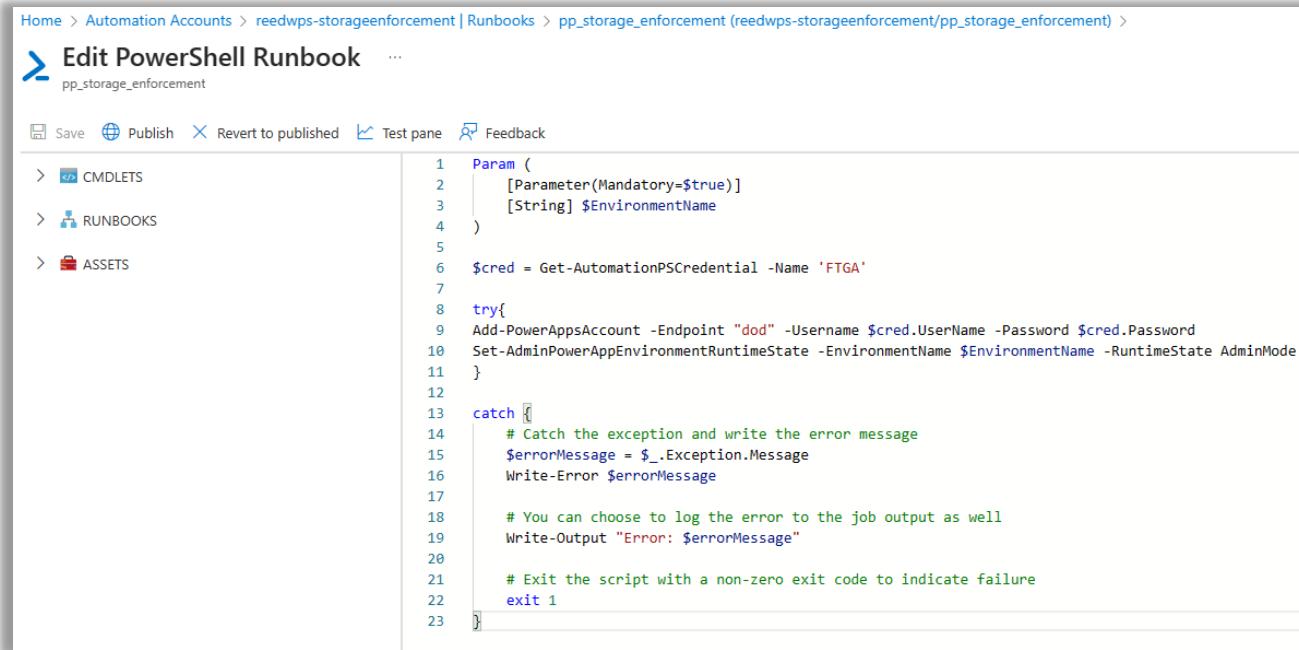
Use the steps outlined [here](#) to configure and publish the Power BI **CoE Dashboard – Storage Capacity Enforcement.pbit** file included with the solution.

**Note:** This is the end of the solution deployment steps.

## Solution Components

This section provides further details on the different components included with the Storage Capacity Enforcement solution. Please review to get an understanding on how the solution works and how to configure it to meet your enforcement requirements.

### Azure Automation



```
Param (
    [Parameter(Mandatory=$true)]
    [String] $EnvironmentName
)

$cred = Get-AutomationPSCredential -Name 'FTGA'

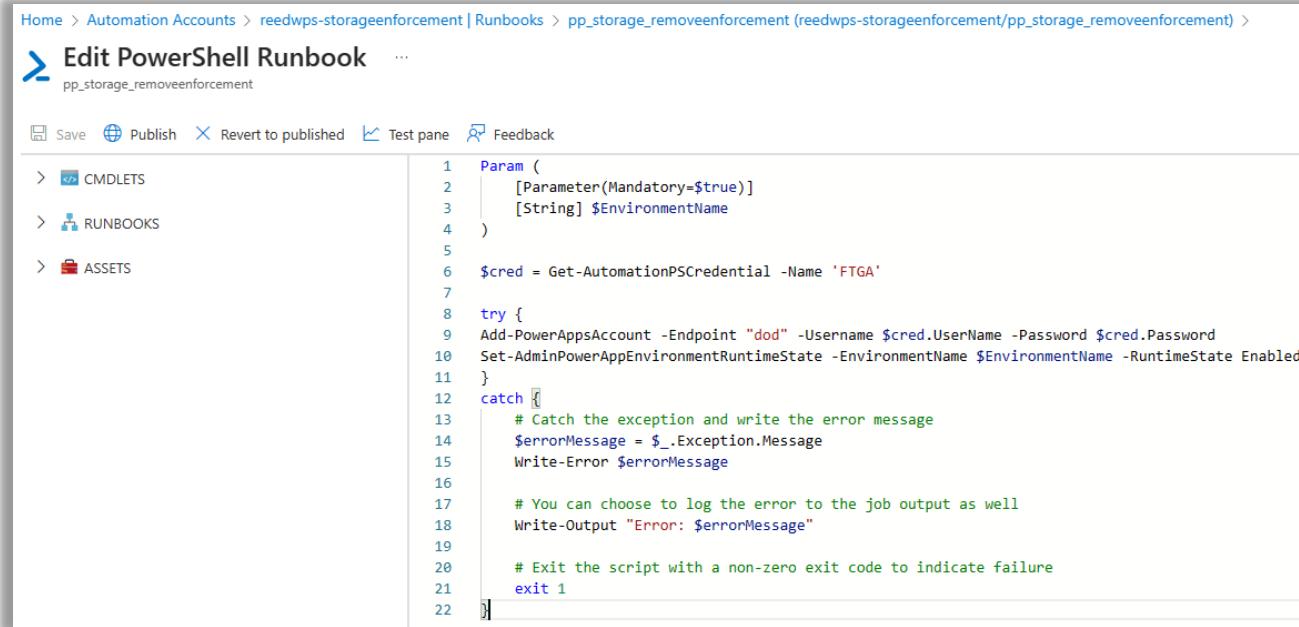
try{
    Add-PowerAppsAccount -Endpoint "dod" -Username $cred.UserName -Password $cred.Password
    Set-AdminPowerAppEnvironmentRuntimeState -EnvironmentName $EnvironmentName -RuntimeState AdminMode
}

catch {
    # Catch the exception and write the error message
    $errorMessage = $_.Exception.Message
    Write-Error $errorMessage

    # You can choose to log the error to the job output as well
    Write-Output "Error: $errorMessage"

    # Exit the script with a non-zero exit code to indicate failure
    exit 1
}
```

- **Runbook: Enable Admin Mode** – Used to execute the PowerShell script which places an environment into admin mode.



```
Param (
    [Parameter(Mandatory=$true)]
    [String] $EnvironmentName
)

$cred = Get-AutomationPSCredential -Name 'FTGA'

try {
    Add-PowerAppsAccount -Endpoint "dod" -Username $cred.UserName -Password $cred.Password
    Set-AdminPowerAppEnvironmentRuntimeState -EnvironmentName $EnvironmentName -RuntimeState Enabled
}

catch {
    # Catch the exception and write the error message
    $errorMessage = $_.Exception.Message
    Write-Error $errorMessage

    # You can choose to log the error to the job output as well
    Write-Output "Error: $errorMessage"

    # Exit the script with a non-zero exit code to indicate failure
    exit 1
}
```

- **Runbook: Disable Admin Mode** – Used to execute the PowerShell script which disables admin mode for an environment.

## App – Power Platform Admin View

This solution includes additions and changes to the original CoE Starter Kit [Power Platform Admin View](#) model-driven application. These new UI enhancements will show up automatically once the solution is imported. See highlights below.

### Capacity and Add-ons

The screenshot shows the Power Platform Admin View interface. The top navigation bar includes 'Power Apps' and 'Power Platform Admin View'. The left sidebar lists various admin categories like Home, Recent, Pinned, Monitor, Overview Dashboard, PowerApps Apps, Flows, Environments, Connectors, Bots, Desktop Flows, Power Pages Sites, Audit Log, Business Process Flows, Solutions, AI Models, Requests, and Users. The main content area has tabs for Overview, Governance, Capacity and Add-ons (which is selected), Creation Request, Settings, Resources, and Related. The 'Capacity and Add-ons' tab is divided into two sections: 'Storage Capacity Enforcement' and 'CAPACITY'. The 'Storage Capacity Enforcement' section contains a table with columns for 'Is admin-mode enabled?' (status: No), 'Admin-mode enabled on' (date: ---), 'Admin-mode disabled on' (date: 6/23/2023 at 12:56 PM), and a 'Last Refreshed' button. The 'CAPACITY' section contains a table with columns for Capacity Type (Database, File, Log), Approved Capacity (5,500.00 MB, 4,653.8080 MB, 0.0000 MB), Actual Consumption (3,017.8520 MB, 4,653.8080 MB, 0.0000 MB), Capacity Unit (MB), and a % in use column (54.87%). A green box highlights the 'Storage Capacity Enforcement' section, and a purple box highlights the 'CAPACITY' table. Numbered circles 1 and 2 point to these respective areas.

Capacity Type*	Approved Capacity	Actual Consumption	Capacity Unit	%
Database	5,500.00	3,017.8520	MB	54.87
File		4,653.8080	MB	
Log		0.0000	MB	

1. **Storage Capacity Enforcement area** – This section provides you with the latest admin mode status and includes the date/time stamp for when admin mode was last enabled or disabled.
2. **% of Approved Capacity in use** – This column provides you with the percentage of the approved capacity that is currently consumed for that capacity type.

## Settings

The screenshot shows the Power Platform Admin View interface. At the top, there's a toolbar with standard save, new, deactivate, delete, and refresh buttons. Below the toolbar, the title bar says "Power Platform Admin View". The main area has a breadcrumb path "- Saved" and a section titled "Environment". Under "Environment", there are tabs for Overview, Governance, Capacity and Add-ons, Creation Request, and Settings, with "Settings" being the active tab. In the "Configuration" section, there are several settings listed:

Excuse From Inventory	No
Excuse From Inactivity Flows	No
Excuse From Compliance Flow	No
Excuse From App Quarantine Flow	Yes
Excuse From Empty Environment Cleanup	No
Excuse From Environment Storage Capacity Enforcement	No

- **Excuse from Environment Storage Capacity Enforcement setting** – This setting allows you to exclude specific environments from the storage capacity enforcement process so they will not be placed into admin mode, even if they go beyond the approved capacity limits.

## Views

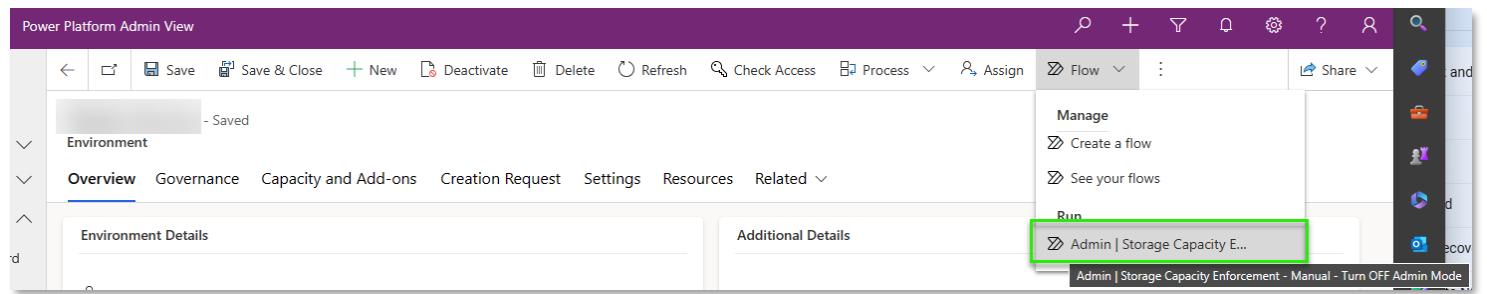
The screenshot shows the 'Power Apps | Power Platform Admin View' interface. The left sidebar includes sections like Home, Recent, Pinned, Monitor, Overview Dashboard, PowerApps Apps, Flows, Environments (which is selected), Connectors, Bots, Desktop Flows, Power Pages Sites, Audit Log, and Business Process Flows. The main area displays a list titled 'Environments Disabled by Capacity Enforcement' with the following items:

- Active Environments (Default)
- Deleted Environments Review
- ✓ Environments Disabled by Capacity Enforcement
- Environments Excused from Capacity Enforcement
- Environments Excused from Inventory
- Environments with No Storage Capacity Limits
- Environments without Environment Owner
- Managed Environments
- Microsoft Teams Environment Review

At the bottom of the list are two buttons: 'Set as default view' and 'Manage and share views'.

1. **Environments Disabled by Capacity Enforcement** – List of environments currently in admin mode due to storage capacity overage.
2. **Environments Excused from Capacity Enforcement** – This view provides the environments which have been marked as excluded from the capacity enforcement processes.
3. **Environments with No Storage Capacity Limits** – Lists the environments which have no approved storage capacity limits defined and are not set to be excluded from the capacity enforcement solution.
4. **Environments without Environment Owner** – Provides a list of the environments that do not have an environment owner defined. The Environment Owner field is used when sending emails with the solution. If no environment owner is defined, only the CoE Admin team will receive the email notifications.

## Manual Flow



### Admin | Storage Capacity Enforcement - Manual - Turn OFF Admin Mode

#### Run flow

Admin | Storage Capacity Enforcement - Manual - Turn OFF Admin Mode

Owner: [REDACTED]

This flow is triggered from the CoE Power Platform Admin View app. If an admin would like to turn off admin-mode for an environment, they can access t ...

[See more ▾](#)

This flow uses Microsoft Dataverse (legacy), Microsoft Dataverse, Power Platform for Admins, and Azure Automation.

[Review connections and actions](#)

[Run flow](#)

[Cancel](#)

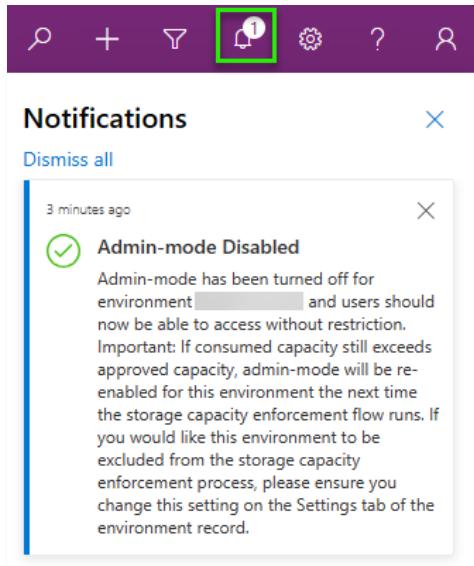
### Admin | Storage Capacity Enforcement - Manual - Turn OFF Admin Mode

#### Run flow



Your flow run successfully started. To monitor it, go to the [Flow Runs Page](#).

[Done](#)



- **Admin | Storage Capacity Enforcement – Manual – Turn OFF Admin Mode** – This flow allows a CoE admin to quickly remove admin mode for an environment, by selecting the Flow dropdown menu and clicking on the flow to execute it. It will run in the context of the current environment record that is being viewed and shortly after present an in-app notification.

## Processes / Flows

<b>Admin   Storage Capacity Enforcement – Sync CoE Solution Metadata</b>	<b>Admin   Storage Capacity Enforcement – Configure Emails</b>	<b>Admin   Storage Capacity Enforcement – Close to Capacity Alerts</b>	<b>Admin   Storage Capacity Enforcement – Turn ON Admin Mode</b>	<b>Admin   Storage Capacity Enforcement – Turn OFF Admin Mode</b>	<b>Admin   Storage Capacity Enforcement – Manual – Turn OFF Admin Mode</b>
Manually run during install, creates solution metadata to support Flow execution state (success/failures) for easy administrative insight	Manually run during install, creates email templates used to send the email notifications	Runs weekly, checks actual storage capacity consumption against approved capacity and emails CoE admins and environment owner if consumed capacity is between 80-100%	Runs weekly, checks actual storage capacity consumption against approved capacity and places environment into admin mode if > 100% allocated; sends email to environment owner and CoE admins	Runs weekly, checks actual storage capacity consumption against approved capacity for environments with admin mode enabled, if all capacity types are less than 80% of approved, admin mode is disabled; sends email to environment owner and CoE admins	Manually executed from the Power Platform Admin View app, provides CoE admins with option to disable admin mode for specific environments
Table: CoE Solution Metadata	Table: Customized Email	Table: Environment	Table: Environment	Table: Environment	Table: Environment

# Power BI Dashboard

**Disabled Environments | Storage Capacity Enforcement**

Note: This page includes details for environments that have been placed into admin-mode as a result of exceeding approved capacity thresholds

**Disabled Environment Details**

Environment Name	Environment ID	Admin Mode Enabled On	Environment Owner
Reed Test	f8t	10/9/2023 5:36:54 PM	rtest@testtestffodux.com
Reedw RW1 2023-2	1f2	10/9/2023 2:41:13 PM	rtest@testtestffodux.com

**Top 10 - % of Approved Capacity Used**

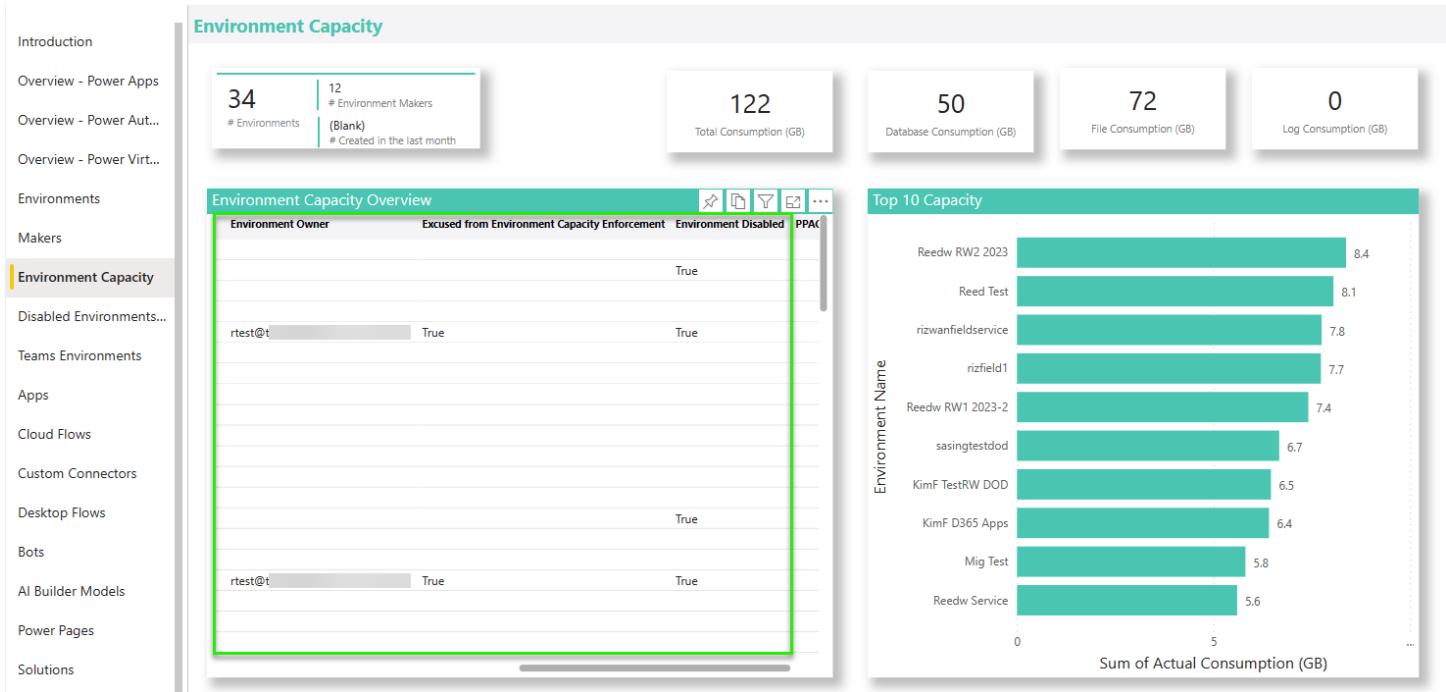
**Capacity Type** Database (Purple) File (Blue) Log (Green) Approved Capacity (Red)

Environment Name	Capacity Type	% of Approved Capacity Used
Reed Test	Database	~150%
Reed Test	File	~130%
Reedw RW1 2023-2	Database	~120%
Reedw RW1 2023-2	File	~200%

**Filters**

- Environment Name: All
- Environment Type: All
- Capacity Type: All

- **Disable Environments | Storage Capacity Enforcement** – This page includes details on the environments in your tenant which have been disabled through the Storage Capacity Enforcement solution. Some of the key metrics include:
  - Total number of disabled environments
  - Environments disabled in the past 30, 90 days
  - Total number of production, sandbox environments disabled
  - List of disabled environments including environment name, ID, date/time admin mode was enabled as well as the environment owner email address
  - List of environment-level storage capacity details broken down by Database, File and Log capacity types
  - Chart visualization highlighting the top 10 environments which have the highest amount of approved capacity overage



- **Environment Capacity** – The Storage Capacity Enforcement solution includes additional fields on the *Environments Capacity Overview* table, including:
  - Excused from Capacity Enforcement
  - Environment Disabled
  - Environment Owner

## Appendix A

### Administration Mode FAQs

#### What is administration mode?

Administration mode or “admin” mode is an optional setting at the Power Platform environment level which can be configured for sandbox, production or trial environments. Enabling admin mode prevents end users (non-admins) from accessing model-driven or Dynamics 365 apps in a Dataverse environment. Users with the System Administrator or System Customizer security roles can still access the environment and perform the same functions that their roles support whether admin mode is enabled or not.

#### Can standard (non-admin) users access model-driven apps or Dynamics 365 apps when the environment is in admin mode?

No, standard users will not be able to access model-driven or Dynamics 365 apps if the environment is in admin mode. If the user is attempting to access these apps using the Power Apps portal, they will not be listed in the Apps area (only canvas apps will be listed). If they attempt to access the app directly through the URL, they will receive a message similar to the following:

#### Notifications



Sign-in currently disabled

Only system administrators or system customizers can sign in at this time.

Contact your system administrator with questions about this message.

#### Can standard (non-admin) users access canvas apps if an environment is in admin mode?

Yes, canvas app access is configured through [app sharing](#) and does not take Dataverse security roles or permissions into consideration for access to the app itself. If a canvas app is using a Dataverse connector which connects to the Dataverse environment that has admin mode enabled, then any components surfacing data through that connector (ex. gallery, chart, etc.) will not show data in the canvas app. If there are other components and screens in the canvas app that connect to non-Dataverse resources such as SharePoint or SQL Server, those components will continue to work as expected.

#### Can standard users create canvas apps if an environment is in admin mode?

Yes, assuming the user could create canvas apps prior to admin mode being enabled, they'll be able to create new canvas apps when the environment is in admin mode since it doesn't impact the canvas app create and access capabilities.

### **Can standard users create flows if an environment is in admin mode?**

Yes, assuming the user could create flows prior to admin mode being enabled, they'll be able to create new flows when the environment is in admin mode since it doesn't impact the flow create and access capabilities.

### **Will flows in the environment continue to execute if an environment is in admin mode?**

Flow execution behavior with admin mode can vary. Flows that have Dataverse triggers may be impacted when an environment is in admin mode. Otherwise, flows that are scheduled, instant or triggered by non-Dataverse actions will most likely continue to execute whether admin mode is enabled or not.