

# Microsoft Vaccination Management in a Day

## Lab 01: System Configuration

Step-by-Step Lab

April 2021

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# Overview

## Prerequisites

*Note: If you are in an official training, the environment has been set up and provided to you.*

This is the **first** lab in a series covering Microsoft Vaccination Management (MVM). These labs follow a sequence of presentations covering an overview of Microsoft Vaccination Management, Solution Center installation, and the accompanying data model. Before beginning this lab, confirm that you have provisioned an environment with the necessary components installed as described in the following link:

- [Deploy MVM](#)

## Before you Begin

1. You must be connected to the internet.
2. Open an internet browser in either In-Private or Incognito mode.
3. Navigate to [Power Apps](#) and sign-in with your user credentials.
4. Select the correct environment from the upper-right Environment drop down.



*Note: If you notice environment sync issues during the lab, ensure that the assigned environment is **not in the Administration mode** (i.e., Administration mode should be in disabled state).*

## Recommended Resources

The following resources provide a full understanding of Microsoft Vaccination Management and its components and are helpful general resources:

- [MVM Homepage](#)
- [MVM MS Docs](#)

## Roles and Personas

This lab covers the following Microsoft Vaccination Management roles and personas:

- System Administrator
- Developer

## Goals

After this lab, you will be able to do the following:



- Explore and Enable MVM Workflows.
- Learn to update MVM Portal bindings and Bing map settings.
- Learn to enable, configure, and customize the MVM Power Automate Flows.
- Learn to integrate MVM Power Automate Email flows with a bulk email service connector.



The estimated time to complete this lab is **90** minutes.

# Exercise 1: MVM Workflows

MVM ships some workflows to automate certain business processes. After deploying the solution, you must verify and activate the workflows based on your customer requirements. Most of the workflows are automatically activated.

In this exercise, you will be playing the role of a System Administrator and explore the out of the box MVM workflows and activate the inactive workflows.

Before beginning this exercise:

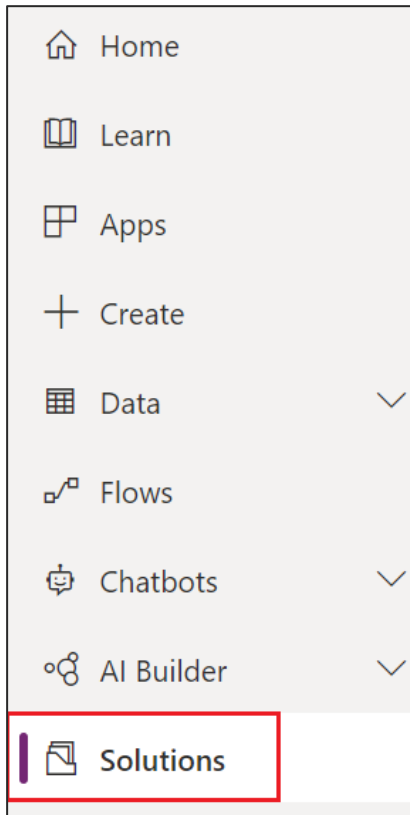
1. Navigate to [Power Apps](https://make.powerapps.com/) (<https://make.powerapps.com/>) (recommend Incognito or InPrivate session).
2. Log in using the credentials supplied in the training for your user.
3. Select the correct environment from the upper right **Environment** drop down.



## Task 1: Explore MVM workflows

In this task, you will explore and learn to activate the inactive workflows.

1. In the left pane, click on Solutions and then you can view the list of solutions deployed in the environment.



- On the **Solutions** page, click on **Vaccination Management Workflows**. This solution consists of all the workflows shipped as part of MVM.

Solutions	
Display name	
MVM In A Day	
Vaccination Management Configuration	
Vaccination Management Sample Data	
Vaccination Management Integration Anchor	
Vaccination Management Integration	
Vaccination Management Anchor	
Vaccination Management Frontline Worker	
Vaccination Management Flows	
Vaccination Management Workflows	

- Verify the **status** on each of the workflows. If any of them are turned off, open the workflow, verify the steps, and click on the **Activate** button to turn on the respective workflow as shown in the next steps.
- For example, **Vaccination – Eligibility Phase Determination** workflow is turned off by default. Click to open the **Vaccination – Eligibility Phase Determination** workflow in a new tab in your browser.

Solutions > Vaccination Management Workflows							
Display name ▾	Name	Type ▾	Managed...	Modified	Owner	Status	
Vaccination - Appointment (EMR) Booked with Primary...	Vaccination - Appointment (EMR) Booked with Primary Slot	Process	🔒	1 wk ago		On	
Vaccination - Appointment (EMR) Proposed with Prima...	Vaccination - Appointment (EMR) Proposed with Primary Slot	Process	🔒	1 wk ago		On	
Vaccination - Appointment cancellation 🗑	Vaccination - Appointment cancellation	Process	🔒	1 wk ago		On	
Vaccination - Cancel Appointment 🗑	Vaccination - Cancel Appointment	Process	🔒	1 wk ago		On	
Vaccination - Create 2nd Dose Immunization Recomm...	Vaccination - Create 2nd Dose Immunization Recommendation	Process	🔒	1 wk ago		On	
Vaccination - Eligibility Email Update 🗑	Vaccination - Eligibility Email Update	Process	🔒	1 wk ago		On	
✓ Vaccination - Eligibility Phase Determination 🗑	Vaccination - Eligibility Phase Determination	Process	🔒	1 wk ago		Off	
Vaccination - Email Update From Contact 🗑	Vaccination - Email Update From Contact	Process	🔒	1 wk ago		On	
Vaccination - Generate recommendation from phase 🗑	Vaccination - Generate recommendation from phase	Process	🔒	1 wk ago		On	
Vaccination - Recommendation copy session cookie va...	Vaccination - Recommendation copy session cookie value	Process	🔒	1 wk ago		On	
Vaccination - Set Appointment Fulfilled based on Imm...	Vaccination - Set Appointment Fulfilled based on Immunization	Process	🔒	1 wk ago		On	
Vaccination - Set Contacts Eligibility 1 to 1 🗑	Vaccination - Set Contacts Eligibility 1 to 1	Process	🔒	1 wk ago		On	
Vaccination - Set Eligibility Contact 1 to 1 🗑	Vaccination - Set Eligibility Contact 1 to 1	Process	🔒	1 wk ago		On	
Vaccination - Set Vaccine on Immunization based on V...	Vaccination - Set Vaccine on Immunization based on Vaccine E	Process	🔒	1 wk ago		On	
Vaccination - Vaccine Phase set Pending to Send 🗑	Vaccination - Vaccine Phase set Pending to Send	Process	🔒	1 wk ago		On	

5. In the workflow definition, review the logic in the lower part of the screen. This workflow contains the logic to determine eligibility and sets a phase. After reviewing the logic, select **Activate**.

File Save and Close 🗑 🔄 Activate 🔄 Convert to a background workflow 📊 Show Dependencies 📁 Solution Layers ⚙️ Actions ▾

Process: Vaccination - Eligibility Phase Determination

**Information**

**Common**

- Information
- Audit History
- Catalog Assignments
- Chatbot subcomponent...

**Process Sessions**

- Process Sessions

**General** Administration Notes

**Hide Process Properties**

Process Name \* Vaccination - Eligibility Phase Determination

Entity COVID Vaccination Eligibility

Activate As Process

Category Workflow

**Available to Run**

☐ Run this workflow in the background (recommended)

☒ As an on-demand process

☐ As a child process

**Options for Automatic Processes**

Scope Organization

Start when: After

Record is created ☒ Record status changes ☐ Record is assigned ☐ Record fields change ☒ Record is deleted ☐

Execute as: ☐ The owner of the workflow ☒ The user who made changes to the record

**Workflow Log Retention**

☒ Keep logs for workflow jobs that encountered errors

**Determination conditions**

If [COVID Vaccination Eligibility:Front Line Worker equals [Yes] OR COVID Vaccination Eligibility:Health Worker equals [Yes]] AND COVID Vaccination Eligibility:Attested equals [Yes], then:

- Set to phase 1
- Update: COVID Vaccination Eligibil Set Properties

Otherwise, if [COVID Vaccination Eligibility:Front Line Worker equals [Yes] OR COVID Vaccination Eligibility:Group Home equals [Yes]] AND COVID Vaccination Eligibility:Attested equals [Yes], then:

- Set to phase 2
- Update: COVID Vaccination Eligibil Set Properties

Otherwise, if COVID Vaccination Eligibility:Attested equals [Yes], then:

**Congratulations!** You have explored and activated all the MVM workflows.



## Exercise 2: MVM Power Portal

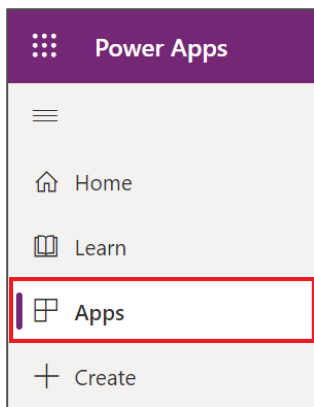
As part of the MVM deployment, Registration and booking portal is deployed however there are some post-deployment steps that needs to be done before using the portal. This exercise details those post-deployment steps.

### Task 1: Update Bing API Key and Map settings

The appointment scheduling portal lets you search for appointment locations using Bing maps. You must update the portal settings to use your Bing map keys so that users can use this feature in Registration and booking portal. You can also update the default latitude and longitude settings (currently set to the Seattle region) to ensure that the default region of the map is shown appropriately when the maps are displayed for the first time to the users.

In this task, you will learn how to update the Bing API key and other default map settings.






1. Create a [Bing Maps account](#) and [generate an API key](#). *[Note: If you are in an official training then this step is just informational, and no action is required from you because the Bing Map account would have already been set up and the API key would have been provided to you by your instructor.]*
2. Navigate to [Power Apps](#).
3. Select **Apps** on the left navigation bar and then you can view the list of solutions deployed in the environment.



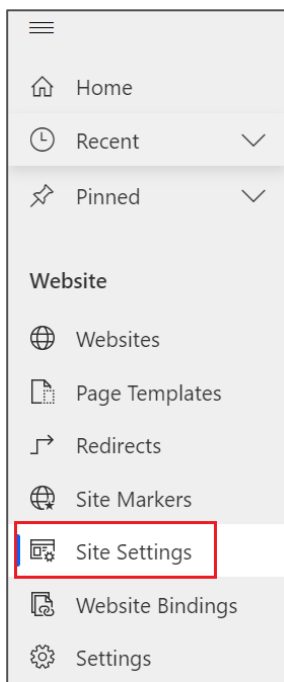
4. Find the **Portal Management** App and click on it to open it. This app consists of all the Portal settings and its metadata.

**Apps**

Apps    Component libraries (preview)

	Name		Modified
	Vaccination call center app	...	3 d ago
	Vaccination management app	...	3 d ago
	Portal Management	...	4 d ago
	Solution Health Hub	...	1 wk ago
	Registration and booking portal	...	4 d ago

5. In the left pane, click on **Site Settings**.



6. On the column **Name**, search for names that begins with "Vaccination Management/Map".

Filter by

Begins with

Vaccination Management/Map

Apply Clear

7. Select each of the following records and click on edit to update the values as per the below instructions.

- Vaccination Management/Map/Credentials:** Set the Bing API key provided by your lab instructor.
- Vaccination Management/Map/Latitude:** Set the default latitude that the map needs to display on load. For Ex: 47.6740 for Redmond.
- Vaccination Management/Map/Longitude:** Set the default longitude that the map needs to display on load. For Ex: -122.1215 for Redmond.
- Vaccination Management/Map/DefaultZoom:** Set the default zoom level which can provide you the desired resolution when the map is loaded. More details on the pixel and zoom level mapping can be found in [Map Control: Zoom Levels -> Resolution | Maps Blog \(bing.com\)](https://www.bing.com/maps/blog/2015/05/20/Map-Control-Zoom-Levels-Resolution/).

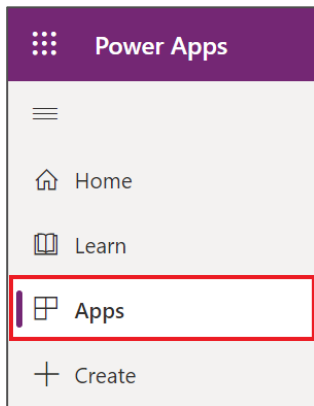
Active Site Settings		
Name	Value	Website
Vaccination Management/Map/Credentials		Vaccination Management Registration Portal
Vaccination Management/Map/DefaultLatitude	47.678630828857415	Vaccination Management Registration Portal
Vaccination Management/Map/DefaultLongitude	-122.12261962890625	Vaccination Management Registration Portal
Vaccination Management/Map/DefaultZoom	11	Vaccination Management Registration Portal

## Task 2: Update Portal Binding

By default, the portal points to the Starter Portal configuration which is the default template for a blank portal. After deploying the solution, you must change the binding of the portal to point to the new portal configuration instead of the starter portal.

In this task, you will learn how to update the portal binding after the solution deployment.

- Navigate to [Power Apps](#).
- Select **Apps** on the left navigation bar and then you can view the list of solutions deployed in the environment.



3. Find the **Registration and booking portal**. *[Note: The portal name might be different in your environment but there is only one Portal App and is the one that needs to be selected.].* This is the portal used for Registration and booking appointments.

The screenshot shows the 'Apps' list in Power Apps. At the top, there are tabs for 'Apps' and 'Component libraries (preview)'. Below the tabs are three status messages: 'Something went wrong. Please try again later.', 'Your trial portal app will expire in 19 days. To keep it, convert it to production. Learn more about trials.', and '1 environment variable needs to be updated. See environment variable'. Below these messages is a table with the following columns: 'Name', 'Modified', 'Owner', and 'Type'.

Name	Modified	Owner	Type
Vaccination site management app	1 wk ago		Model-driven
Portal Management	1 wk ago		Model-driven
Solution Health Hub	2 wk ago	SYSTEM	Model-driven
Registration and booking portal	1 d ago		Portal

4. Select **More Commands (...)** > **Browse**. This will open the **Registration and booking portal**. You may also select the app name or click Browse on the top command bar to open it.

**Apps**

Apps    Component libraries (preview)

ⓘ Your trial portal app will expire in 19 days. To keep it, convert it to production. [Learn more about trials.](#)

⚠ 1 environment variable needs to be updated. [See environment variable](#)

	Name		Modified
⚙	Vaccination site management app	...	1 wk ago
	Portal Management	...	1 wk ago
📄	Solution Health Hub	...	2 wk ago
✓	Registration and booking portal	...	1 d ago

- Edit
- Browse
- Share
- Settings
- Delete
- Details

5. You should see the **Starter Portal** template in the **Registration and booking portal**.

**Contoso Ltd**    Home    Services ▾    About us    🔍    Sign in

**Hey, welcome to Power Apps Portals!**

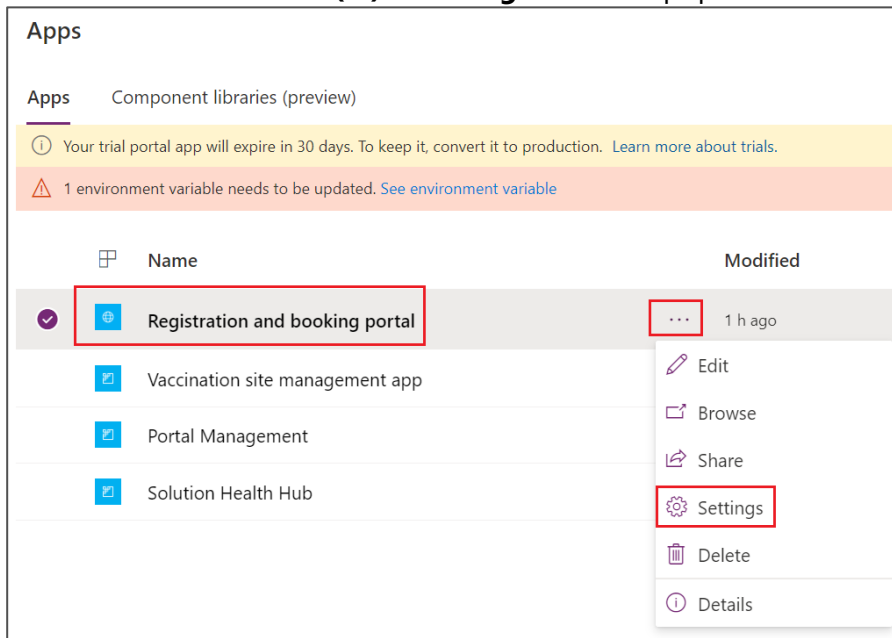
[Learn more](#)

**Getting started**

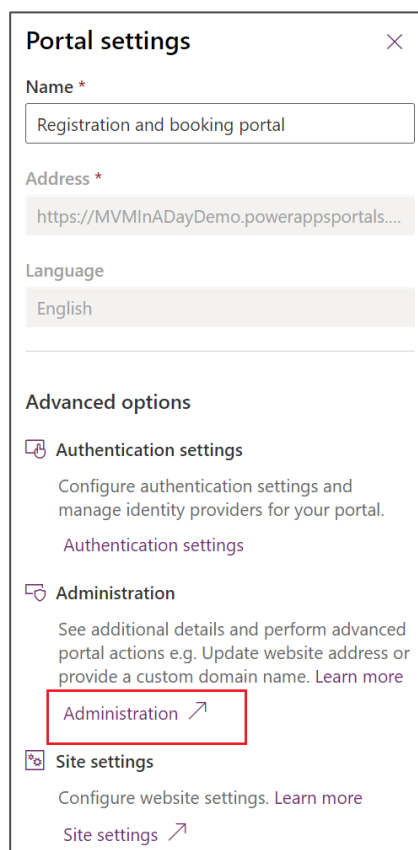
Create powerful website for users inside and outside your organization to sign in with a wide variety of identities, create and view data in Common Data Service, or even browse content anonymously.

6. Close the **Registration and booking portal** website. Now you will configure it to the **Vaccination Management Registration Portal** template.
7. Return to the **Power Apps** screen in the **Apps** section.

8. Select the **Registration and booking portal** app if it isn't already selected.
9. Select **More Commands (...)** > **Settings**. This will pop out the **Portal settings** panel on the right.



10. In the right pane, select **Administration** to open Power Apps Portals Admin Center in a new tab page.



11. This will open a new tab, the **Power Apps Portals admin center**, where you can do portal administrative tasks.
12. The page should open in the **Portal Details** tab of the Power Apps Portals admin center.

13. Scroll down to **Update Portal Binding > Select Website Record**, Open the **Select Website Record** drop down and change the current value (**Starter Portal**) to **Vaccination Management Registration Portal** and then click on **Update button**. This will bind the **Vaccination Management Registration Portal** template with this portal URL and show the proper user interface to the user.

Power Apps portals admin center

Portal Details

Portal Actions

Manage Dynamics 365 Instance

Set up SharePoint integration

Set up Power BI integration

Run Portal Checker

Manage portal authentication key

Set up IP address restriction

Portal Details

General Settings

Name \*

Registration and booking portal

Type \*

Trial

Your trial portal will expire in 28 day(s). Convert your portal to production to avoid its suspension. [Learn more](#)

Convert

Application ID

c0afd97f-9031-4f87-8753-d6ff65f3f7b8

Owner

girdhar chowhan

Portal URL

Base Portal URL

<https://MVMinADayDemo.powerappsportals.com>

Portal Audience

Portal Audience \*

Customer

Update Portal Binding

Select Website Record \*

Vaccination Management Registration Portal

Change Portal State

Portal State \*

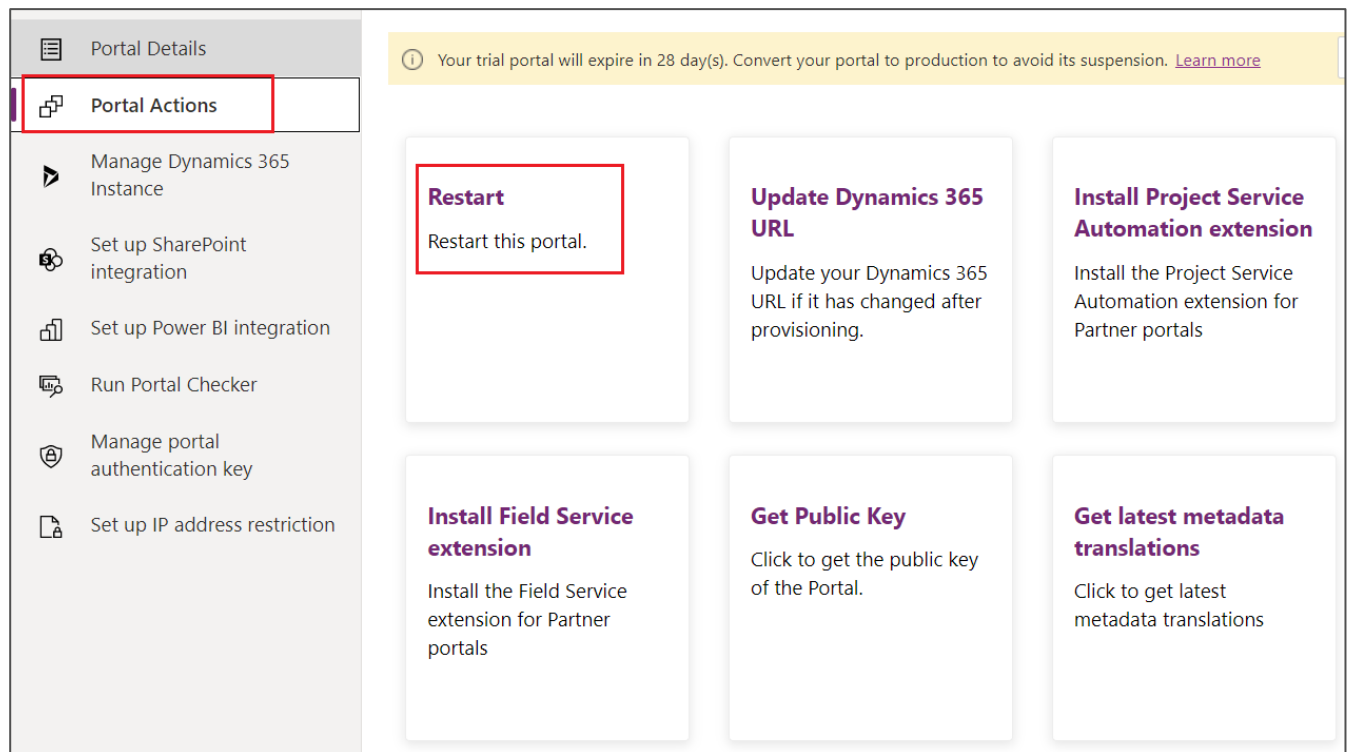
On

☐ Enable portal for early upgrade

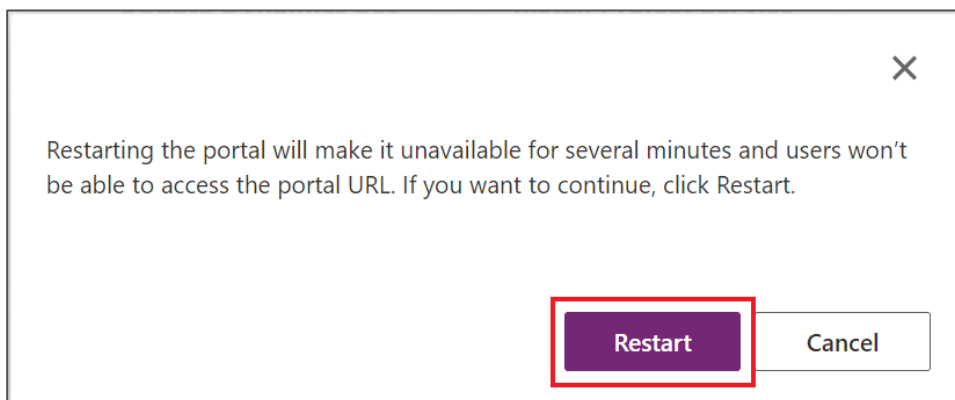
If you are a Global Administrator, click [here](#) to provide consent to your Dynamics 365 portals.

Update

1. In left pane, Select **Portal Actions** and then click **Restart** to restart the portal for the changes to take effect.

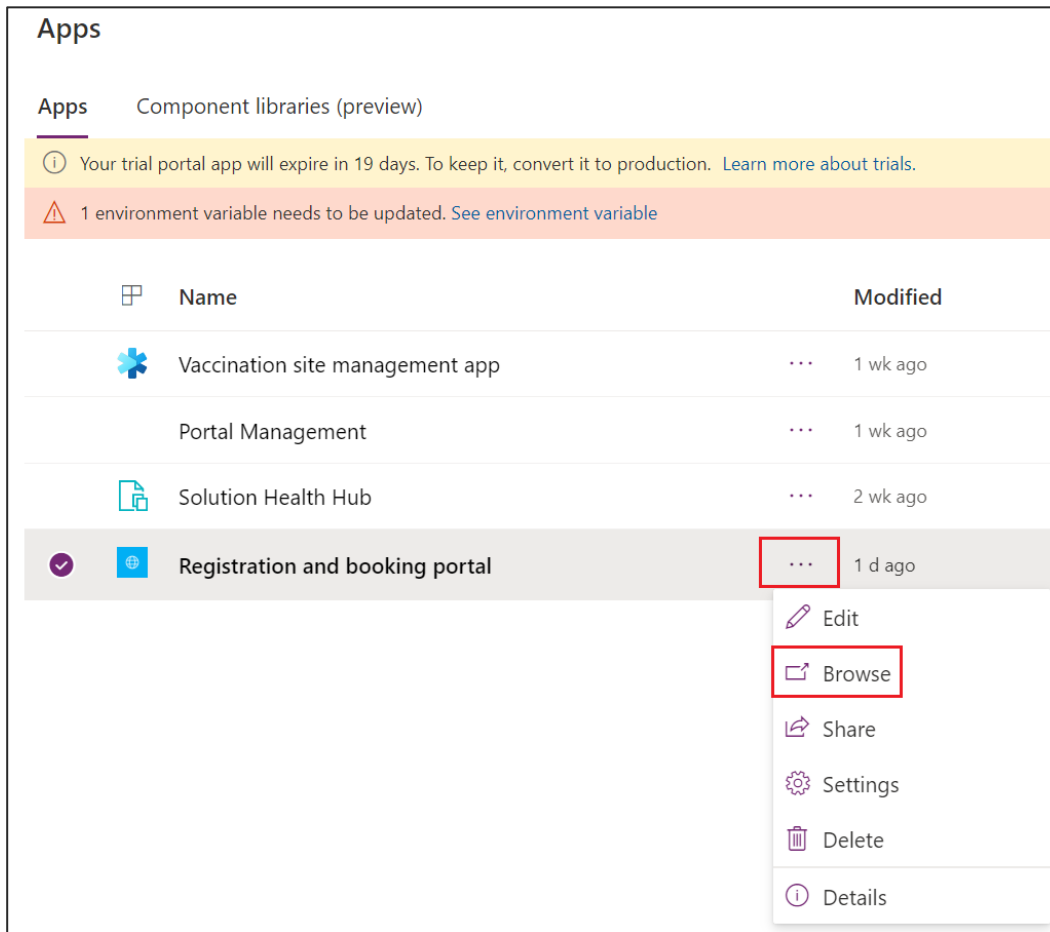


2. When prompted, confirm the **Restart** for the portal.



3. Wait 1-5 minutes for the portal to restart. (Feel free to refill your water or stretch those legs!)
  - a. You may also jump ahead to the next exercise, as we will open the portal later in the next exercise.
4. Navigate back to the Registration and booking portal.
  - b. Navigate to the [Power Apps \(https://make.powerapps.com/\)](https://make.powerapps.com/).
  - c. Select **Apps > Registration and booking Portal** app.
  - d. Open the app by selecting the app name or clicking Browse.





**Apps**

Apps Component libraries (preview)

ⓘ Your trial portal app will expire in 19 days. To keep it, convert it to production. [Learn more about trials.](#)

⚠ 1 environment variable needs to be updated. [See environment variable](#)

	Name	Modified
🌸	Vaccination site management app	⋮ 1 wk ago
	Portal Management	⋮ 1 wk ago
📄	Solution Health Hub	⋮ 2 wk ago
✓ 🌐	Registration and booking portal	⋮ 1 d ago

- Edit
- Browse**
- Share
- Settings
- Delete
- Details

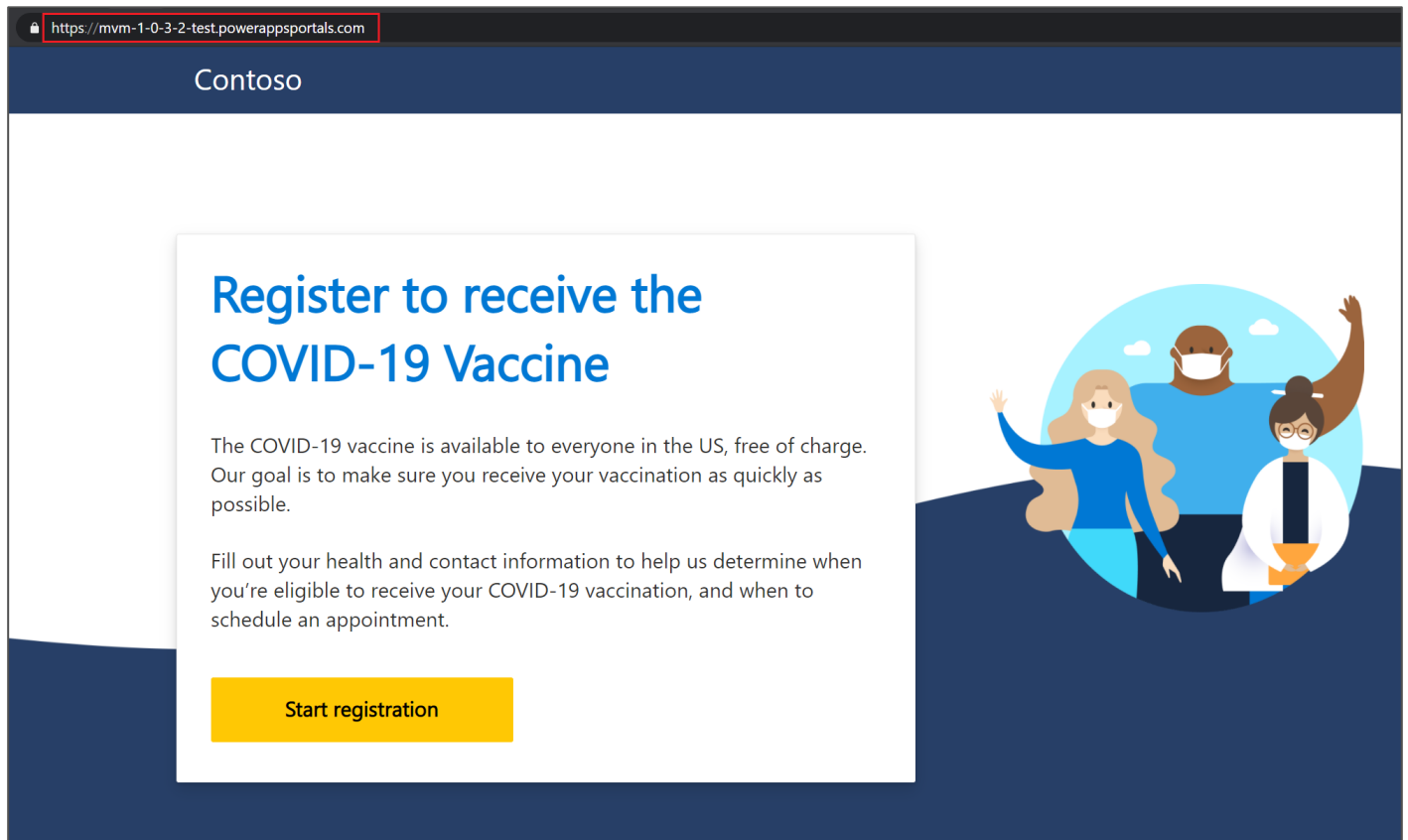
5. If you see the following error, the portal is still restarting.



**Service Unavailable**

HTTP Error 503. The service is unavailable.

6. Once the Portal is opened and running properly, it should look like the following image. Also, **copy and store the portal URL** (without 'https://') as you will be using it to update the environment variable in the next exercise.



### Task 3: Enable Virtual Waiting Room

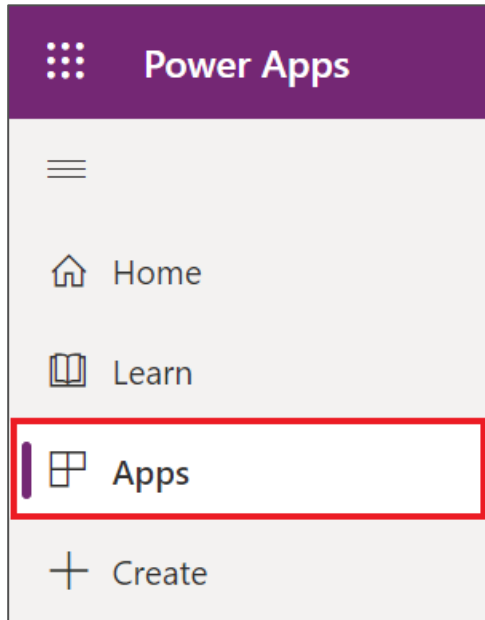
Virtual waiting room feature in MVM Registration and booking portal:

- Allows to streamline demand during burst load situations.
- Takes out the unpredictability element.
- Provides a predictable user experience which users expect from a consumer grade site.






Enabling this feature will limit the number of people allowed on the site through a virtual queue mechanism. When queue is full, new users are placed in waiting room and provided with a default page which is configurable. Every minute more users are automatically allowed into the site depending on the queue length configuration.

As part of this task, you will learn the steps to enable virtual waiting room and its parameters. In an actual customer implementation, contact Product Group before setting up any of these parameters so that based on the expected volumes, if necessary, product group can scale the portal and provide the expected parameter values.

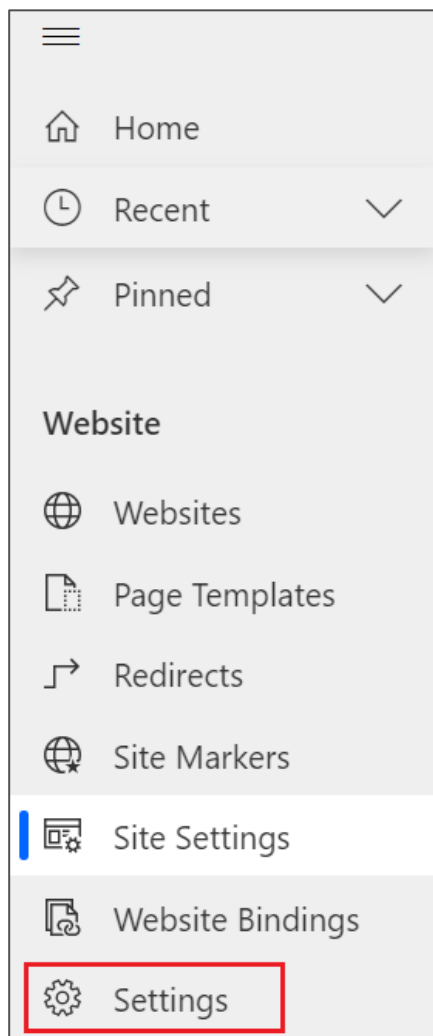
1. Navigate to [Power Apps](#).
2. Select **Apps** on the left navigation bar and then you can view the list of solutions deployed in the environment.



3. Find the **Portal Management** App and click on it to open it. This app consists of all the Portal settings and its metadata.

Apps		
Apps	Component libraries (preview)	
	Name	Modified
	Vaccination call center app	... 3 d ago
	Vaccination management app	... 3 d ago
	Portal Management	... 4 d ago
	Solution Health Hub	... 1 wk ago
	Registration and booking portal	... 4 d ago

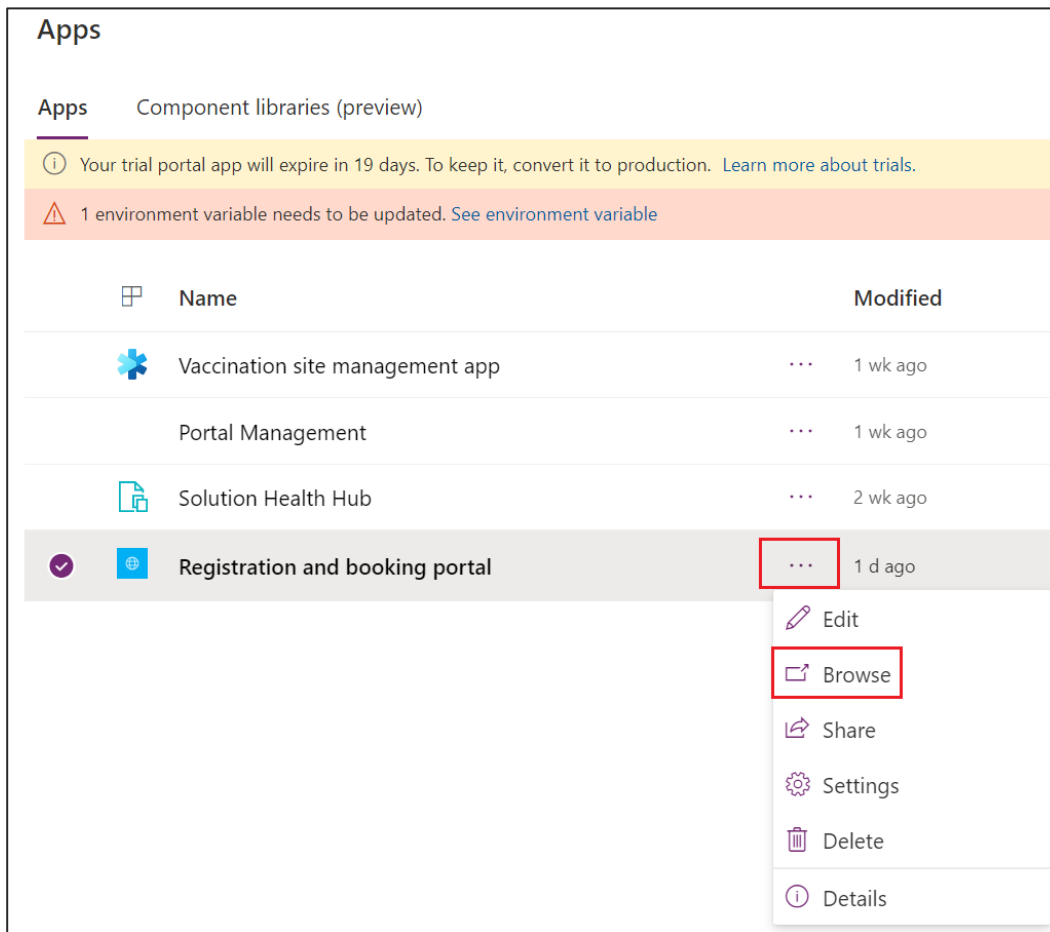
4. In the left pane, click on **Settings**.



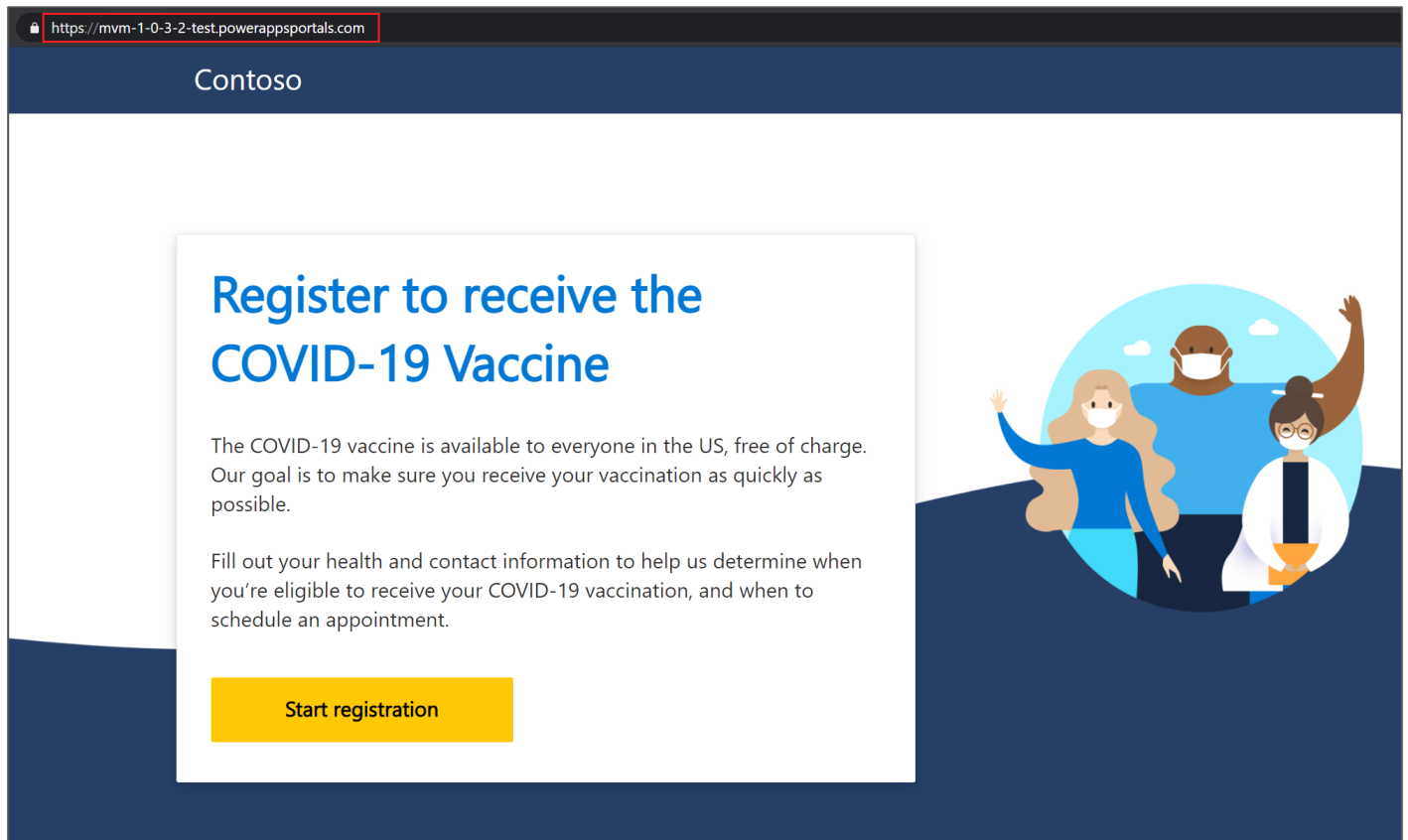
5. Select each of the following records and click on edit to update the values as per the below instructions.
  - a. On the record ending with **EnableThrottling**: To enable the virtual waiting room feature, set the value as **true**.
  - b. On the record ending with **ThrottlingCounterThreshold**: The value in this field indicates the number of users to be allowed within a specified time. In this task, to experience the waiting room feature, set the value to 1 which means only 1 session is allowed per minute and other sessions are expected to be in the virtual waiting room. However, in an actual customer implementation, contact Product Group before setting up this parameter so that based on the expected volumes, if necessary, product group can scale the portal and suggest the expected value.
  - c. On the record ending with **ThrottlingTimeout**: The value in this field indicates the time limit within which the max. number of users are to be allowed. In this task, to experience the waiting room feature, set the value to 00:01:00 which means that 1 session is allowed per minute.

✓   Name ↑ ↓	Value ↓
<a href="#">a1103dc5-a5fe-4d76-adc3-1c71c5661eb7_EnableThrottling</a>	true
<a href="#">a1103dc5-a5fe-4d76-adc3-1c71c5661eb7_ThrottlingCounterThreshold</a>	1
<a href="#">a1103dc5-a5fe-4d76-adc3-1c71c5661eb7_ThrottlingTimeout</a>	00:01:00

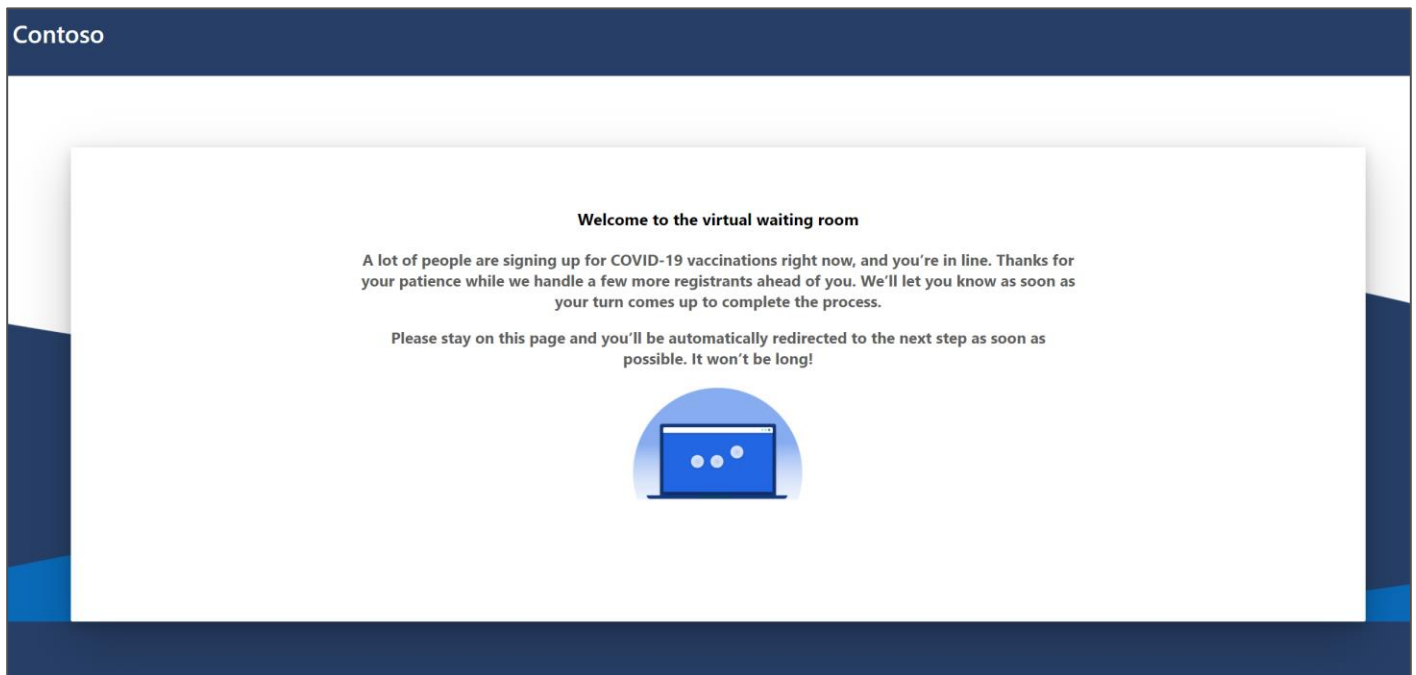
6. Navigate back to the Registration and booking portal.
  - a. Navigate to the [Power Apps \(https://make.powerapps.com/\)](https://make.powerapps.com/).
  - b. Select **Apps** > **Registration and booking Portal** app.
  - c. Open the app by selecting the app name or clicking Browse.



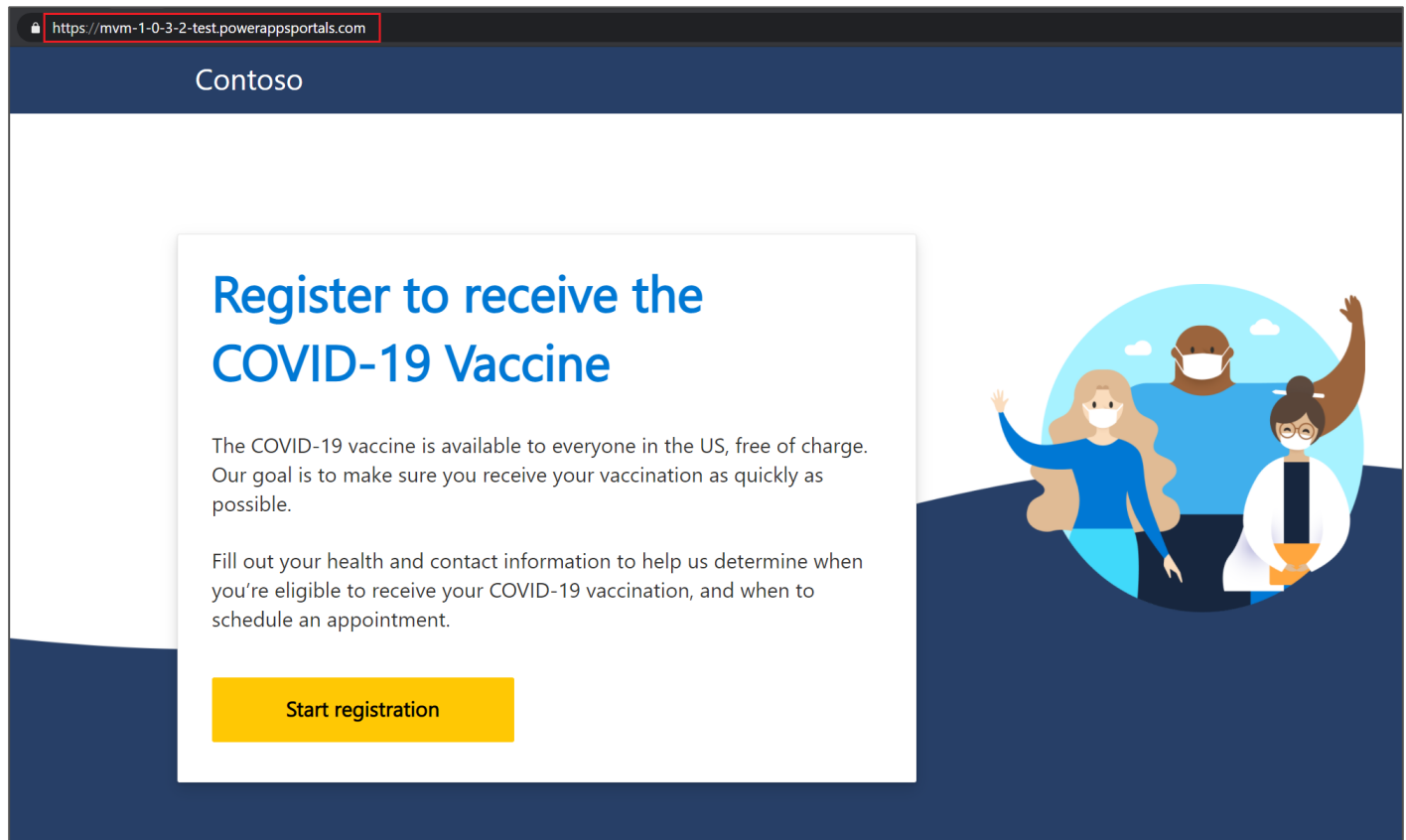
17. It should look like the following image.



18. Immediately copy and paste the portal URL into a different browser and you would see the virtual waiting room page. If you are bit late then try to open the portal in different tab pages and you will notice the difference.








19. Wait for a minute on the same page and you will then see the actual homepage of the registration portal.

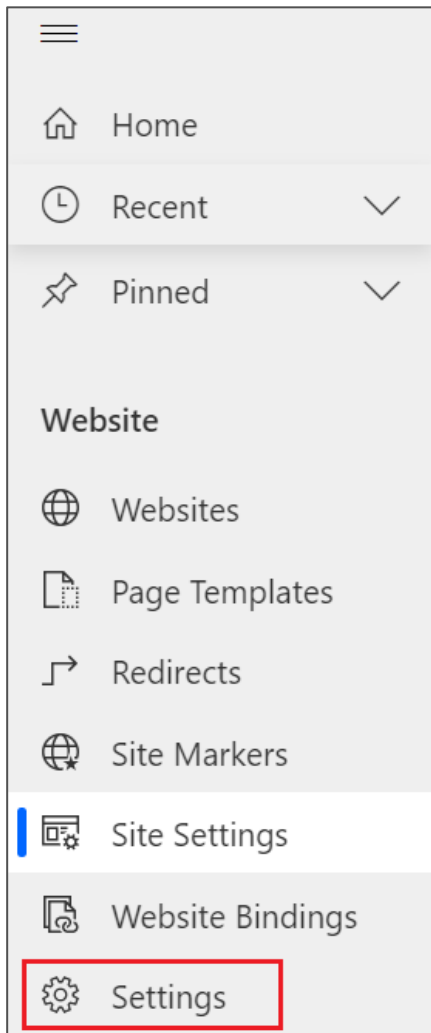


## 20. Navigate back to the Portal Management Settings Page

- Find the **Portal Management** App and click on it to open it. This app consists of all the Portal settings and its metadata.

Apps		
Apps	Component libraries (preview)	
	Name	Modified
	Vaccination call center app	... 3 d ago
	Vaccination management app	... 3 d ago
	Portal Management	... 4 d ago
	Solution Health Hub	... 1 wk ago
	Registration and booking portal	... 4 d ago

- In the left pane, click on **Settings**.



- c. Disable the virtual waiting room feature by update the value to **false** on the record ending with **EnableThrottling**.

**Congratulations!** You completed the post deployment steps to configure the Registration and booking Portal. After updating the bindings and restarting the portal, the website should now show as Vaccination Management Registration Portal template rather than Starter Portal. You have also learned the steps to enable the virtual waiting room feature.



## Exercise 3: MVM Power Automate Flows

Power Automate flows are used in MVM to automate multiple business processes such as sending registration confirmation emails, appointment reminder emails, vaccine dose reminder emails, bulk appointment slots creation etc.,

In this exercise, you will be playing the role of a System Administrator and explore the out of the box MVM flows, enable the power automate flows and customize the flows.

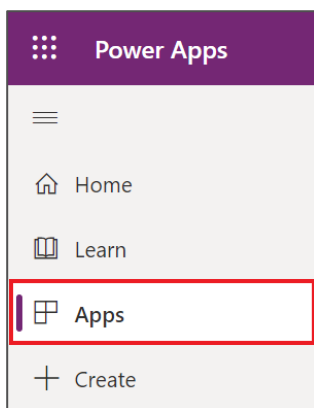
### Task 1: Update Environment Variable

Some of the Power Automate Flows handle sending of emails. These emails are based on a defined template that is filled with dynamic data. In the emails such as Appointment booking/cancellations, the URL of the Registration and booking portal is often mentioned.

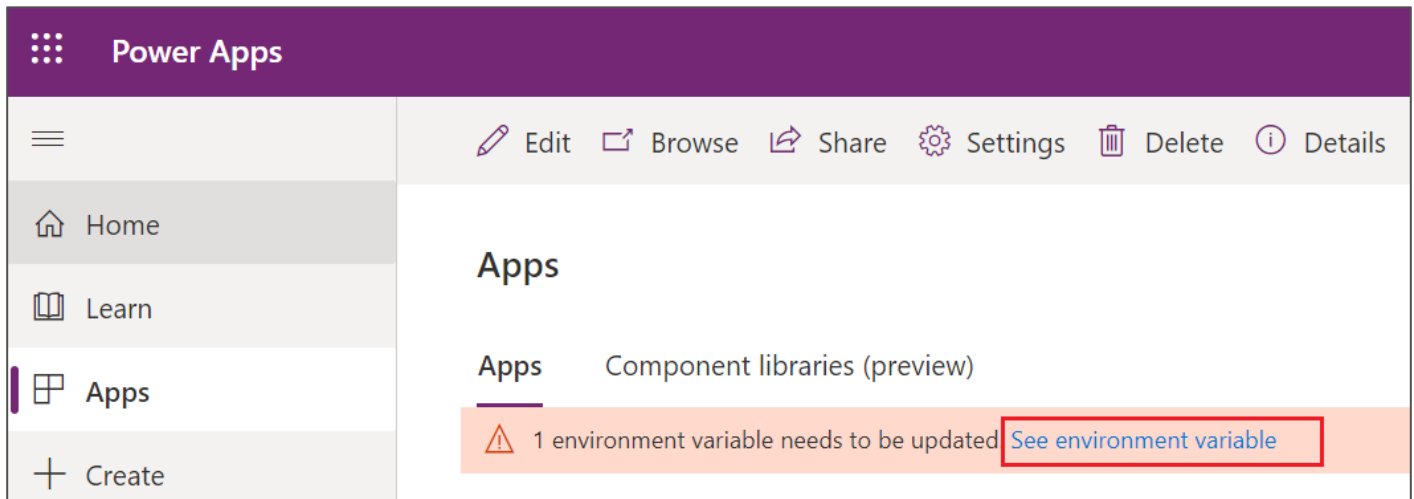
In this task, you will change that URL in the environment variable **RegistrationPortalURL** from the default one to the one that is specific to your Registration and booking Portal. This will ensure that all automatically generated emails will have the right URL to your Portal without modifying the individual flows.

See the following documentation to learn more about the [Environment Variables](#).

1. Navigate to [Power Apps](#).
2. Select **Apps** on the left navigation bar and then you can view the list of Apps deployed in the environment.



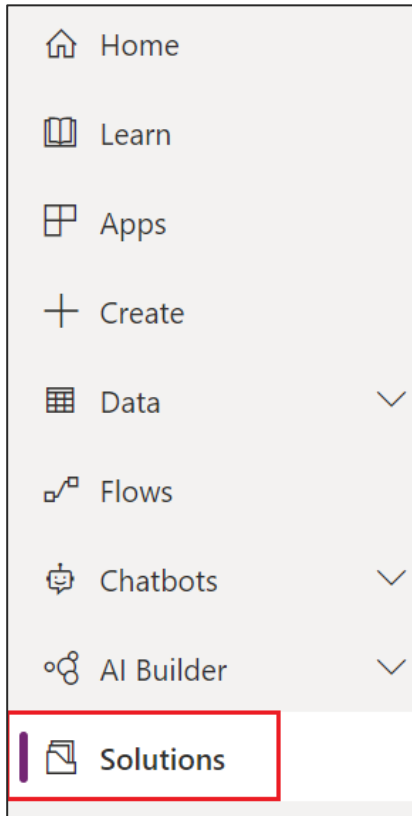
3. Click on **See environment variable**.



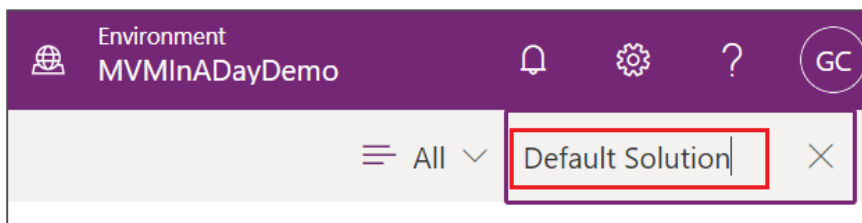
4. A pop-up screen will appear on the right to provide the environment variable **RegistrationPortalUrl**. Paste the portal URL value copied in the last step of previous exercise however make sure not to include <https://> in the value.



5. Click on the button **Save and close**.
6. Once you have done this, the "1 environment variable needs to be updated" warning message disappears. However, if you need to update it again (just in case if you have updated a wrong value in the earlier steps), follow the below steps else you can skip the below steps and proceed to the next task.
  1. In the left pane, click **Solutions**.



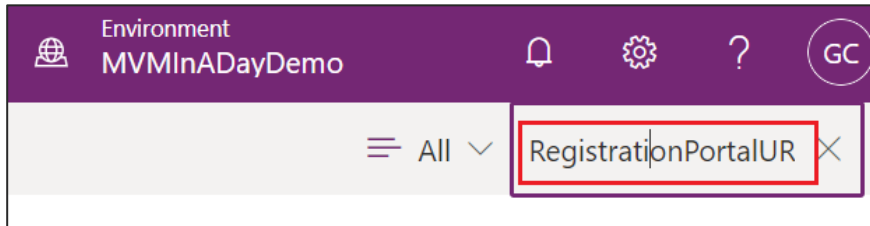
2. On the top right corner, search for the term **Default Solution**.



3. Click on **Default Solution** and it will display all the environment variables.

Solutions		
Display name		Name
Common Data Services Default Solution	...	Cr686ac
Default Solution	...	Default

4. On the top right corner, search for the environment variable **RegistrationPortalURL**



5. Click on the environment variable **RegistrationPortalUrl** to update the URL.



6. On the right pane, update the value in the field **Current Value** with the correct portal URL value (without 'https://') and then click on **Save** button.

### Edit RegistrationPortalUrl

Use this variable to store information about an app or flow. Its values can be updated as it moves to different environments. [Learn more](#)

**Display name \***

**Name \*** ⓘ

**Description**

**Data Type \***

ABC

Text

**Default Value** ⓘ

**Current Value**

Override the default value by setting the current value for your environment.

...

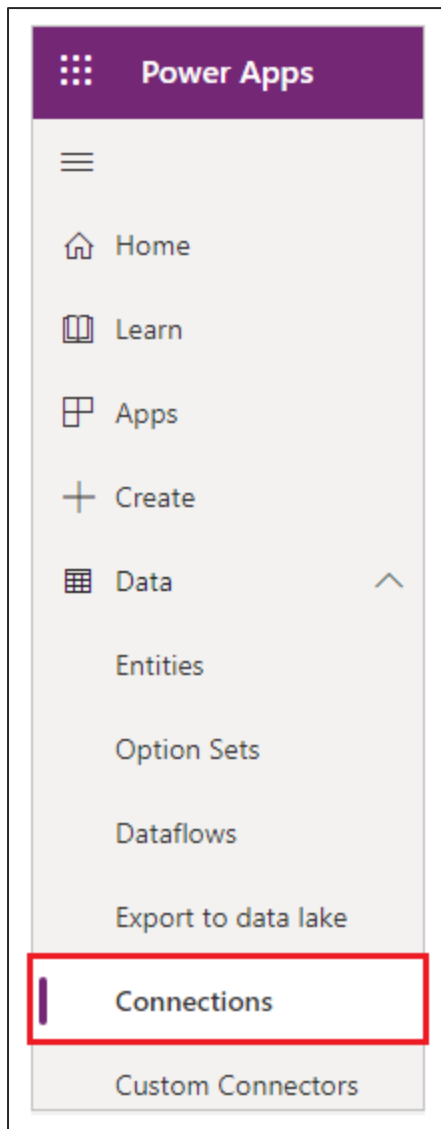
## Task 2: Create new Power Automate Connections

A connection is a proxy or a wrapper around an API that allows the underlying service to talk to Microsoft Power Automate, Microsoft Power Apps, and Azure Logic Apps. It provides a way for users to connect their accounts and use a set of pre-built actions and triggers to build their apps and workflows.

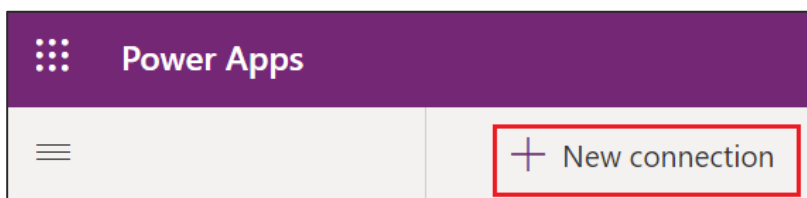
In this task, you will learn to add the connections such as **Office 365 Outlook** and **Common Data Service (current environment)** which will be used in the subsequent tasks to associate it with Connection references.

See the following documentation to learn more about the [Power Automate Connections](#).

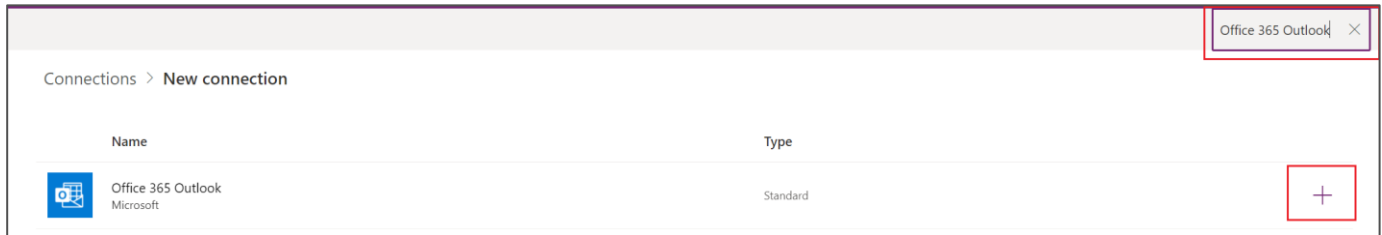
1. In the left navigation, expand **Data** and select **Connections**.



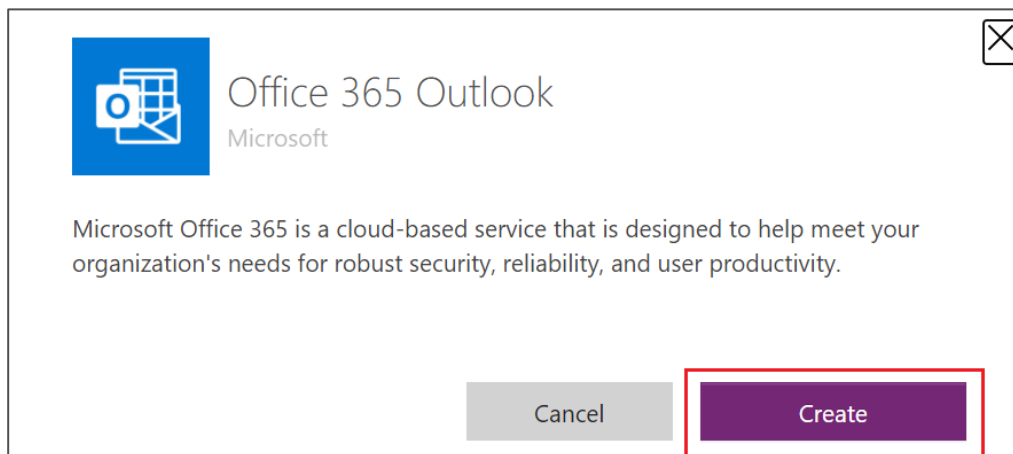
2. To add an **Office 365 Outlook connection**, select + **New connection**.



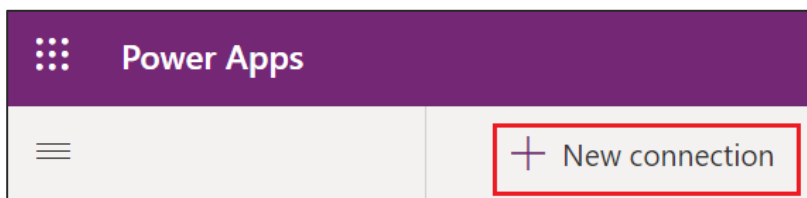
3. Search for **Office 365 Outlook** in the search bar located in the top right edge and then click on + to add the connection.



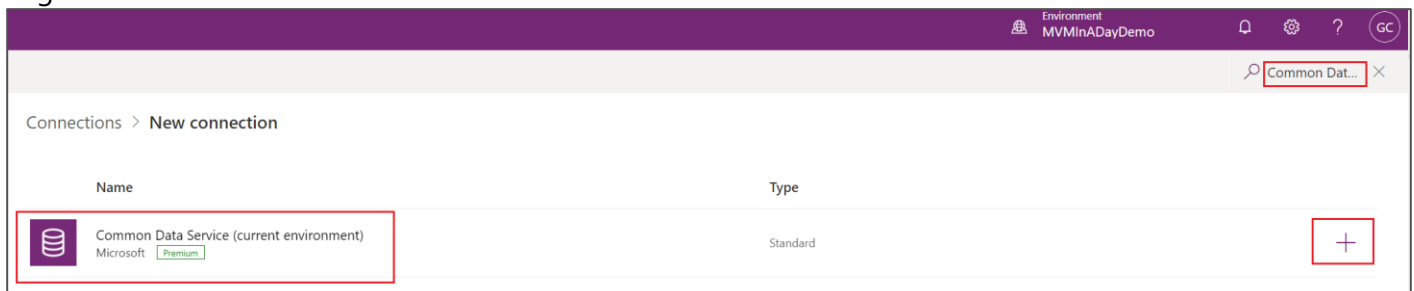
4. Select the **Create** button on the dialog box.



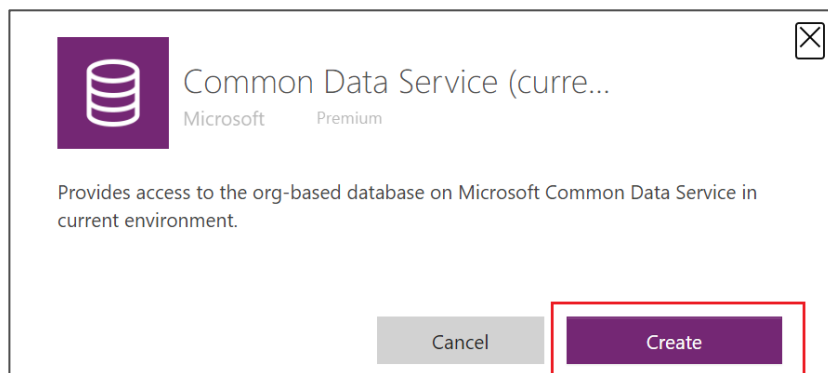
5. This connector will prompt for credentials. These account/connection details will be used by the **Office 365 Outlook** connector in the **MVM Power Automate** email related flows to send emails (i.e., this account will be considered as "From email address" in all outgoing emails which uses this connector). Hence, provide a **no-reply** email account credentials provided by your lab instructor.
6. To add a **Common data service (current environment)** connection, Select + **New connection**.



7. Search for **Common data service (current environment)** in the search bar located in the top right edge and then click on + to add the connection.



8. Select the **Create** button on the dialog box.



9. This connector will prompt for credentials. These account/connection details will be used by the **Common Data Service(current environment)** connector in the **MVM Power Automate** flows to perform CRUD operations on this environment's database. For this task, you can use your In A Day user account (credentials that you are using to login to [Power Apps](#)) to establish the connection however in a customer's environment, make sure to use a dedicated service account instead of a user's account.

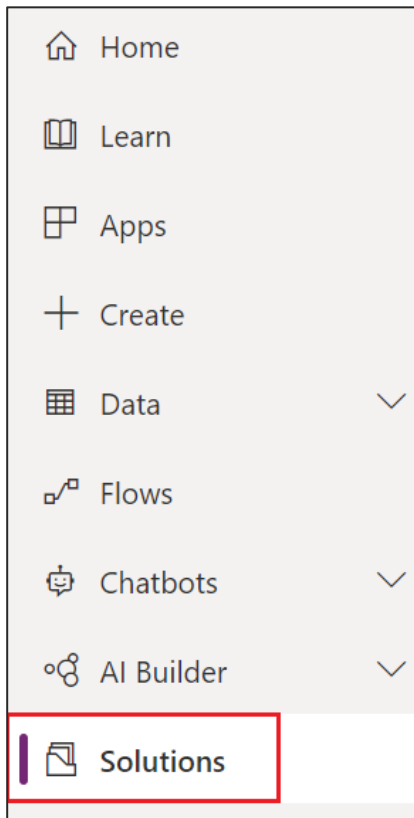
### Task 3: Link Connections to MVM Connection References

A connection reference is a solution component that contains information about a connector. The operations within a Power Automate flow bind to a connection reference. You need to update the connection references used by Microsoft Vaccination Management to point to the connections created as part of the earlier task.

See the following documentation to learn more about the [Connection references](#) and [Connectors](#).

In this task, you will be using an unmanaged Solution **Vaccination Management Configuration** and update the connection on the connection references with the new connections which were created as part of the earlier task.

1. In the left pane, click **Solutions** and then you can view the list of solutions deployed in the environment.

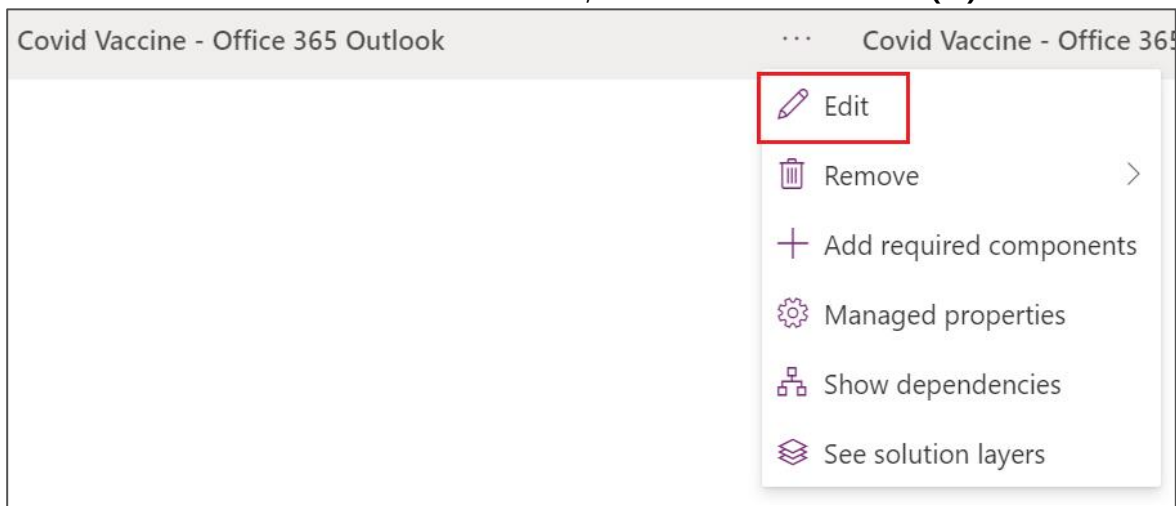


2. On the **Solutions** page, select **Vaccination Management Configuration** solution. This is an unmanaged solution where all the connection references used in the product are present and allows you to link them to the appropriate connections created as part of earlier task.

Solutions			
Display name		Name	Created ↓
Vaccination Management Anchor	...	VaccinationManage...	3/20/2021
Vaccination Management Configuration	...	VaccinationManage...	3/20/2021
Vaccination Management Frontline Worker	...	VaccinationManage...	3/20/2021
Vaccination Management Flows	...	VaccinationManage...	3/20/2021



3. On the **Covid Vaccine – Office 365 Outlook**, Select **More Commands (...)** > **Edit**.



4. On the **Edit Connection Reference pane>Connection field**, select an existing Office 365 Outlook connection from the list which was created as part of Task 2.

 A screenshot of the 'Edit Covid Vaccine - Office 3...' pane. The pane contains several fields: 'Display name \*' (with value 'Covid Vaccine - Office 365 Outlook'), 'Name \*' (with value 'msemr\_sharedoffice365\_5fe3b'), 'Add a description' (empty), 'Connector \*' (with value 'Office 365 Outlook'), and 'Connection \*' (with value '@PowerPlatformOpenHacks.onmicr...'). The 'Connection \*' field is highlighted with a red rectangular box. There is also a 'Refresh' button next to the 'Connection \*' field.

5. Repeat steps 3 and 4 to establish connections on the connection references for **Covid Vaccine - Flows CDS Connector** and **Covid Vaccine - Flows CDS Connection #2**.

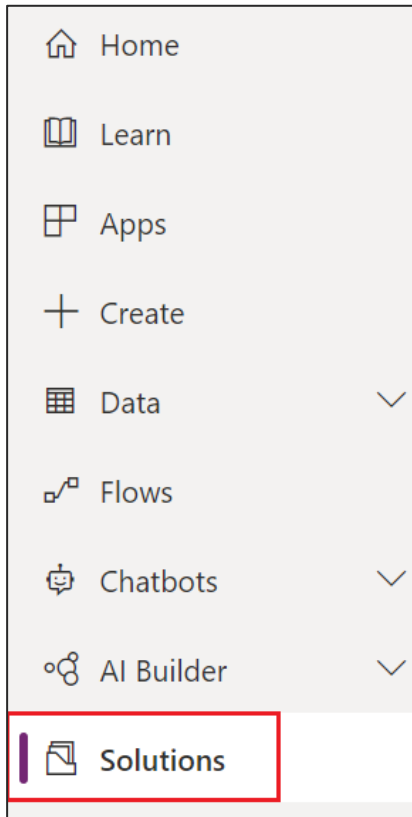
## Task 4: Create a Solution

In this task, you will learn to create a solution to group all the changes that you will be doing in the subsequent tasks and exercises. Solutions are used to transport apps and components from one environment to another or to apply a set of customizations to existing apps. A solution can contain one or more apps as well as other components such as site maps, tables, processes, web resources, choices, flows, and more.

Solutions are the mechanism for implementing application lifecycle management (ALM) in Power Apps and other Power Platform products, such as Power Automate. For detailed information about the solution concepts and how solutions are used for application lifecycle management, see [Overview of ALM with Microsoft Power Platform](#) in the Power Platform ALM guide.

See the following documentation to learn more about the [Solutions](#).

1. In the left pane, click on **Solutions** and then you can view the list of solutions deployed in the environment.

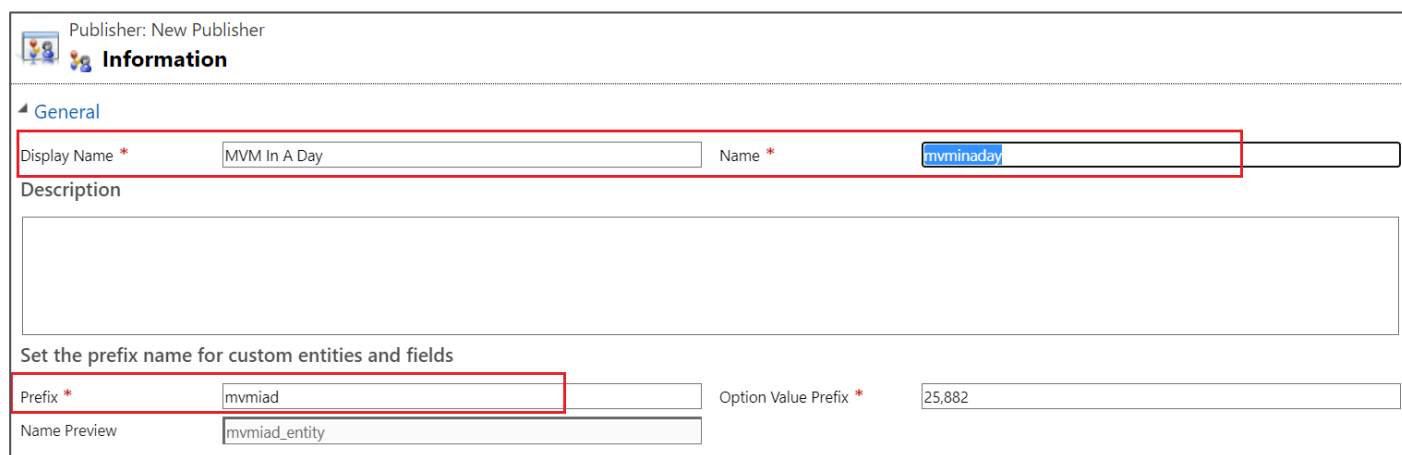


2. On the **Solutions** page, click on **New solution** in the command bar.
3. In the right pane, select the **Publisher** drop down list and then select **+ Publisher** to create a new Published record in a new tab page in your browser. The solution publisher indicates who developed the app. For this reason, you should create a solution publisher that is meaningful. For more information about the solution publisher, see [Solution publisher](#) in the Power Platform ALM guide. Once a publisher has been set-up, it can be linked to every (new) solution created.



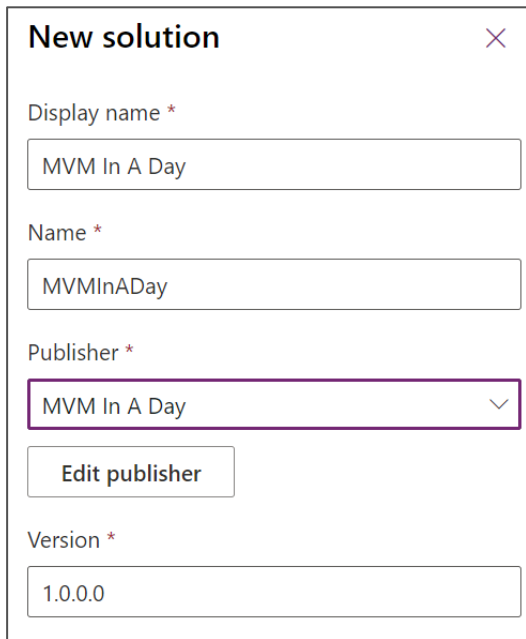
4. In the **New Publisher** form, enter the required and optional information:

- Display Name:** Enter the display name for the publisher. For Ex: MVM In A Day
- Name:** Enter the unique name for the publisher. This is generated using the value you enter in the Display Name. You can edit this before you save the publisher record. For Ex: mvminaday
- Prefix:** Enter the publisher prefix you want. For Ex: mvmiad
- Option Value Prefix:** This column generates a number based on the publisher prefix. This number is used when you add options to choices and provides an indicator of which solution was used to add the option.
- Contact Details:** Optionally, you can add contact and address information.
- Click on **Save and Close** on the top left.



5. On the Power Apps screen, In the right pane, enter the required and optional values to create a solution:

- Display name :** The name will be displayed in the list of solutions. For Ex: MVM In A Day
- Name:** The unique name of the solution. This is generated using the value you enter in the Display Name column. You can edit this before you save the solution, but after you save the solution, you can't change it. For Ex: MVMInADay
- Publisher:** It is recommended to create a publisher for your organization to use consistently across your environments where you will use the solution. For Ex: MVM In A Day
- Version:** Enter a number for the version of your solution. This is important if you export your solution. The version number will be included in the file name when you export the solution. For Ex: 1.0.0.0



**New solution** ✕

Display name \*

MVM In A Day

Name \*

MVMInADay

Publisher \*

MVM In A Day ✓

Edit publisher

Version \*

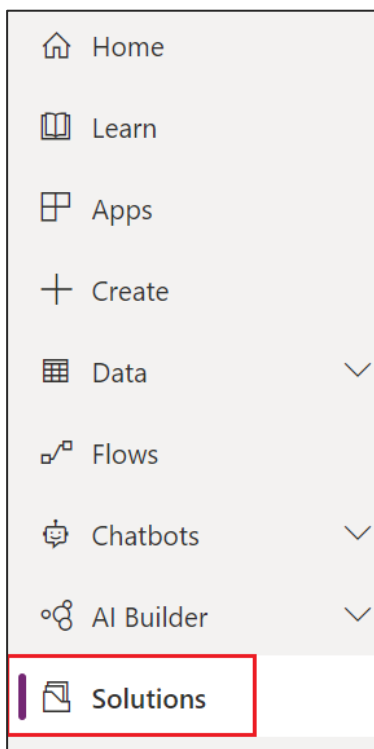
1.0.0.0

6. Click on **Create**.

## Task 5: Explore and Enable MVM Power Automate Flows

In this task, you will explore the out of the box MVM Power Automate Flows.































1. In the left pane, click on **Solutions** and then you can view the list of solutions deployed in the environment.



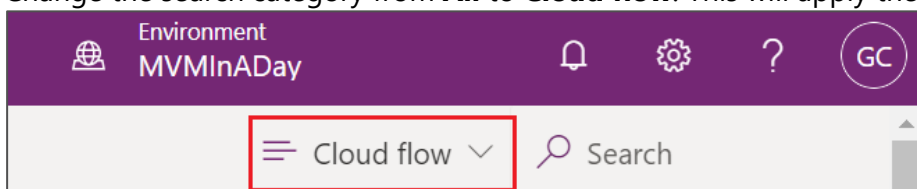
2. On the **Solutions** page, click on **Vaccination Management Flows**. This solution consists of all the Power Automate flows and its related components shipped as part of MVM.

Solutions
Display name
Vaccination Management Frontline Worker
Environment Variable
Vaccination Management Workflows
Vaccination Management Integration Anchor
Vaccination Management Integration
Vaccination Management Flows

3. You can now view the list of out of the box MVM power Automate flows which help in accomplishing multiple business requirements.

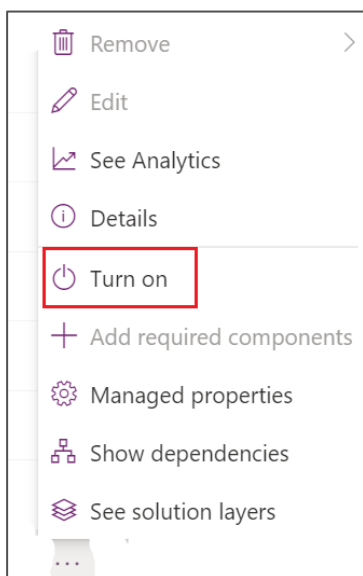
Solutions > Vaccination Management Flows				
Display name ▾		Name	Type ▾	Managed...
Bulk Appointment Slots Creator 	...	Bulk Appointment Slots Creator	Cloud flow	
Covid Vaccine - Flows CDS Connection #2	...	Covid Vaccine - Flows CDS Connection #2	Connection Reference	
Covid Vaccine - Flows CDS Connector	...	Covid Vaccine - Flows CDS Connector	Connection Reference	
Covid Vaccine - Office 365 Outlook	...	Covid Vaccine - Office 365 Outlook	Connection Reference	
Email Appointment Reminder 	...	Email Appointment Reminder	Cloud flow	
Email Booking Cancellation (Provider Cancelled) 	...	Email Booking Cancellation (Provider Cancelled)	Cloud flow	
Email Booking Cancellation (Resident Cancelled) 	...	Email Booking Cancellation (Resident Cancelled)	Cloud flow	
Email Booking Confirmation 	...	Email Booking Confirmation	Cloud flow	
Email Registration Confirmation (Lastname: A-M) 	...	Email Registration Confirmation (Lastname: A-M)	Cloud flow	
Email Registration Confirmation (Lastname: N-Z) 	...	Email Registration Confirmation (Lastname: N-Z)	Cloud flow	
Email Vaccine 1st Dose Reminder 	...	Email Vaccine 1st Dose Reminder	Cloud flow	
Email Vaccine 2st Dose Reminder 	...	Email Vaccine 2st Dose Reminder	Cloud flow	
Email VIS Document 	...	Email VIS Document	Cloud flow	
Get Environment Variable 	...	Get Environment Variable	Cloud flow	
RegistrationPortalUrl	...	msemr_RegistrationPortalUrl	Environment variable	
Process no-show appointments 	...	Process no-show appointments	Cloud flow	
Process Null Appointments 	...	Process Null Appointments	Cloud flow	

4. Change the search category from **All** to **Cloud flow**. This will apply the filter to list only the Cloud Flows.



5. Make sure that the **Status** on each of the below four base flows are **On** as these flows are used as child flows in other flows.
- Send Email (Phase Opening)** – This is used as a child flow by the **Process Phase Opening** flow.
  - Send Email (Registration)** - This is used by the **Email Registration Confirmation** flows to send emails to the residents.
  - Send Email with Attachment (Base)** – This is used as a child flow by the **Email VIS Document** flow to send vaccine information statement as an attachment once resident receives the vaccine.
  - Send Email (Generic)** – This is used as a child flow by all other remaining flows which sends emails.

If any of them are not turned on then select **More Commands (...)** > **Turn On**.



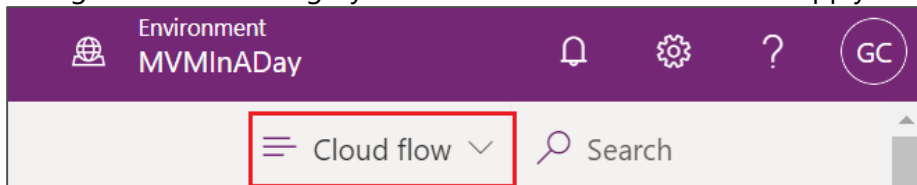
6. Based on the customer requirements, you can turn on the required flows in the remaining list of flows. The definitions for each of the flows is listed in the below table:

Flow	Definition
<b>Email Booking Confirmation</b>	Trigger: Every record created in Appointments (Vaccination) table Steps in each run: 3 Max run per day: 166,000

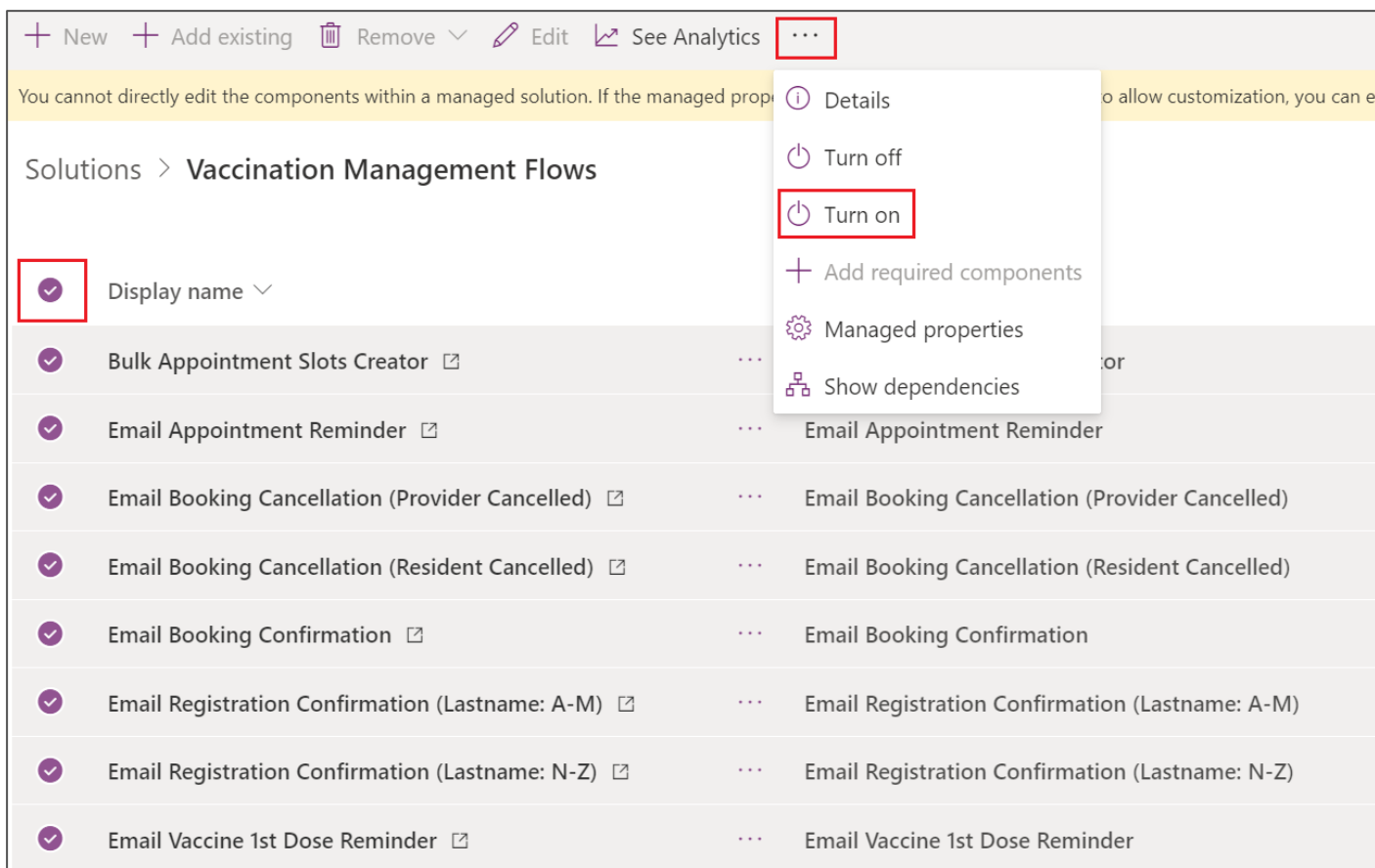
	Uses email child flow: Yes Uses environment variable child flow: Yes
<b>Email Appointment Reminder</b>	Trigger: Every 1 hour (max 5,000 records per run) Steps in each run: 10 Max run per day: 50,000 Uses email child flow: Yes Uses environment variable child flow: Yes
<b>Email Booking Cancellation (Canceled by resident)</b>	Trigger: Every time a record updates in Appointments (Vaccination) table and marked as canceled Steps in each run: 5 Max run per day: 100,000 Uses email child flow: Yes Uses environment variable child flow: Yes
<b>Email Booking Cancellation (Canceled by provider)</b>	Trigger: Every time a record updates in Appointments (Vaccination) table and marked as canceled pending Steps in each run: 7 Max run per day: 71,000 Uses email child flow: Yes Uses environment variable child flow: No
<b>Email Vaccine Dose Reminder</b>	Trigger: When a row is created in Immunization Recommendation Steps in each run: 6 Max run per day: 83,000 Uses email child flow: Yes Uses environment variable child flow: Yes
<b>Email VIS Document</b>	Trigger: When a row is created in Immunization Steps in each run: 6 (assume one doc per vaccine) Max run per day: 83,000 Uses email child flow: Yes Uses environment variable child flow: No
<b>Bulk Appointment Slots Creator</b>	Trigger: When a new site schedule is created Steps in each run: $31 + \text{"days"} \times \text{"intervals"} \times \text{"slots per interval"} \times 20$ Max run per day: Depends on the steps, which depend on number of slots needed to be created in each run Uses email child flow: No Uses environment variable child flow: No
<b>Process Phase Opening</b>	Trigger: When a new site schedule is created Steps in each run: 12 (with phase re-evaluation enabled); 10 (without phase re-evaluation enabled)

	<p>Max run per day: Depends on number of records the phase is opened for. Max 41,000 records per day with phase re-evaluation enabled. Max 50,000 records per day without phase re-evaluation enabled.</p> <p>Uses email child flow: Yes (when phase re-evaluation enabled)</p> <p>Uses environment variable child flow: Yes</p>
--	--

7. Change the search category from **All** to **Cloud flow**. This will apply the filter to list only the Cloud Flows.



8. For this task, we can turn on all the flows by selecting all flows and then select **More Commands (...)** > **Turn On** in the command bar as would be using them in the later labs. In case you see any errors then turn on each of the flows.



## Task 6: Update Email Template

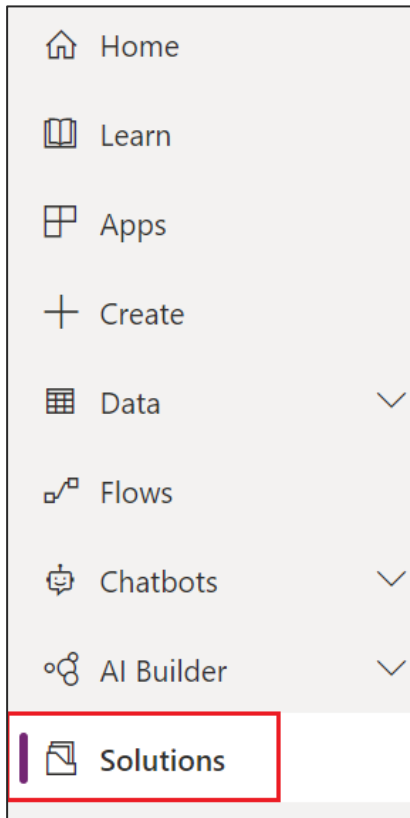
Each flow which needs to send email has the email content and subject, and can be customized, if needed. All emails are sent using **Send Email (Phase Opening)**, **Send Email (Registration)**, **Send Email with Attachment (Base)** and **Send Email (Generic)** flows that adds header and footer to each email. You



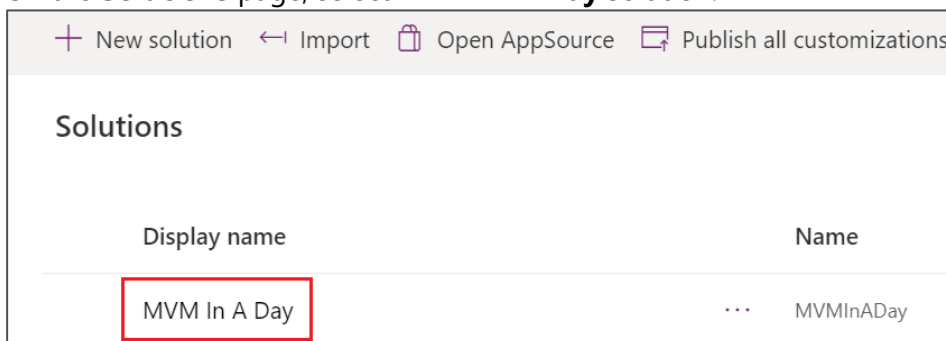
can customize the organization name, logo, banner shared for all emails in these flows based on the customer requirements.

In this task, you will learn to update the logo and banner in the MVM base email flows.

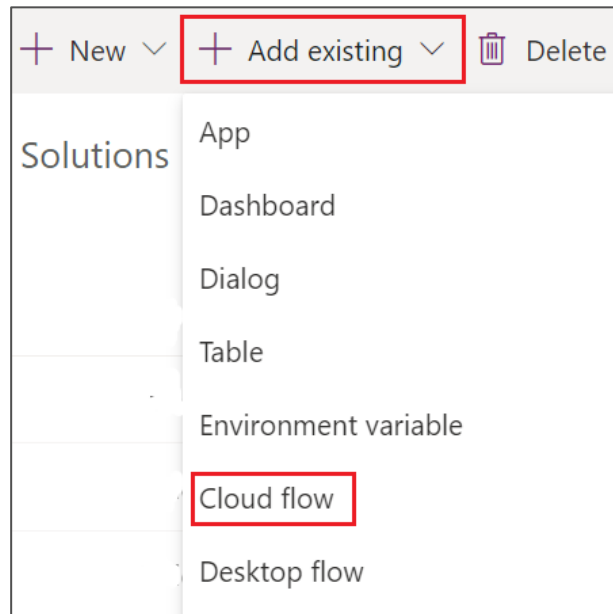
1. In the left pane, click on **Solutions** and then you can view the list of solutions deployed in the environment.



2. On the **Solutions** page, select **MVM In A Day** solution.



3. In the **MVM In A Day** solution, click on **+ Add existing > Cloud flow** in the command bar.



4. On the right pane, select **Send Email (Phase Opening)**, **Send Email (Registration)**, **Send Email with Attachment (Base)** and **Send Email (Generic)** flows and click on **Add** to add them into the solution.

### Add existing cloud flows

Select cloud flows from other solutions or cloud flows that aren't in solutions yet. Adding cloud flows that aren't already in solutions will also add them to Common Data Service.

4 cloud flows selected Cloud flow Search cloud flows

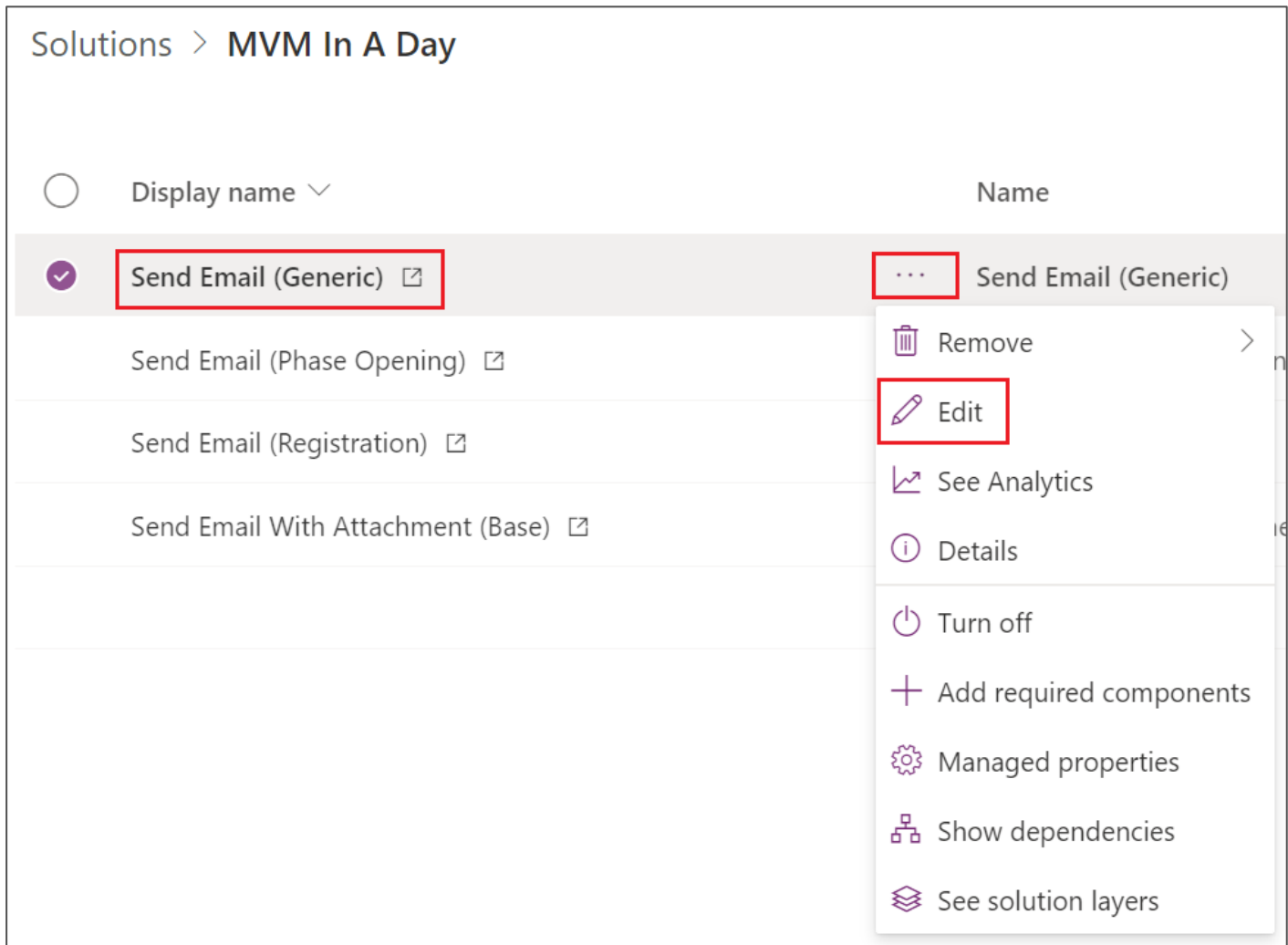
From solutions

Outside solutions

Email registration confirmation (Base)	3 d ago		On
Email Vaccine 1st Dose Reminder	3 d ago		On
Email Vaccine 2st Dose Reminder	3 d ago		On
Email VIS Document	3 d ago		On
Get Environment Variable	3 d ago		On
Process no-show appointments	3 d ago		On
Process Null Appointments	3 d ago		On
Process Phase Opening	3 d ago		On
Process Tentative Slots	3 d ago		On
Process unattested registrations	3 d ago		On
Re- Send Email Appointment Reminder	3 d ago		On
<input checked="" type="checkbox"/> Send Email (Generic)	3 d ago		On
<input checked="" type="checkbox"/> Send Email (Phase Opening)	3 d ago		On
<input checked="" type="checkbox"/> Send Email (Registration)	8 h ago		On
<input checked="" type="checkbox"/> Send Email With Attachment (Base)	3 d ago		On
Vaccination - Clear Web Form Session Cookies Hourly	3 d ago		On
Vaccination - Clear Web Form Sessions Hourly	3 d ago		On
Vaccination - Clear Web Session Challenge	3 d ago		On

Add
Cancel

- On the **Send Email (Generic)** flow, Select **More Commands (...)** > **Edit** to open and edit the flow in a new tab page in the browser.



- Click on the **Send an email** step and replace the base URL (highlighted in the below screenshot) with the Registration and Booking Portal URL copied in Exercise 2->Task 2>Step 19 to update the Company logo and background image in the email. Similarly, you can add header text and update footer text in the base email template.

Send an email

\* To: Email x

\* Subject: EmailSubject x

\* Body

```
</>
<div style="max-width:640px">
 </img>
<br>
 </img>
<br>
EmailBody x
<br> <br>

Please continue to wear a mask, wash your hands and practice social distancing. For more on
preventing the spread of COVID-19,
visit <a href="https://www.cdc.gov/coronavirus/2019-ncov">https://www.cdc.gov/coronavirus/2019-
ncov</a>
<br> <br>
Contoso Healthcare
<br> <br>
<i>Please do not reply to this message. This is an unmonitored email address.</i>
</div>
```

Show advanced options ▾

7. Follow similar steps (Steps 5 & 6) on **Send Email (Phase Opening)**, **Send Email (Registration)**, **Send Email with Attachment (Base)** flow to have a consistent email template.

**Congratulations!** You have explored the OOB MVM Power automate flows, created a solution and learned to configure/customize the MVM Power Automate Flows.

## Exercise 4: Integrate MVM Email Flows with Bulk Email Service

[Microsoft Exchange Online](#) is not a bulk email service, and has a limit of 10,000 emails per day per mailbox, which will not suffice for typical email volumes required for vaccination management scenarios and hence it requires customers to have their own bulk email service as per their choice and compliance needs that they can use to send emails for various scenarios including registration confirmation, booking invitations, appointment confirmation and cancellations, appointment reminders, immunization records etc. While the actual number of emails sent will vary for each deployment based on your registration and vaccination volumes, the number of emails can be *excessively high per day during peak times*.

Customer implementations can extend the [standard Power Automate flows](#) in Microsoft Vaccination Management to integrate Microsoft Vaccination Management with the third-party bulk email provider of their choice.

Some of the popular bulk email services like [SendGrid](#) have standard Power Automate connectors that can be used by customers or other bulk email services can be integrated by building a Power Automate custom connector.

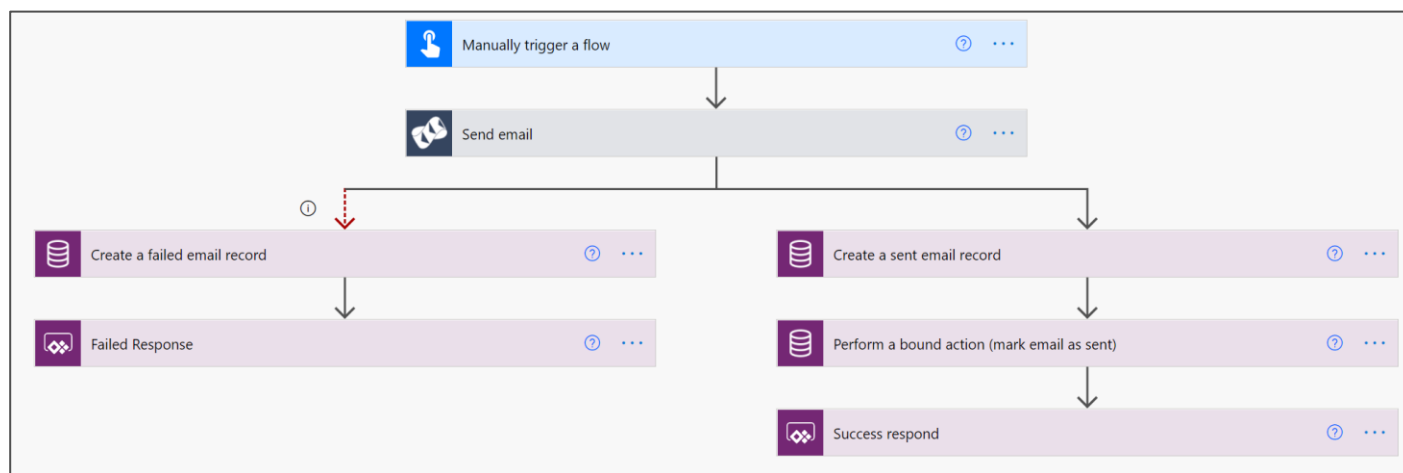
In this exercise, you will learn to extend an email flow to integrate with SendGrid Service as an example to send higher volumes of emails.

See the following documentation to learn more about the [Sending limits in Exchange](#).

### Task 1: Extend an Email flow to integrate with Bulk email service

In this task, you will learn to use SendGrid connector as an example to send higher volumes of emails.

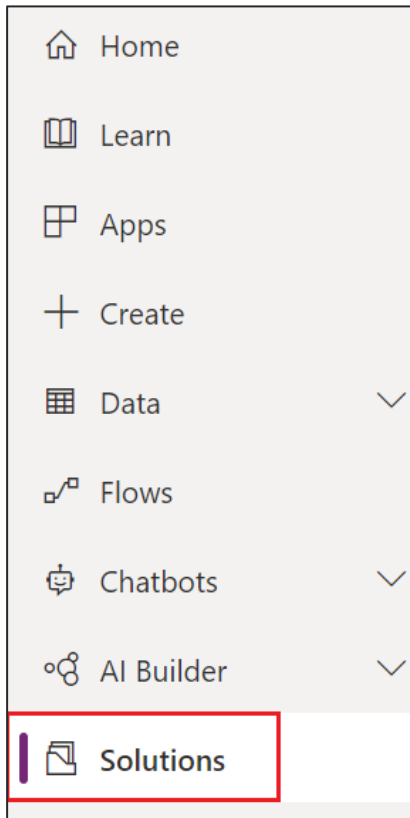
See the following documentation to learn more about the [SendGrid Connector](#).



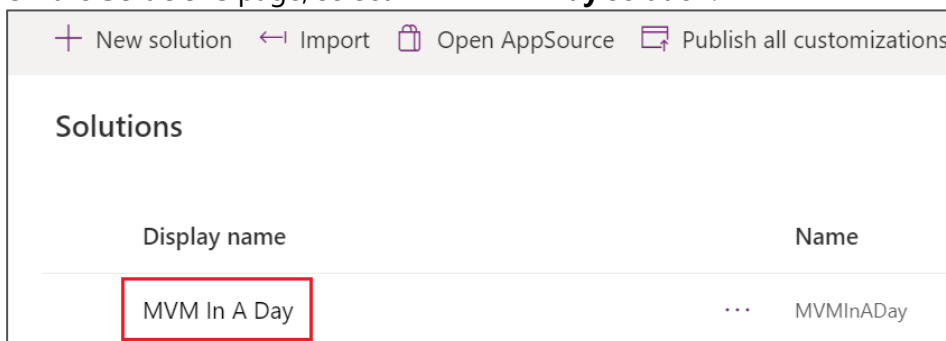
1. Create a SendGrid account either directly in [SendGrid](#) or via [Azure Portal](#) and then create an API key.  
*[Note: If you are in an official training then this step is just informational, and no action is required from*

*you because the SendGrid account would have already been set up and the API key would have been provided to you.]*

2. Navigate to [Power Apps](#).
3. In the left pane, click on **Solutions** and then you can view the list of solutions deployed in the environment.



4. On the **Solutions** page, select **MVM In A Day** solution.



5. On the **Send Email (Registration)** flow, Select **More Commands (...)** > **Edit** to open and edit the flow in a new tab page in the browser.

Solutions > MVM In A Day

Display name ▾	Name
Send Email (Generic) <a href="#">↗</a>	Send Email (Generic)
Send Email (Phase Opening) <a href="#">↗</a>	Send Email (Phase Opening)
<input checked="" type="checkbox"/> Send Email (Registration) <a href="#">↗</a>	Send Email (Registration)
Send Email With Attachment (Base) <a href="#">↗</a>	Send Email With Attachment (Base)

- Remove
- Edit
- See Analytics
- Details
- Turn off
- Add required components
- Managed properties
- Show dependencies
- See solution layers

6. Click on **Send an email** step and copy the content in the body as you will be using it in the later step.



**Send an email**

\* To: Email x

\* Subject: EmailSubject x

\* Body

```

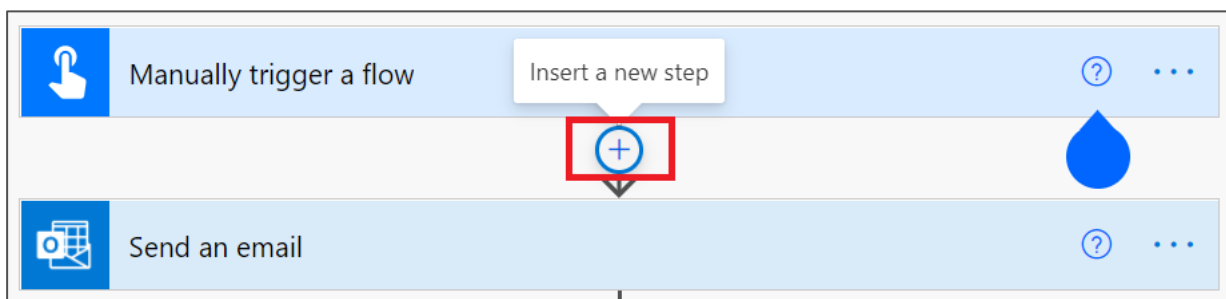
</>
<div style="max-width:640px">
 </img>
<br>
 </img>
<br>
EmailBody x
<br><br>

Please continue to wear a mask, wash your hands and practice social distancing. For more on
preventing the spread of COVID-19,
visit <a href="https://www.cdc.gov/coronavirus/2019-ncov">https://www.cdc.gov/coronavirus/2019-
ncov</a>
<br><br>
Contoso Healthcare
<br><br>
<i>Please do not reply to this message. This is an unmonitored email address.</i>
</div>

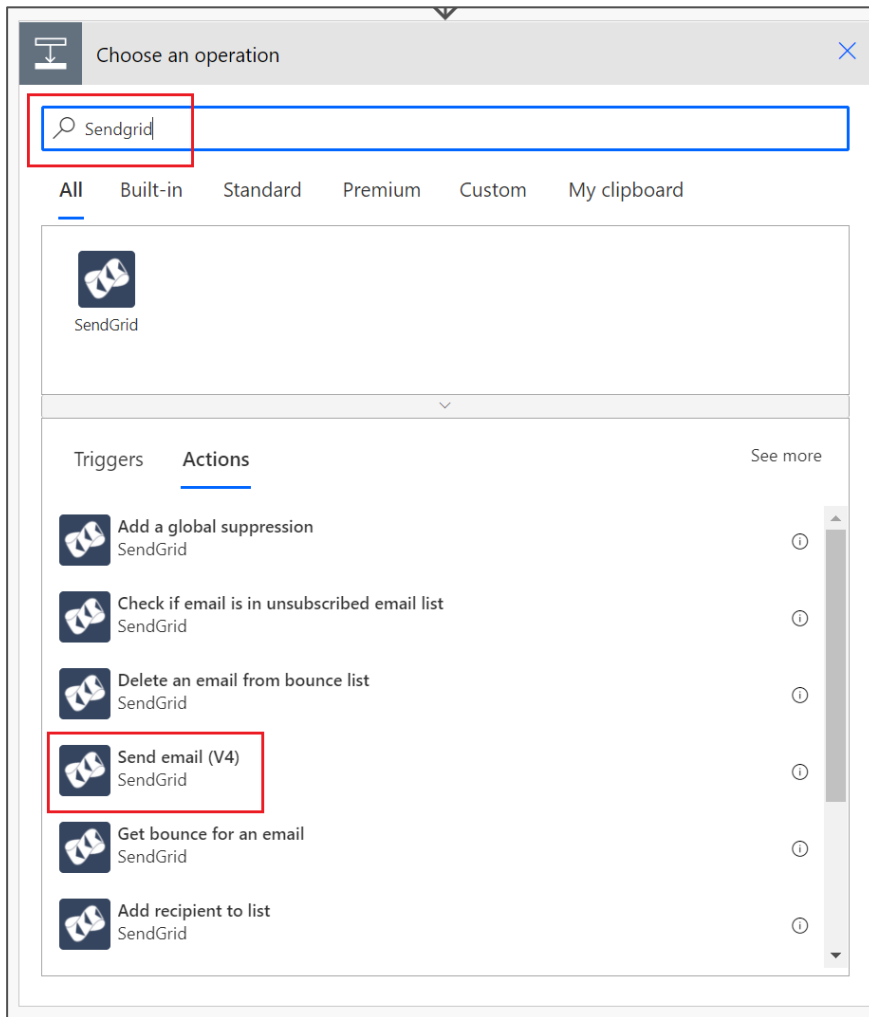
```

Show advanced options ▾

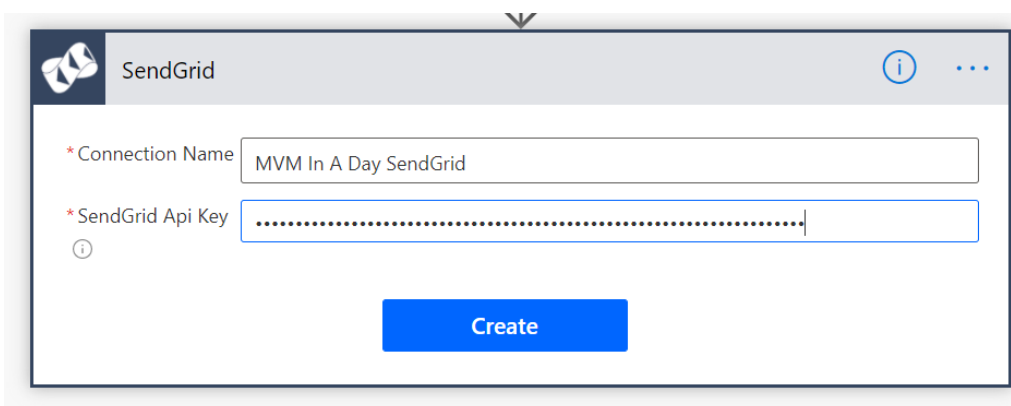
- Click on the button + to add a new step in between **Manually trigger a flow** step and **Send an email** to the flow.



- Search and add a SendGrid's **Send email (v4)** action and rename it to **Send email**.

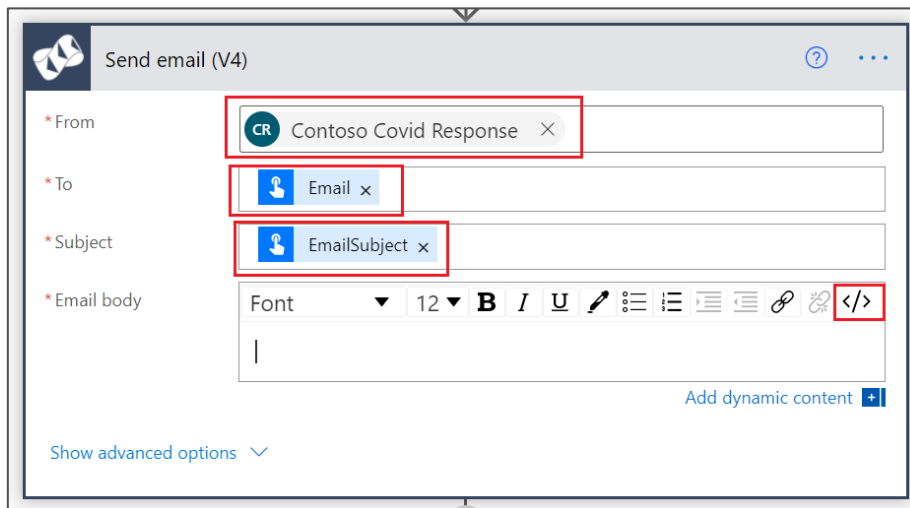


9. Provide a **Connection name** (For Ex: MVM In A Day SendGrid), enter the API Key in the **SendGrid API key** and then click on **Create** to establish a connection with SendGrid server. *[Note: If you are in an official training, use the SendGrid API key provided by your lab instructor.]*

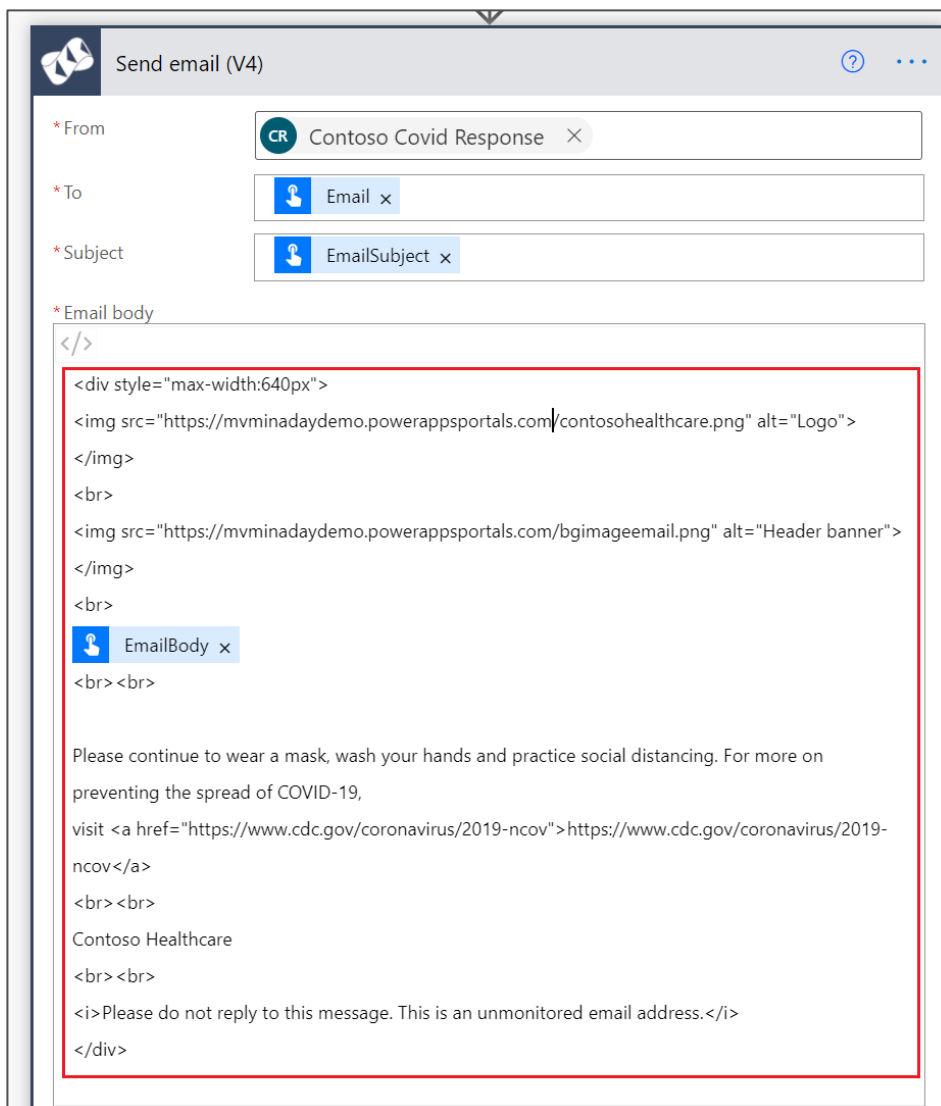


10. Provide the details as mentioned below:
- From:** Use a no-reply email address. *[Note: If you are in an official training, use the no-reply email address provided by your lab instructor.]*
  - To:** Add a dynamic content **Email**.

- c. **Subject:** Add a dynamic content **EmailSubject**.
- d. **Email body:** Click on `</>` symbol on the format bar in Email body and replace the code with the html code copied in Step 6.



The screenshot shows the 'Send email (V4)' form. The 'From' field contains 'Contoso Covid Response' with a 'CR' icon. The 'To' field contains 'Email' with a person icon. The 'Subject' field contains 'EmailSubject' with a person icon. The 'Email body' field is empty. The format bar above the 'Email body' field shows various icons, including the code symbol icon (`</>`) which is highlighted with a red box. Below the format bar, there is a link 'Add dynamic content' with a plus icon. At the bottom left, there is a link 'Show advanced options' with a downward arrow.



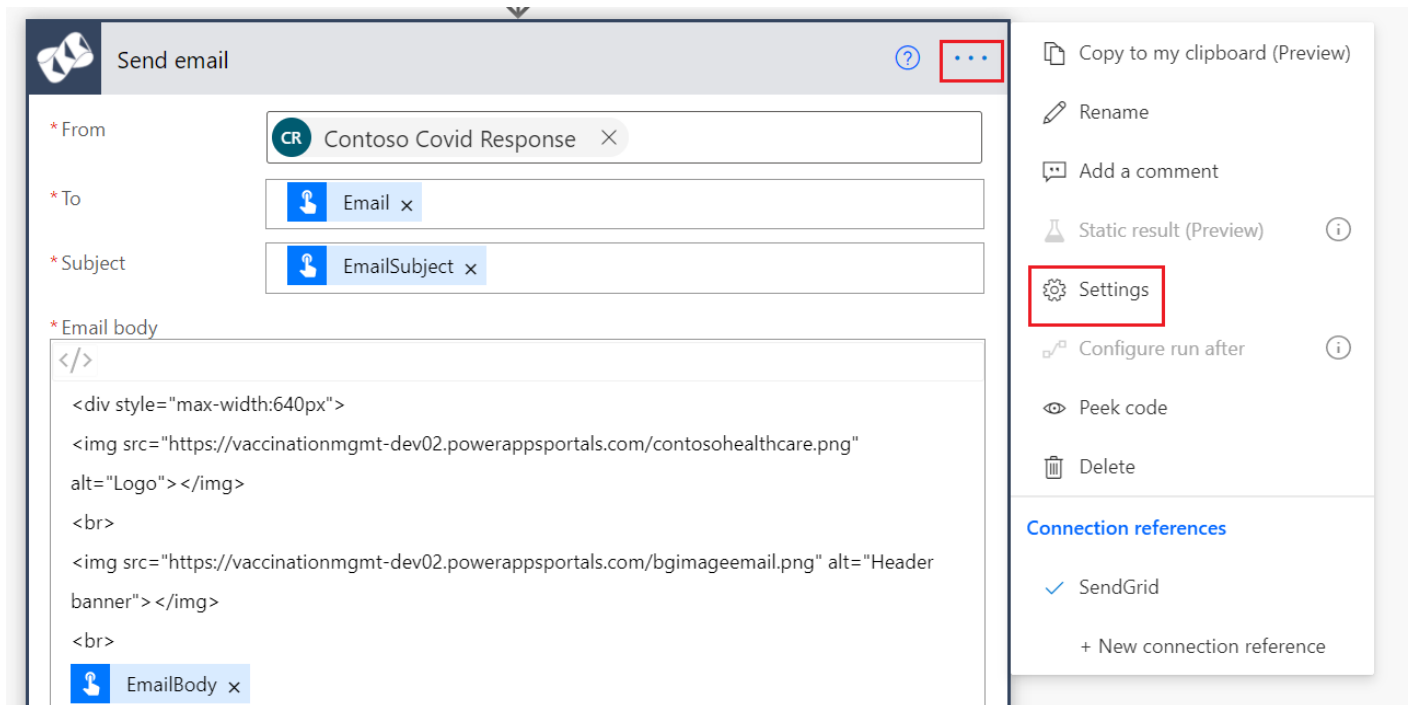
The screenshot shows the 'Send email (V4)' form with the 'Email body' field populated with HTML code. The code is enclosed in a red box. The code starts with a closing code symbol icon (`</>`) and is followed by a series of HTML tags and text. The code includes a logo, a header banner, and a paragraph of text. The code is as follows:

```
</>
<div style="max-width:640px">

</img>
<br>

</img>
<br>
EmailBody
<br> <br>

Please continue to wear a mask, wash your hands and practice social distancing. For more on
preventing the spread of COVID-19,
visit <a href="https://www.cdc.gov/coronavirus/2019-ncov">https://www.cdc.gov/coronavirus/2019-
ncov</a>
<br> <br>
Contoso Healthcare
<br> <br>
<i>Please do not reply to this message. This is an unmonitored email address.</i>
</div>
```

11. Click on **More commands(...)>Settings**.

## 12. Set up retry policy on this step so that the step will run again in case of any intermittent failures based on settings defined below:

- a. **Type:** Select **Exponential interval**.
- b. **Count:** Set the retry count as 25.
- c. **Interval:** Set the interval in ISO 8601 format. For Ex: For 1 minute, update it as PT1M.
- d. **Minimum Interval:** Set the minimum interval in ISO 8601 format. For Ex: For 1 minute, update it as PT1M.
- e. **Maximum Interval:** Set the maximum interval in ISO 8601 format. For Ex: For 1 hour, update it as PT1H.

### Settings for 'Send email'

#### Secure Inputs

Secure inputs of the operation.

Secure Inputs ☐ Off

#### Secure Outputs

Secure outputs of the operation and references of output properties.

Secure Outputs ☐ Off

#### Asynchronous Pattern

With the asynchronous pattern, if the remote server indicates that the request is accepted for processing with a 202 (Accepted) response, the Logic Apps engine will keep polling the URL specified in the response's location header until reaching a terminal state.

Asynchronous Pattern ☒ On

#### Automatic decompression

Automatically decompress gzip response.

Automatic decompression ☒ On

#### Timeout

Limit the maximum duration an asynchronous pattern may take. Note: this does not alter the request timeout of a single request.

Duration ⓘ

#### Retry Policy

A retry policy applies to intermittent failures, characterized as HTTP status codes 408, 429, and 5xx, in addition to any connectivity exceptions. The default is an exponential interval policy set to retry 4 times.

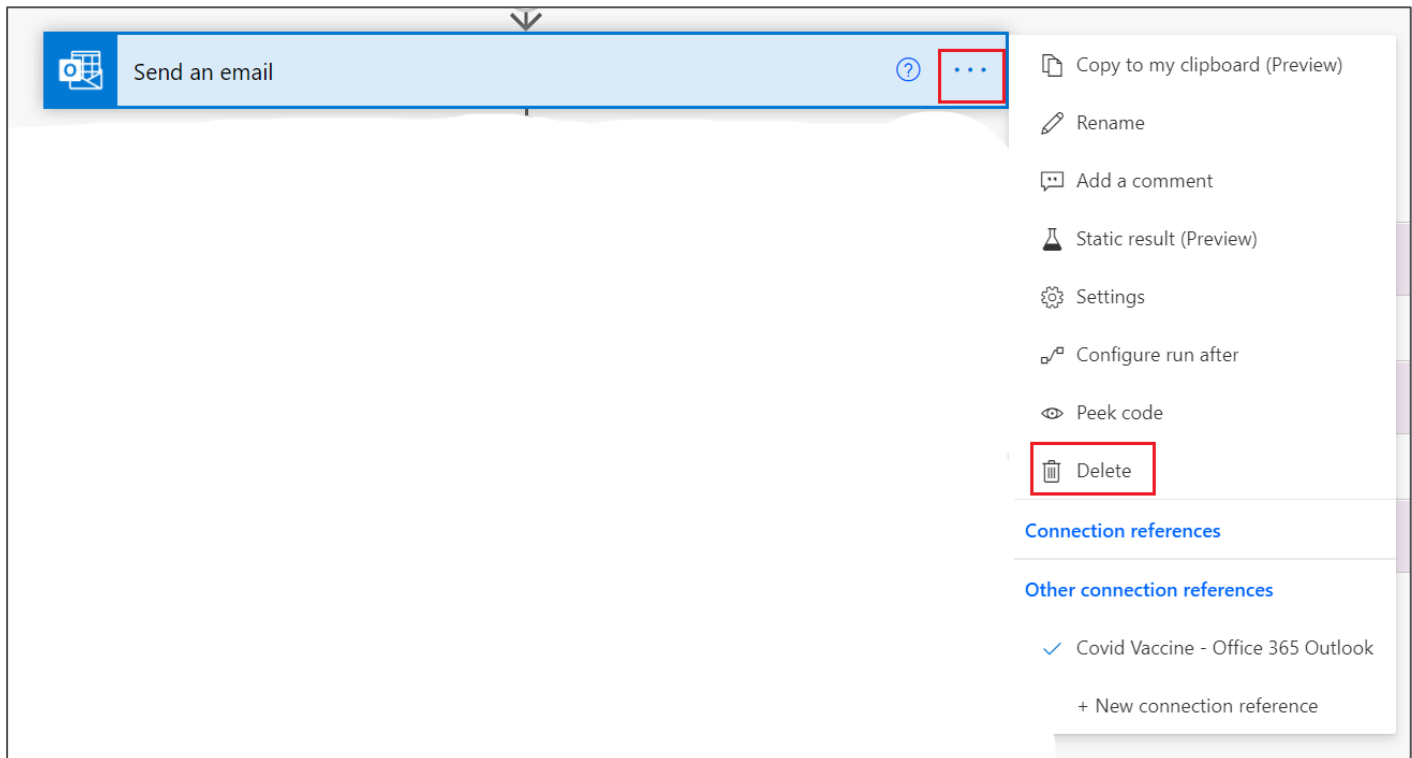
Type	Exponential Interval
* Count	25
* Interval ⓘ	PT1M
Minimum Interval ⓘ	PT1M
Maximum Interval ⓘ	PT1H

#### Tracked Properties

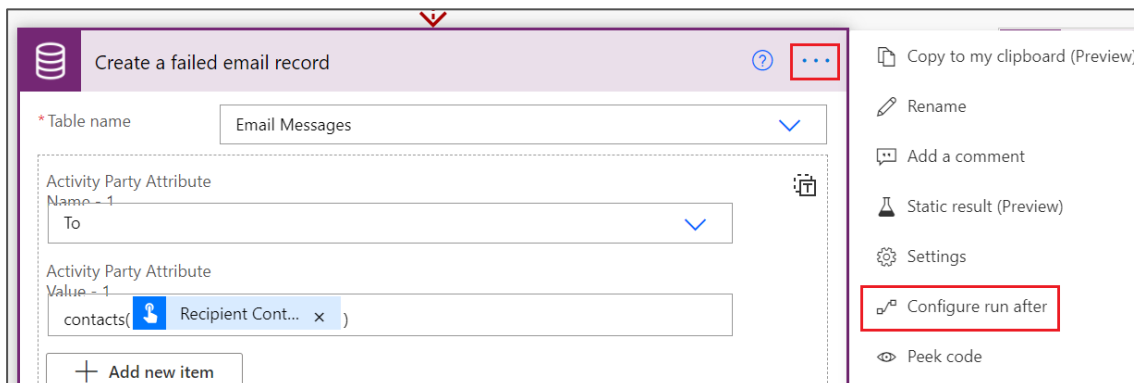
Done

Cancel

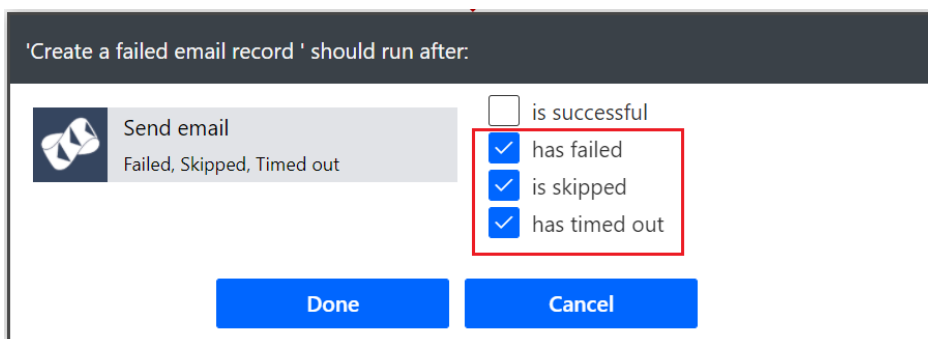
13. Delete the **Send an email** step by clicking on **More commands (...)>Delete**.



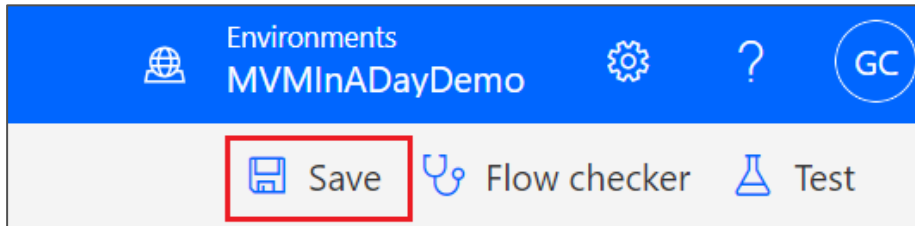
14. On the **Create a failed email record** step, Select **Configure run after**.



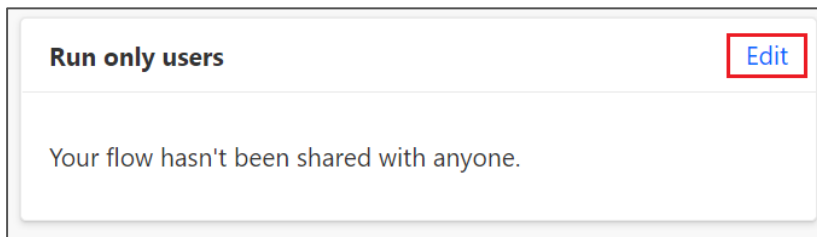
- 15.
16. Select the three statuses as shown in the below screenshot and then click on **Done** so that this set of step runs only when email run step has failed/skipped/timed out.



17. Click on **Save** button on top edge of the flow editor and make sure there are no errors in the flow checker.



18. Click on <- to navigate to overview screen.
19. Click on **Edit** on the **Run only users** section.



20. Select **Use this connection (MVM In A Day SendGrid)** from the drop down and then click on **Save** so that this connection will be used when this child flow is used in the parent flows.

Manage run-only permissions

Invite system users or teams

Let others run this flow and see the results, but not edit in any way.


Enter names or email addresses

Currently shared with


This flow has not been shared with any users. Add a person and see their name here.

Connections Used

These connections will provide the users listed here to have run-only access to this flow. Unless providing their own connection, run-only users will not have access to these connections outside this flow.

 SendGrid  
Run-only users will be asked to provide their own connection to this connector.

Use this connection (MVM In A Day SendGrid)

 Common Data Service (current environment)  
Access to this connection is provided by the owner of the flow.

Use this connection (girich@PowerPlatformOpenHacks.onmicrosoft.)

Save

Cancel

21. If the **Status** of the flow is **Off** then click on **Turn on** to enable the flow. You can skip this step if the flow is already enabled.
22. {Optional Step} You can perform the same steps mentioned in this task to replace the Office 365 Outlook connector with SendGrid connector on the other email flows (**Send Email (Phase Opening)**, **Send Email with Attachment (Base)** and **Send Email (Generic)**)

## Task 2: Test the Power Automate flow changes

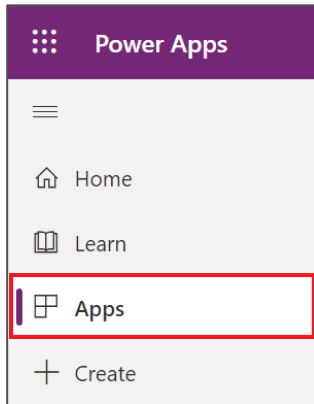
In this task, you will test the Power Automate flow changes done as part of this exercise by registering in the **Registration and booking portal** and verify the email.

1. Navigate to [Power Apps](#).
2. To test the email flow, Select **Apps** on the left navigation bar and then you can view the list of Apps deployed in the environment.

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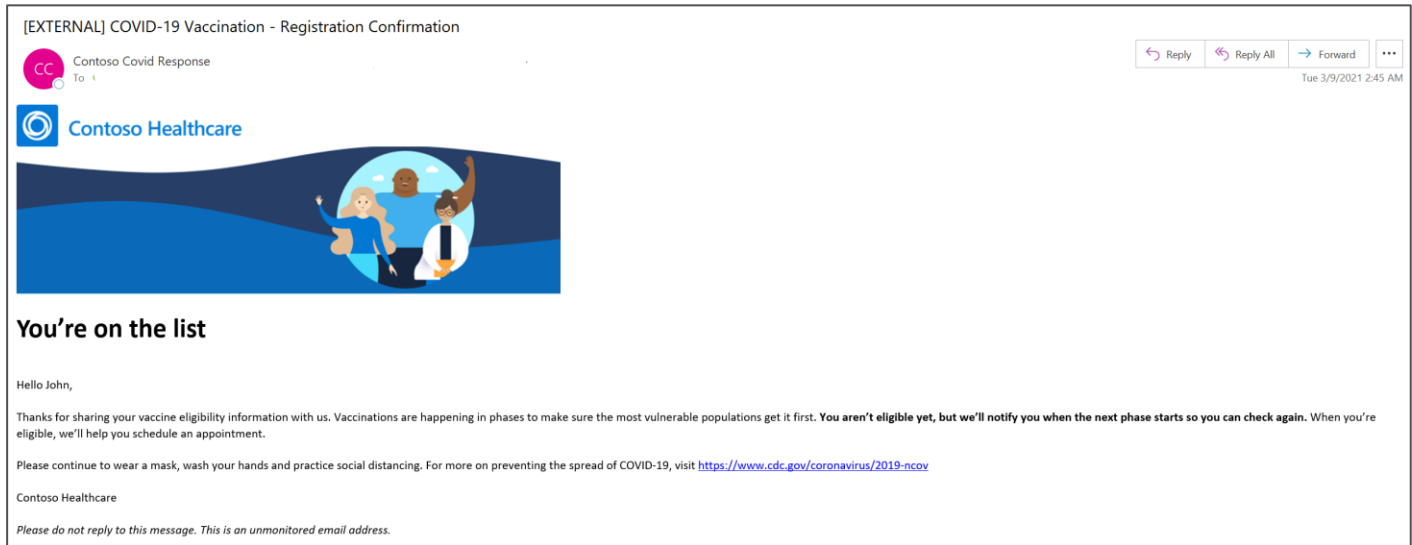




3. Find the **Registration and booking portal** and click on it to open the portal in a new tab page in the browser. This is the portal used for Registration and booking appointments.
4. Select **Check eligibility** in the portal.
5. Do not set **Yes** for any of the questions in the questionnaire until step 4 of 6.
6. On Step 5, provide all the required resident details and, make sure to provide a last name starting in between A-M.
7. At the end of the page, enter the year in **Date of birth** as 1990 and provide a valid email address.
8. At the end of next page, mark the confirmation checkbox and then click on **Submit** button.

A screenshot of a confirmation screen titled "Please select to confirm". It features a checkbox with a checkmark inside a red square, followed by the text "I certify that the information I've provided is true to the best of my knowledge \*". Below this text is a horizontal blue line. At the bottom of the screen, there are two buttons: "Previous" and "Submit". The "Submit" button is highlighted with a red rectangle.

9. In 1-3 minutes, **Covid Vaccine – Email Registration Confirmation (Lastname: A-M)** will pass the required details to its child flow, **Contoso Covid Vaccine Email Base** to send an email to the resident. You will also receive a registration confirmation email to the email address provided in the registration and booking portal within 3 minutes.



10. In case you haven't received the registration email even after 5 minutes from submission then
  - a. Check for the e-mail in your Junk folder.
  - b. If you cannot find the registration email in your junk folder then verify whether the steps in Exercise 1->Task 1-> 4 and 5 have been followed and then redo this task.
  - c. If you cannot find the registration email even after following the above steps, then open the latest executions in **Email Registration Confirmation (Lastname: A-M)** and **Send Email(Registration)** flow history to debug it further.
11. You can also verify the **28-day run history** for the execution status and detailed run history in the **Email Registration Confirmation (Lastname: A-M)** and **Send Email(Registration)** flows.
12. In case you are receiving the same e-mail for every 3 minutes then it could potentially be due to a wrong setup of values in the Flow. Please turn off the **Send Email(Registration)** flow immediately and review/compare all the values set in your **Send Email(Registration)** flow as part of Exercise 4->Task 1-> Steps 13 and 14. If you don't see any difference then open the latest execution from **Send Email(Registration)** flow history to debug it further. Do not turn on the flow again until you have noticed a difference in the setup and corrected it.

**Congratulations!** You have learned to integrate a bulk email service with MVM Email flows.

# Summary

In this lab, you learned to

- Explore and Enable MVM Workflows.
- Learn to update MVM Portal bindings and Bing map settings.
- Learn to enable, configure, and customize the MVM Power Automate Flows.
- Learn to integrate MVM Power Automate Email flows with a bulk email service connector.

# Lab Survey

We would appreciate your feedback on Microsoft Vaccination Management in a Day and this hands-on-lab, such as the quality of documentation and the usefulness of the learning experience.

Please use the survey at **<https://aka.ms/MVMIADSurvey>** to share your feedback.

You may provide feedback for each module as you complete it or at the end once you've completed all the modules. Thank you!

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