



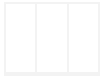
Empowering RPA enthusiasts: Harnessing the Potential of Power Automate (MPPPC23)

Lab 8 – Hosted machines and unattended automation

30 mins

September 2023





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Lab Overview

In previous labs, you have created a cloud flow that can run a desktop flow to complete the whole end-to-end steps to process an incoming invoice file from the vendor for Contoso Coffee shop company. The desktop flow was running in attended mode, which means it will run on the machine while you (the user) are logged in, so the automation is running in front of your eyes.

UNATTENDED MODE

For some situations, we would prefer the automation to run on the background by itself without anyone needing to log on to the machines (e.g., a virtual machine or a group of virtual machine pool that owned by Contoso Coffee shop company), so it can run anytime needed without interfering with human's work, or we want to scale up easily if the amount of data need to be processed is significant. This mode is called **Unattended mode**.

HOSTED MACHINES

You built this automation using your own machine and you installed the needed software (Contoso invoice app) on it. If you plan to develop different automations for different purposes, you may want to use dedicated machines to avoid installing applications that are only needed for your automations but not for your day-to-day work. Additionally, as a developer you may want to have installed development tools that you don't need on the machines ultimately running the automations. **Hosted machines** allow you to create and use VMs on demand right from the Power Automate portal. These machines are **highly customizable** (like having different VM images for instance one for finance automation and one for HR) and the **machine is ready to go**:

1. Power Automate for Desktop is automatically installed.
2. The machine is automatically joined to AAD, automatically enrolled with Microsoft Intune.
3. The machine is automatically registered to the environment.

These machines can be used for any step of your automation journey: (1) Building your automation, (2) Testing your automation or (3) Running your automation in attended or unattended mode.

HOSTED MACHINE GROUPS

Seamlessly scaling your automations based on the workload is made much easier with hosted machine groups. A hosted machine group is created with just a few clicks and can quickly process your invoices even though hundreds of them are coming daily. A new VM is automatically created when a run is waiting in the queue and no machine is available to run it.

You will complete the following tasks in this lab:

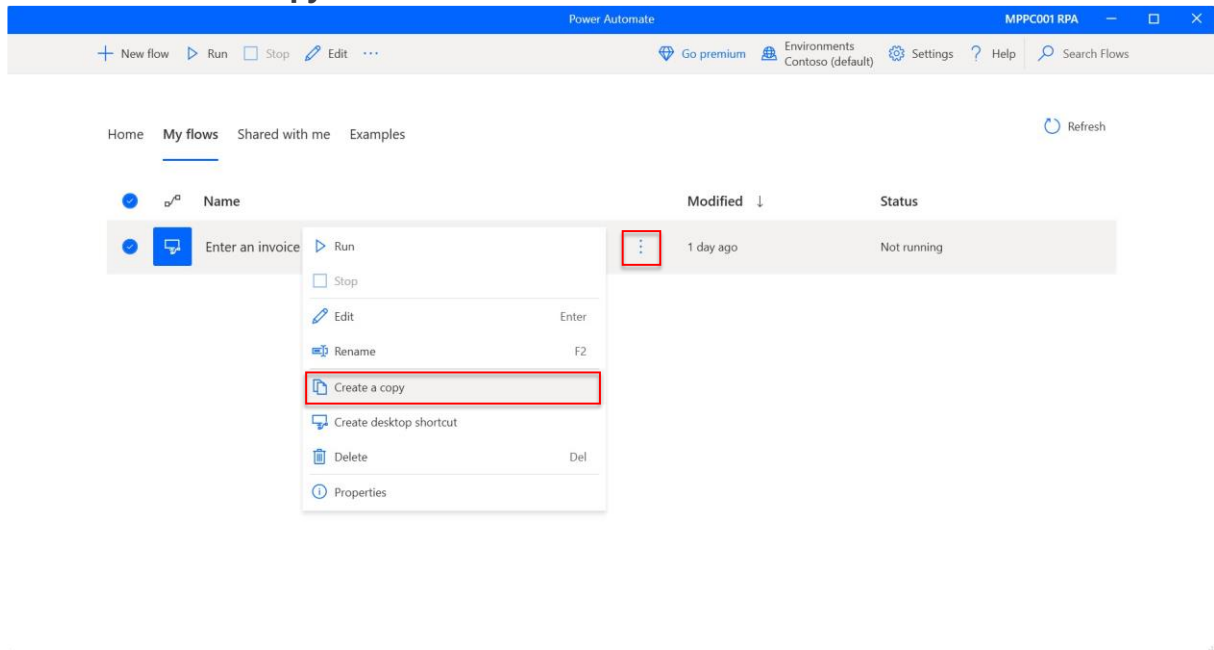
- **Exercise 1 – Use of hosted machine to run unattended automation** ○ Edit your desktop flow (and remove the Excel actions) ○ Create a new cloud flow that calls your desktop flow to run on a hosted machine in unattended mode ○ Test run unattended.
- **Exercise 2 – Unattended automations at scale** ○ Create a hosted machine group ○ Use this hosted machine group to run your automations at scale

Prerequisites

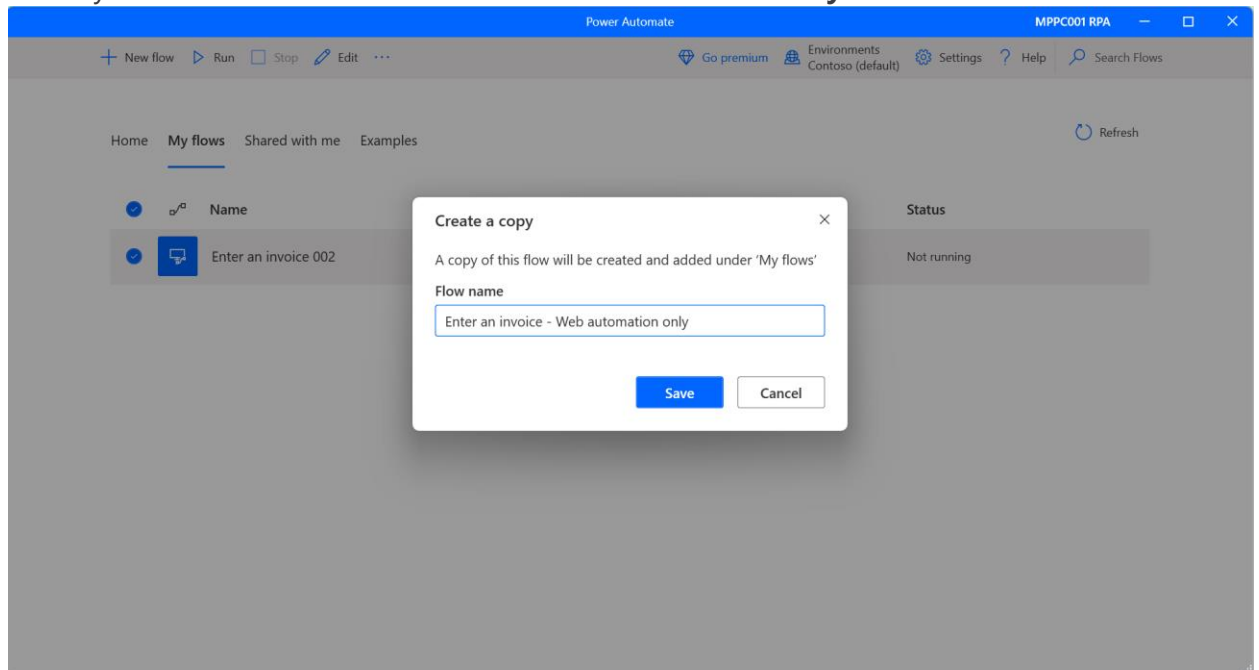
This lab builds on the initial setup lab (lab 1) and labs 2-6 – ensure these labs are complete.

Exercise 1: Use of hosted machine to run unattended automations

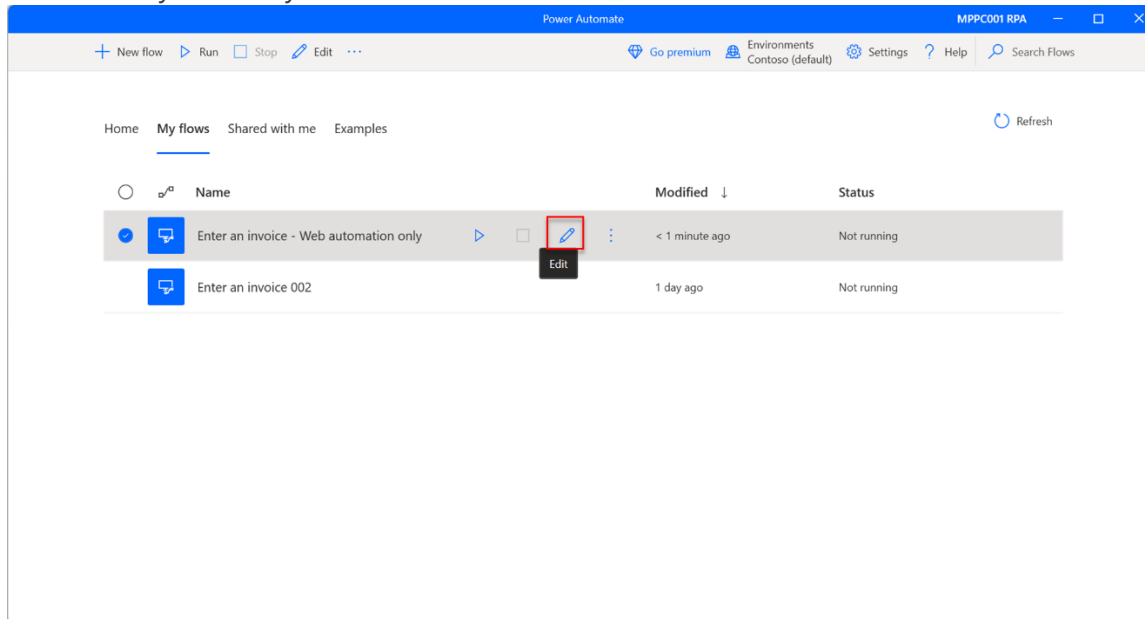
1. Go to **My flows**, open the contextual menu of your “Enter an invoice” desktop flow and select **Create a copy**:



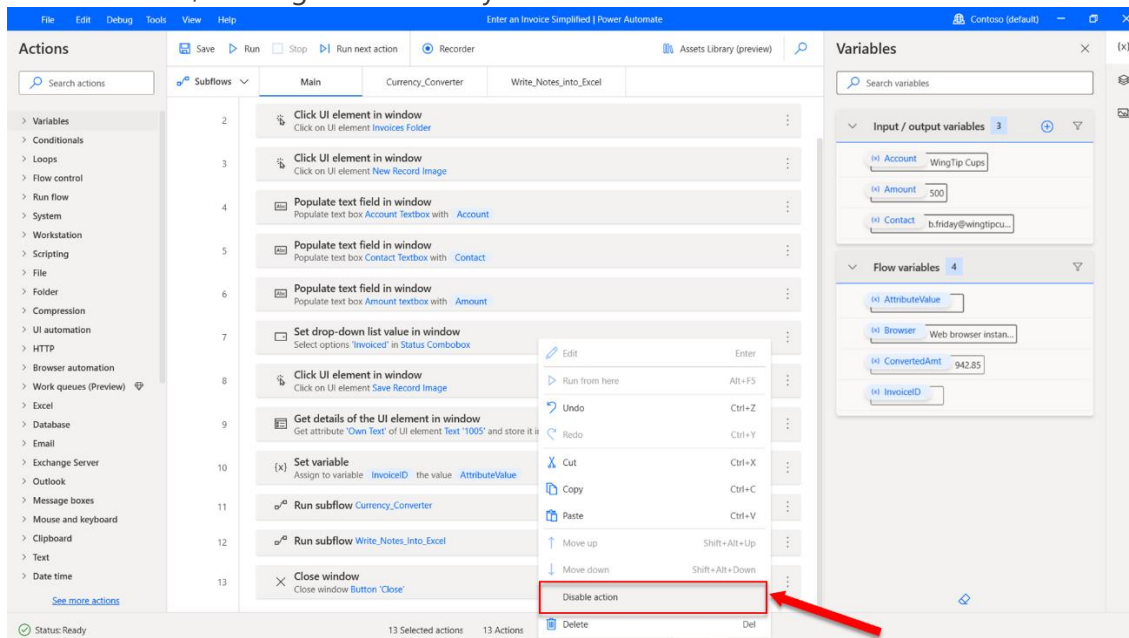
2. Name your new flow “**Enter an invoice - Web automation only**” and click **Save**:



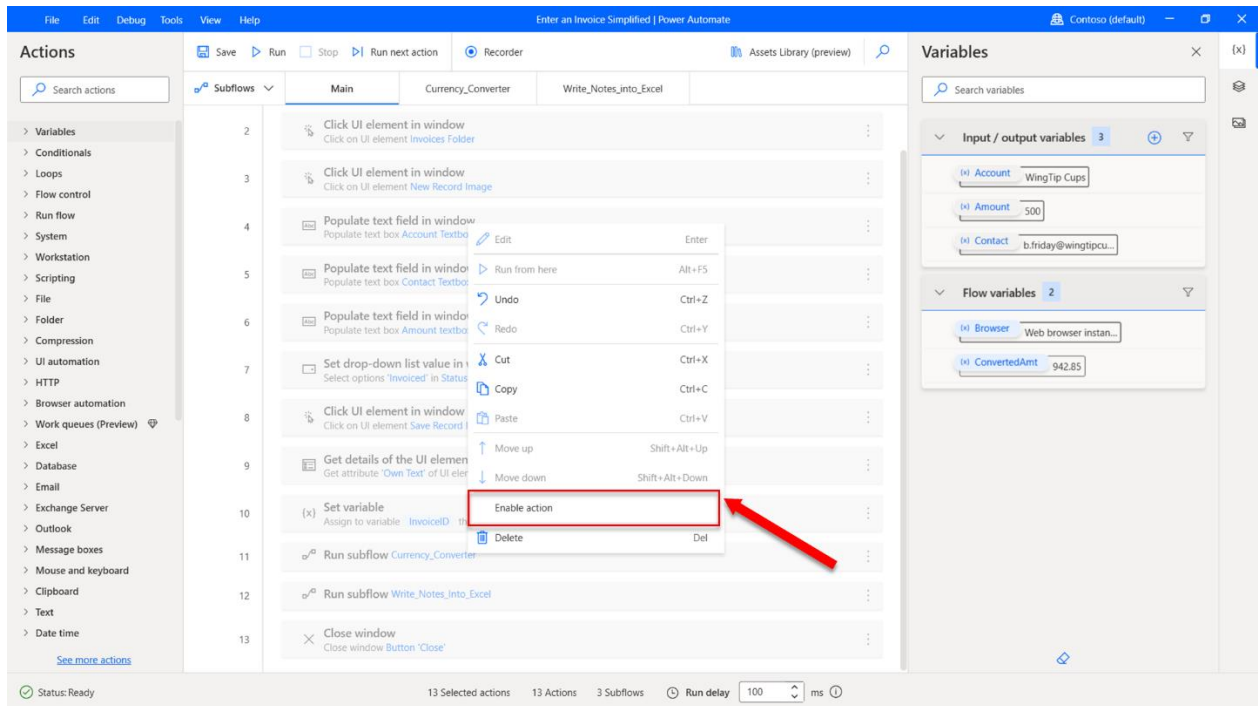
3. Edit your newly created flow:



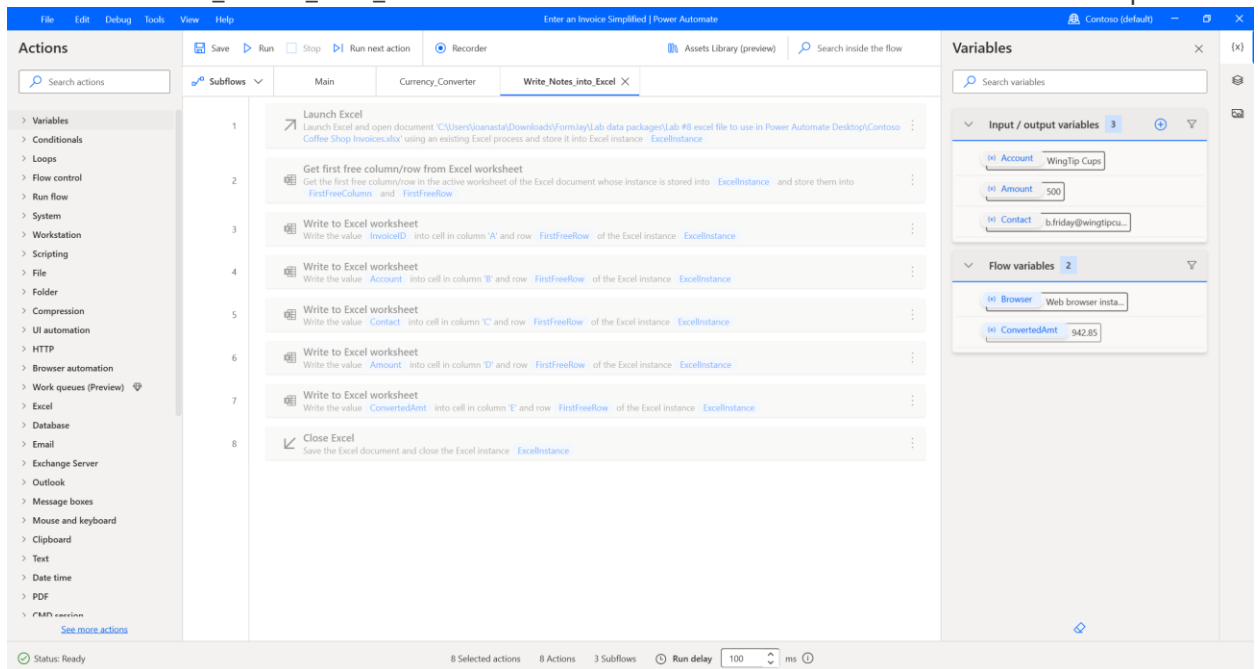
4. Your hosted machine may not be setup with Office and the Contoso app, so we will disable the related actions and will only keep the web automation part. This will ensure your flow can run successfully. From your **Main** section, press CTRL + A to select all the actions, then right-click on any action and select "Disable action"



5. Re-enable Action #11 by right-clicking on "**Run subflow Currency_Converter**" and selecting "Enable action"



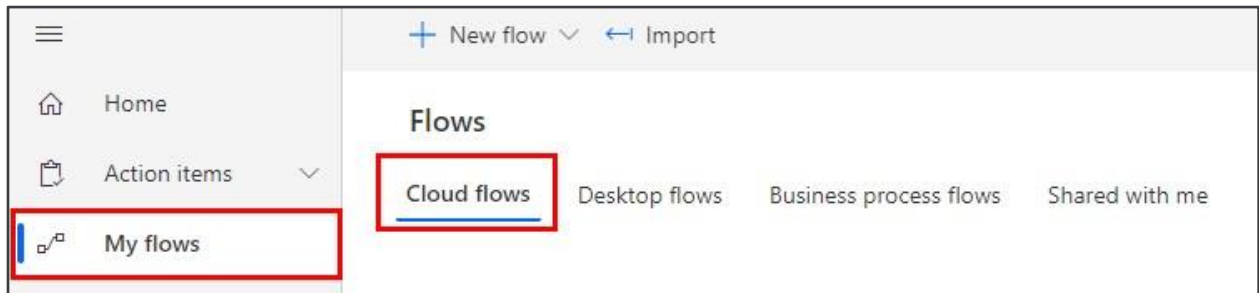
6. Go to **Write_Notes_into_Excel** subflow and **disable all the actions** like done in step 7



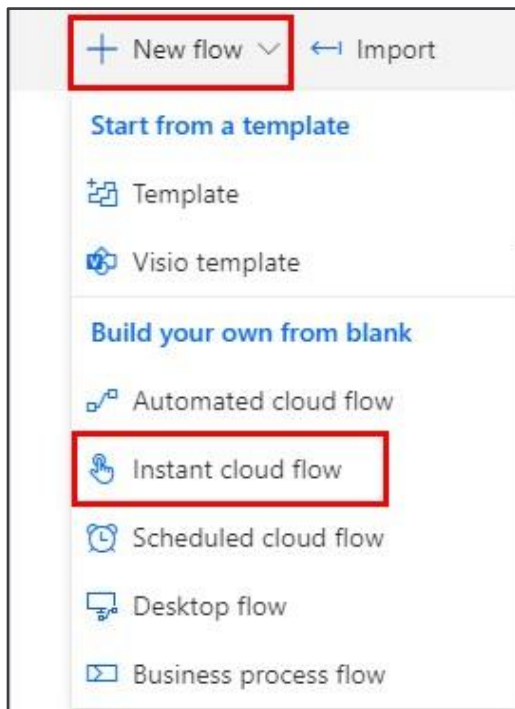
7. Don't forget to **Save** your desktop flow then **close** all Power Automate for Desktop windows (designer and console)

8. Now, let's try this flow in **unattended mode**.

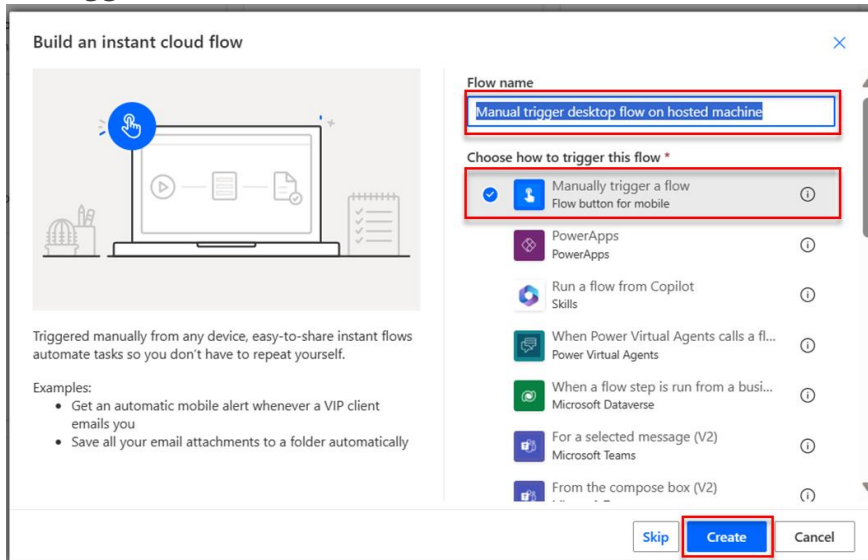
9. Navigate to <https://powerautomate.microsoft.com>. Go to **My flows** > **Cloud flows**



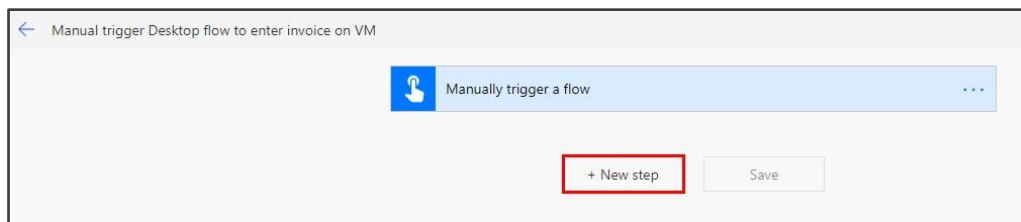
10. Click **+New flow** > **Instant cloud flow**



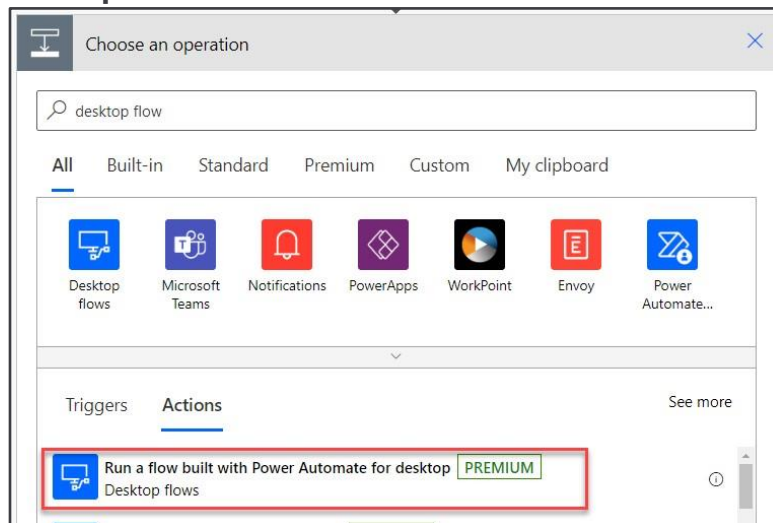
11. Name the flow as **Manual trigger desktop flow on hosted machine**, select **Manually trigger a flow**. Then click **Create**.



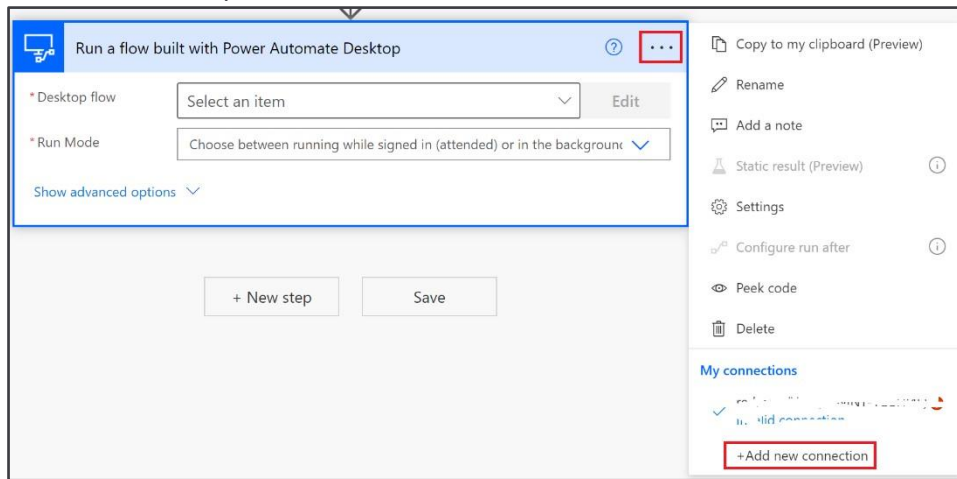
12. Click **+New step**.



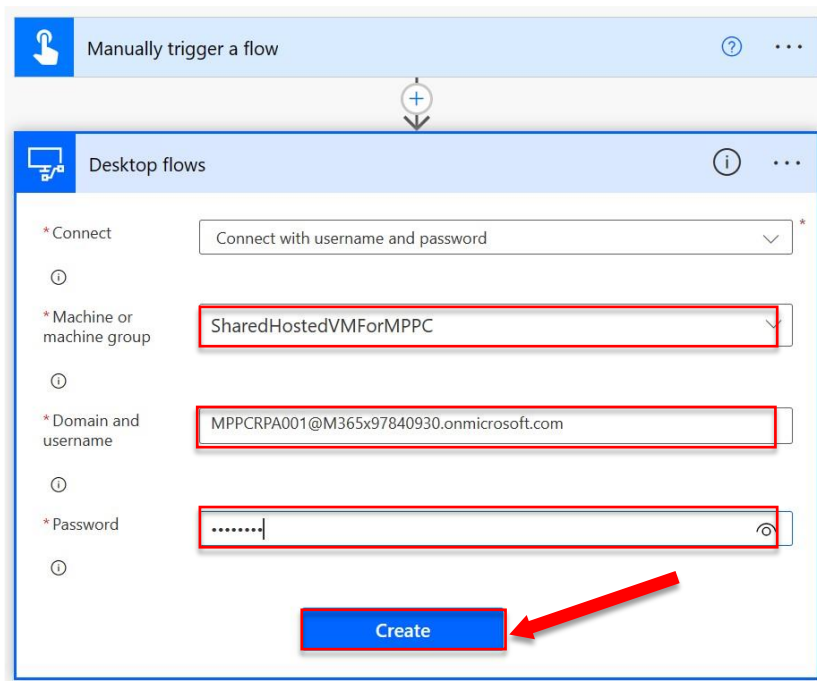
13. Search for **desktop flow** and select **Run a flow built with Power Automate for desktop**.



14. In the desktop flow action card, click on the three dots and select **Add new connection**.



15. Select the hosted machine that has been shared with you "**ShareHostedVMForMPPC**", enter the account credentials provided to you, and click on **Create**:



16. Select “**Enter an invoice – Web automation only**” desktop flow and fill the box with the following values:

Run Mode: Unattended (runs on a machine that’s signed out)

Amount: \$200

Contact: b.friday@wingtip toys.com

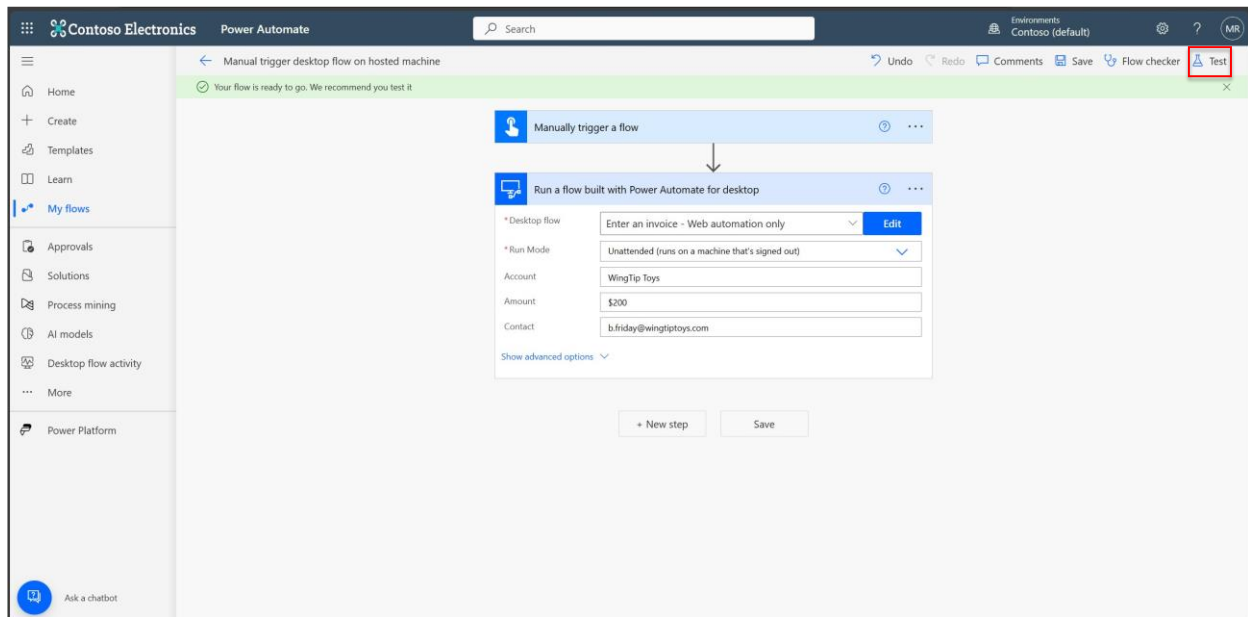
Account: WingTip Toys

Then click **Save**

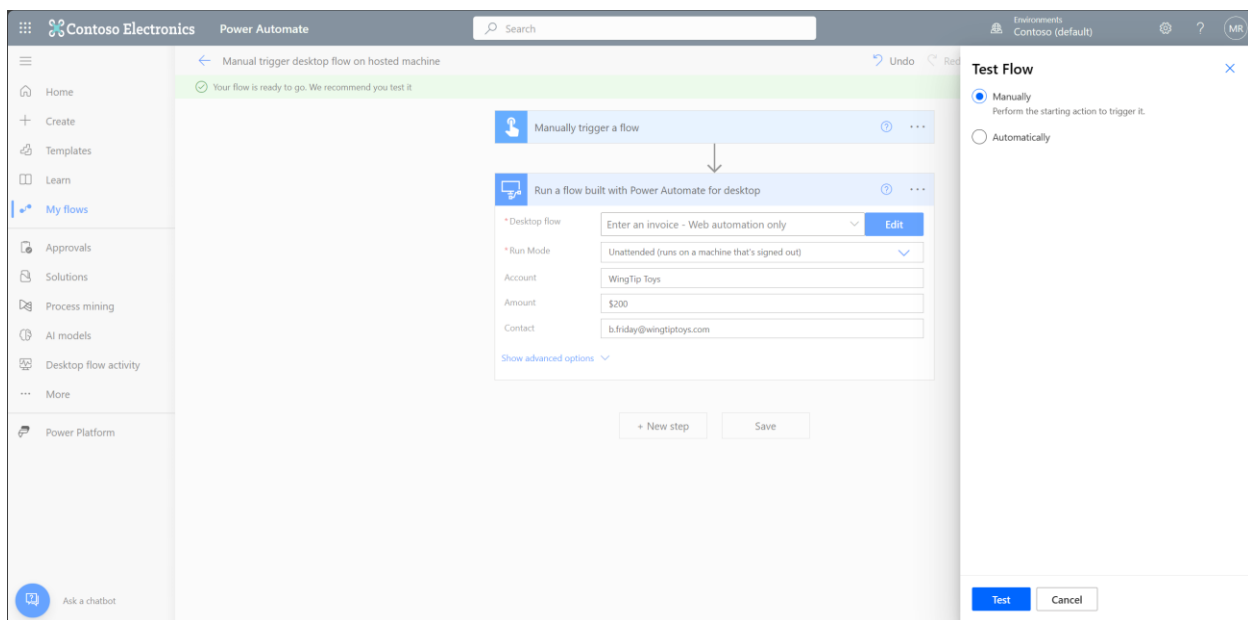
The screenshot shows the 'Run a flow built with Power Automate for desktop' configuration window. The 'Desktop flow' section is expanded, showing a list of flows. The flow 'Enter an invoice - Web automation only' is selected. Below the list, the 'Run Mode' is set to 'Unattended (runs on a machine that's signed out)'. The 'Account' is 'WingTip Toys', the 'Amount' is '\$200', and the 'Contact' is 'b.friday@wingtip toys.com'. The 'Save' button is highlighted with a red box.

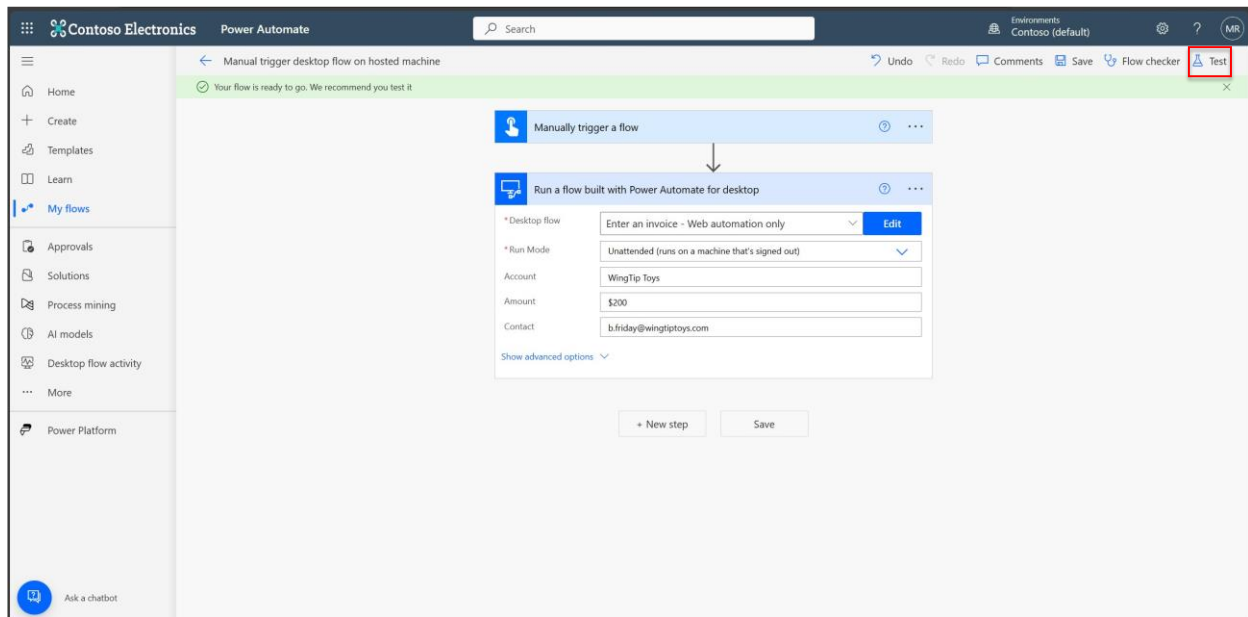
Field	Value
Desktop flow	Enter an invoice - Web automation only
Run Mode	Unattended (runs on a machine that's signed out)
Account	WingTip Toys
Amount	\$200
Contact	b.friday@wingtip toys.com

17. Test your flow attended by pressing on Test:

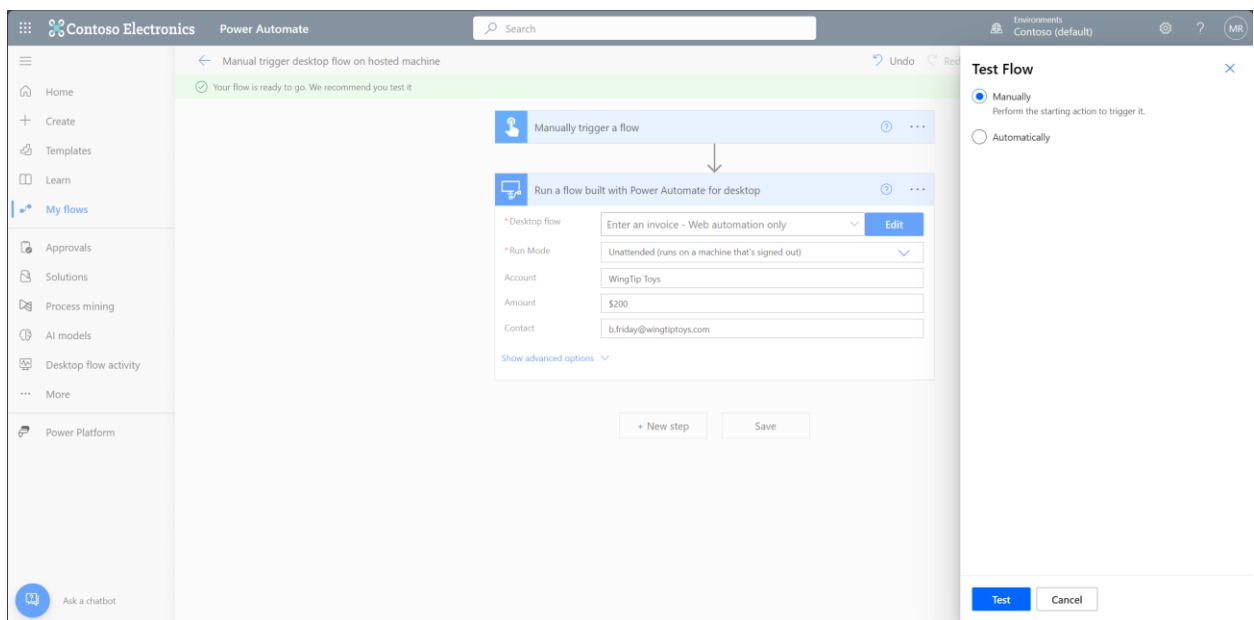


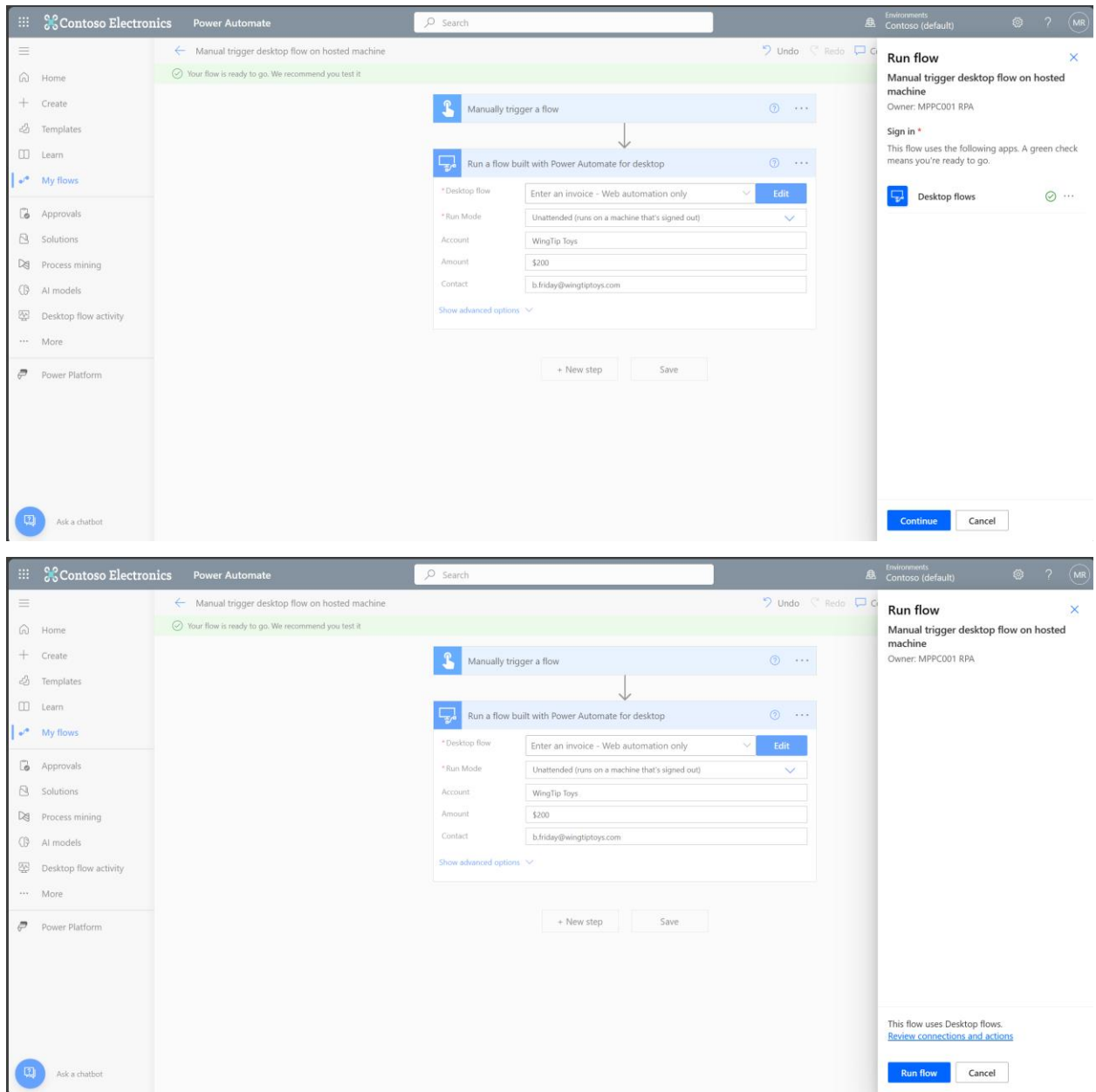
13. Select **Manually**, click on **Test** then **Continue** and then **Run Flow**.



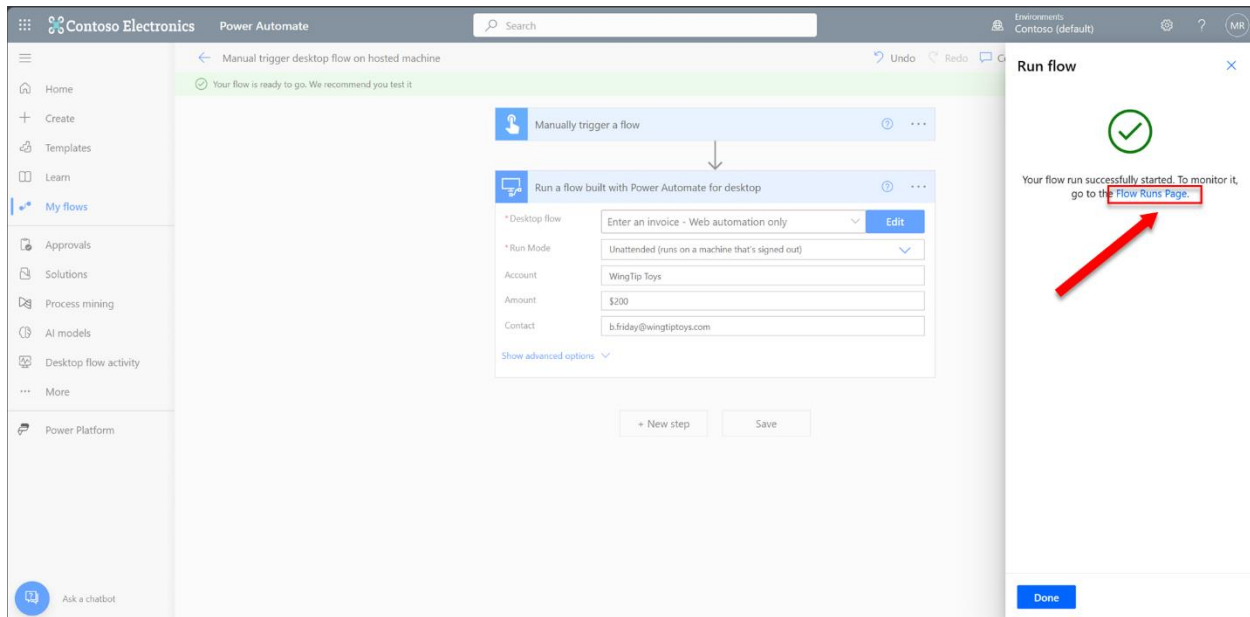


14. Select **Manually**, click on **Test** then **Continue** and then **Run Flow**.

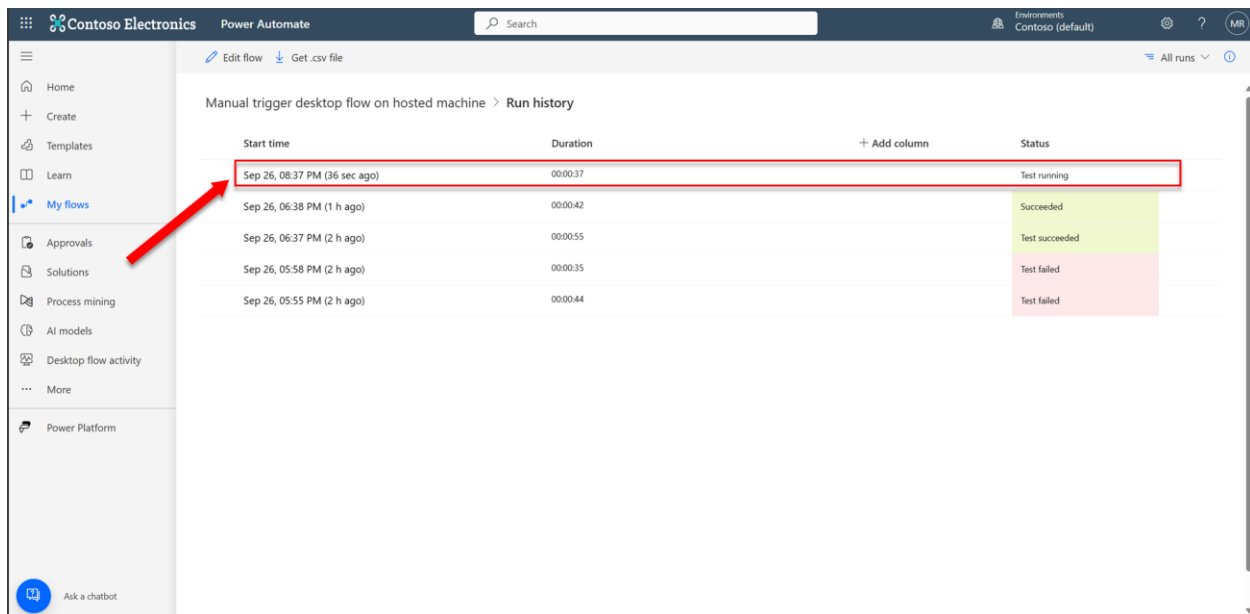




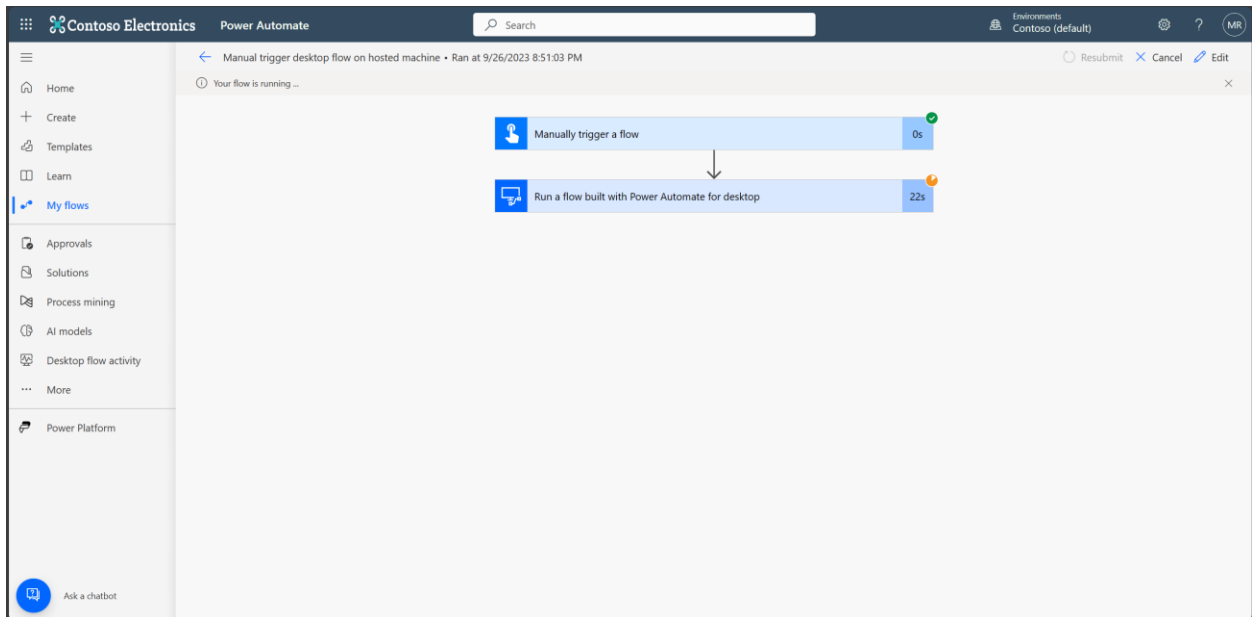
15. Click on **Flow Runs** page



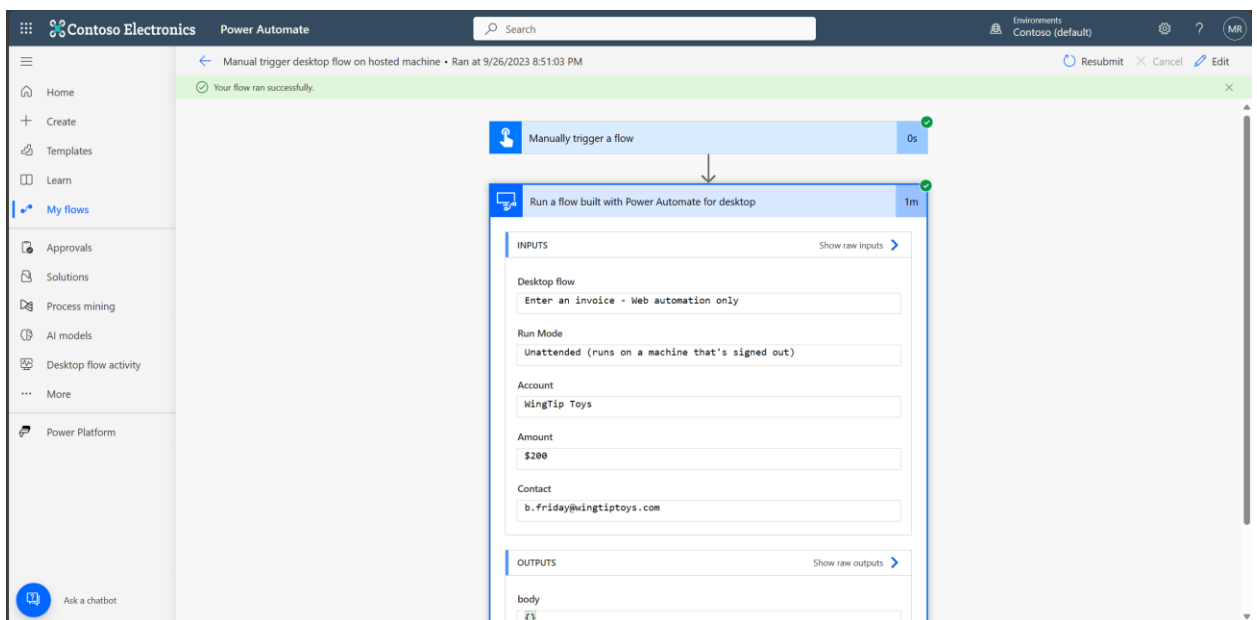
16. The run at the top is the one you just launched, click on the Start time to go to the run details page. (Don't hesitate to refresh your page)



17. The flow is running, wait until its end. It should complete successfully

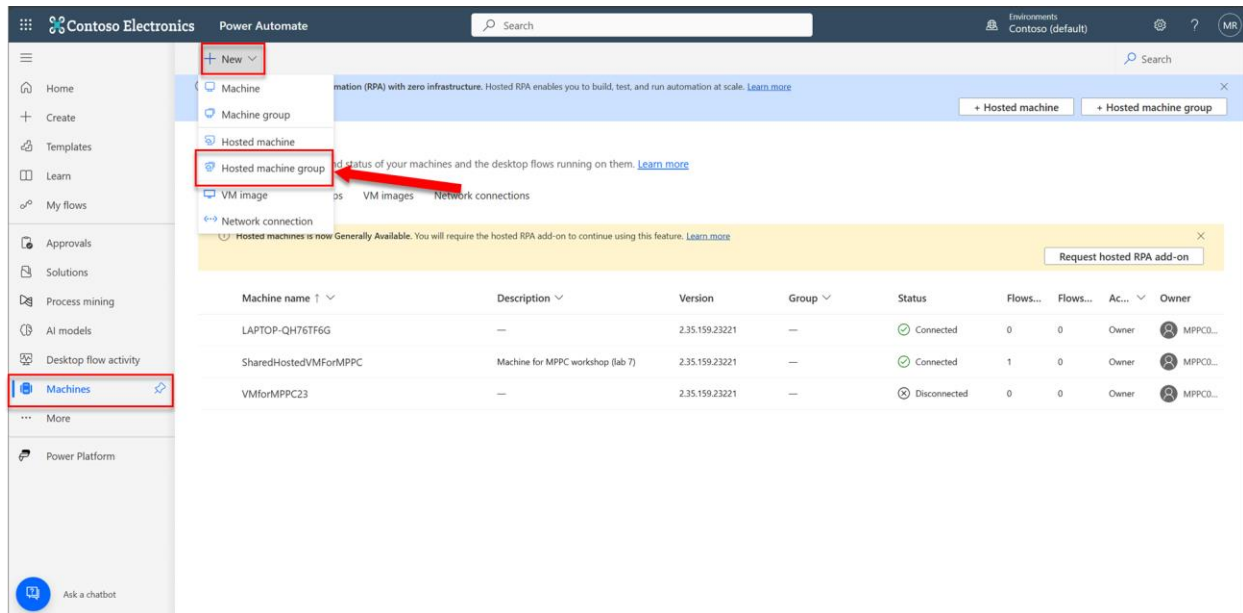


The flow should have completed successfully:



Exercise 2: Unattended automation at scale

1. Now, we will move from a single machine to a hosted machine group which can scale on demand. Go to Machines, then select New > Hosted machine group:



2. Give a name (Hosted group for invoice processing) to your group and click **Next**:

Create new hosted machine group

Step 1 of 6

Set up your new hosted machine group

Hosted machine groups allow you to run unattended automation at scale without the need to provide or set up any machines. You can create hosted machine groups like any other machine group, and Power Automate will automatically provision the machines based on the defined configuration.

Desktop flows assigned to a hosted machine groups get queued to it when triggered to run. Then, like for any machine group, when a bot in the group is available, it's assigned the next desktop flow to be executed in the queue.

[Learn more about the desktop flow queues](#)

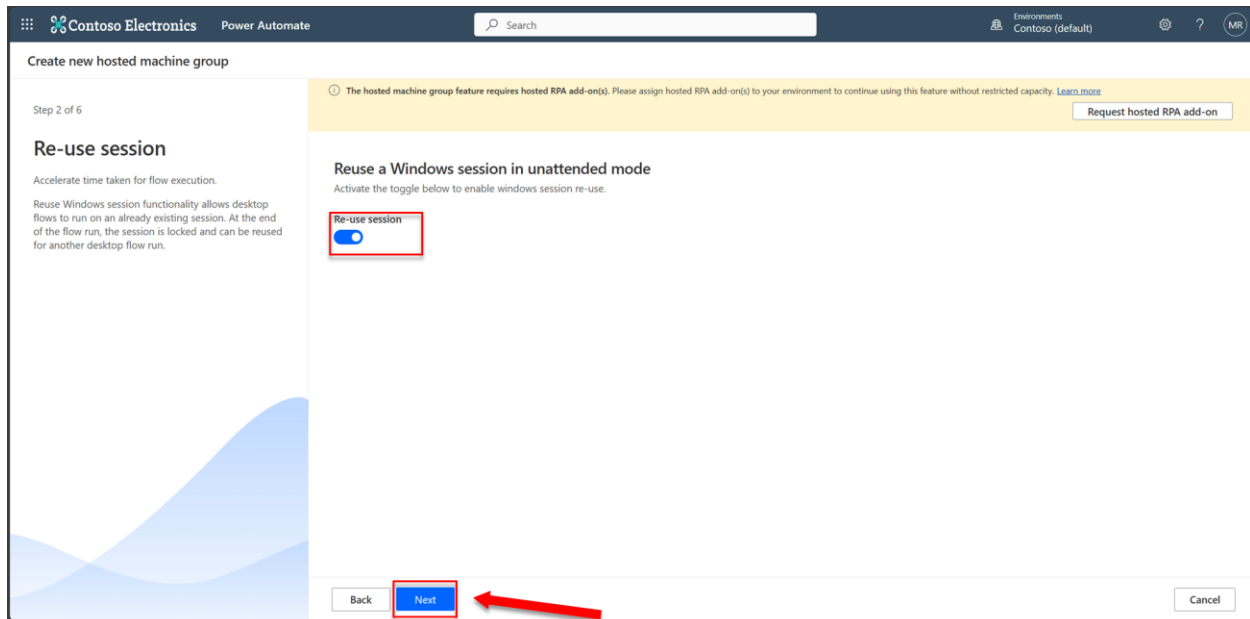
Name and describe your hosted machine group
Enter a name for your hosted machine group, then optionally add a description.

Hosted machine group name *
Hosted group for invoice processing

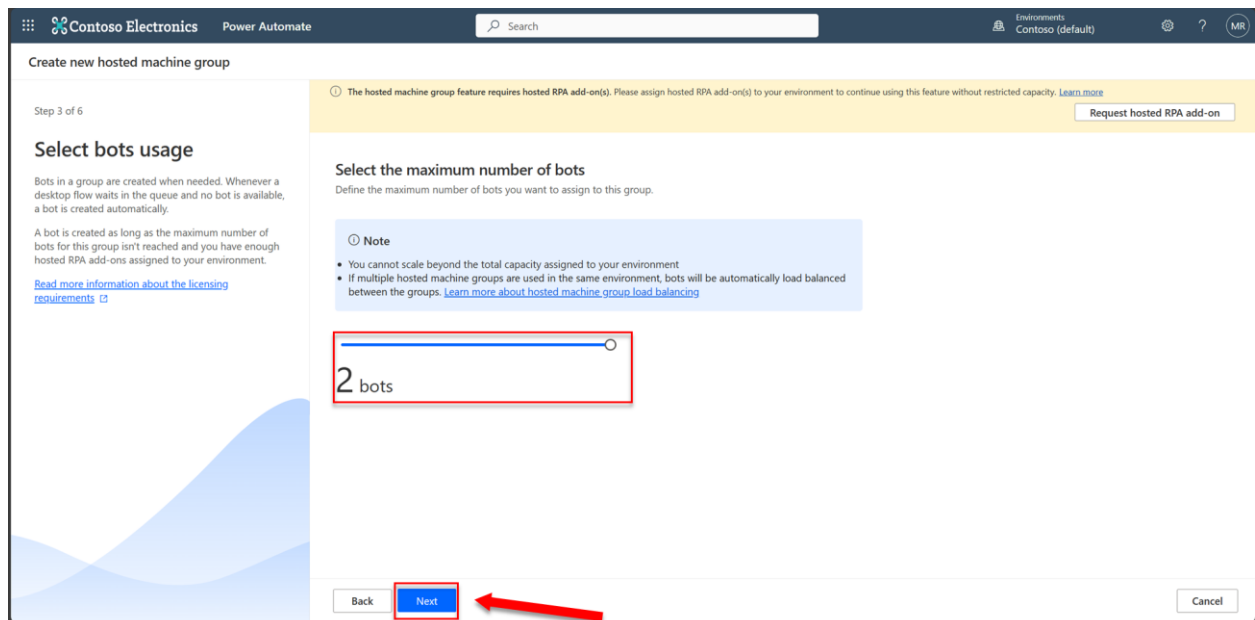
Description
Hosted machine group for invoicing

Next Cancel

3. Enable re-use session for faster processing and click **Next**:

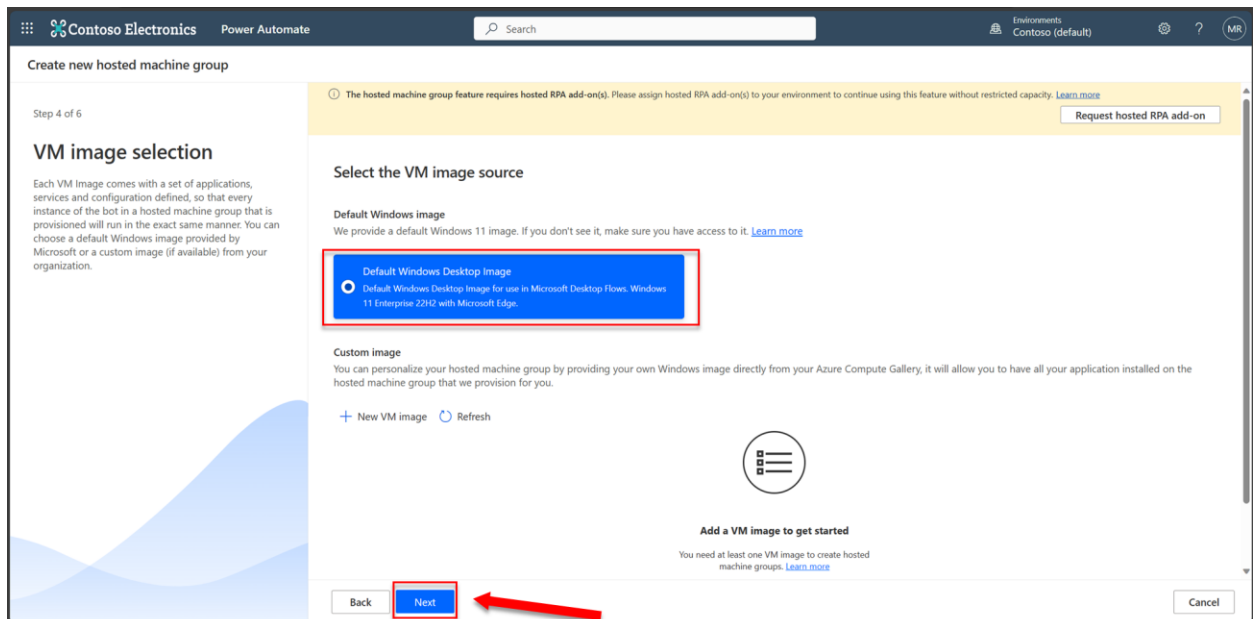


4. Select a maximum of **2 bots** which means that based on the workload, a maximum of 2 machines will simultaneously process the flows enqueued.

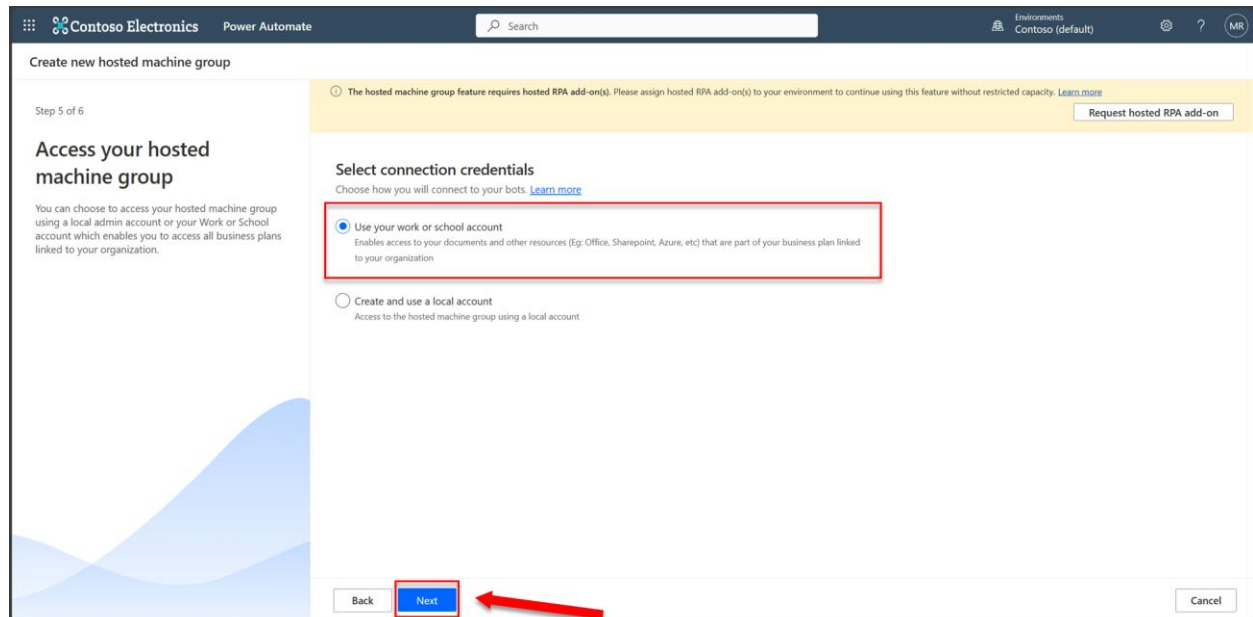


5. Select the **Default Windows Desktop Image** (which is suitable for web only automation).

Note: We could have used a custom image that would have contained the Contoso app and Office installed. **This requires additional installation from the IT department but allows advanced customization of VMs.**



6. Select **"Use your work or school account"** to be able to use your workshop account and click **Next**.



7. Review your options and click on **Create**.

Contoso Electronics Power Automate

Search

Environments
Contoso (default)

Create new hosted machine group

Step 6 of 6

Ready to go?

The hosted machine group feature requires hosted RPA add-on(s). Please assign hosted RPA add-on(s) to your environment to continue using this feature without restricted capacity. [Learn more](#)

[Request hosted RPA add-on](#)

Review and create

Review your new hosted machine group details below. If something is missing you can go back to the previous steps. If everything looks good, select Create.

Hosted machine group name
Hosted group for invoice processing

Description
Hosted machine group for invoicing

Re-use session
Yes

Bot usage
Up to 2 bots

VM image
Default Windows Desktop image

Credentials details
Work or school account

[Back](#) [Create](#) [Cancel](#)

Contoso Electronics Power Automate

Search

Environments
Contoso (default)

[Edit details](#) [Share](#) [Settings](#) [Delete group](#)

Hosted machine group running in restricted capacity. Please assign hosted RPA add-on(s) to your environment to continue using this feature. [Learn more](#)

[Request hosted RPA add-on](#)

✓ Your hosted machine group is ready to use. Now assign flows to them. Bots will be created as flows are added to the queue

Machine groups > Hosted group for invoice processing

Hosted machine group for invoicing

[Overview](#) [Run queue](#)

Machine group details

Machine group type	Flow activity	VM image	Account type	State
Hosted machine group	0 running, 0 queued	Default Windows Desktop image	Work or school account	Provisioning

Reuse session: Yes

Owner: MPPC001 RPA

Last runs

No desktop flows have run on this machine group

Once there are runs, they'll show here. [Learn more](#)

Connections

Nobody's connected to this machine group

Once there are connections, they'll show here. [Learn more](#)

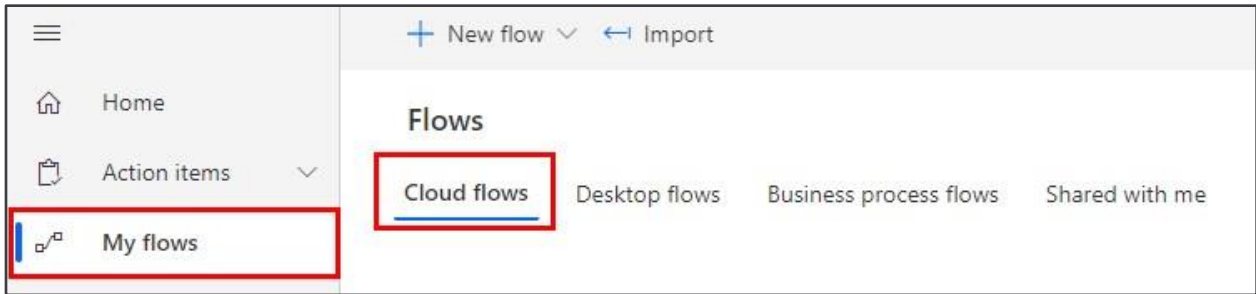
Shared with [Manage access](#)

MR MPPC001 RPA

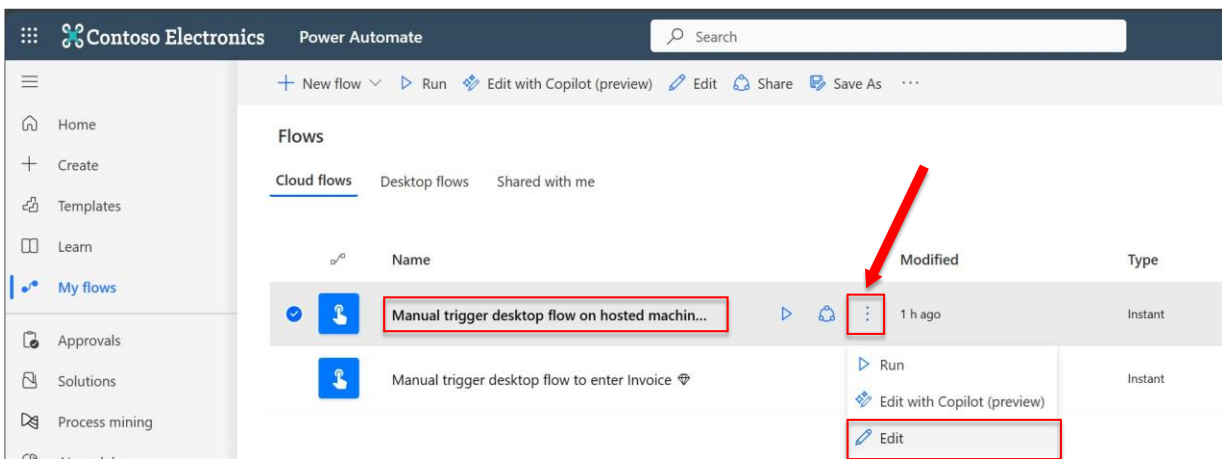
7-day completed run status [Go to activity](#)

- Now that your hosted machine group is ready to use, let update the automation to target it. Navigate to:

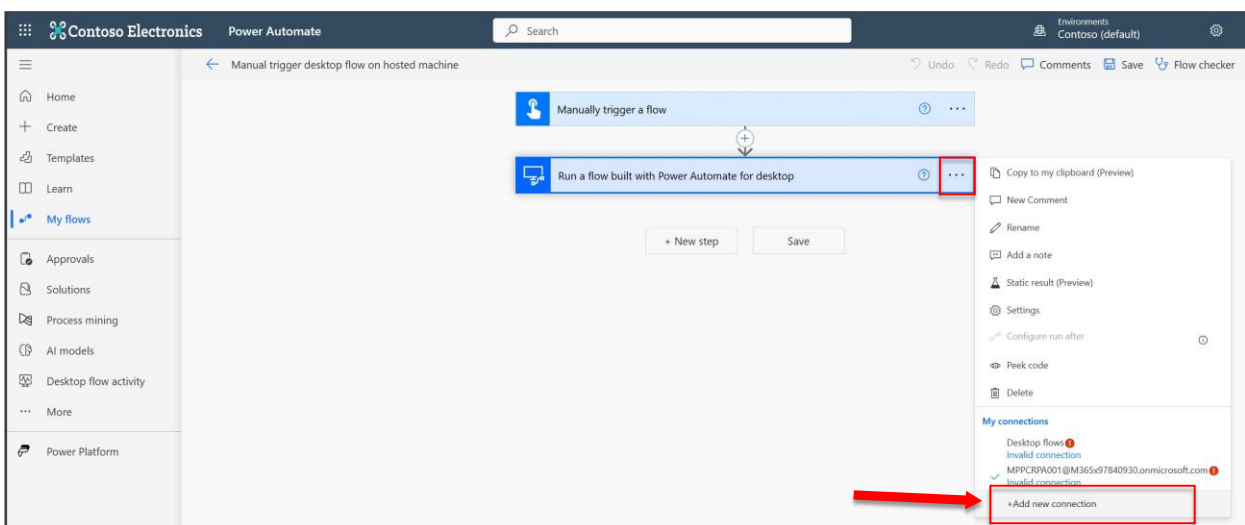
My flows > Cloud flows



9. Open the contextual menu for the **“Manual trigger desktop flow on hosted machine”** cloud flow and select **Edit**:



10. On the Desktop flow card, open the contextual menu and select **+Add new connection**



11. Select your hosted machine group (**Hosted group for invoice processing**)

Manually trigger a flow

Desktop flows

* Connect: Connect with username and password

* Machine or machine group: Hosted group for invoice processing

Search

* Domain and username: Hosted group for invoice processing

* Password: VMforMPPC23, SharedHostedVMForMPPC, LAPTOP-QH76TF6G

Create Cancel

+ New step Save

12. Enter the account credentials, and click on **Create**:

Desktop flows

* Connect: Connect with username and password

* Machine or machine group: Hosted group for invoice processing

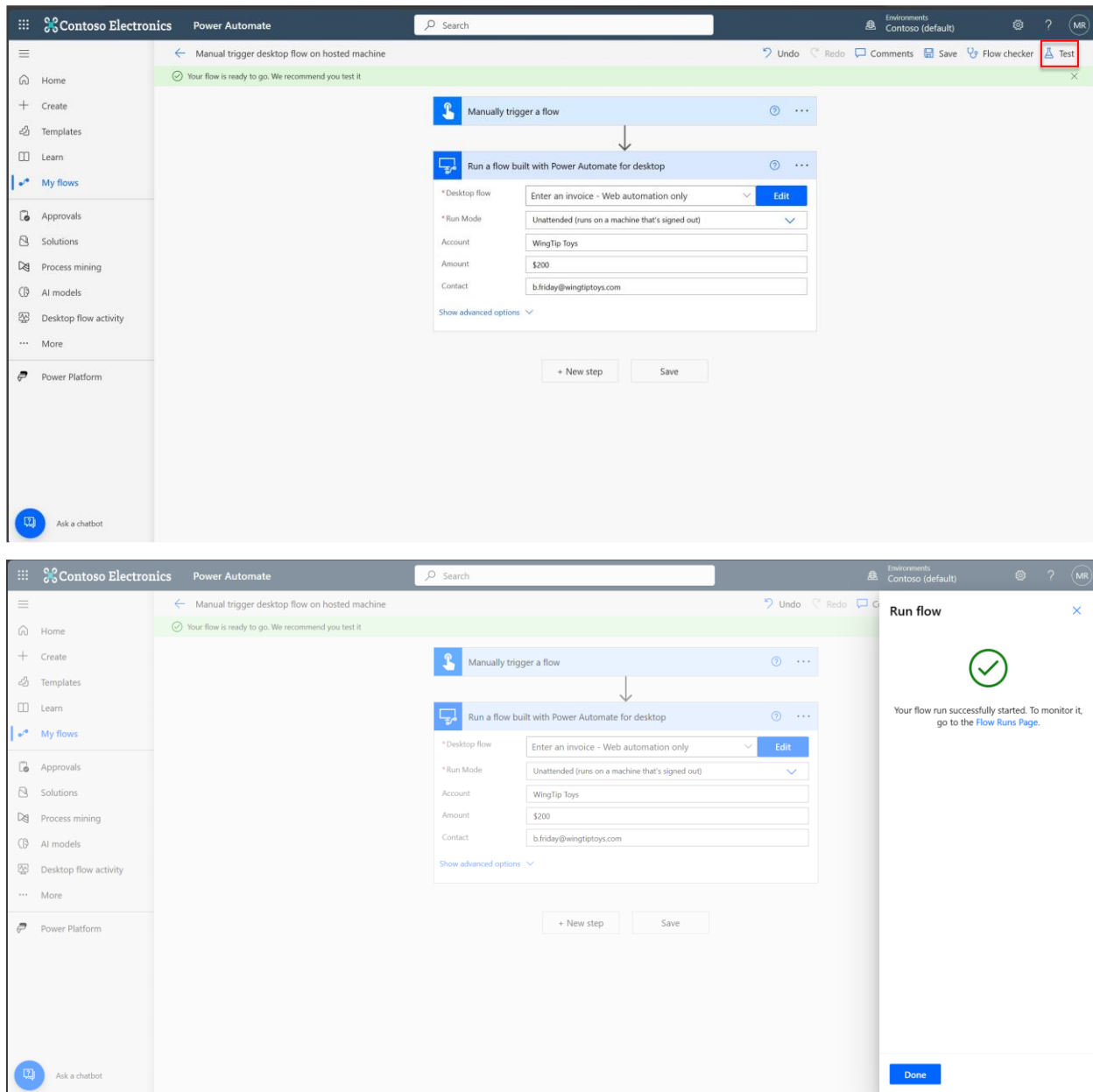
* Domain and username: MPPCRPA001@M365x97840930.onmicrosoft.com

* Password:

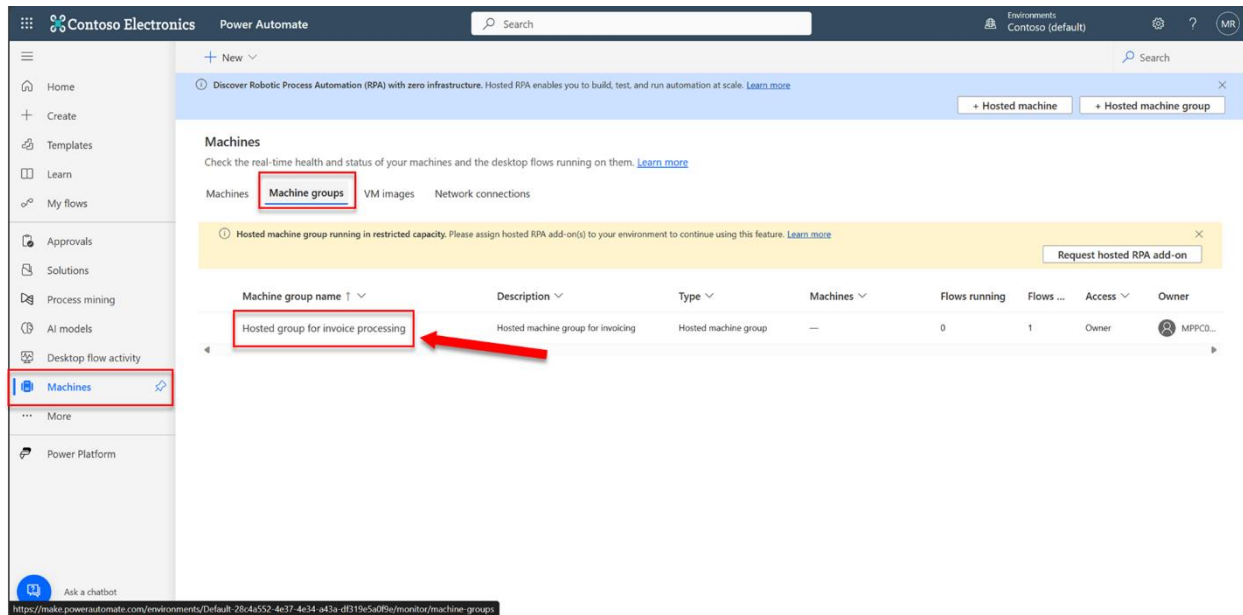
Create Cancel

+ New step Save

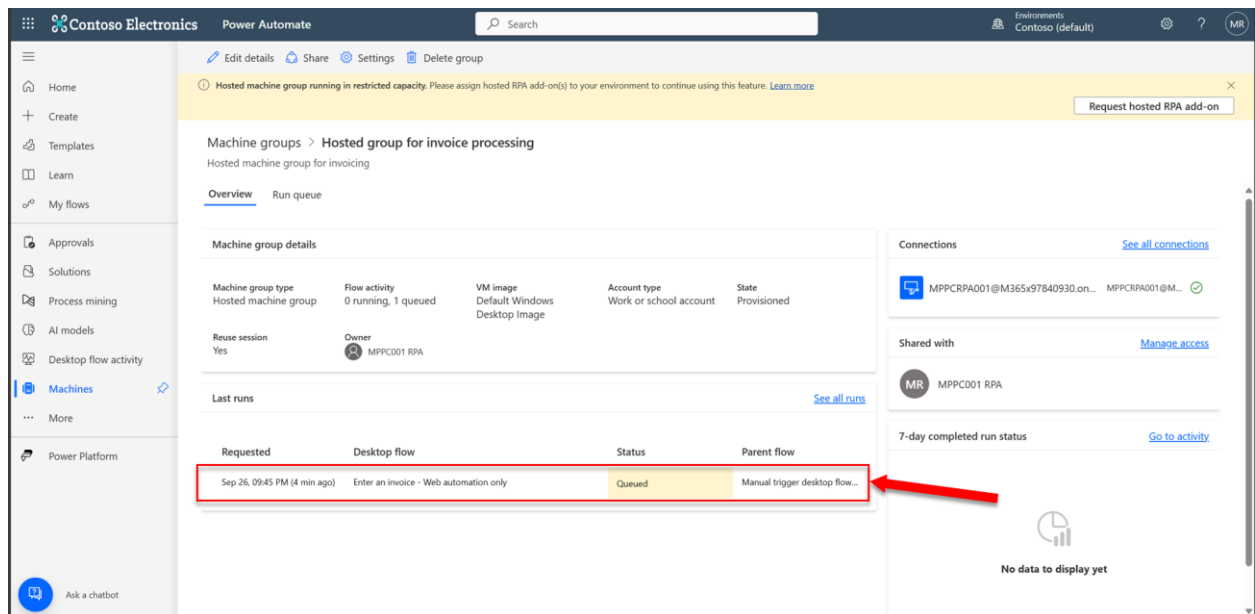
13. You can Save your flow and test it.



14. You can go to **Machines**, then select the **Machine groups** tab and click on your machine group **Hosted group for invoice processing**:



15. You can see that your test run is queued, if you don't see it don't hesitate to refresh the page:



We won't verify your flow run outcome as it will take about 30 minutes to create the first machine in the group and run your flow. Congratulations, you have successfully created a hosted machine group that auto-scales and create VMs on demand whenever a flow needs to run.

Check your knowledge

Lab 7

5 mins

1. What can I do with a hosted machine?
 - A. Build desktop flows, test them, run them in attended and unattended mode
 - B. Only creating/editing desktop flows

2. How do I move my automation from attended to unattended?
 - A. I need to create a different desktop flow for each
 - B. I can just change the run mode of my desktop flow
 - C. I can change the run mode of my desktop flow but I may check VM configurations and the use of a password-based Desktop flow connection

3. I don't need to manage individual machines in a hosted machine group.
 - A. True
 - B. False

Answer Key

1. What can I do with a hosted machine?

- A. **Build desktop flows, test them, run them in attended and unattended mode**
- B. Only creating/editing desktop flows

Answer: **A.** Hosted machines are highly flexible machines that can be used for any RPA scenario be it, dev, test, or production.

2. How do I move my automation from attended to unattended?

- A. I need to create a different desktop flow for each
- B. I can just change the run mode of my desktop flow
- C. **I can change the run mode of my desktop flow but I may check VM configurations and the use of a password-based Desktop flow connection**

Answer: **C.** Most of the time it is as simple as changing the run mode in the desktop flow card but you need to ensure you're using a password-based connection (e.g.: the sign-in option doesn't work for unattended). Additionally, some specific configurations like NLA may prevent Desktop flows to run unattended.

3. I don't need to manage individual machines in a hosted machine group.

- A. **True**
- B. False

Answer: **A.** True. Hosted machine group automatically manages the individual machines it creates overtime. No need to handle them and no access to them is possible. Hosted machine groups are only meant for pure unattended automation.

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