



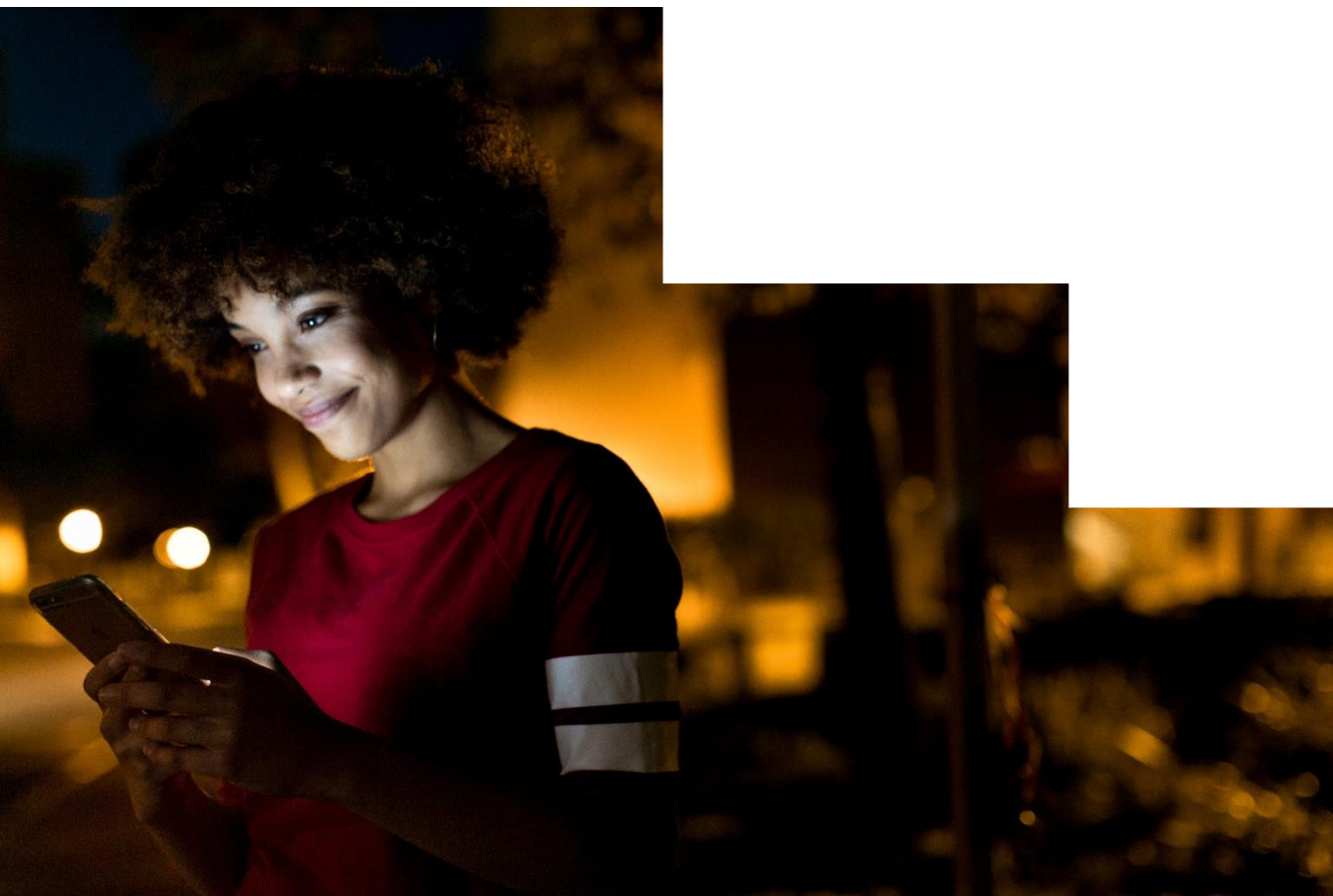
Robotic Process Automation in a Day

Lab 9 – Run the scenario in unattended mode (Optional)

90 mins

April 2023

Applies to Power Automate Desktop v. 2.31.105.23101 ([more](#))



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Lab Overview

You will complete the following tasks in this lab:

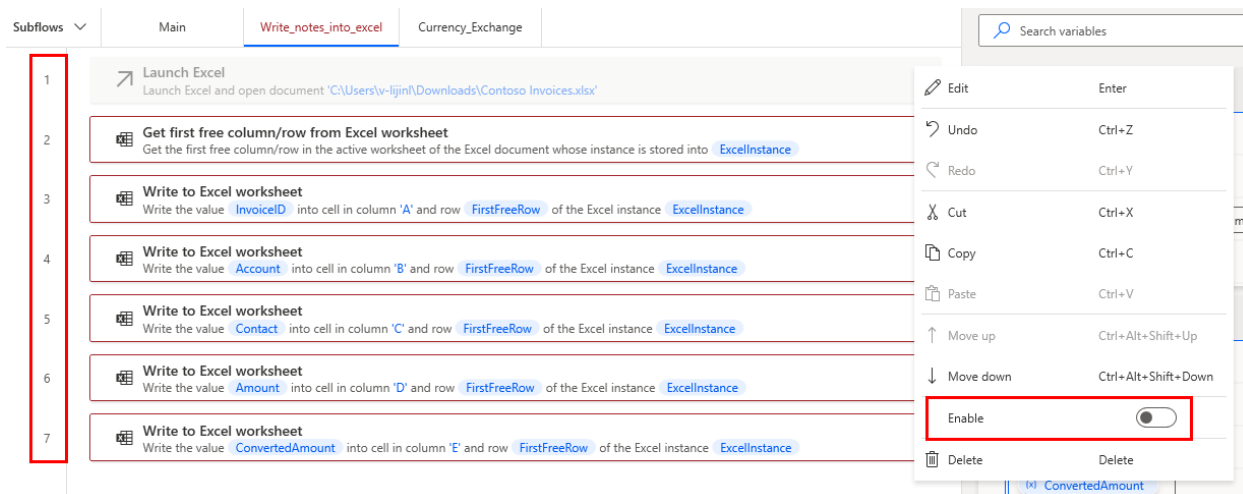
- **Exercise 1 – Basic desktop flow in Unattended mode**
 - Register a new virtual machine and add it to a machine group
 - Create a new cloud flow that calls an existing desktop flow from Lab 4 in unattended mode
 - Perform a test run of this simple unattended desktop Flow scenario
- **Exercise 2 – Desktop flow + cloud flow scenario in Unattended mode**
 - Streamline the invoice processing solution to simplify the test scenario
 - Perform a test run of the updated invoice processing solution in unattended mode
- **Exercise 3 – Unattended machine group scenario**
 - Register a second virtual machine
 - Add the second VM's to the machine group with the first VM's
 - Perform multiple tests runs of the updated invoice processing solution in unattended mode, distributing the test runs across the machine group

Prerequisites

This lab builds on the initial setup lab (lab 1) and labs 2-8 – ensure these labs are complete.

Exercise 1: Basic desktop flow in Unattended mode

1. If your remote VM has no Excel installed, you should disable the following steps from your desktop flow before you run them on the remote VM.



2. Open the test profile in a browser and navigate to: <https://aka.ms/rpa/vm1> [should be provided by the trainer]
3. Start your VM.

Note: It will take a couple minutes to get started.

My virtual machines

RPA in a day VM1



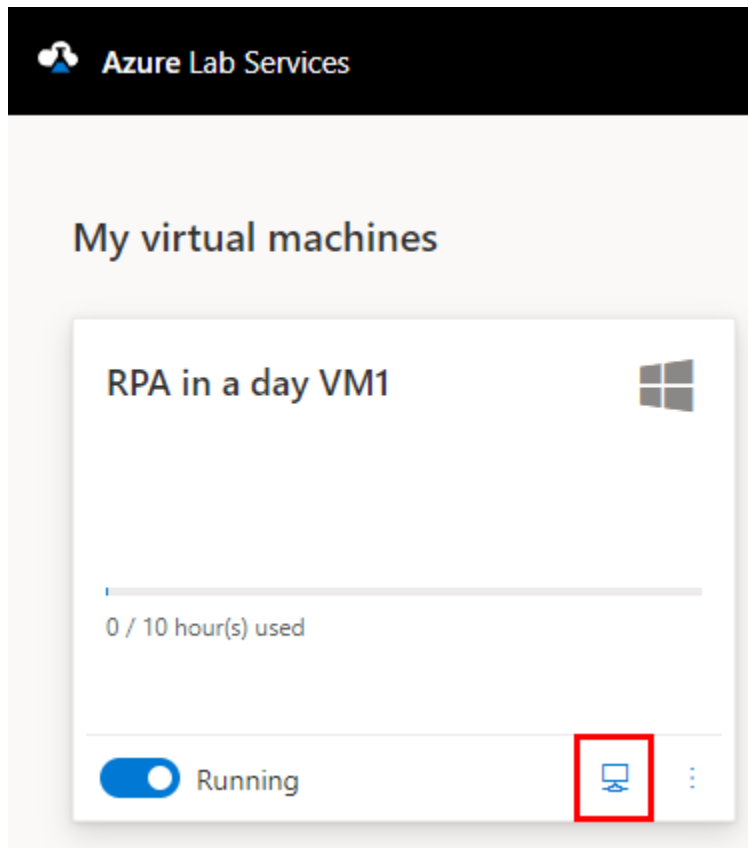
0 / 10 hour(s) used



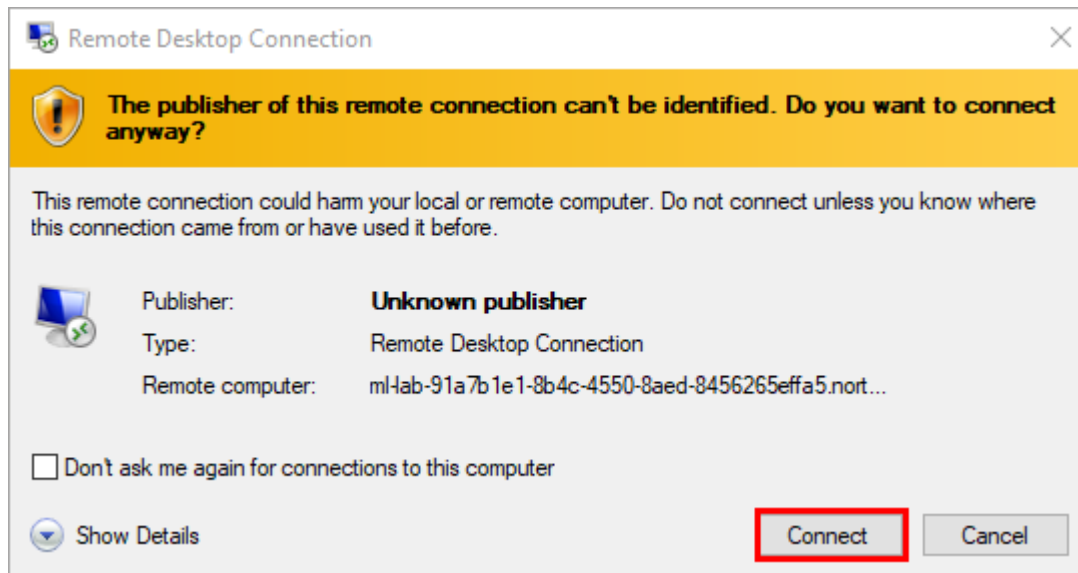
Stopped



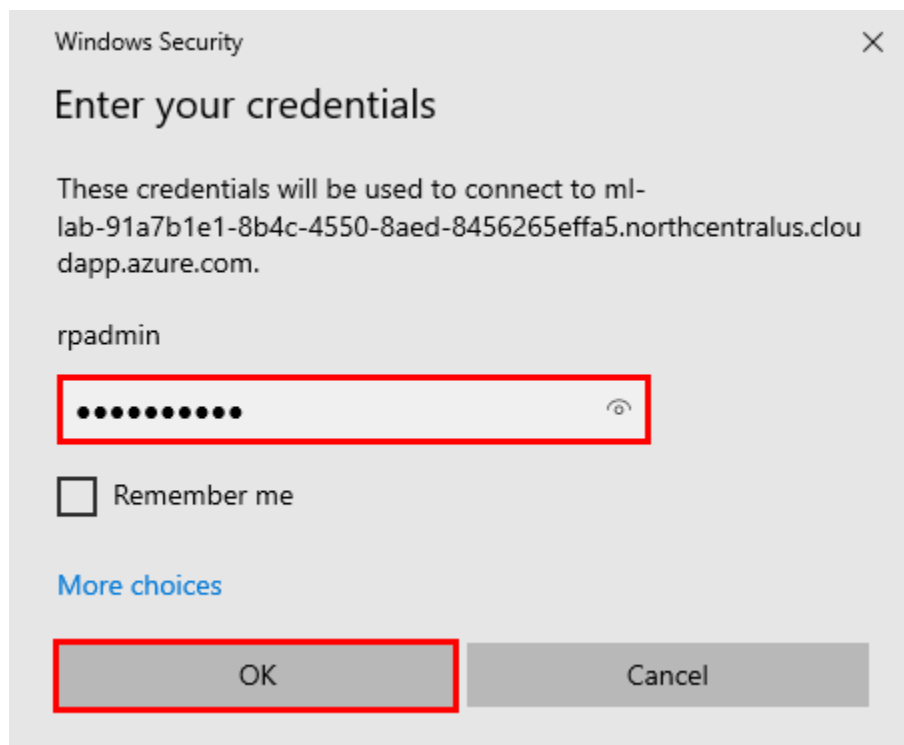
4. Once it's running, click on the **connect to the virtual machine** icon.



5. This will download the "RPA in a day VM1.rdp" [should be provided by the trainer] file, double click on it to get connected.

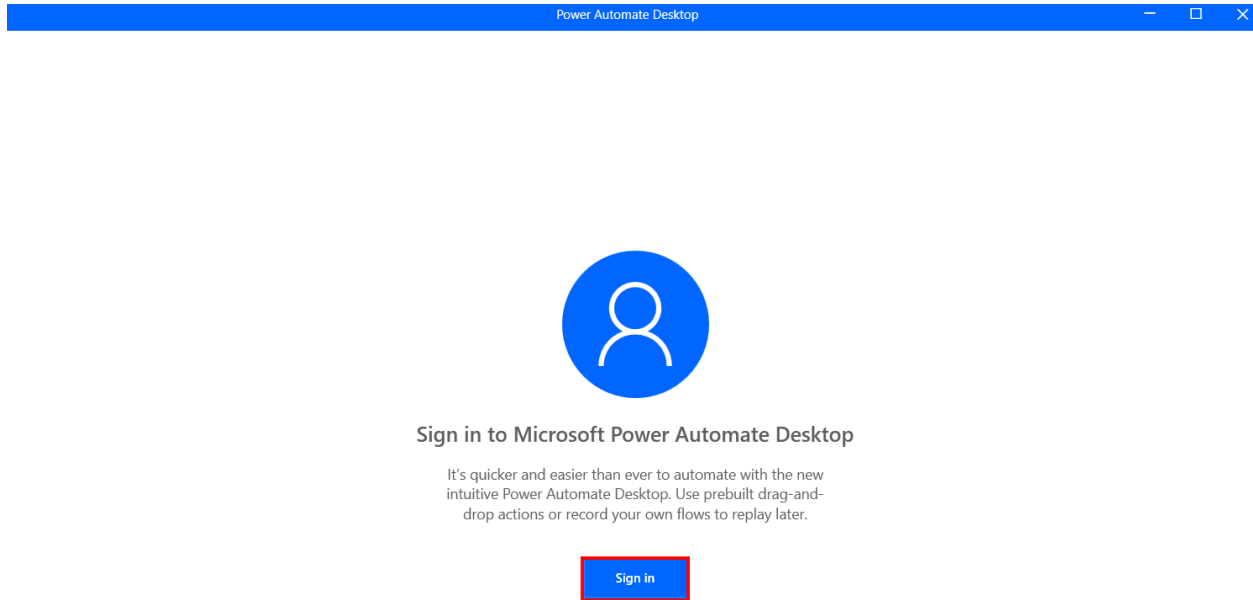


6. Use the following credentials, provided by trainer, to log in to the VM:

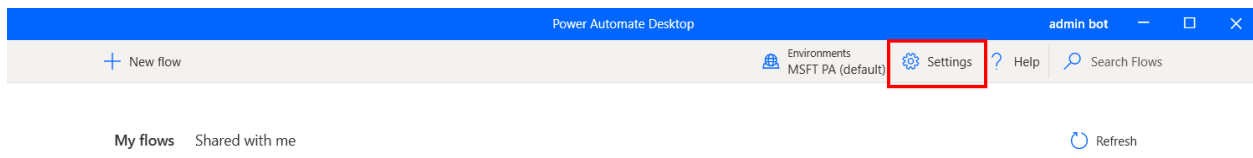


7. If there is no desktop flows pre-installed on the VM, or it has old version of desktop flow, you need to upgrade the desktop flows version.
<https://docs.microsoft.com/en-us/power-automate/ui-flows/upgrade>

8. When the installation has completed, select **Launch Power Automate Desktop**.
9. Sign into Power Automate Desktop by clicking **Sign in**.



10. In Power Automate Desktop, select **Settings**.



11. Select Open machine settings

The screenshot shows the Power Automate application window. The main area displays a list of flows under the 'My flows' tab. The 'Settings' dialog box is open on the right side, showing the 'General' tab. The 'Open machine settings' link is highlighted with a red box.

Power Automate (test user 1)

Environments: Demo Company (default)

Settings ? Help Search Flows

My flows | Shared with me

Name	Modified
Enter an invoice	7 hours ago
test1	1 week ago

Settings

General | Data collection

Application

- ☒ Auto-start application
- ☒ On close, keep the application running
- ☒ Display Windows notifications
- ☒ Stop the running flow with hotkey
 - ☒ Ctrl ☒ Shift ☒ Alt T

Updates

[Check for updates](#)

☒ Show update notifications

[Learn more about updates](#)

Machine settings

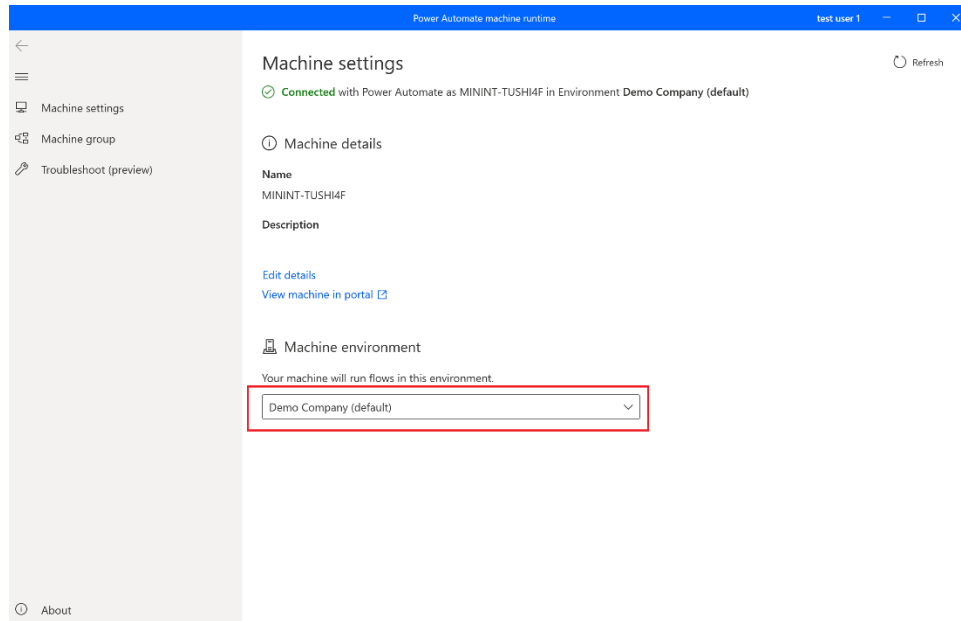
Open the Power Automate machine-runtime app to manage and troubleshoot machine settings.

[Open machine settings](#)

[Learn more about general settings](#)

Save Cancel

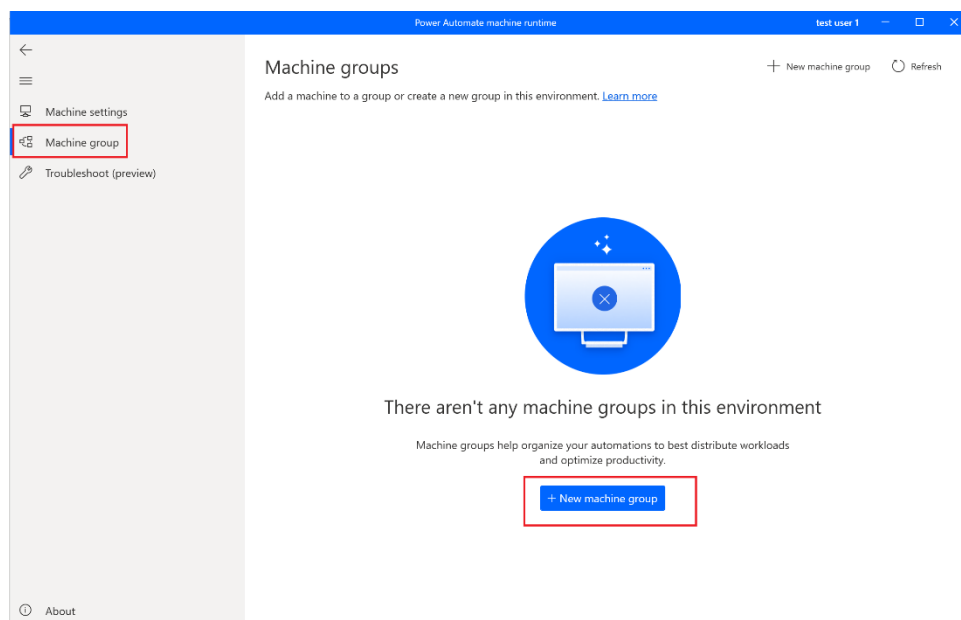
12. This will open the Machine runtime app. If the machine has not been registered yet, you can select a **Machine running environment** and register the machine into that environment. Power Automate will only allow desktop flows to be triggered from this environment to run on this machine.



13. When the connection is established successfully, the pane will display the following fields regarding the machine under Machine settings:

- **Name:** A unique name to identify the machine.
- **Description:** An optional description of the machine.
- **Machine environment:** The running environment of the machine.

14. **Now switch to Machine group:** Through this option, you can add the machine to a machine group. You can find information about machine groups in [Manage machine groups](#). Click on the **+New machine group** button



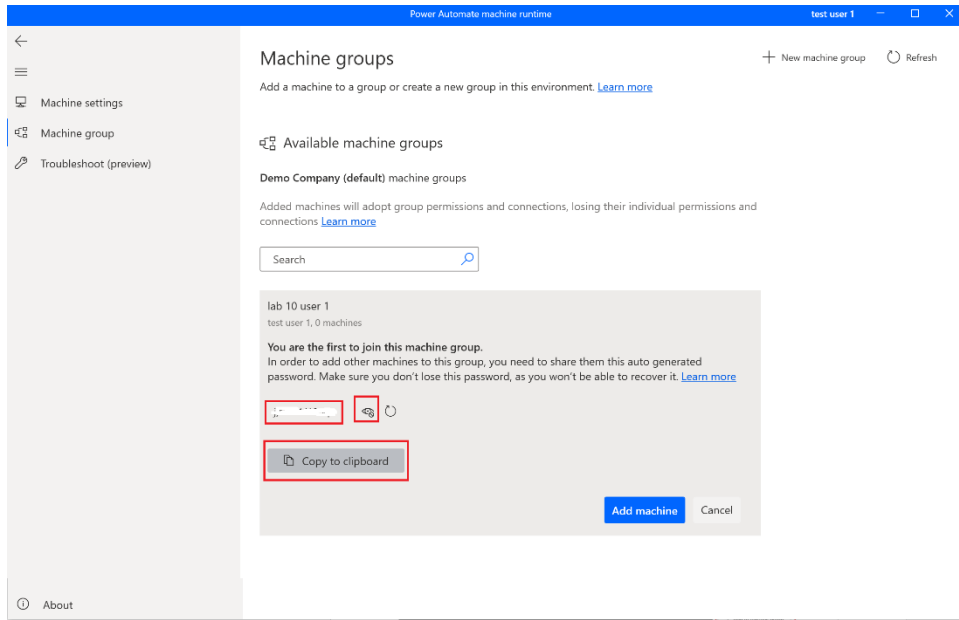
15. Type in a machine group name and click

The screenshot shows the 'New machine group' dialog box in the Power Automate machine runtime application. The dialog has a blue header bar with the text 'Power Automate machine runtime' and a user profile 'test user 1'. On the left, there is a sidebar with a menu containing 'Machine settings', 'Machine group' (selected), and 'Troubleshoot (preview)'. The main area of the dialog is titled 'New machine group'. It contains a text input field for 'Machine group name' with the value 'lab 10 user 1' entered. Below this is a 'Description' text area. At the bottom, there are two buttons: 'Create' (highlighted with a red box) and 'Cancel'.

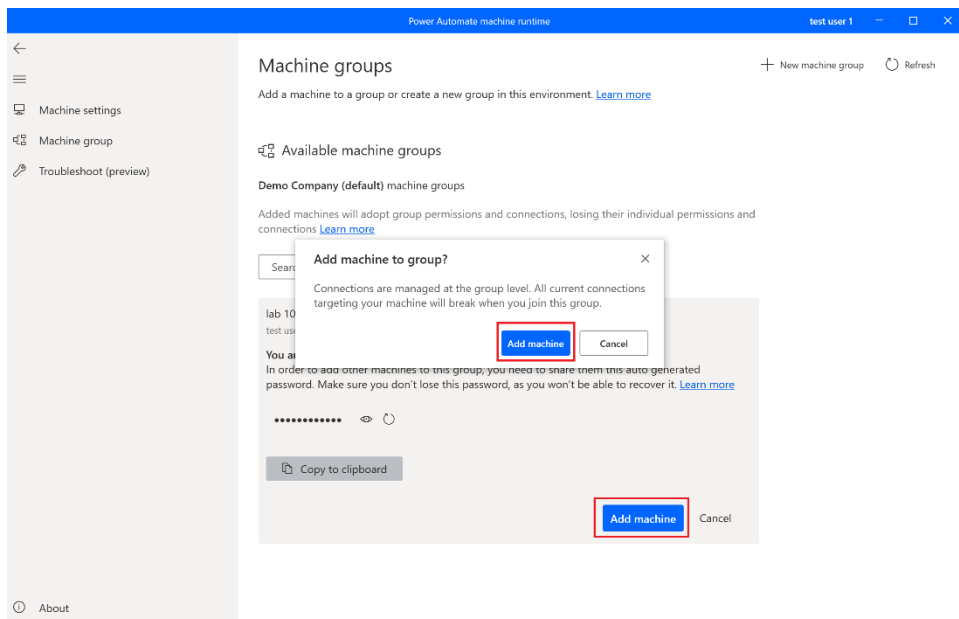
16. Now you will see a machine group has been created

The screenshot shows the 'Machine groups' page in the Power Automate machine runtime application. The page has a blue header bar with the text 'Power Automate machine runtime' and a user profile 'test user 1'. On the left, there is a sidebar with a menu containing 'Machine settings', 'Machine group' (selected), and 'Troubleshoot (preview)'. The main area is titled 'Machine groups' and includes a '+ New machine group' button and a 'Refresh' button. Below the title, there is a message: 'Add a machine to a group or create a new group in this environment. [Learn more](#)'. Under the heading 'Available machine groups', there is a section for 'Demo Company (default) machine groups' with a sub-message: 'Added machines will adopt group permissions and connections, losing their individual permissions and connections [Learn more](#)'. Below this is a search bar. A list of machine groups is displayed, with the first entry 'lab 10 user 1' highlighted by a red box. Below the name, it says 'test user 1, 0 machines'.

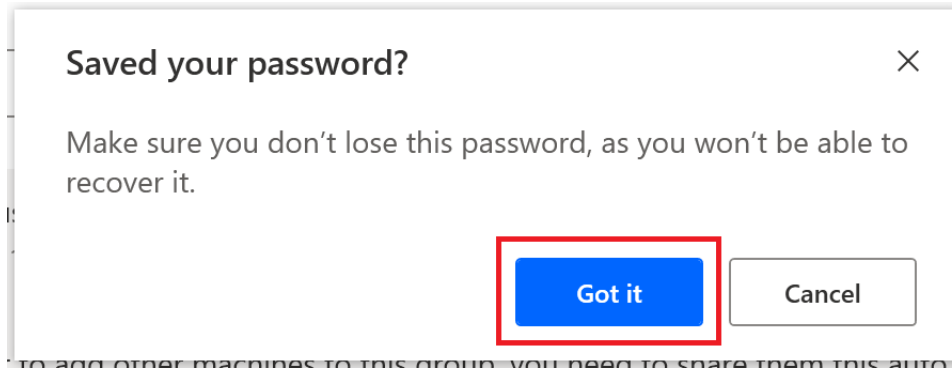
17. Click to open this machine group. You will notice there is a password associated with this new machine group. Copy and save this password to somewhere (for example in your outlook notes) to store and use in the future. Note you will not be recover this password if you lost it. You will have to create new machine group again in that case.



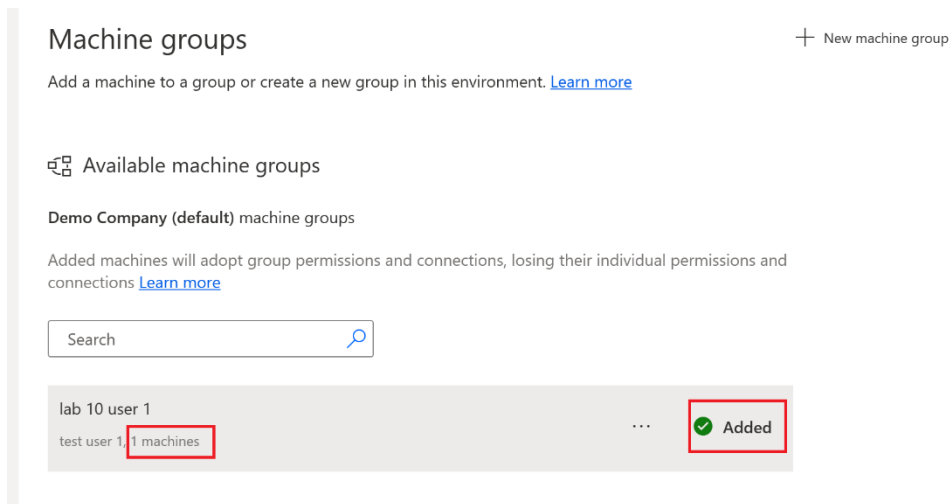
18. , Click **Add machine** button to add this machine into the new machine group. And confirm you want to add machine into the machine group



19. Confirm you have saved the machine group password

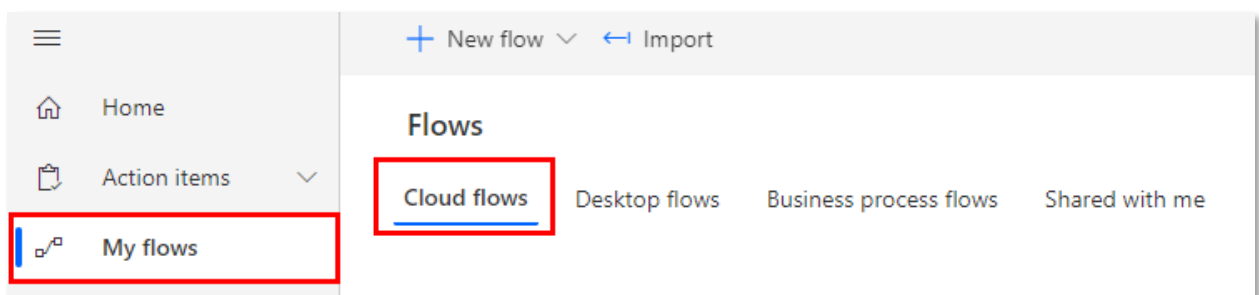


20. Now you will see 1 machine has been added to the machine group successfully

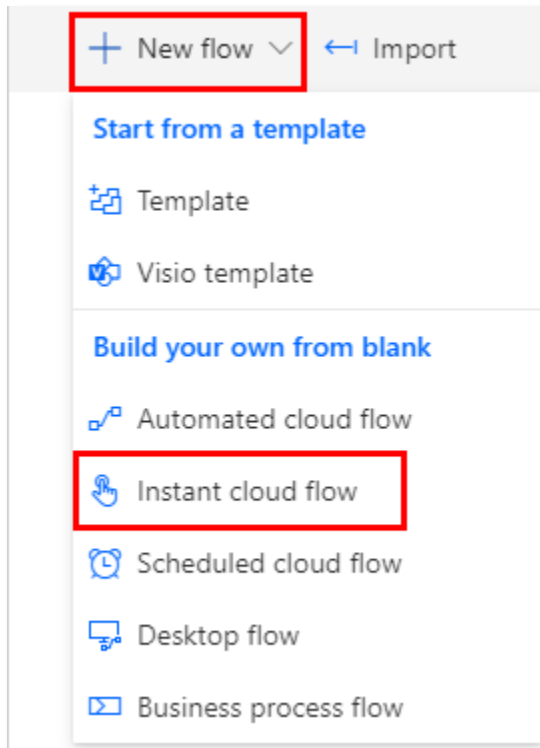


21. If the Contoso app is not pre-installed on the VM, copy and install it on your VM. You can find the latest version under the lab package.

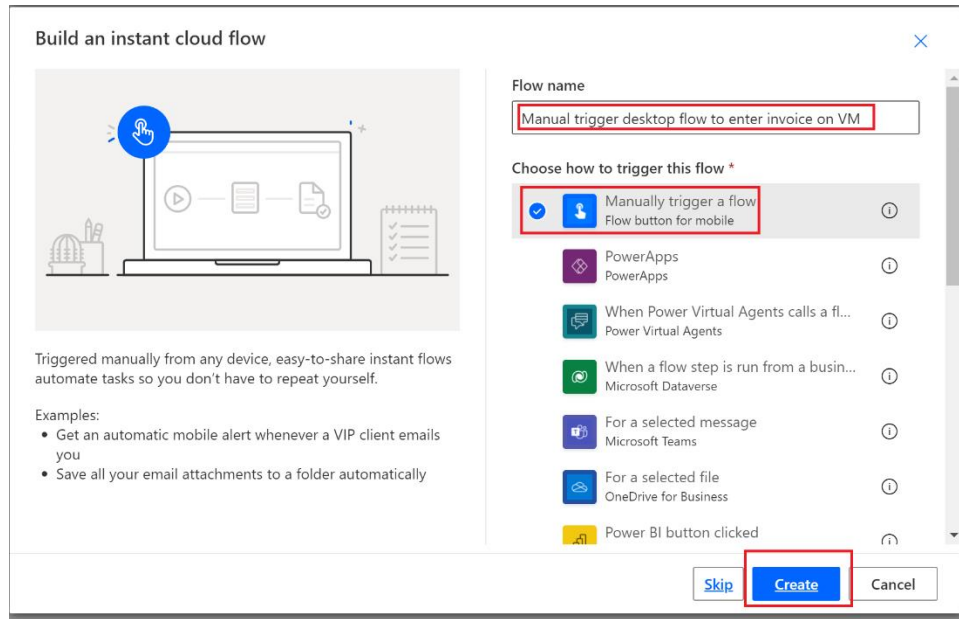
22. Now go back to your own computer (not VM) navigate to <https://powerautomate.microsoft.com>. Go to **My flows > Cloud flows**.



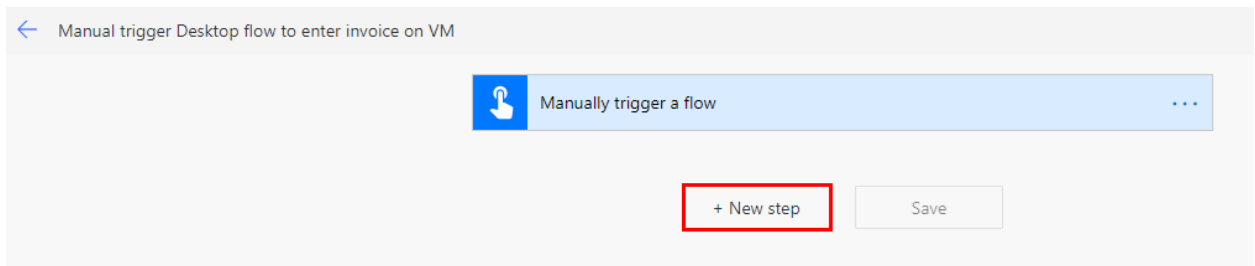
23. Click +New flow > Instant cloud flow



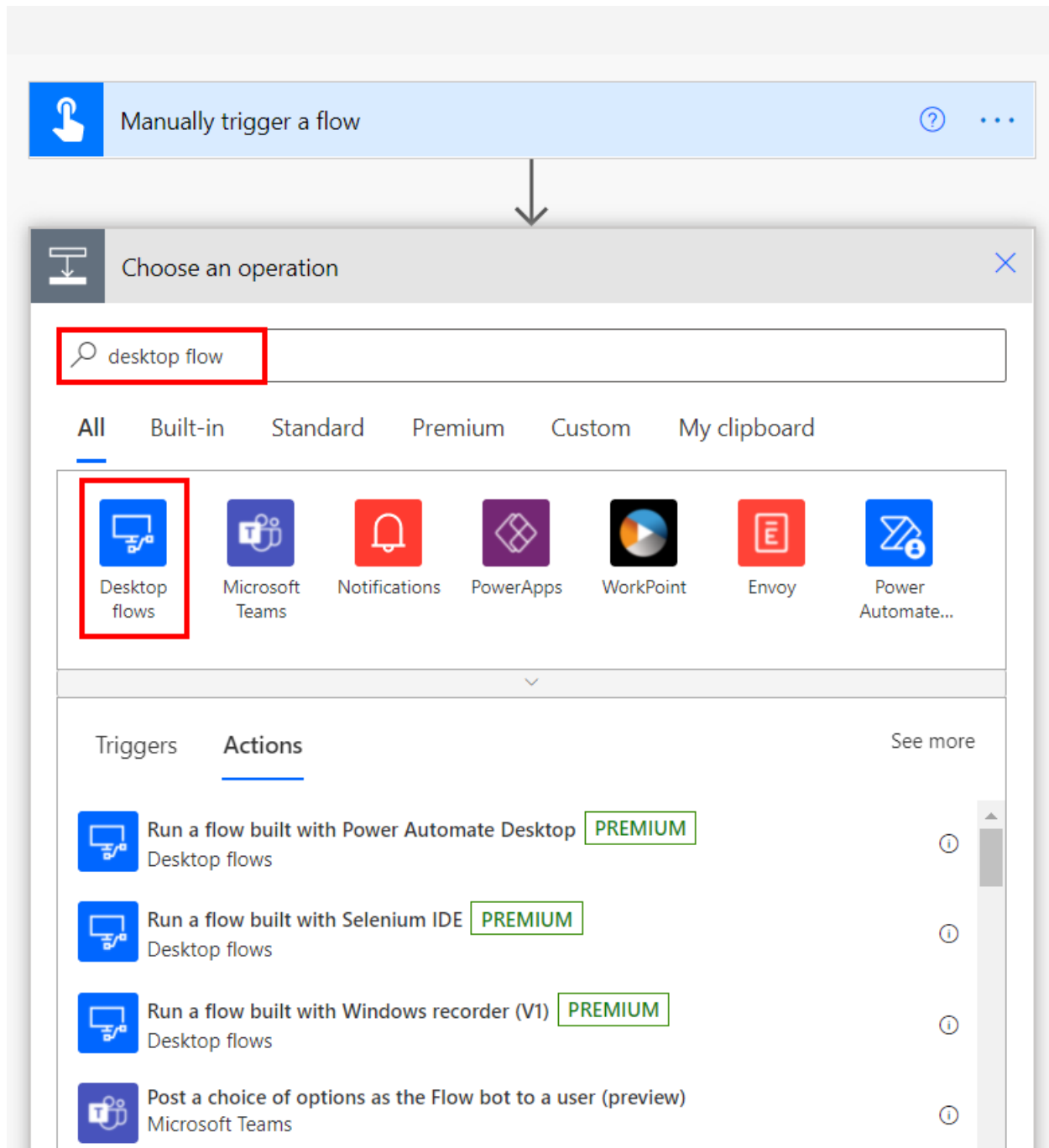
24. Name the flow as **Manual trigger desktop flow to enter invoice on VM**, select **Manually trigger a flow**. Then click **Create**.



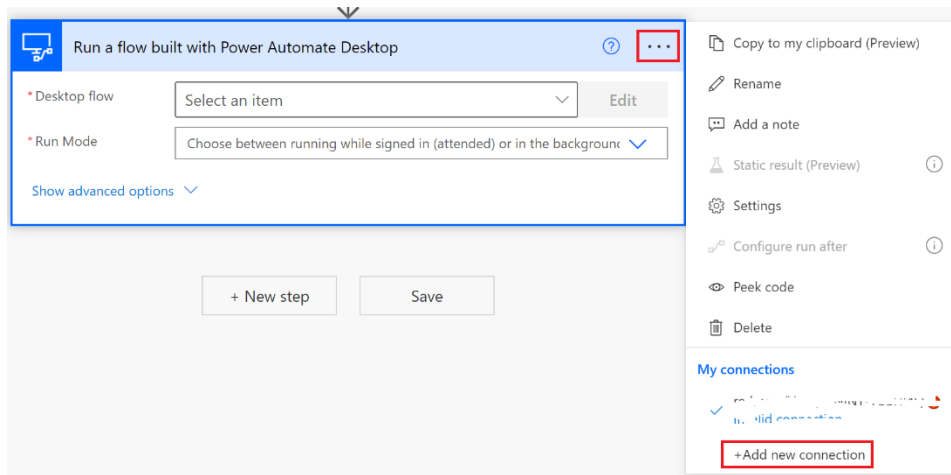
25. Click **+New step**.



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



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



28. Select **Directly to machine** in the Connect field, then select machine group name you have created in the Machine or machine group field, enter username (e.g. domain\username) and your **password**. Or the VM log in credential provided by your instructor. Then click **Create**.

The screenshot shows the 'Manually trigger a flow' dialog box. The 'Desktop flows' section is expanded, revealing four required fields, each highlighted with a red box:

- * Connect:** A dropdown menu with 'Directly to machine (preview)' selected.
- * Machine or machine group:** A dropdown menu with 'Lab 10' selected.
- * Domain and username:** A text field containing 'MININT-4PRC061\Administrator'.
- * Password:** A text field with masked characters (dots).

At the bottom of the dialog are two buttons: 'Create' and 'Cancel'.

29. Select Enter an invoice desktop flow.

Manual trigger Desktop flow to enter invoice on VM

Manually trigger a flow

Run a flow built with Power Automate Desktop

* Desktop flow: Enter an invoice [Edit](#)

* Run Mode: Choose between running while signed in (attended) or in the background [v](#)
'Run Mode' is required.

Amount:

Contact:

Account name:

[Show advanced options](#) [v](#)

[+ New step](#) [Save](#)

30. Fill the box with these values:

Run Mode: Unattended -Runs in the background without signing in

Amount: \$200

Contact: b.friday@wingtiptoy.com

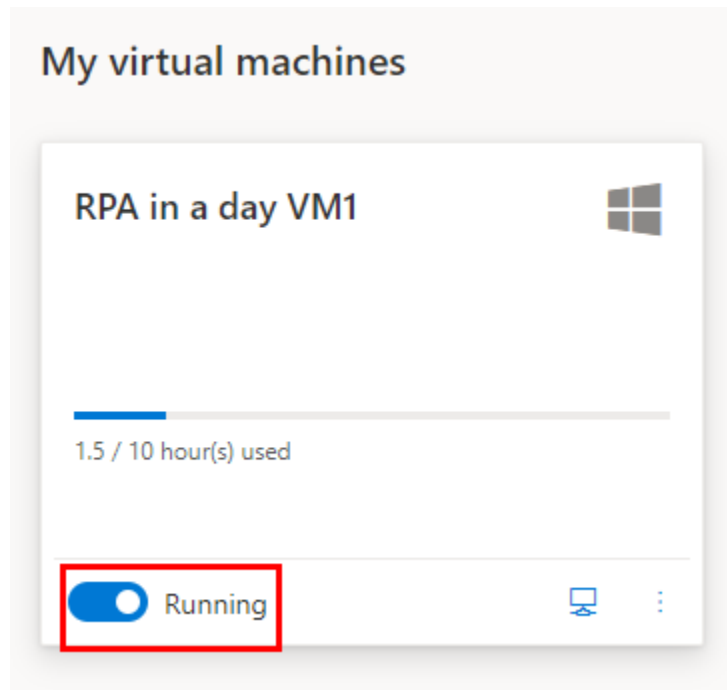
Account: WingTip Toys

Then click **Save**.

The screenshot shows the Power Automate Desktop interface. At the top, there is a blue bar with a hand icon and the text "Manually trigger a flow". Below this, a plus icon in a circle indicates a new step. The main area is titled "Run a flow built with Power Automate Desktop". It contains a list of fields: "Desktop flow" with a dropdown menu showing "Enter an invoice" and an "Edit" button; "Run Mode" with a dropdown menu showing "Unattended - Runs in the background without signing in"; "Amount" with a text box containing "\$200"; "Contact" with a text box containing "b.friday@wingtiptoy.com"; and "Account name" with a text box containing "WingTip Toys". Below these fields is a link "Show advanced options" with a downward arrow. At the bottom, there are two buttons: "+ New step" and "Save". The "Save" button is highlighted with a red border.

31. Prepare to test unattended flow. Make sure your VM is in good state. Review the steps below:

- a) Navigate to <https://labs.azure.com/virtualmachines> to see if your VM is still running. Start the VM if it's stopped.



- b) On the portal, you will see the machine is online as well under **Monitor -> Machines**. You will notice that it is joined to the group you created.

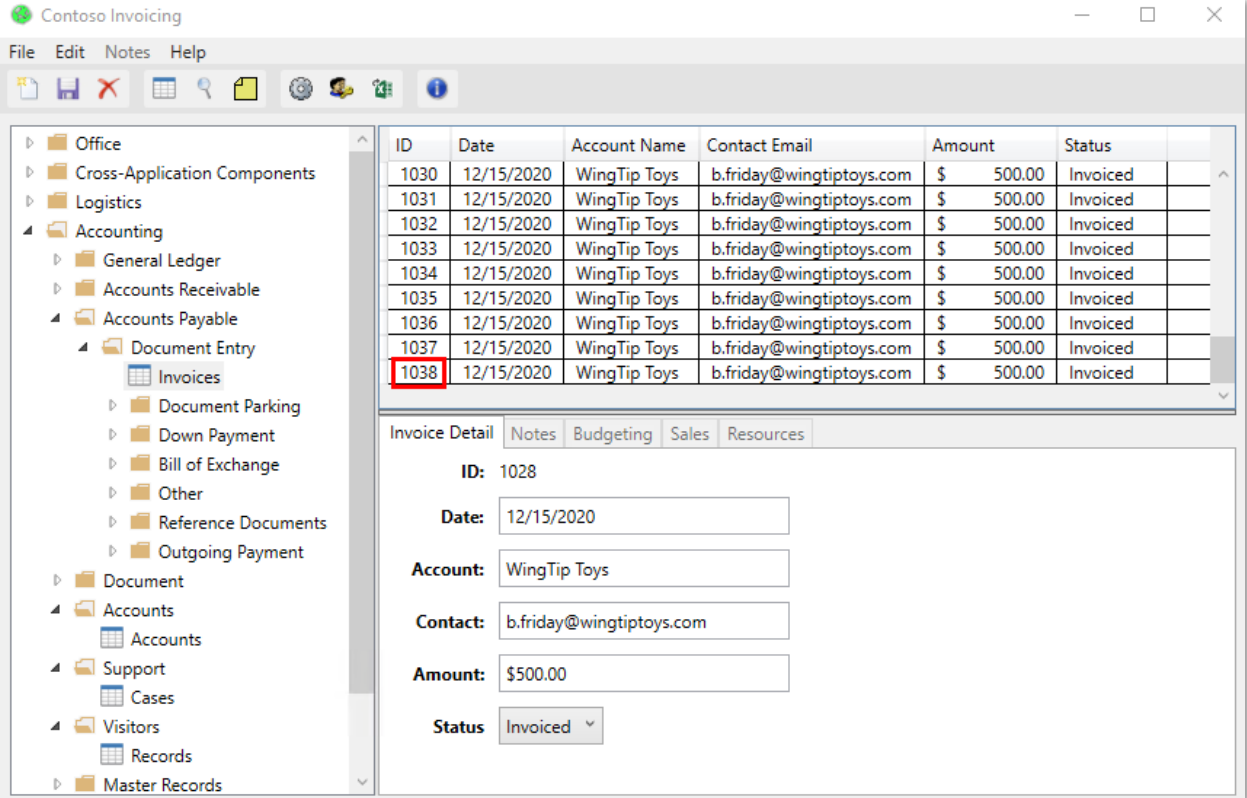
Machines

Check the real-time health and status of your machines and the desktop flows running on them. [Learn more](#)

Machines (preview) Machine groups (preview) Gateways

Machine name	Description	Group	Status	Flows run...
	—	Lab 10	✓ Available	0

- c) Open Contoso invoicing app, go to Invoice tab, and write down what is the current highest invoice ID number. This is to prepare for the comparison with the new IDs after the unattended run.



ID	Date	Account Name	Contact Email	Amount	Status
1030	12/15/2020	WingTip Toys	b.friday@wingtip toys.com	\$ 500.00	Invoiced
1031	12/15/2020	WingTip Toys	b.friday@wingtip toys.com	\$ 500.00	Invoiced
1032	12/15/2020	WingTip Toys	b.friday@wingtip toys.com	\$ 500.00	Invoiced
1033	12/15/2020	WingTip Toys	b.friday@wingtip toys.com	\$ 500.00	Invoiced
1034	12/15/2020	WingTip Toys	b.friday@wingtip toys.com	\$ 500.00	Invoiced
1035	12/15/2020	WingTip Toys	b.friday@wingtip toys.com	\$ 500.00	Invoiced
1036	12/15/2020	WingTip Toys	b.friday@wingtip toys.com	\$ 500.00	Invoiced
1037	12/15/2020	WingTip Toys	b.friday@wingtip toys.com	\$ 500.00	Invoiced
1038	12/15/2020	WingTip Toys	b.friday@wingtip toys.com	\$ 500.00	Invoiced

Invoice Detail | Notes | Budgeting | Sales | Resources

ID: 1028

Date: 12/15/2020

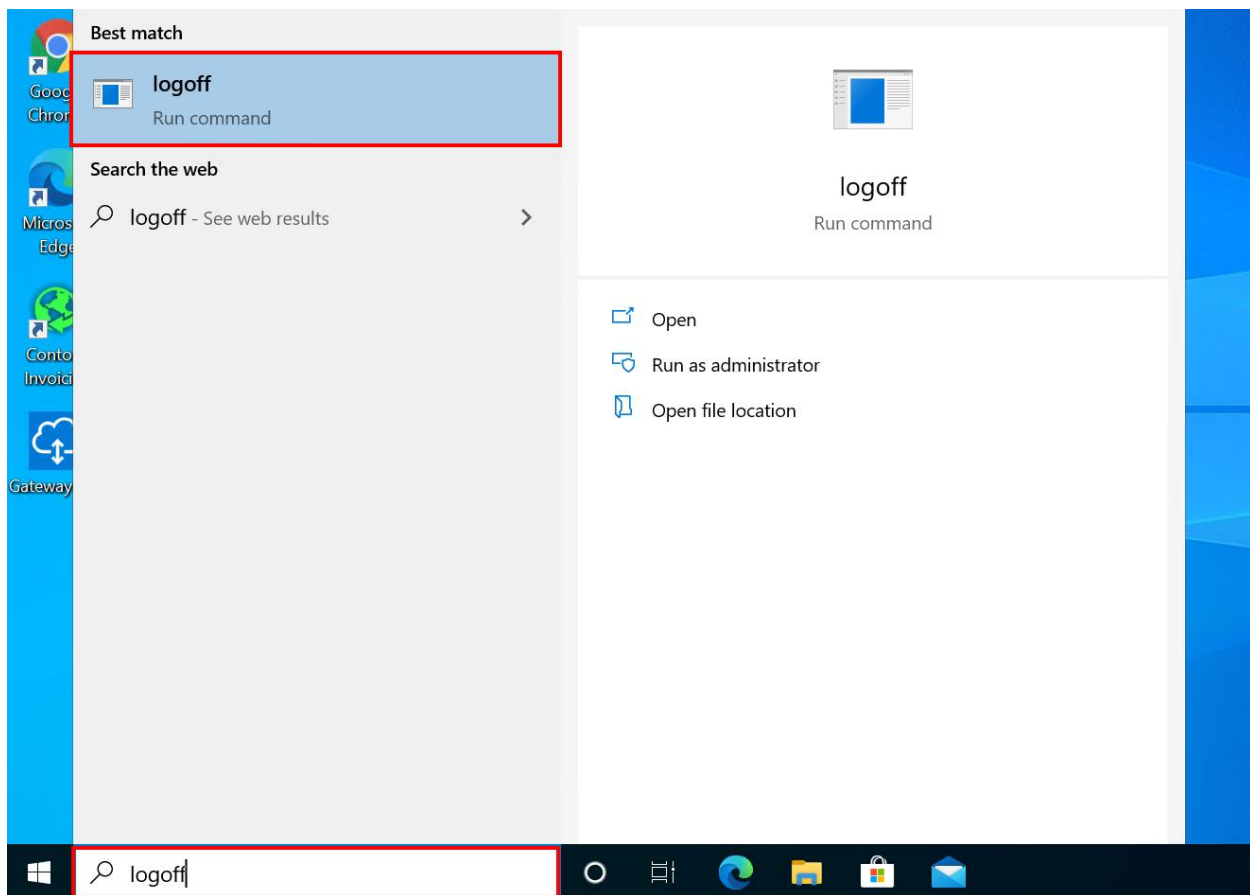
Account: WingTip Toys

Contact: b.friday@wingtip toys.com

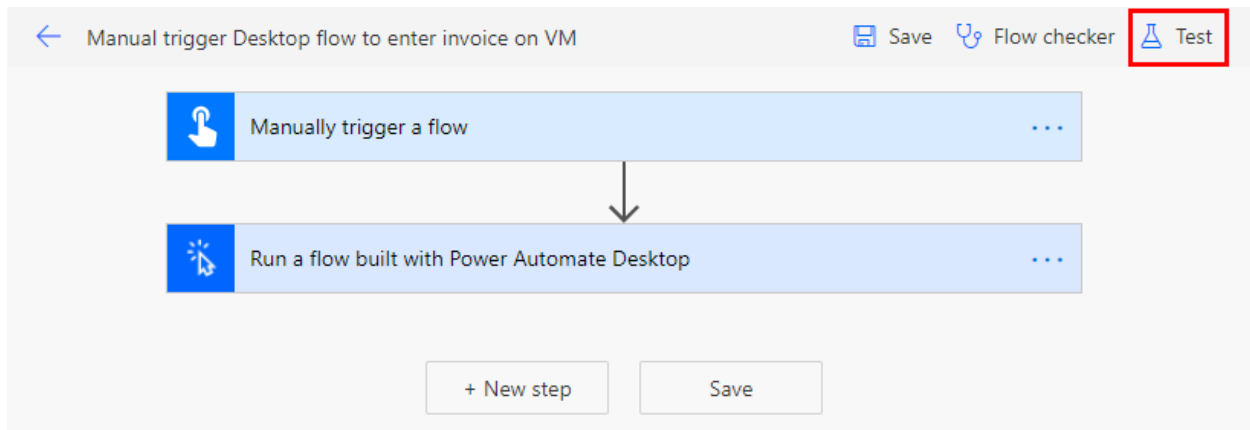
Amount: \$500.00

Status: Invoiced

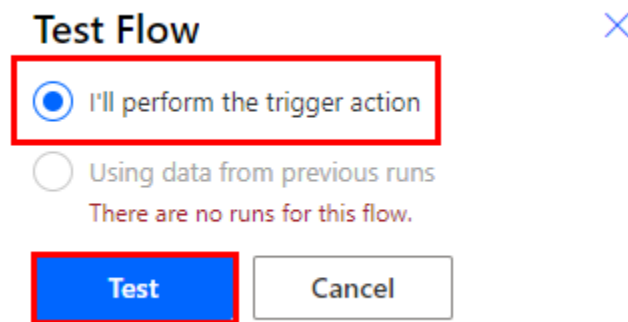
d) Log off your VM.



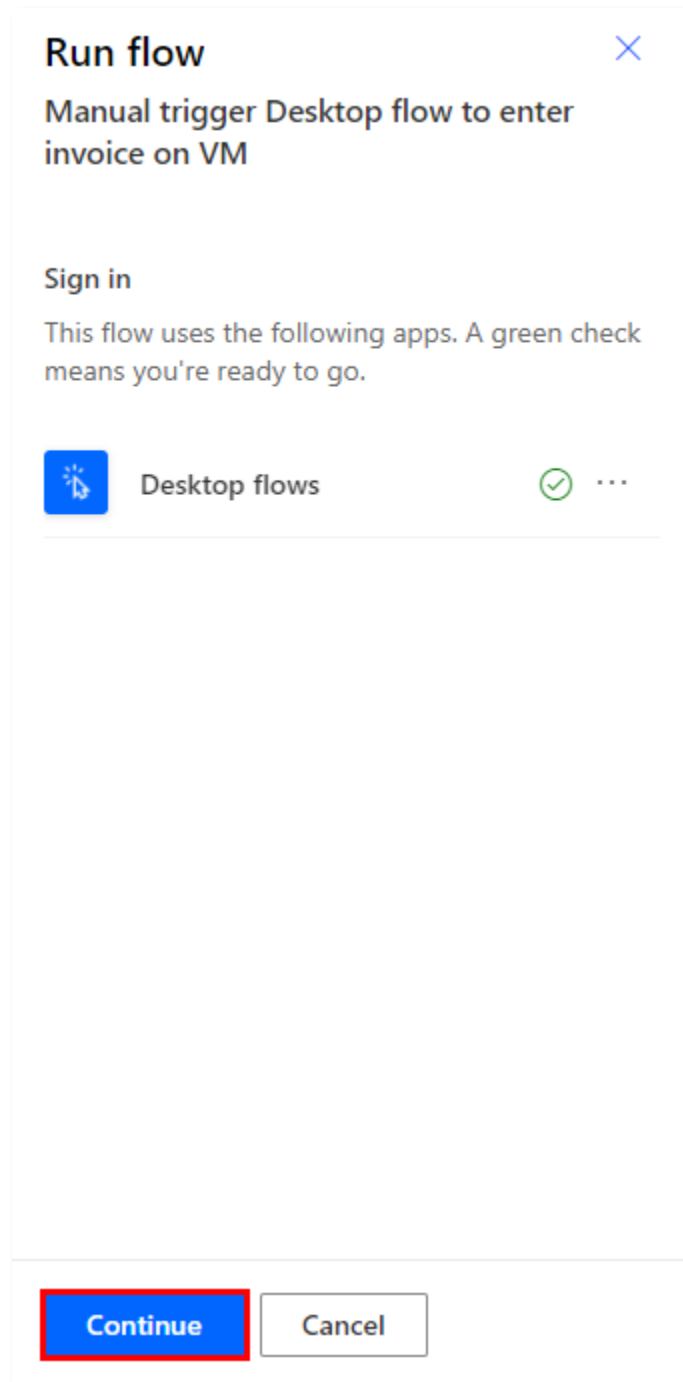
32. Now from the portal in your own computer (not the vm), click **Test**.



33. Select I'll perform the trigger action. Click Test.



34. Click Continue.

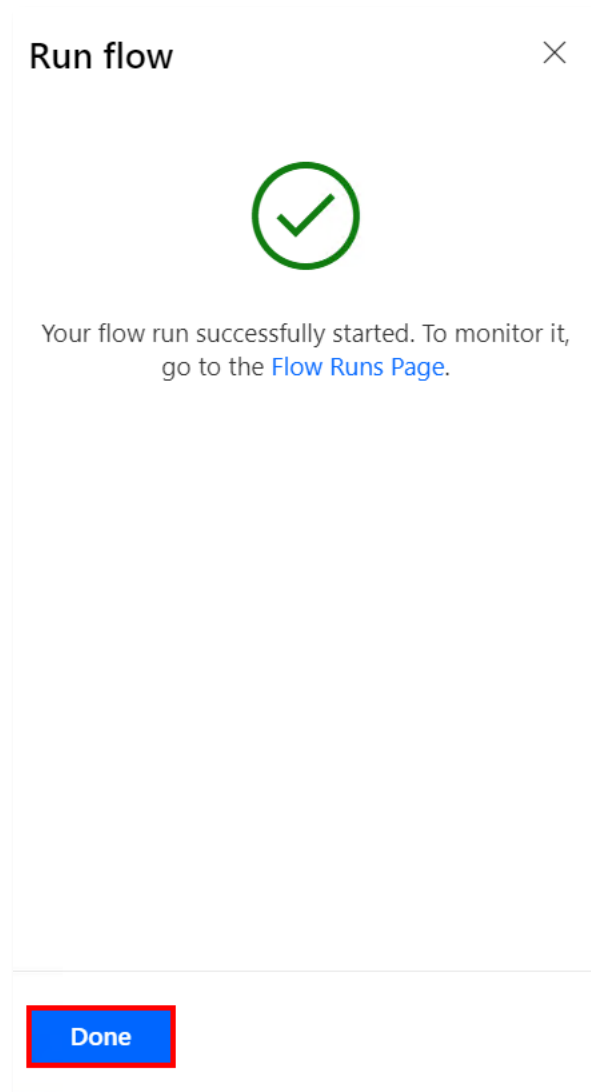


35. Click **Run flow**.

This flow uses Desktop flows.
[Review connections and actions](#)



36. Click **Done**.



37. The flow will be running unattended on the VM that you have logged off. You can monitor the flow run from the portal run history. It should run successfully.

Tip: If the installation location paths (e.g., C:\Program Files (x86)\Contoso, Inc\Contoso Invoicing\LegacyInvoicingApp.exe) are different for the Contoso app on the machine at recording time vs the VM used for playback time, you will have to either modify the path manually from the portal script steps or uninstall/reinstall the Contoso app on the VM to the same path, or simply delete the script and re-record the desktop flow on the VM again to pick up the correct path.

38. You can log back into the VM and write down the newest invoice ID from Contoso app.

Note: After the first time download the RDP file, you should be able to find your VM RDP file under **File Explorer > Downloads** and use it to connect to the VM.

Exercise 2: End-to-end Invoice Processing Scenario in Unattended mode

1. Now we will update the E2E invoicing process flow to be run unattended. Go to Solutions. Select Invoice processing solution (the one you created in lab 7)

The screenshot shows the Microsoft Power Automate interface. On the left is a sidebar with navigation options: Home, Action items, My flows, Create, Templates, Connectors, Data, Monitor, AI Builder, Process advisor (preview), **Solutions** (highlighted with a red box), and Learn. The main area is titled 'Solutions' and contains a table of available solutions.

Display name
Invoice processing solution (highlighted with a red box)
RPA in a day - Process Advisor
Process Mining Anchor
Process Mining
Power Apps Checker Base
Power Apps Checker
Contextual Help Base
Contextual Help
Common Data Services Default Solution
Default Solution

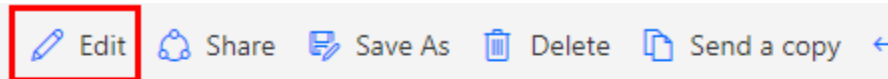
2. Open Enter invoice information flow (the one you created in lab 7).

Solutions > Invoice processing solution

Display name ▼

Enter invoice information flow 

3. Click Edit.



Flows > Enter invoice information flow

4. Expand **When a new email arrives** step.

When a new email arrives (V3)

Folder: Inbox

Show advanced options ▼

+ New step

Save

5. Click **Show advanced options**.

When a new email arrives (V3)

Folder: Inbox

Show advanced options ▼

+ New step

Save

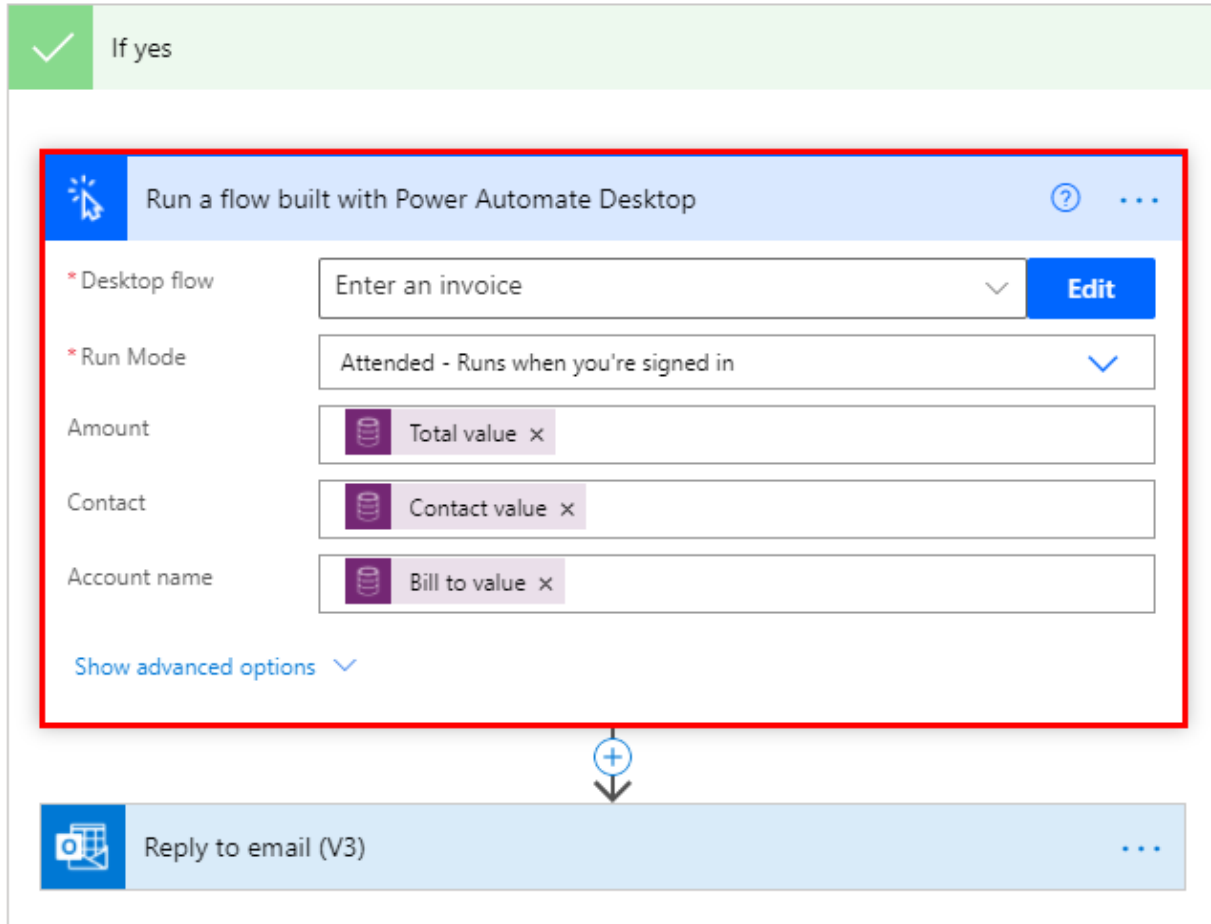
6. Type in **unattended** in Subject Filter field.

The screenshot shows the configuration window for the 'When a new email arrives (V3)' trigger in Microsoft Power Automate. The window has a light blue header with the trigger icon and title. Below the header, there are several configuration fields. The 'Subject Filter' field is highlighted with a red border and contains the text 'unattended'. The other fields are: 'Folder' (Inbox), 'To' (Recipient email addresses separated by semicolons), 'CC' (CC recipient email addresses separated by semicolons), 'To or CC' (To or CC recipient email addresses separated by semicolons), 'From' (Sender email addresses separated by semicolons), 'Include Attachments' (Yes), 'Importance' (Any), and 'Only with Attachments' (Yes). At the bottom, there is a link to 'Hide advanced options'.

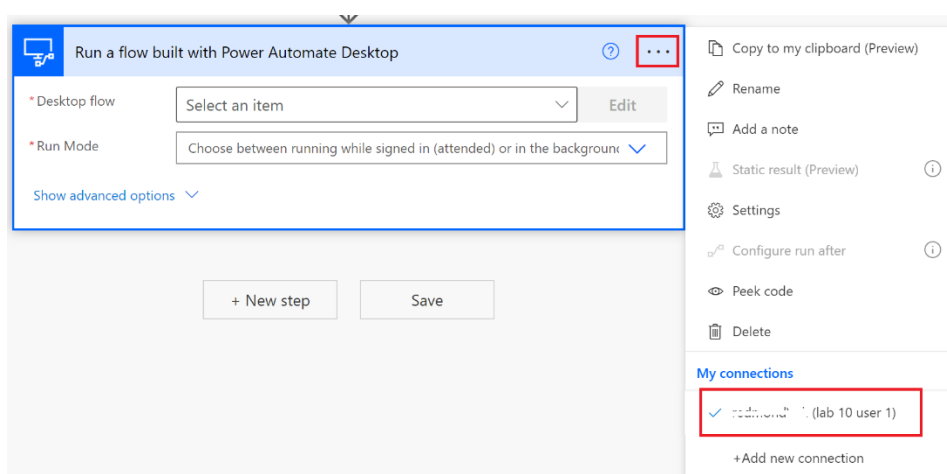
Field	Value
Folder	Inbox
To	Recipient email addresses separated by semicolons (If any match, the
CC	CC recipient email addresses separated by semicolons (If any match, '
To or CC	To or CC recipient email addresses separated by semicolons (If any m
From	Sender email addresses separated by semicolons (If any match, the tr
Include Attachments	Yes
Subject Filter	unattended
Importance	Any
Only with Attachments	Yes

[Hide advanced options](#) ^

7. Expand **Run a flow built with Power Automate Desktop**.



8. Select the ellipsis icon (...) for **Run a flow built with Power Automate Desktop** action and select the correct unattended connection that you created in exercise 1 of lab 10.



9. Select **Unattended** – Runs in the background without signing in in Run Mode field.

Run a flow built with Power Automate Desktop

* Desktop flow: Enter an invoice [Edit]

* Run Mode: **Unattended - Runs in the background without signing in** [v]

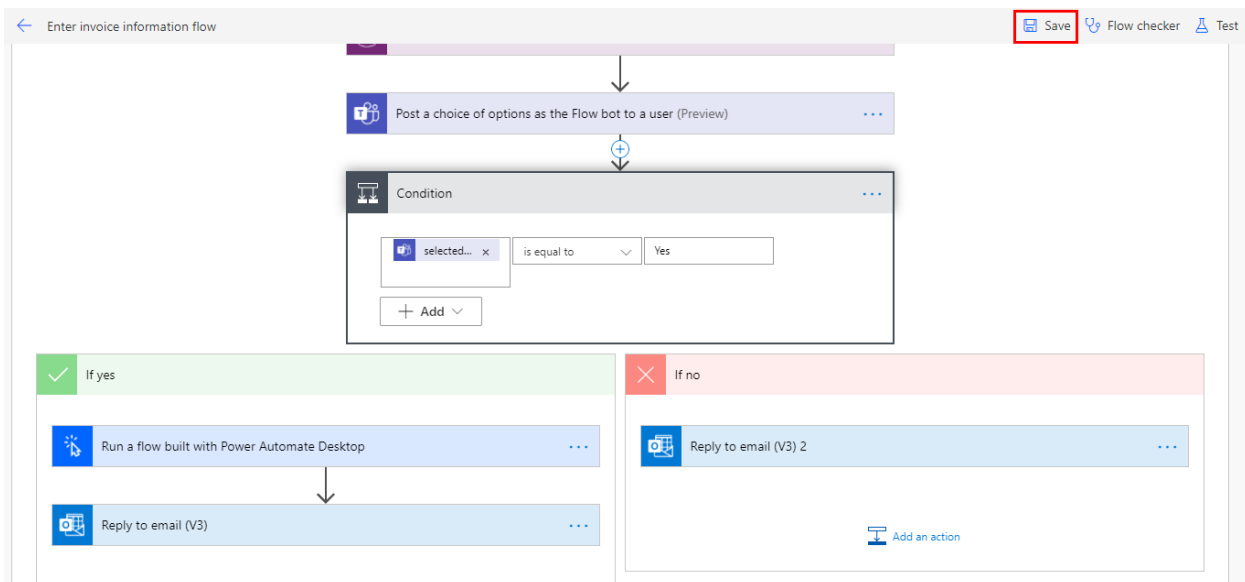
Amount: [Total value x]

Contact: [Contact value x]

Account name: [Bill to value x]

Show advanced options [v]

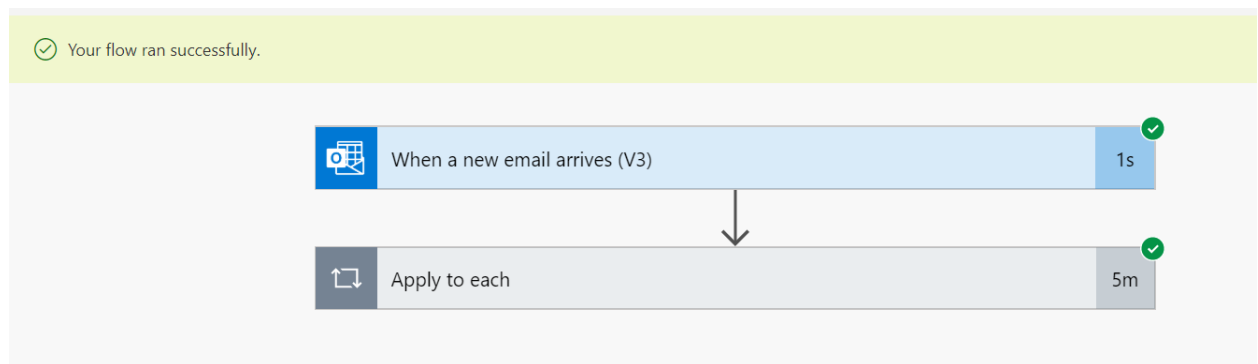
10. Click **Save**.



11. Make sure your VM is ready for unattended run. E.g. make sure VM is running (by checking on the portal under Monitor -> Machines), write down the highest invoice ID number, logged off the VM using logoff command.

12. Now prepare to trigger this flow. In a separate tab, open the Teams app (open it in the browser, not the app).

13. In another separate tab, open the Office 365 Outlook app.
14. Compose a new email with the following settings:
 - a. To: {email address of the user identity you are using in this lab}
 - b. Subject: **unattended**
 - c. Attachments: **newinvoice.jpg** (from the lab resource files)
15. Send the email and wait for the flow to be triggered to run.
16. Wait for an approval request message to you in the Teams tab - approve the invoice.
17. In the Outlook tab, wait for a confirmation email that indicates the approval is complete.



18. Log in back to VM to check the new added entry after your flow runs successfully.

Note: You can find your VM rdp file under **File Explorer > Downloads** and use it to connect to the VM.

19. Open Contoso Invoicing app on VM.



20. Click **Invoices**. And you can find the new entries here from the unattended runs. Notice the ID increased compared to the number you wrote down earlier.

The screenshot shows the 'Contoso Invoicing' application window. The left sidebar contains a tree view with the following structure:

- Office
- Cross-Application Components
- Logistics
- Accounting
 - General Ledger
 - Accounts Receivable
 - Accounts Payable
 - Document Entry
 - Invoices** (highlighted with a red box)
 - Document Parking
 - Down Payment
 - Bill of Exchange
 - Other
 - Reference Documents
 - Outgoing Payment
 - Document
 - Accounts
 - Accounts
 - Support
 - Cases
 - Visitors
 - Records
 - Master Records

The main area displays a table of invoice entries:

ID	Date	Account Name	Contact Email	Amount	Status
1031	12/15/2020	WingTip Toys	b.friday@wingtip toys.com	\$ 500.00	Invoiced
1032	12/15/2020	WingTip Toys	b.friday@wingtip toys.com	\$ 500.00	Invoiced
1033	12/15/2020	WingTip Toys	b.friday@wingtip toys.com	\$ 500.00	Invoiced
1034	12/15/2020	WingTip Toys	b.friday@wingtip toys.com	\$ 500.00	Invoiced
1035	12/15/2020	WingTip Toys	b.friday@wingtip toys.com	\$ 500.00	Invoiced
1036	12/15/2020	WingTip Toys	b.friday@wingtip toys.com	\$ 500.00	Invoiced
1037	12/15/2020	WingTip Toys	b.friday@wingtip toys.com	\$ 500.00	Invoiced
1038	12/15/2020	WingTip Toys	b.friday@wingtip toys.com	\$ 500.00	Invoiced
1039	12/15/2020	Litware Inc.	adixon@litware.com	\$ 6,743.12	Invoiced

Below the table, the 'Invoice Detail' section is visible, showing the details for the selected invoice (ID: 1039):

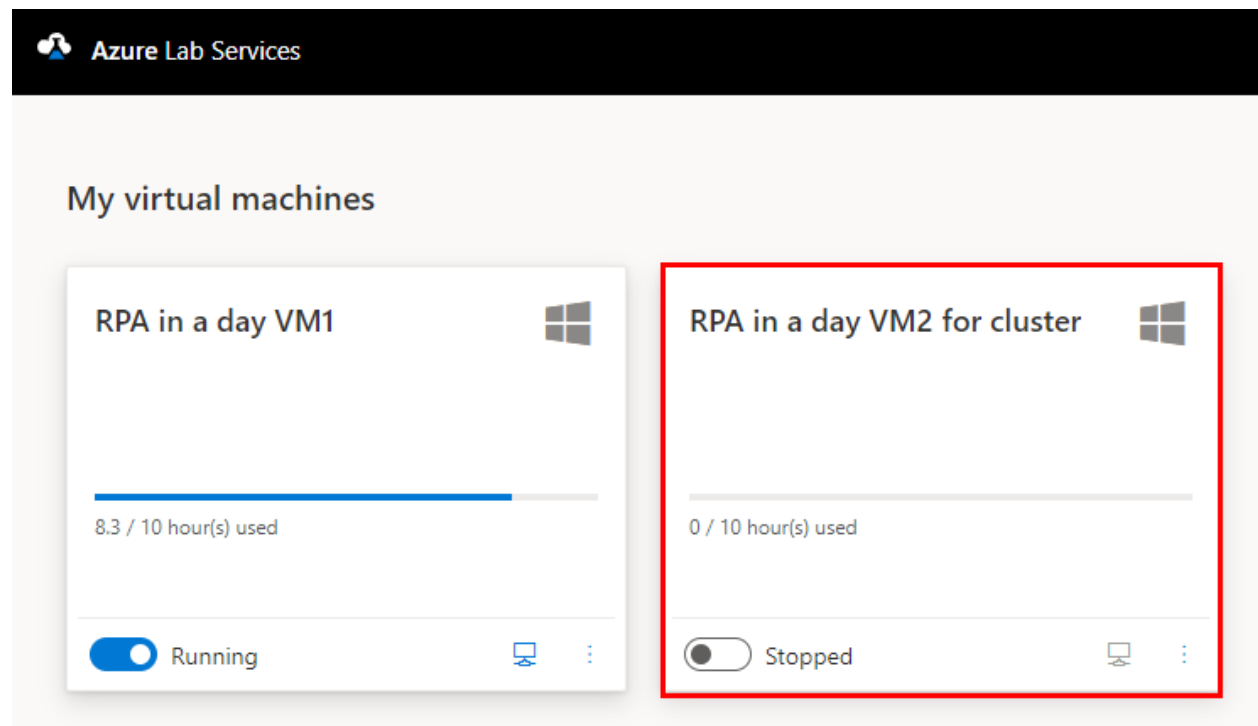
ID: 1039
Date: 12/15/2020
Account: Litware Inc.
Contact: adixon@litware.com
Amount: \$6,743.12
Status: Invoiced

Exercise 3: Run unattended on a machine group with 2 VMs

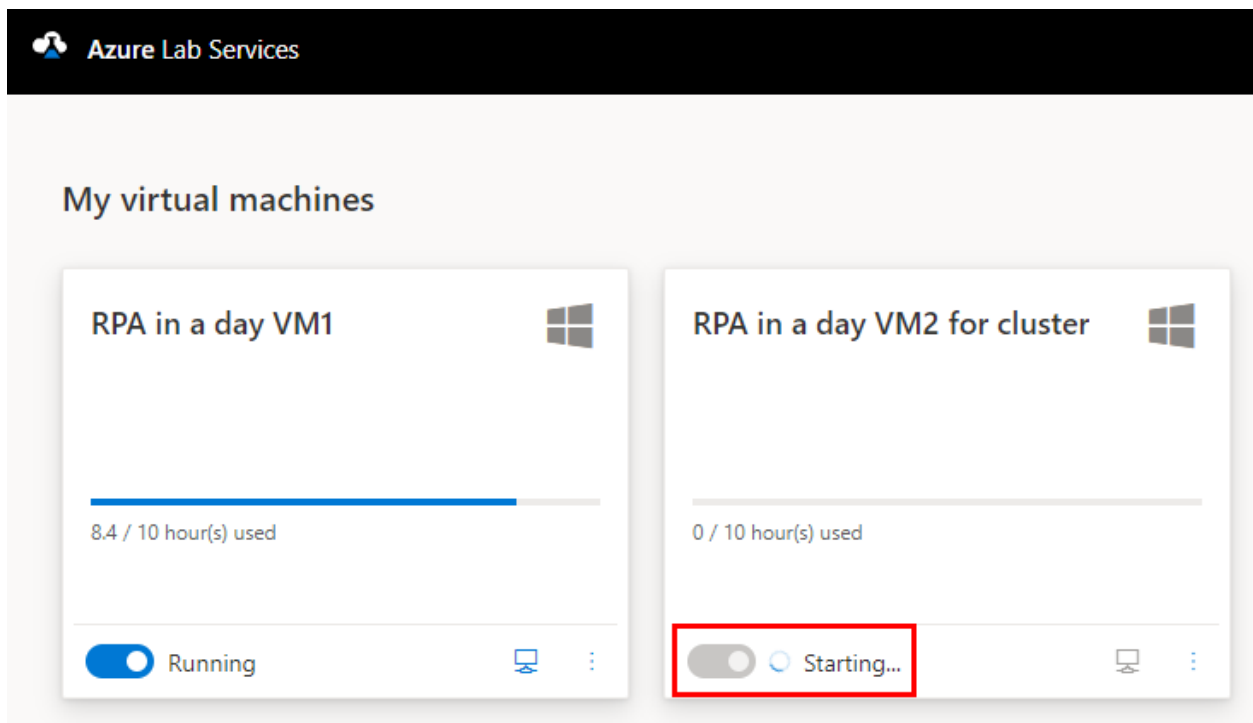
1. We already have 1 VM used in exercise 1 and 2 in this lab 10. Now we will add one more VM to make these 2 VMs to form a group.

Note, All VMs need to have the same machine login credential to be joined to a group. Otherwise, you will not be able to create a connection that can log in and run desktop flow on all the VMs within this group.

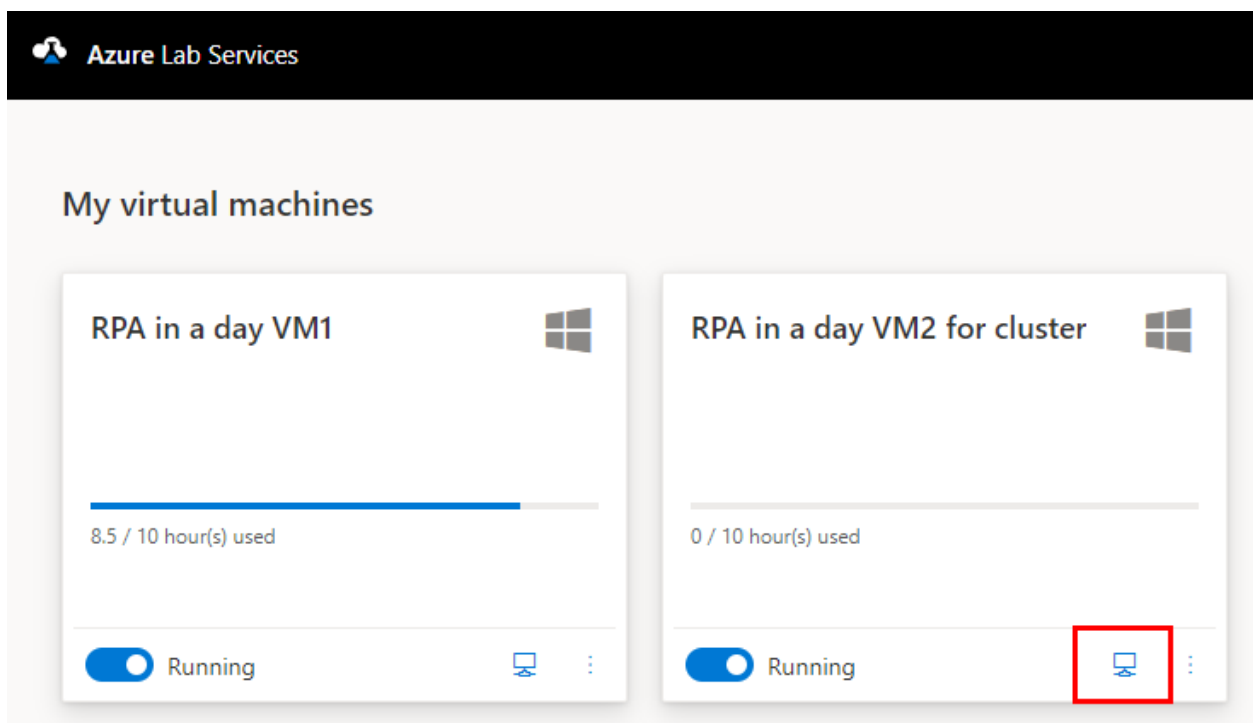
2. Navigate to <http://aka.ms/rpa/vm2> [should be provided by the trainer] to get the second VM "RPA in a day VM2 for group" [should be provided by the trainer]



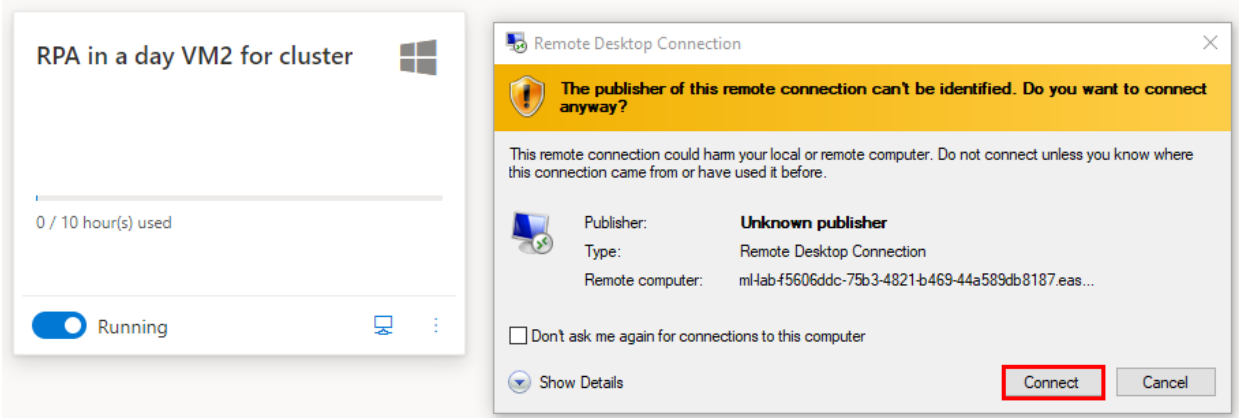
3. Ensure your first VM is running (if not, start it), and start your second VM.



4. Click on the **connect to the virtual machine** icon.

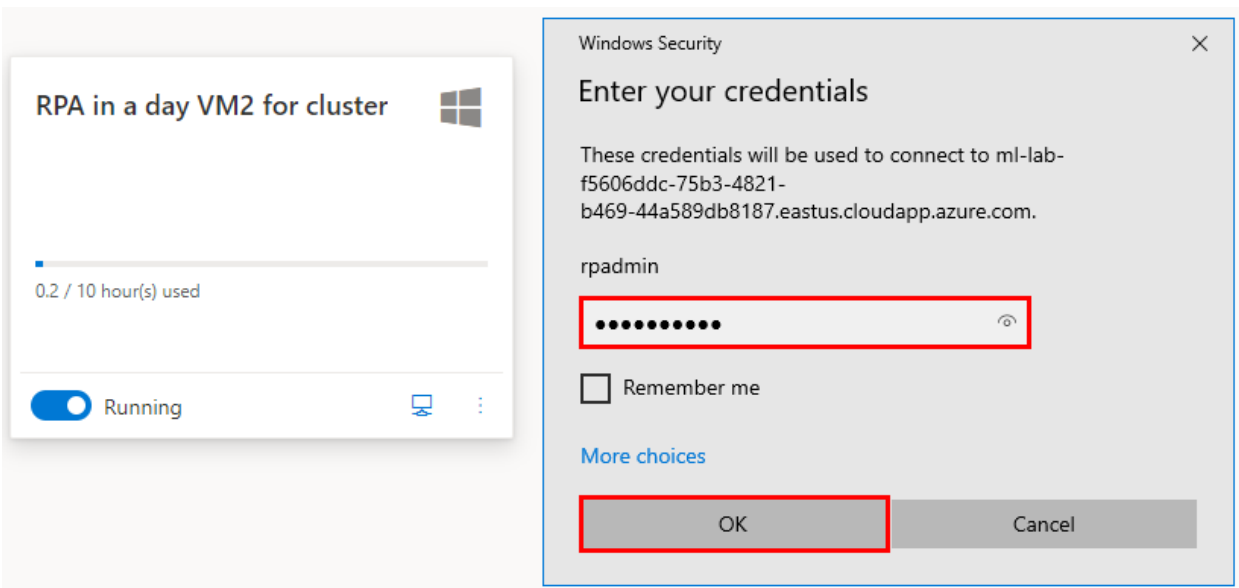


5. Click **Connect**.

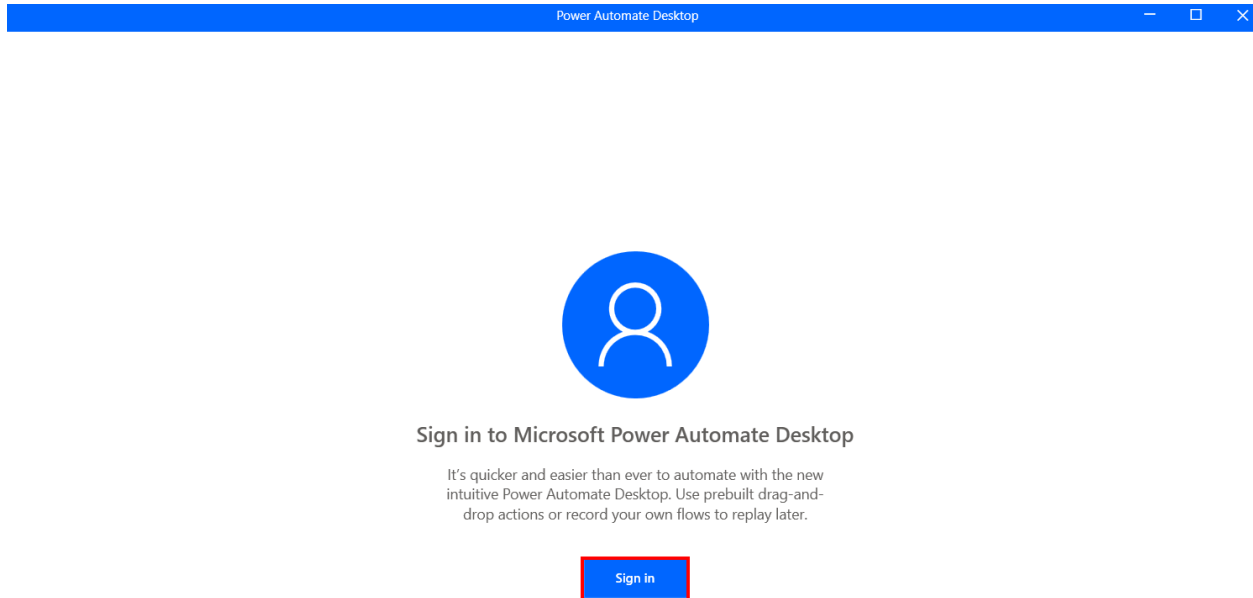


6. Use the following credentials to log in to the VM which is the same as your first VM:
Username: rpadmin [should be provided by the trainer]
Password: Uiflowrpa! [should be provided by the trainer]

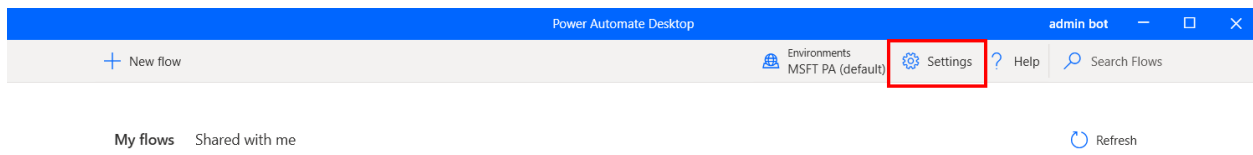
Then click **OK**.



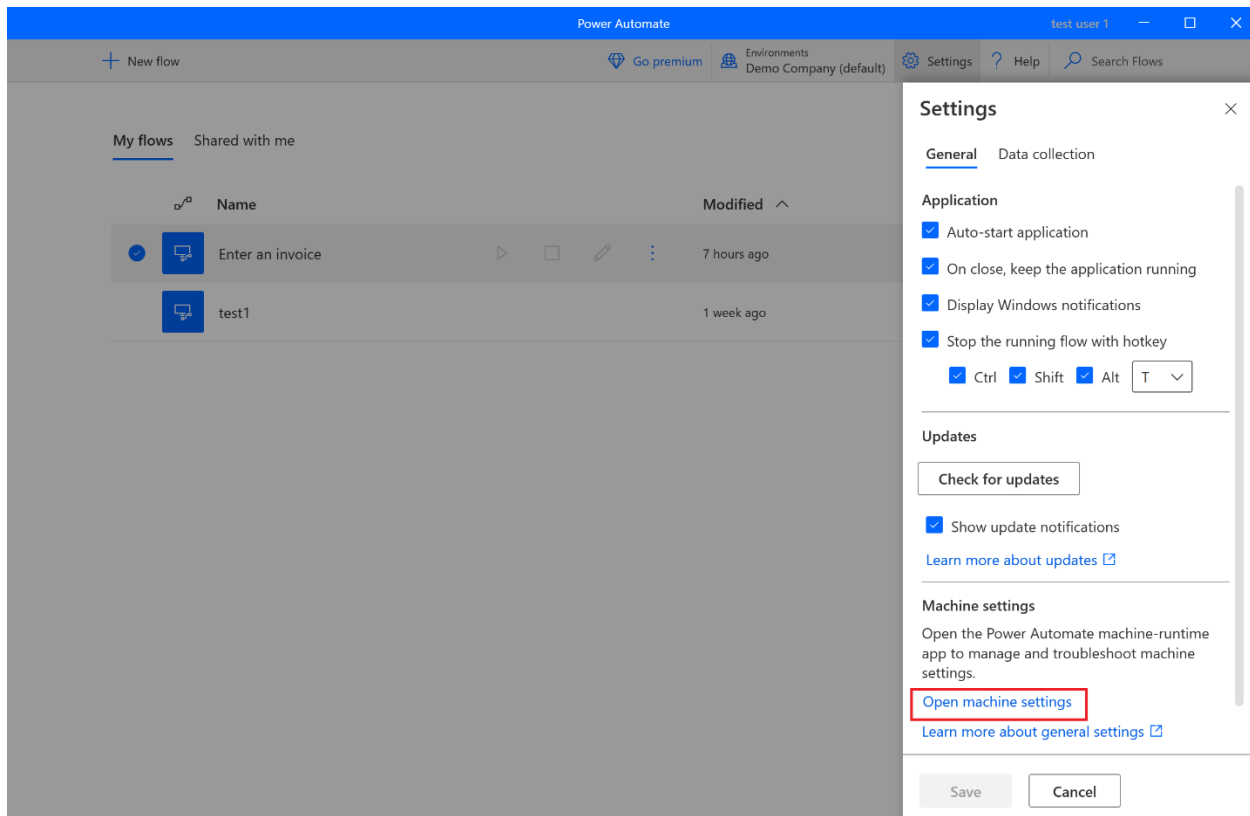
7. If there are no desktop flows pre-installed on the VM, or it has old version of desktop flow, you need to upgrade the desktop flows version.
<https://docs.microsoft.com/en-us/power-automate/ui-flows/upgrade>
8. When the installation has been completed, select **Launch Power Automate Desktop**.
9. Sign into Power Automate Desktop by clicking **Sign in**.



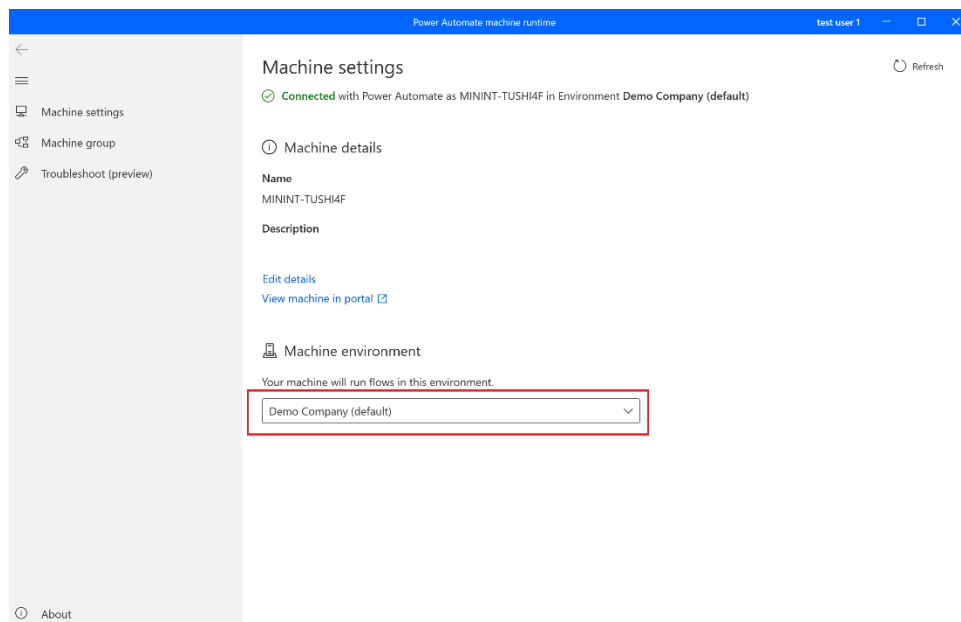
10. In Power Automate Desktop, select **Settings**.



11. Select Open machine settings



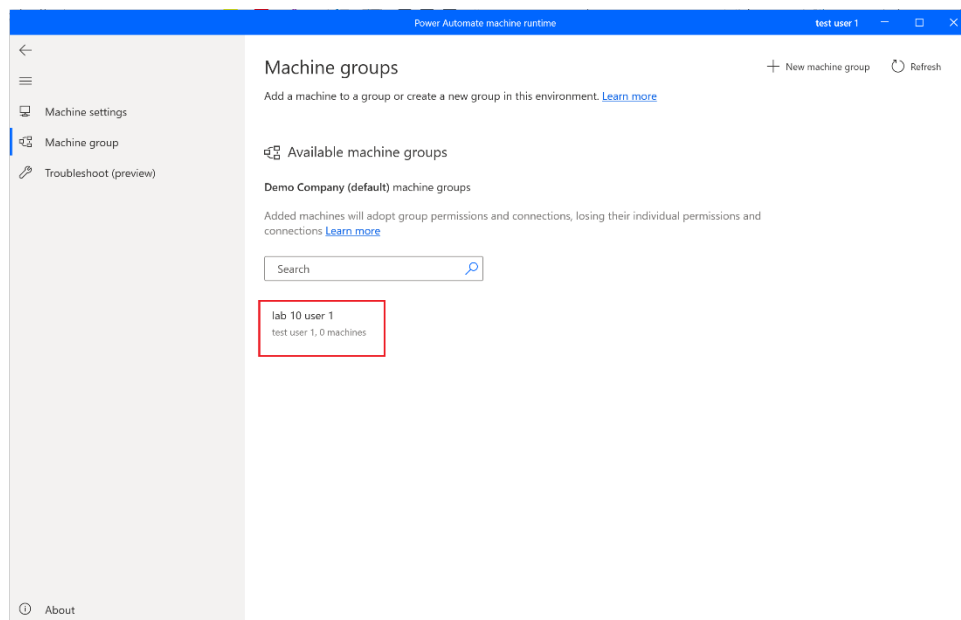
12. This will open the Machine runtime app. If the machine has not been registered yet, you can select a **Machine running environment** and register the machine into that environment. Power Automate will only allow desktop flows to be triggered from this environment to run on this machine.



39. When the connection is established successfully, the pane will display the following fields regarding the machine under Machine settings:

- **Name:** A unique name to identify the machine.
- **Description:** An optional description of the machine.
- **Machine environment:** The running environment of the machine.

40. **Now switch to Machine group:** Through this option, you can add the machine to a machine group.



13. Select the group you have created, then use the machine group password you have saved in your previous step. Lastly click the “Add machine” button.

14. Confirm that you want to add machine to the group.

15. If the Contoso app is not pre-installed on the VM, copy and install it on your VM. You can find the latest version under the lab package.

16. Ensure both your VMs are ready for unattended run. E.g., make sure VMs are running, write down the highest invoice ID numbers on each VM, log off the VMs using logoff command.

17. Now send yourself four emails with different attachments (you can find those files under the Unattended lab folder under lab data packages. Each of these 4 emails should have “unattended” in the email titles.

18. Monitor 4 flows are kicked off in parallel. Approve any Teams requests and monitor all the run results.
19. After all runs are completed, log in back to both VMs to open the Contoso Invoicing app and check the newly added entries with the new invoice IDs. In most cases, 2 new entries should be added to each VM. Some cases due to network delay, the results could be different.

Check your knowledge

Lab 9

7 mins

1. All VMs need to have the same machine login credential to be joined to a group.

- A. True
- B. False

Answer: A. True. This is required since any of the machines in a group may be chosen to run the desktop flow script. We can only include 1 connection in our flow, which means that the account used in the connection must have access to all machines in the group.

2. In the Power Automate maker portal, you will see if a machine is online as well under Monitor > _____?

- A. Cloud flow activity
- B. Desktop flow runs
- C. Desktop flow queues
- D. Machines

Answer: D. Machines

3. What would you do if the installation location paths are different for the Contoso app on the machine at recording time vs the VM used for playback time? (Select all correct answers)

- A. Modify the path manually from the portal script steps
- B. Uninstall/reinstall the Contoso app on the VM to use the same path
- C. Delete the script and re-record the desktop flow on the VM again to pick up the correct path
- D. You don't need to make any changes

Answer: A, B, C

4. To add a new machine instance to a group, does the primary machine need to be offline?

- A. True
- B. False

Answer: False

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