Introduction to Power Automate

Sample manual - first two chapters



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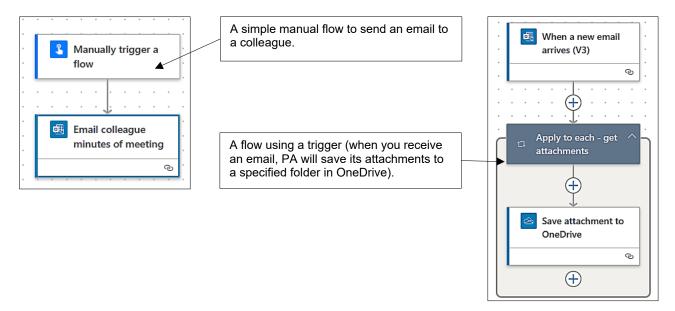
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CHAPTER 1 - GETTING STARTED

1.1 What is Power Automate?

Power Automate (PA) used to be called Microsoft Flow (Microsoft renamed it in 2019). PA allows you to create flows (series of saved instructions) online:



Flows can connect to literally hundreds of cloud-based services – here is a small sample:



Just a few of the many connectors that you can use to link to online services (Microsoft announced that this had reached 1,000 in May 2023, at which point Wise Owl stopped counting).



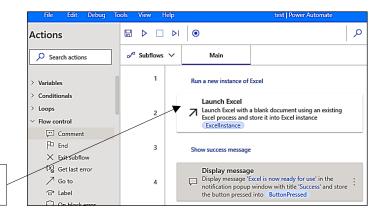
If you commit to using Power Automate, you are trusting your data, business processes and probably career to Microsoft and the Internet: if your web connection should happen to go down or Microsoft's servers fail, there won't be much that you can do!

1.2 Power Automate vs Power Automate Desktop

Microsoft (confusingly, if typically) market two software products whose names include **Power Automate**:

Software	Runs in	What it does	Typical use cases
Power Automate	The cloud	Automates a series (or <i>flow</i>) of instructions to run on Microsoft's servers, under your account.	Collating the results of an online survey, emailing notifications when someone posts a comment in Teams, capturing social media updates in an online database.
Power Automate Desktop	Your desktop	Automates a series (or <i>flow</i>) of instructions to manipulate data on your own computer.	Collating data in Excel workbooks, logging attachments sent in emails, submitting website forms, running backup routines.

Here's what a *Power Automate Desktop* flow looks like:



This flow starts an Excel application and then announces that it's ready for use.

Power Automate and Power Automate Desktop were written by different companies (Microsoft bought *SoftMotive*, authors of Power Automate Desktop, in May 2020) and are different products.



Confusingly, while Power Automate Desktop runs on your desktop it too stores its flows in the cloud (in your online Microsoft account). You can run Power Automate Desktop flows from Power Automate, but the converse isn't true.

1.3 Licensing Requirements

Most users of Power Automate will begin with an Office 365 licence. This allows you to do the following:

Capability	With an Office 365 licence you can
Run flows	create and run automated, scheduled and manually triggered flows (that is, most of the flows you are likely to want to run).
Use standard connectors	Use any of the connectors described as <i>Standard</i> by Microsoft. These include Azure Active Directory, Dropbox, Excel online, GitHub, Gmail, Google apps, LinkedIn, Microsoft Forms, Office 365, Outlook, Pinterest, Power Apps and Power BI, Slack, SharePoint, Teams, WordPress and YouTube.
2,000 platform requests per day	During an initial transition period (lasting 6 months or more), you will be allowed up to 10,000 requests per day. The limit is applied on a rolling 24-hour basis. If you exceed your limit you will need to go to another plan (see below).

Here are some of the main things NOT included in this licence:

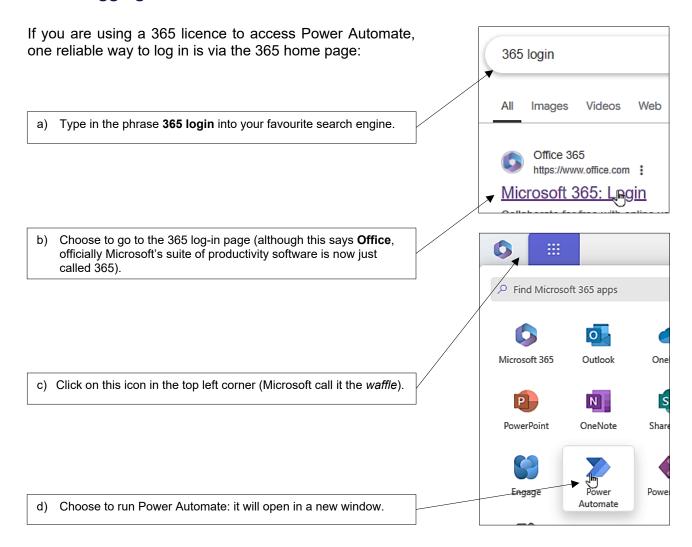
What	Notes
Premium connectors	To connect to connectors designated as premium by Microsoft, you will need any standalone plan (that is, anything except an Office 365 licence). Premium connectors include ArcGIS, most Azure services, most Dynamics service (for which you can buy a specialist licence), Map Pro, Microsoft Dataverse, MySql, Oracle, Ordnance Survey Places, Salesforce, SAP, Stripe, Word Online and Zoom Meetings.
Business process flows	For example, you can create a business process flow to ensure that everyone in an organisation follows the same steps every time they handle a customer request. This courseware doesn't consider business process flows, and neither (Wise Owl suspect) will most customers.
Custom connectors	If you can't find a connector for your service, you can create your own with a custom API wrapper.
On premises gateways	These let you build a bridge between a Microsoft cloud service such as Power Automate and a data source in your organisation (such as a SQL Server database).
Robotic process automation	This allows you to build a flow to mimic the keyboard actions and mouse movements of a human user (for example, to fill in a website form), usually using Power Automate Desktop.
AI builder capacity	You can use AI to build and train AI models to make predictions based on your data. The AI builder has its own licensing rules!

To use premium or custom connectors or on-premises gateways you will probably need to buy one or more separate per-flow or per-user Power Automate licence plans.



If there's not enough detail in this section, you can always search for the phrase "Microsoft Power Apps, Microsoft Power Automate and Microsoft Power Virtual Agents Licensing Guide" and download the 34-page PDF this leads to.

1.4 Logging on to Power Automate





Alternatively, just visiting the website **powerautomate.com** also seems to work, although after the website loads a longer URL may appear in your browser's address bar.

1.5 Environments and Flows

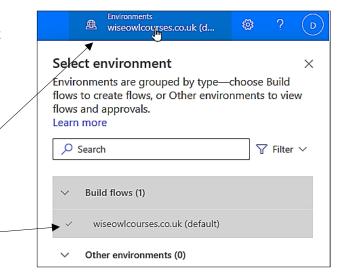
Before listing flows you (or someone else) has created in Power Automate it's vital to make sure you're in the right *environment*.

Choosing an Environment

You can think of environments as different folders in your little bit of the Microsoft cloud. Here's how to change your environment:

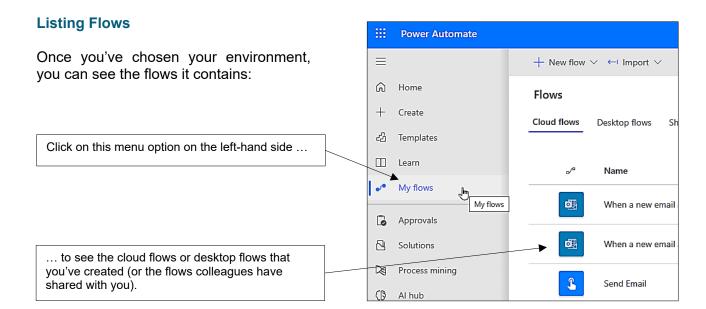
Click on this area at the top right corner of Power Automate to see (and change) your environments.

Often your organisation will have one environment for development and one production environment, although here this training account only has access to one environment, so there's nothing to choose.





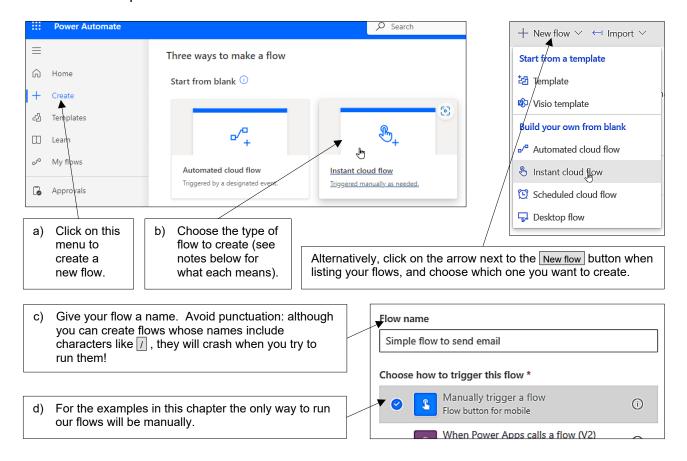
Each environment sits on its own tenant (think of this as a space you've leased from Microsoft on some central server). To move a flow that you've created from one environment (tenant) to another is a non-trivial process: you have to export it from the first environment and then import it into the second.



CHAPTER 2 - WORKING WITH FLOWS

2.1 Creating Flows

Follow these steps to create a new flow:



The 4 main types of flow that you can create are shown overleaf.

Types of Flow

PA lists 4 main types of flow, but the first two are the ones which most people will choose:

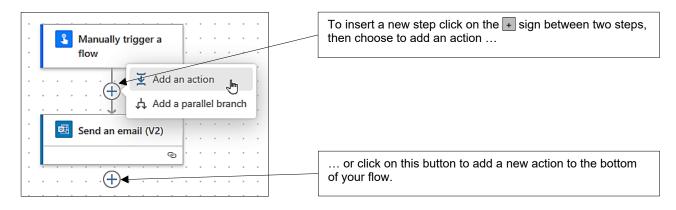
Type of flow	Description	
Automated cloud flow	Any flow which begins when something happens. Triggers can include comments being added to Teams discussions, emails being received or items being added to SharePoint lists (to choose just 3 examples).	
Instant cloud flow	When you're testing a flow (or learning PA) this is the best flow type to choose, since you can test it in isolation without having to trigger an event first.	
Scheduled cloud flow	When you create a scheduled flow you'll be asked to say when it should run (every week at 10am, for example, or every 10 minutes throughout the day).	
Desktop flow	This will launch Power Automate Desktop, the subject of a different Wise Owl training course (and manual!).	



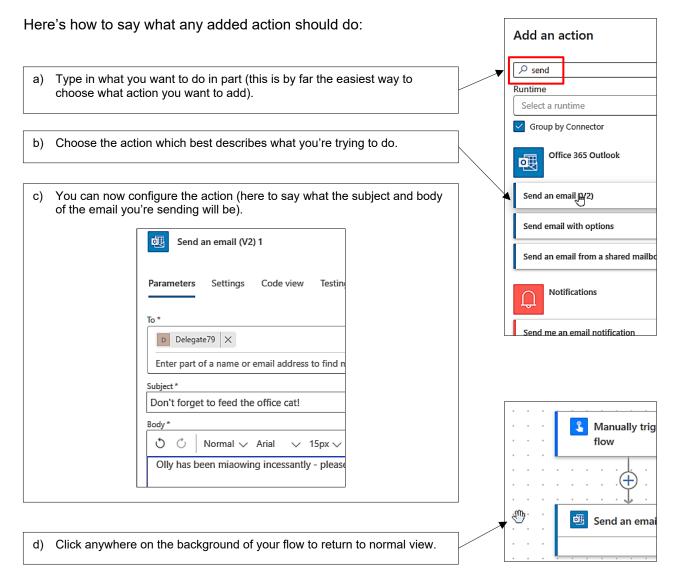
The easiest thing to do, Wise Owl have found, is to create either an automated or instant cloud flow, but then click on the **Skip** button to miss out the stage where you choose the initial trigger. This will bring up a blank flow, and you can then choose which trigger you want to use more easily.

Adding Steps (Actions)

You can add actions to your flow as follows:

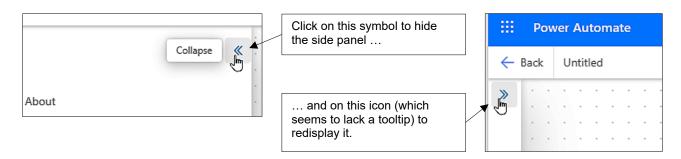


Configuring an Action



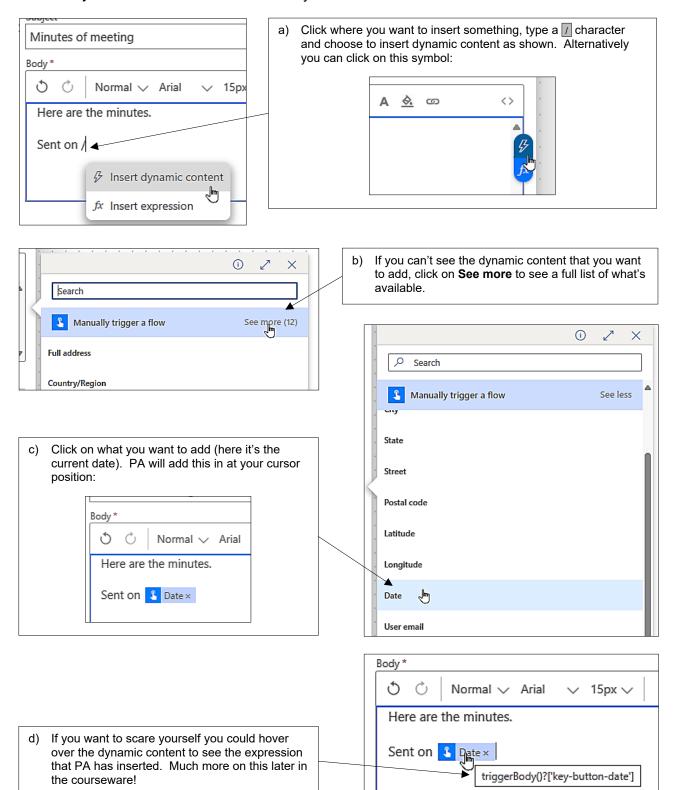
Expanding and Collapsing the Action Bar

You can show and hide the panel on the left of Power Automate showing the details of actions as follows:



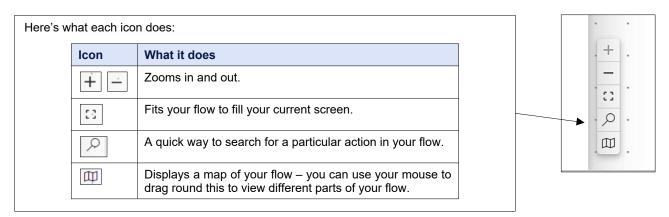
Adding Dynamic Content

When adding a step, PA will always offer up any information that it knows about for inclusion – this is called *dynamic content*. To add this to any action:



Finding Parts of a Flow

These icons at the bottom left corner of the screen make it easy to find your way round your flow:





You can also hold down the Ctrl key and use your mouse wheel to zoom in and out, as is standard in many Windows applications.

Saving your Flow

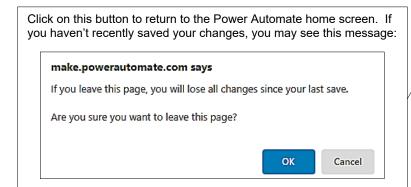
PA will save your flow automatically at regular intervals, but you can save changes manually too:

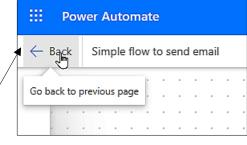
Click on this button at the top right of your PA screen to save your current flow.



Exiting Flows

When you've finished working with a flow, here's how to leave it:

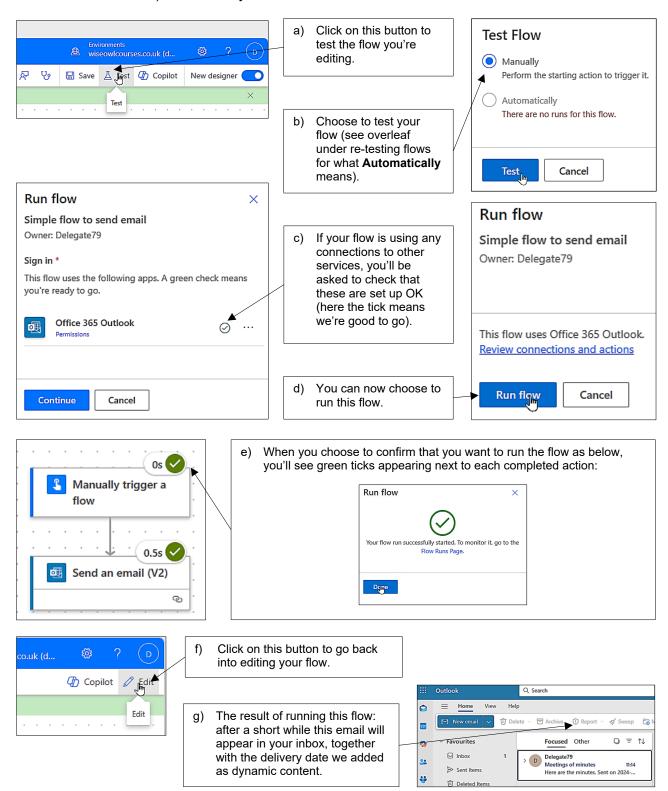




2.2 Testing and Running Flows

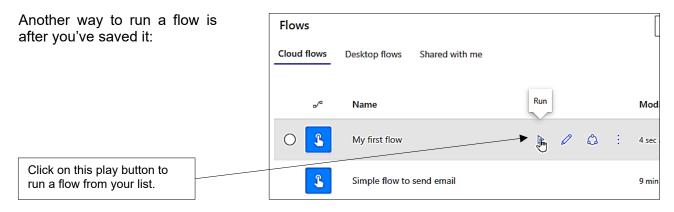
Testing Flows

One way to test a flow is to do whatever triggers it (whether this be sending an email, adding a comment or whatever). However, you can also test and run instant flows as follows:



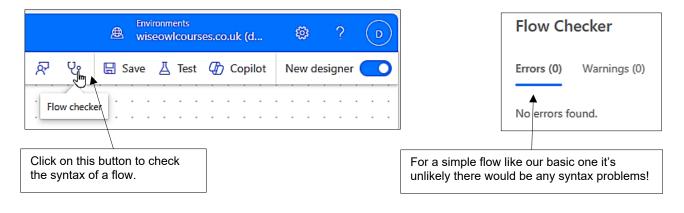
Re-testing Flows Once you've run a flow once, there's a different way to test it: Manually Perform the starting action to trigger it. Automatically When you click on the button to test your flow you'll see a list of all the previous occasions on which it's run. You can choose any of these to re-run the flow using the same starting conditions.

Running Flows



Checking Flows

The **Flow checker** button at the top right of PA allows you to see if a flow makes syntactical sense:

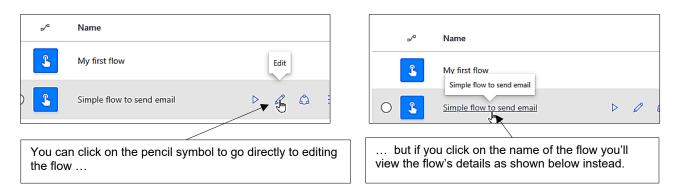




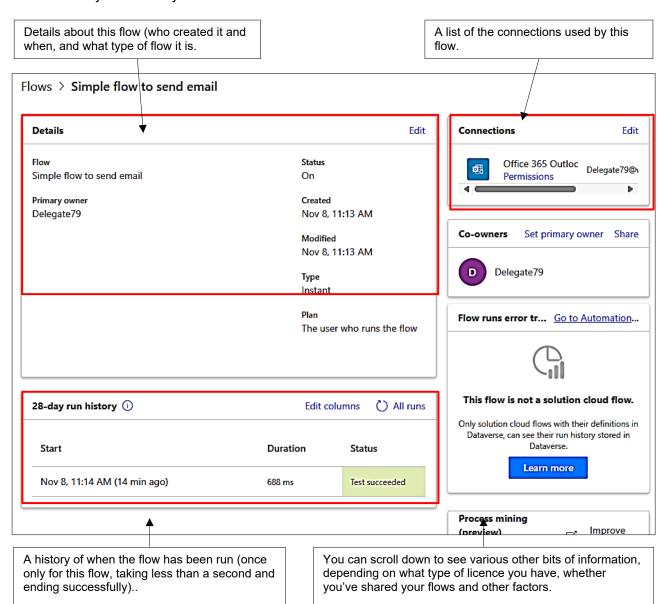
When you run a flow, PA automatically invokes the flow checker anyway, so checking flows manually probably isn't that important.

2.3 Viewing and Editing Flows

Click on the name of a flow to view it, or the pencil button to edit it:



Here's what you'll see if you view the details for a flow:



2.4 Improving Flow Readability

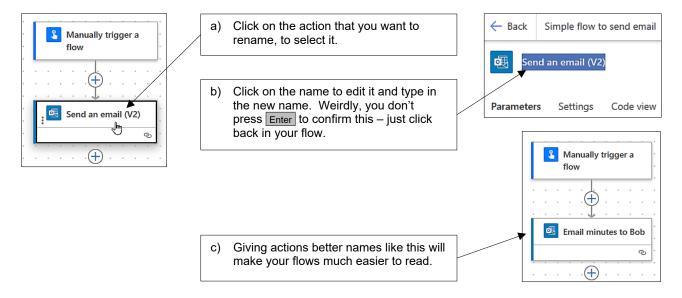
There are two ways to make your flows easier to read: renaming actions and adding notes.



If any users of the classic Power Automate flow designer are wondering where comments have gone – so do we! Comments are one of a few features not (yet?) supported in the new flow designer.

Renaming Actions

Renaming actions makes it easier to see what your flow is doing:



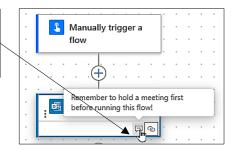


The downside of this? Many expressions that you create in PA refer to actions by name. The longer your action names are, the longer (and more cumbersome) your expression formulae will be!

Adding Notes

Notes explain what actions are doing:

If you see this symbol for an action you can hover over it to see the attached note.

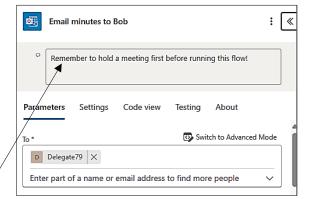


To add a note to an action:



a) Click on these 3 dots and choose **Add a note** from the dropdown menu which appears.

b) Type in your note against this action.

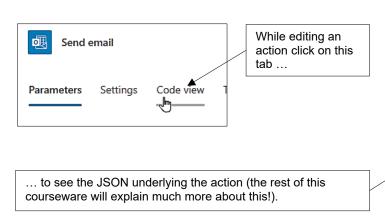


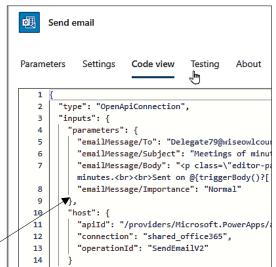
2.5 Working with Flows

This section shows some other ways in which you can work with flows.

Viewing Actions' Code

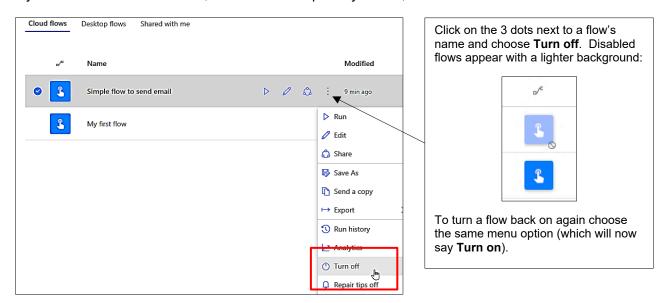
If you want to see what an action in your flow is really doing you can view its underlying code:





Disabling Flows (but not Actions)

If you don't want a flow to run, but want to keep it in your list, turn it off:w

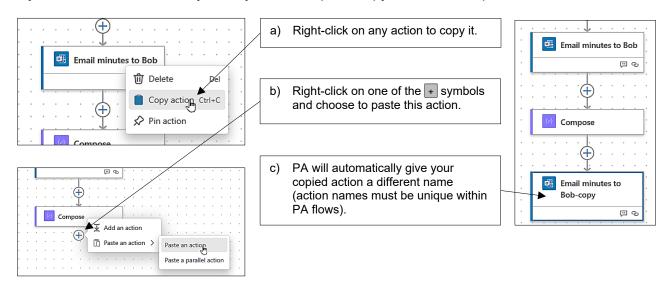




There is no way to disable a single action within a PA flow (more's the pity); only complicated workarounds. The main one is to use the **Testing** tab for an action to enable a static result; although this isn't covered in this courseware.

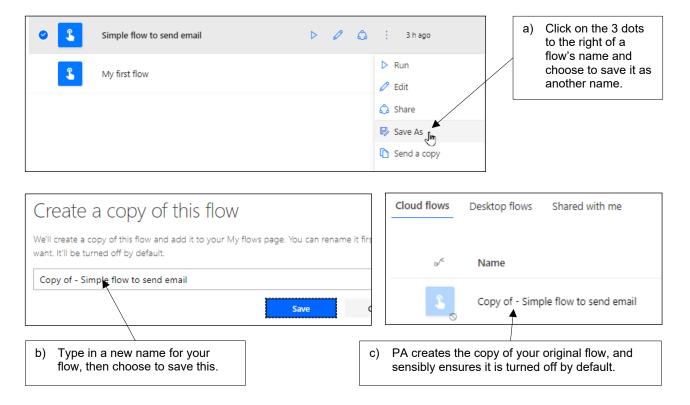
Copying Actions

If you have an action which you may want to repeat, copy it to the PA clipboard:



Copying Flows

To copy a flow, choose to save it as another name:



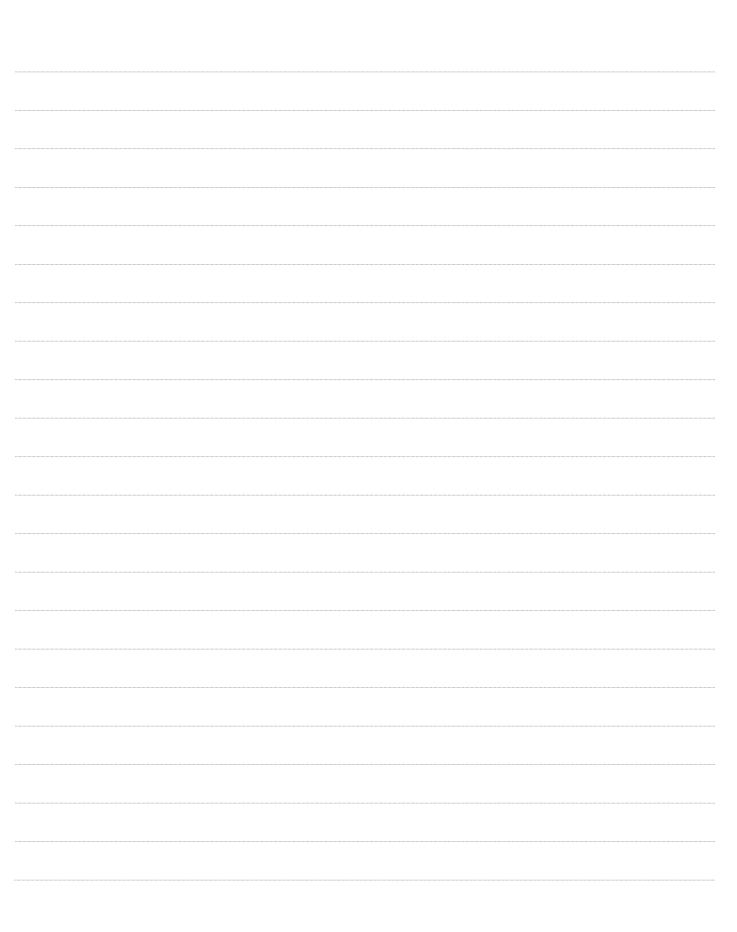
Deleting Flows

Sadly you have to delete flows Flows one at a time (there is no easy Cloud flows Desktop flows Shared with me way to select more than one flow at the same time, although see the hint below). Modified Name 3 Simple flow to send email 10 min ago ▶ Run Click on the 3 dots to the right of My first flow a flow's name. / Edit Share Save As Send a copy → Export Run history Analytics (¹) Turn off Repair tips off ■ Delete b) Choose to delete this flow. (i) Details

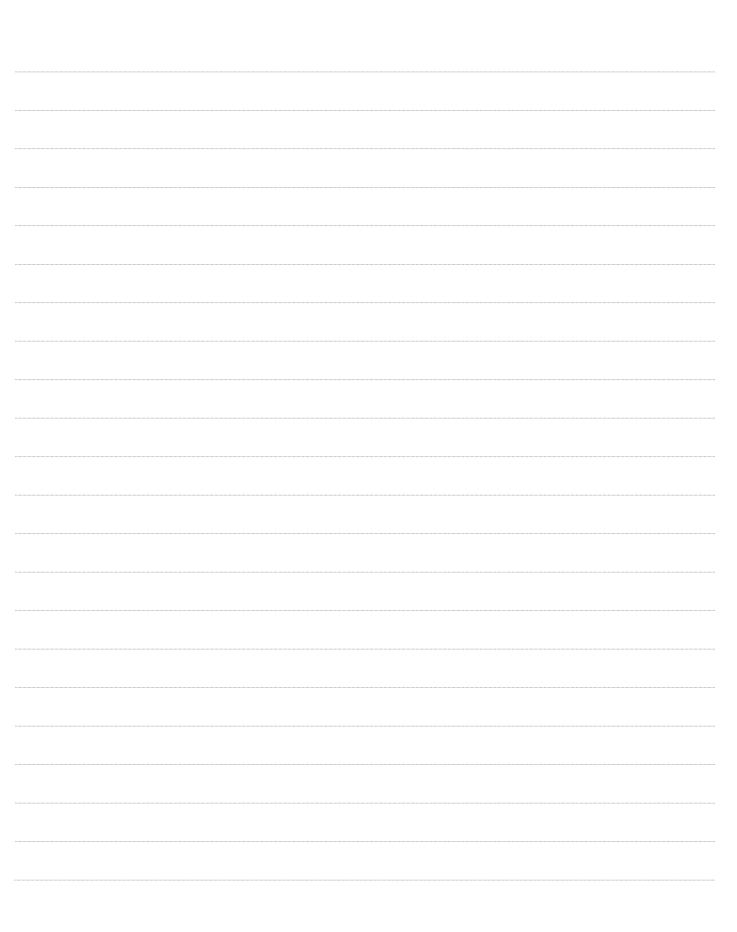


You can connect to Power Automate Management to delete all of your flows, as described in the following Wise Owl blog, but it's not for the faint-hearted:

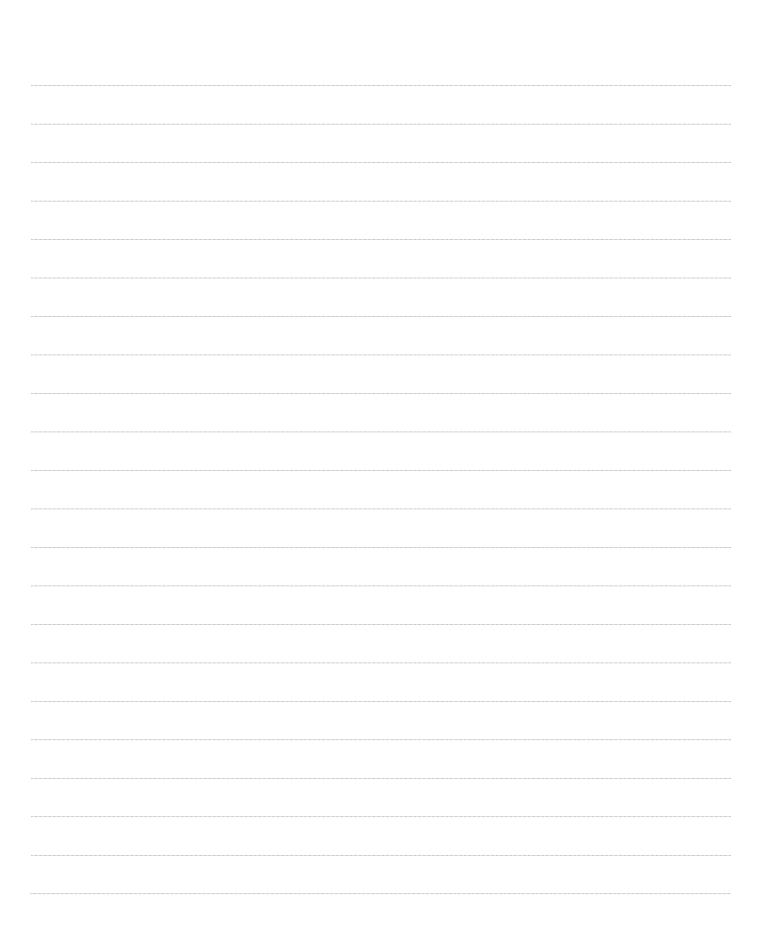
https://www.wiseowl.co.uk/blog/s3156/delete-flows.htm



























What we do!

		Basic training	Advanced training	Systems / consultancy
	Microsoft Excel			
e	VBA macros	2	2	
Office	Office Scripts			
	Microsoft Access			
etc	Power BI and DAX			
Power BI, etc	Power Apps			
Pow	Power Automate (both)			
	SQL			
ver	Reporting Services			
SQL Server	Report Builder			
SQL	Integration Services			
	Analysis Services			
	Visual C#	2	2	
ing	VB programming			
Coding	MySQL	2		
	Python	2	2	



