GIBC GLOBAL INTEGRATION BOOTCAMP

Lab - Democratize Integration with Flow

Author: Johan Hedberg

Objective

In this lab you will learn about Microsoft Flow and how it can help you be more productive easy.

Microsoft Flow is built on top of Logic Apps, or if you will – built on the same engine as Logic Apps. In contrary to Logic Apps, Microsoft Flow is meant for power users in a non-developer, non-admin type of role. This does not mean that developer and admin cannot benefit from Microsoft Flow, quite the opposite, they can use Microsoft Flow the same as any other user for personal productivity task and other integrations that do not need to be centrally developed or managed. Simply put – Flow helps to de-centralize and democratize workflow functionality and integration.

Don't be too scared, Flow still has functionality to keep track and limit what your users do if inside an enterprise setting, for example when used through their Office 365 Business subscription. For more on this see https://docs.microsoft.com/en-us/flow/organization-q-and-a.

There are many human tasks and workflows that can be easily automated using Flow. For this lab we are going to create a Flow to enable us to push a button to perform some basic tasks that can be useful if we need to stay home sick from work. When this happen we may want to:

- Cancel all meetings
- Block the time as out of office in the calendar
- Set up an out of office reply for the rest of the day
- Send an email to our manager

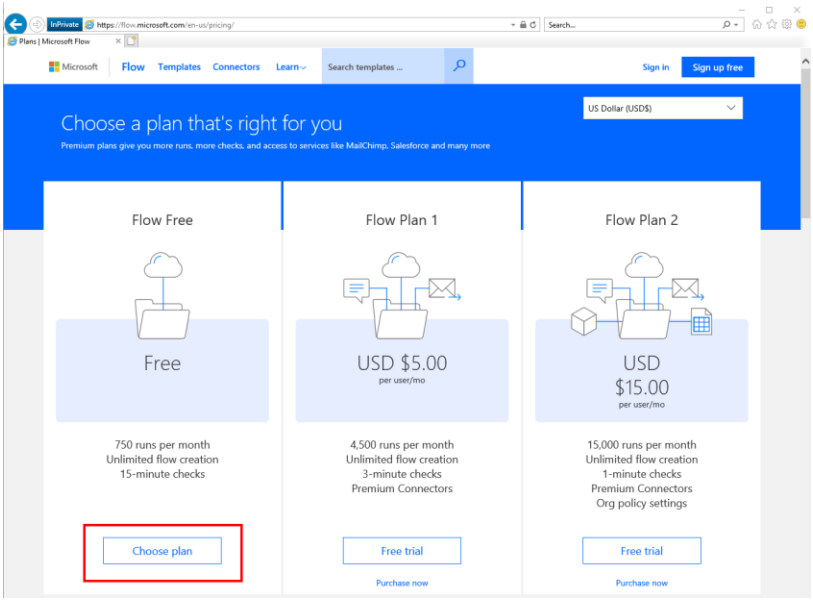
Prerequisites (setup during the lab)

- Microsoft Flow account
  - Flow is either included in your Office365 or Dynamics365 subscription (not all subscriptions include Flow) or you can sign up for a free (or paid) stand-alone Flow account at https://emea.flow.microsoft.com/en-us/pricing/
- Microsoft Flow mobile app
  - Available both for iOS through iTunes App Store and for Android through Google Play
- Office365 Outlook account (Email and Calendar)
  - You can also use the Outlook.com connector if you cannot or do not wish to use an Office 365 account, however you will not be able to Set up automatic replies for Outlook.com. This is currently only available for Office 365.

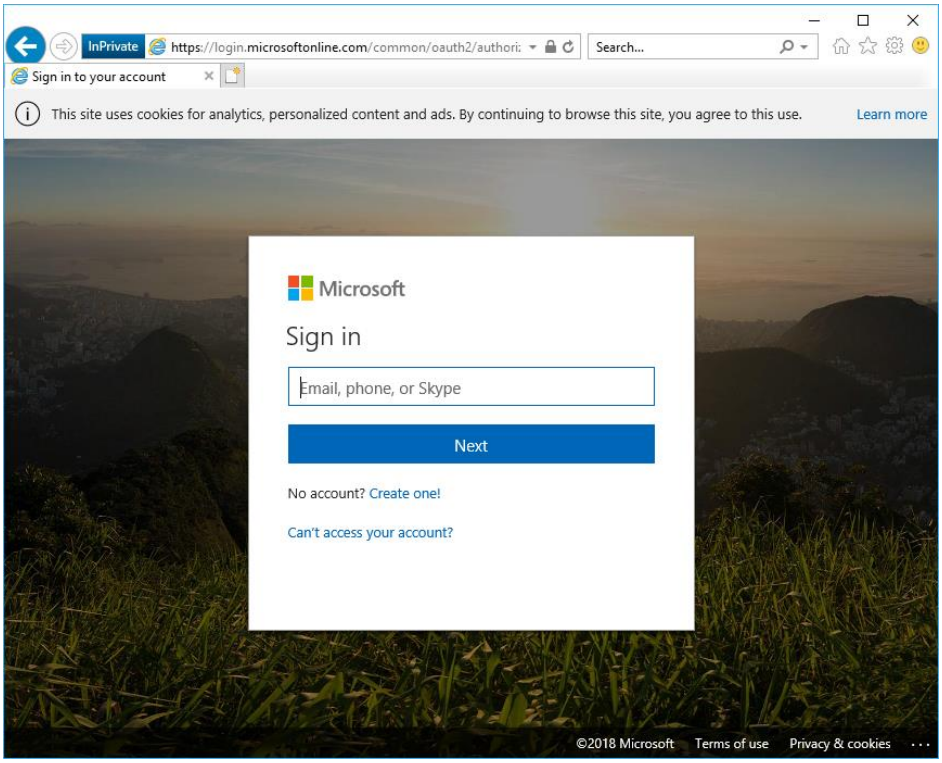
Signing up for Microsoft Flow

We will start by creating a Microsoft Flow account. If you already have an account either as part of your Office 365 subscription or a personal one that you have created earlier that you would like to use you can skip this step.

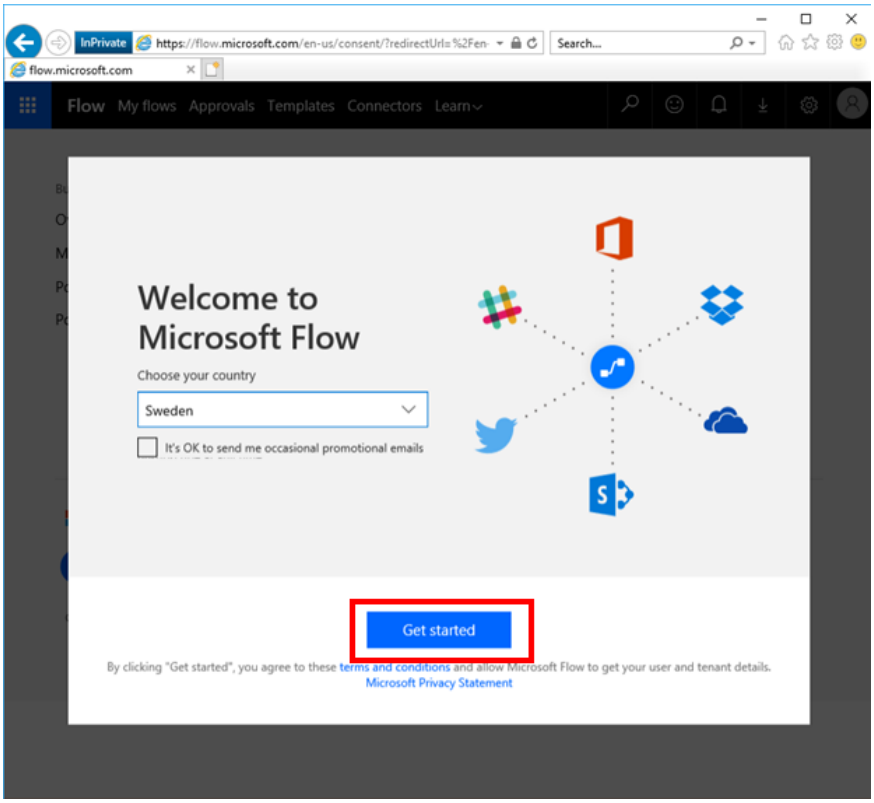
Start by going to https://flow.microsoft.com/en-us/pricing/ and click the **Choose plan**.



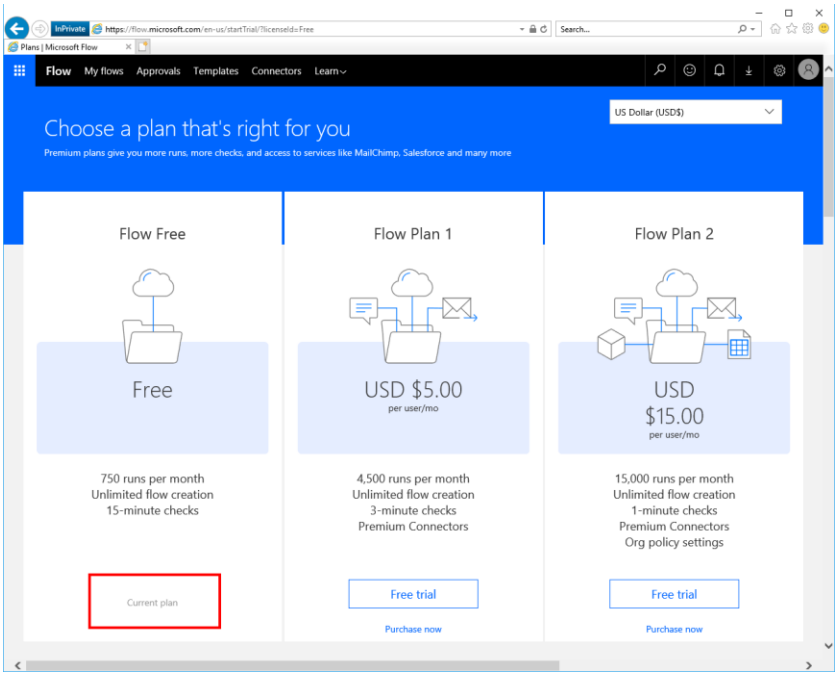
Sign in to the account you intend to use.



Select your country and **click Get started**.



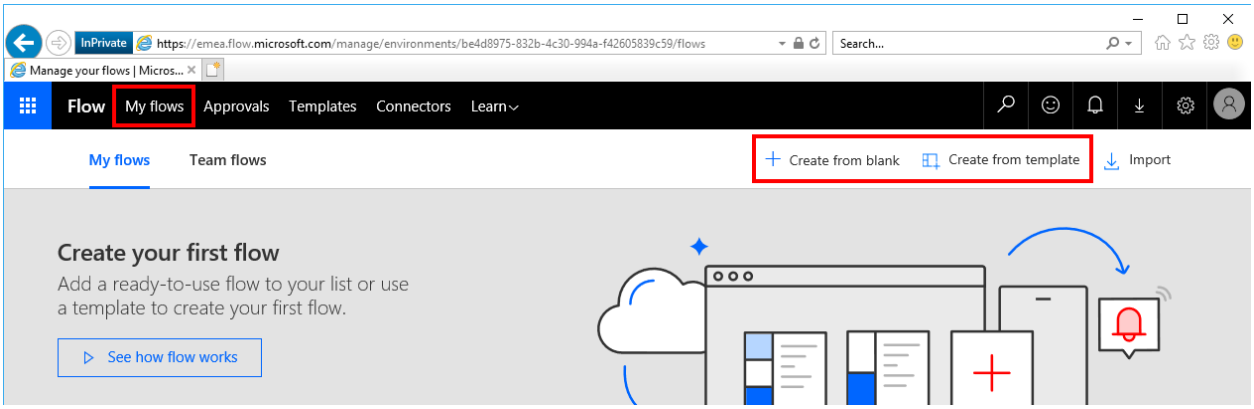
Once you have you will be returned to the Pricing page and Flow Free will show as "*Current plan*".



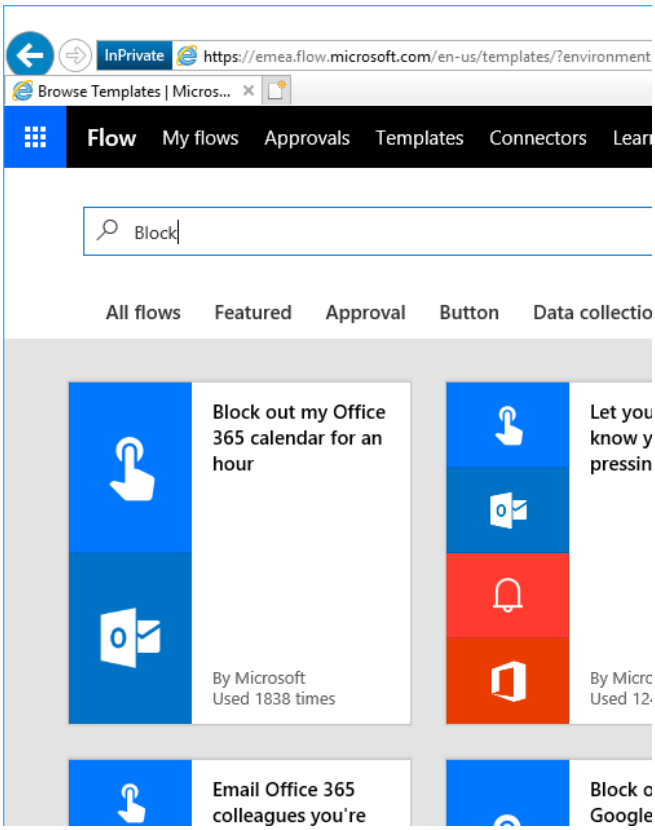
Create your flow

We now have a free Microsoft Flow account (or you are using the Flow account as part of your Office 365 subscription).

Click **My Flows** in the Top menu. Then select either **Create from blank**, or **Create from template**.



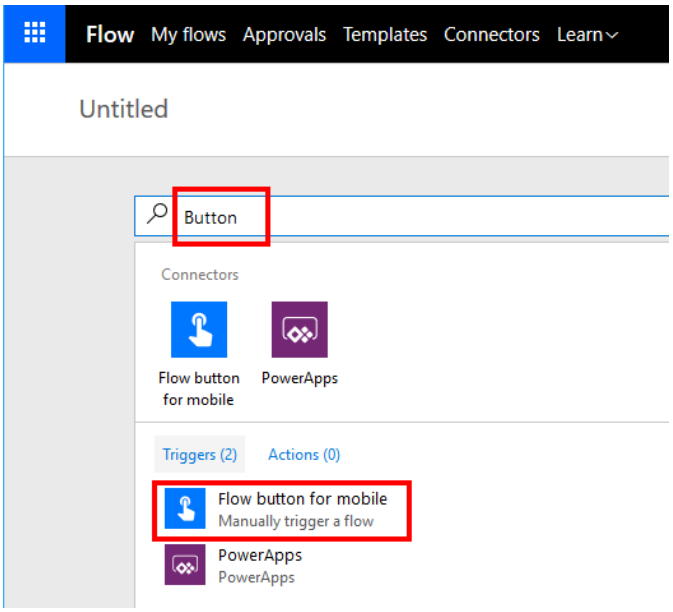
If you select Create from template you can browse all of the template that exists and try to find one that fits your needs, either completely or as one that you can start from. For this lab, you can if you wish start by searching templates for “Block” and then selecting the “Block out my Office 365 calendar for an hour”.



The rest of the lab description will assume you select “Create from blank”, I am merely pointing out that there are many templates and you can often find one that is a is close to what you want to do and might be helpful to get you started.

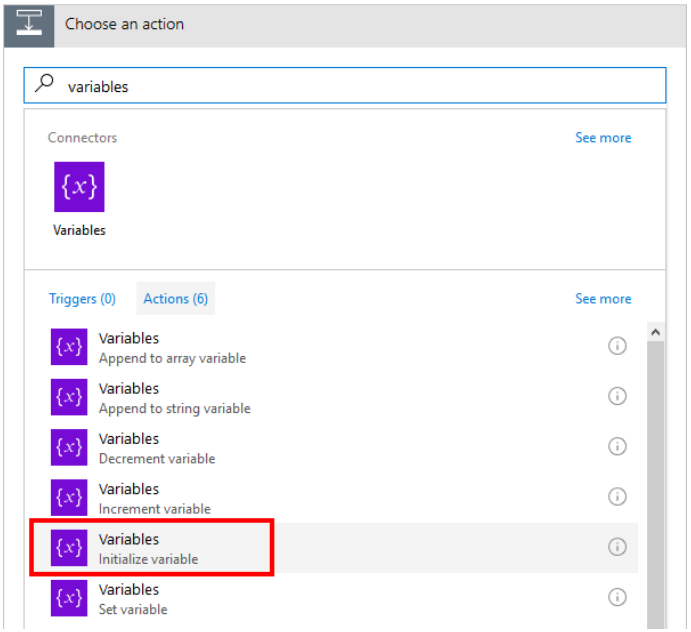
After having clicked “Create from blank” click the link at the bottom of the next page to “Search hundreds of connectors and triggers” – this will show a blank designer.

In the search dialogue, enter **Button** and select *Flow button for mobile*.



This shape does not require any further configuration.

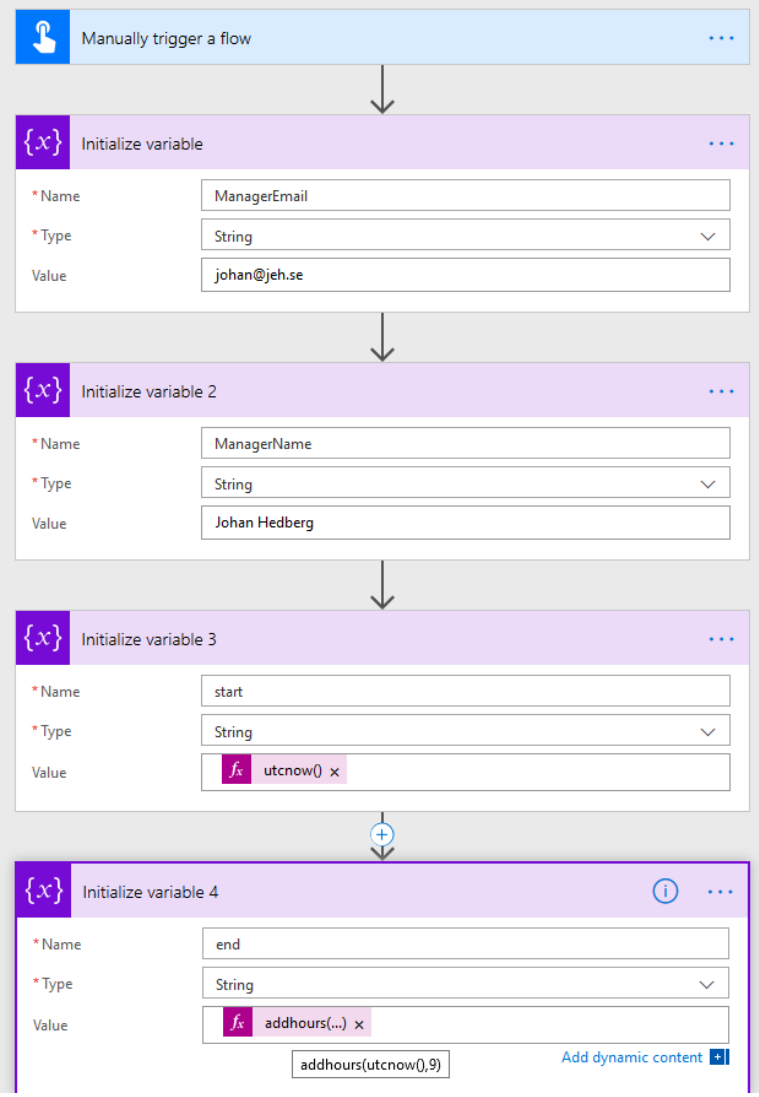
Next we will click the *+ New step* and select to *Add an action*. We will then search for **variables** and the action “*Initialize variable*”.



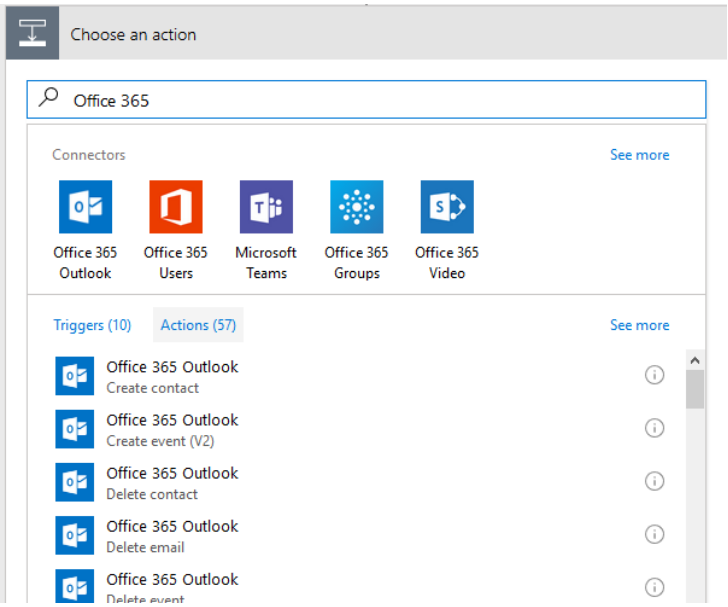
We will create four varaibles. Use the following table to create the variables.

Name	Type	Value	Description
Start	String	utcnow()	We set the start time to the current time.
End	String	addhours(utcnow(),9)	Since we are reporting in sick for the full day we set the end time to 9 hours after the start time.
ManagerEmail	String	some@email.com	The mail address of your manager. In this lab this is an email that we send an email to informing that you are sick. A secondary email that you control is appropriate. If you have no secondary email your own email account also works.
ManagerName	String	Bob Boss	Name of manager

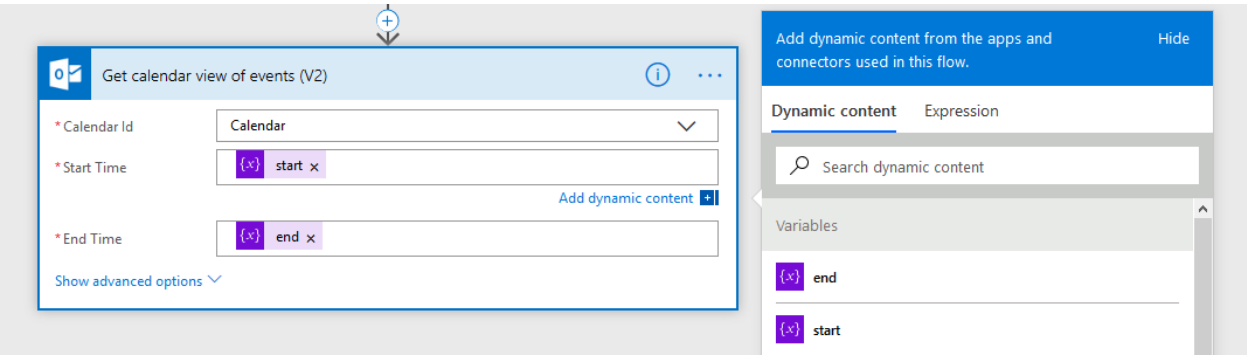
Here is an example of what it might look like.



Next we will click the *+ New step* and select to *Add an action*. We will then search for **Office 365**, select the *Office 365 connector* and select the "*Get calendar view of events (V2)*".

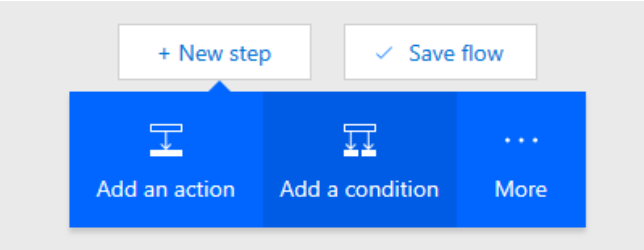


Select the Calendar Id by selecting the appropriate calendar in the drop down, and set the Start Time to the Start variable, and the End time to the End variable, like so.

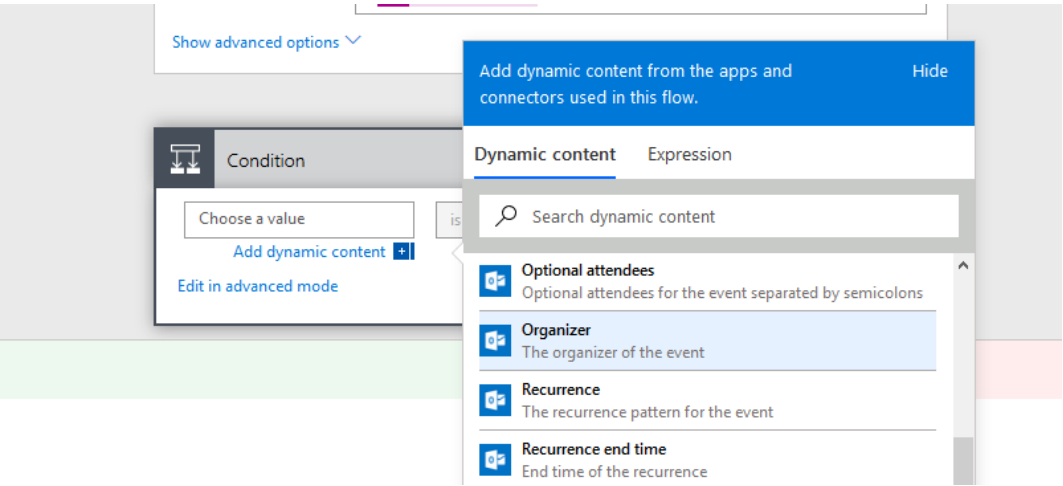


This will return a list of all the events in our selected calendar for the day we are sick.

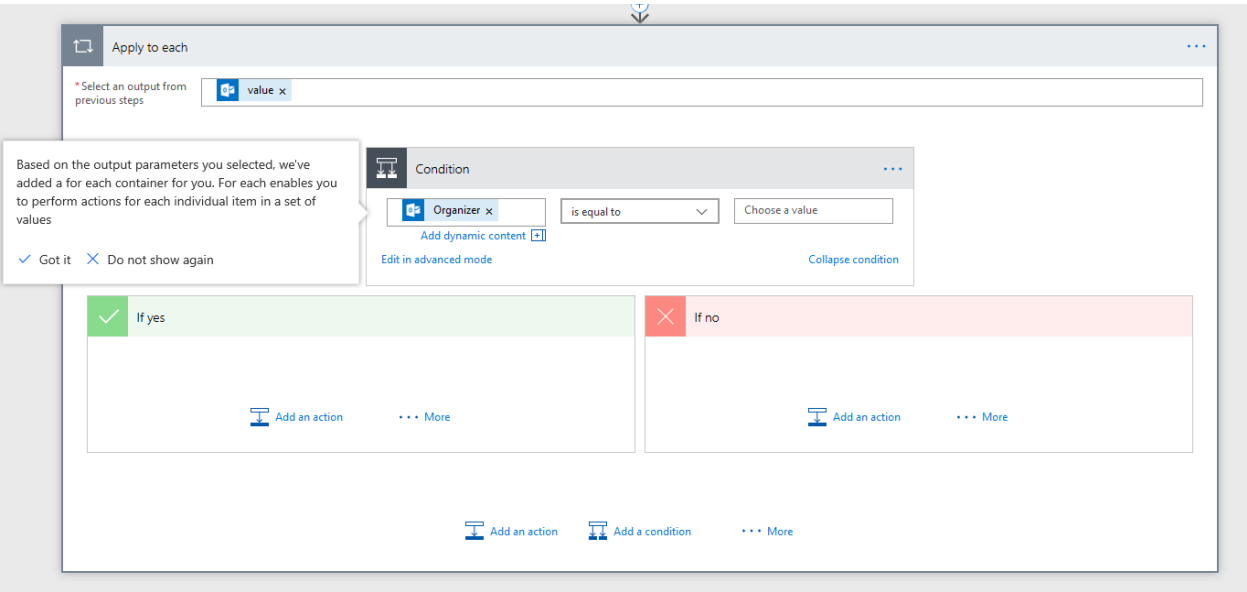
Next we will check if the event was created by us or if we were invited by someone else. For this we need to add a condition. Click New step, and then Add a condition.



Click in the Condition action's *Choose a value* input box to ring up the Dynamic content selector. For the Get Calendar view of events (V2) click the See more link to the right, this brings up more output fields. Scroll down to select the **Organizer**.



Organizer is not part of the top level object of the output, instead it is a member of a single event, of which an array is returned from the Get calendar view of events (V2) action. The designer will recognize this and automatically create a for each or apply to each loop for us.

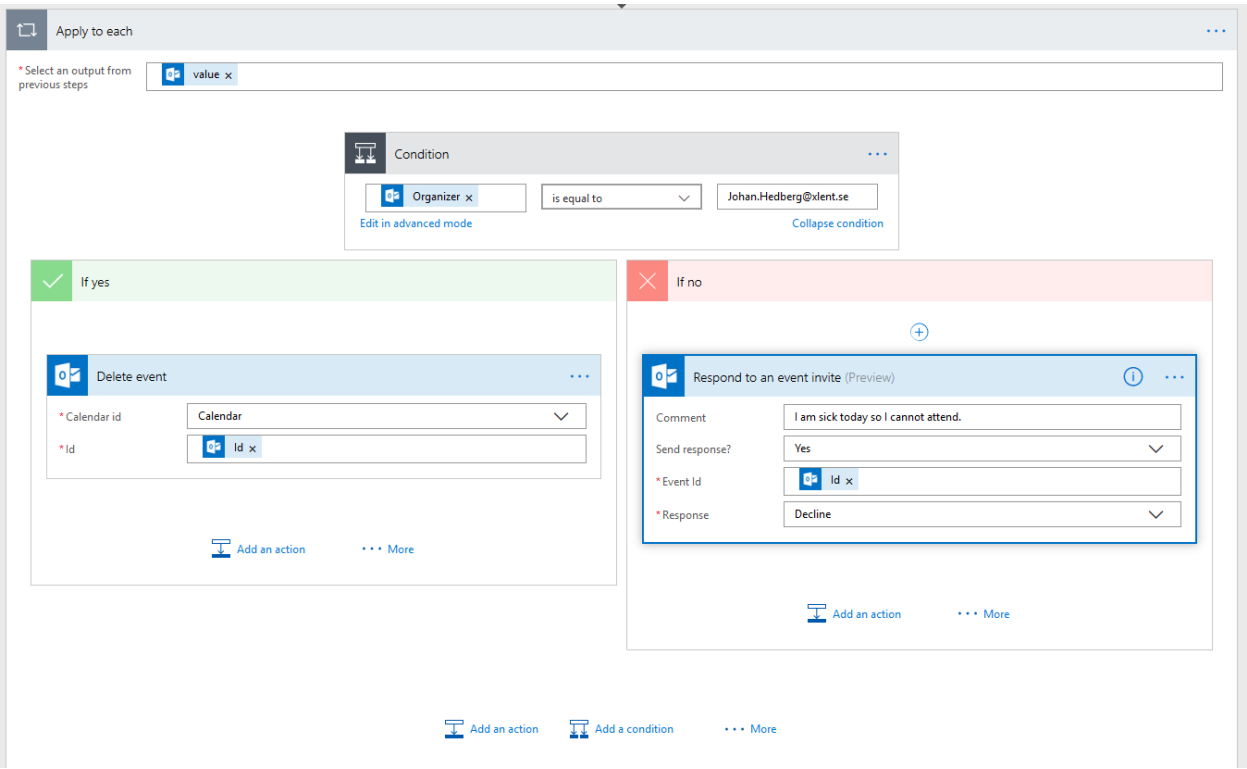


In the right hand side of "is equal to" in the condition, enter your email address. Be mindful of the CAPS and how your email is reported by Office 365. Optionally, you can use a toLower() expression, which in that case will look like this: `toLower(items('Apply_to_each')?['Organizer'])`

If the "if yes" branch, where you are the organizer of the event, you will add an Office 365 – Delete event action, and in the "If no", where you have been invited by someone else, you will add an Office 365 – Respond to an event invite action. The Delete event action only takes the *Event Id*. You can find the Id the same way you found the Organizer. In the Respond to an event invite, set *Send a response* to

Yes, select the event id the same way, and set *Response* to **Decline**. Also add a *Comment* why you are now declining the meeting, something like "**I apologize, but I am home sick today and cannot attend.**".

The result will look something like this.



We have now canceled all our meetings.

You should now be a bit familiar with the designer's user interface. If you are a Logic App user you will be very familiar. For that reason, the rest of the lab uses fewer pictures and less detailed descriptions.

We now have three more actions to add to the Flow before it is completed.

We want to create a new event to block time in the calendar as out of office. We do this using the Office 365 - Create event (V2) action.

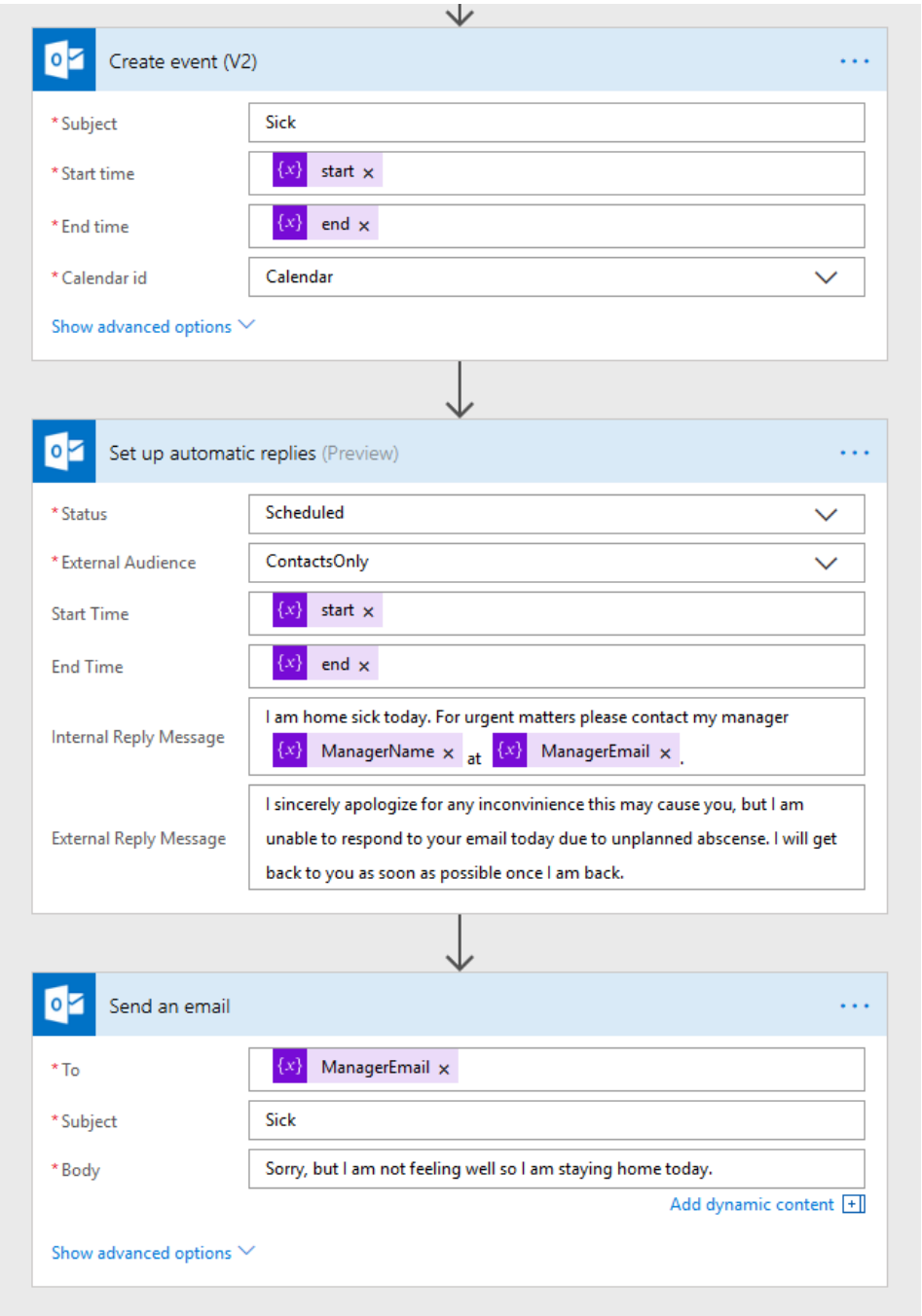
We then want to setup automatic replies. We do this using the Office 365 - Set up automatic replies action.

Finally we want to send an email to our manager using the Office 365 – Send an email action.

Complete the Flow by completing adding the three actions described above and configure them with the help of the table below.

Action	Parameter	Value
Create event	Subject	Sick
Create event	Start time	Select the variable Start by using the Dynamic content selector.
Create event	End time	Select the variable End by using the Dynamic content selector.
Create event	Calendar id	Select the same calendar as used before (your main calendar or one you have created for the purpose of testing this Flow).
Set up automatic replies	Status	Scheduled
Set up automatic replies	External audience	ContactsOnly (or whatever you wish)
Set up automatic replies	Start Time	Select the variable Start by using the Dynamic content selector.
Set up automatic replies	End Time	Select the variable End by using the Dynamic content selector
Set up automatic replies	Internal Reply Message	For example: I am home sick today. For urgent matters please contact my manager ManagerName× at ManagerEmail×. (where ManagerName× and ManagerEmail× point to the variables you setup earlier and are selected with the help of the Dynamic content selector)
Set up automatic replies	External Reply Message	I sincerely apologize for any inconvinience this may cause you, but I am unable to respond to your email today due to unplanned abscense. I will get back to you as soon as possible once I am back."
Send an email	To	ManagerEmail× (select the variable)
	Subject	Sick
	Body	Sorry, but I am not feeling well so I am staying home today.

After you are finish, it might look something like this.



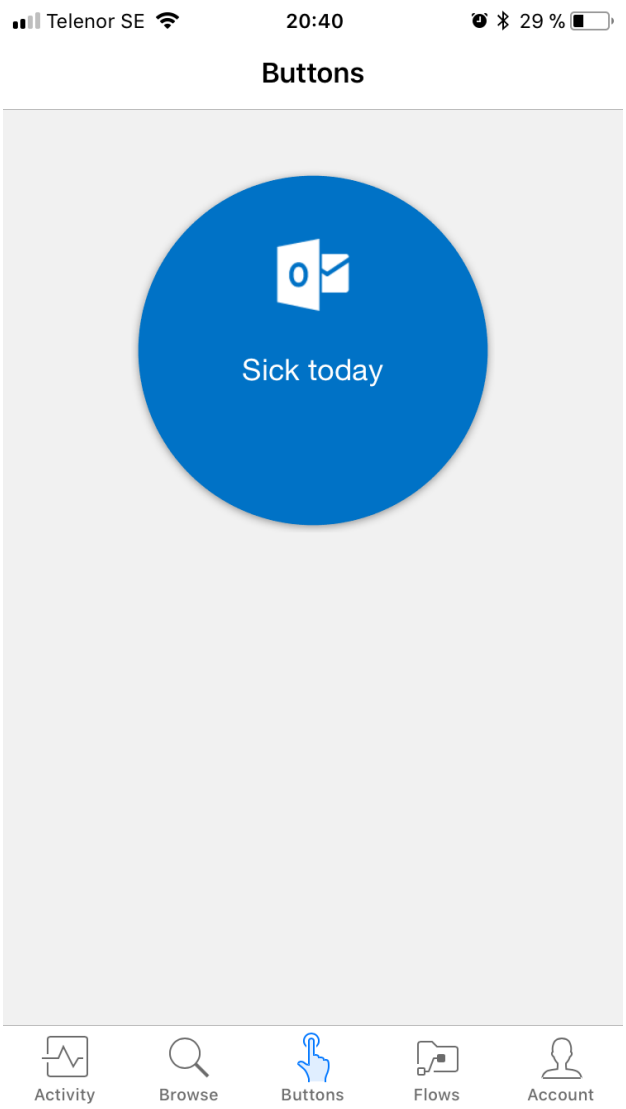
Be sure to give the flow a good name (top of page), for example "**Sick today**" and **save the flow.**

In the browser, stay on Flow page, you will be able to see when it runs.

Installing the Microsoft Flow mobile app

Regardless if you have an Android phone or an iPhone, search the respective store and install the Microsoft Flow App. After it has downloaded and installed, open it and login using the same account that you used to create your flow with.

Go through the welcome procedure and open the Buttons section of the app. Here you will have a button with the same name as your Flow. Pushing the button will start the Flow. Don't do this just yet.



Preparing the calendar

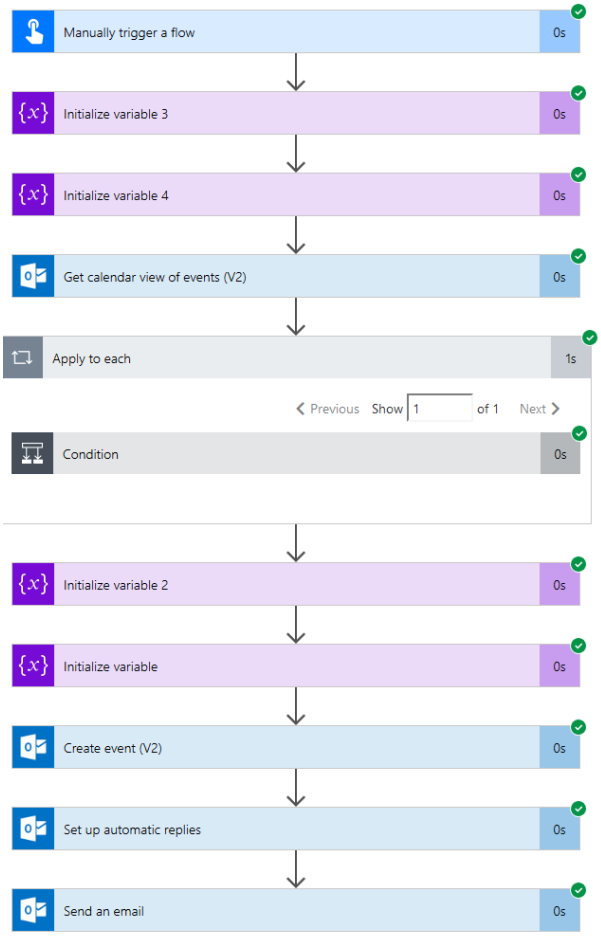
This step is not strictly necessary, but if shows the Flow in action much better if you do it.

Take help from a friend or someone doing the lab beside you (or, if need be from another email account of your own) and send at least one invitation to your account for later today. Also create at least one event in your account, optionally inviting someone else to that event.

Testing the Flow

Now, go back to your mobile phone and the Microsoft Flow app and press your button.

Go back and review the Flow in the browser. Hopefully you will see a successful run. An example is to the right (your Flow might have Actions in a slightly different order).



Also, go to your calendar to see that the events have been removed, a new event has been created, automatic replies are activated and an email was sent to the email you configured as the ManagerEmail.

The account that invited you to a meeting should have gotten a reply declining the meeting.

You can of course also send an email to the account to see out of office in action (make sure you send it from an ok account depending on how you configured your External audience setting).

Conclusion

There are many things you can easily do with Flow as a developer or admin.

There are also many things that a power user can do with Flow without the help of a developer or admin since Flow is stand-alone, or available through Office 365 or Dynamics 364 and does not require the Azure portal, Visual Studio or any other type of development environment.

Next steps

There are many more things you can try out and a good place to start might be with the Flow Guided Learning at https://docs.microsoft.com/en-us/flow/guided-learning/ or by getting ideas by browsing the many available templates.