



Flows by Example

Aric Levin

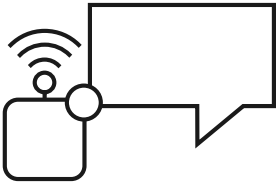
Lead Software Architect

Technical Project Manager

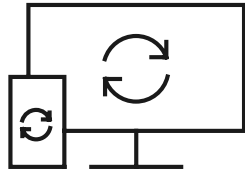
Introduction to Microsoft Flow



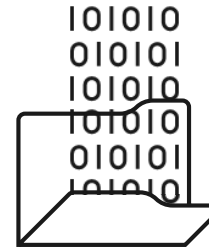
Microsoft Flow helps **non-developers** work smarter by automating workflows across apps and services



Get notifications



Copy files



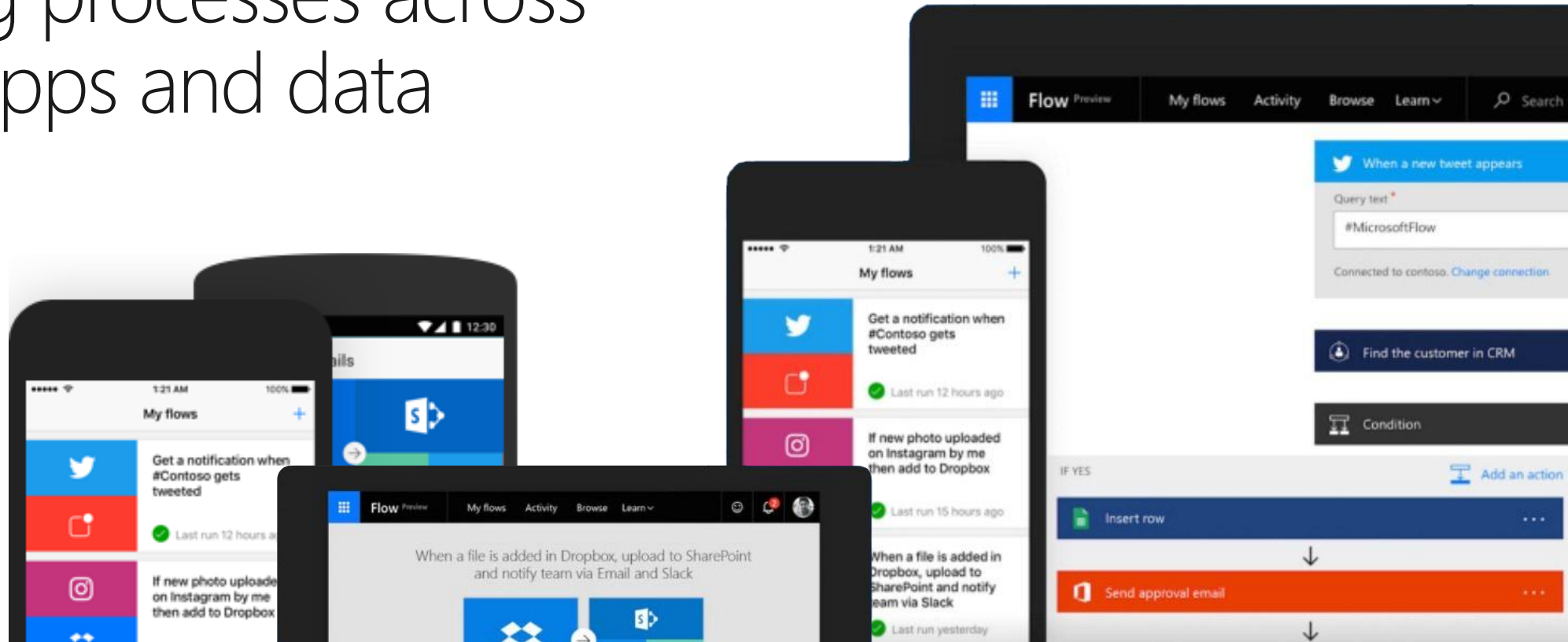
Collect data



Automate approvals

Work less, do more

Microsoft Flow helps people and teams work smarter by automating processes across their apps and data

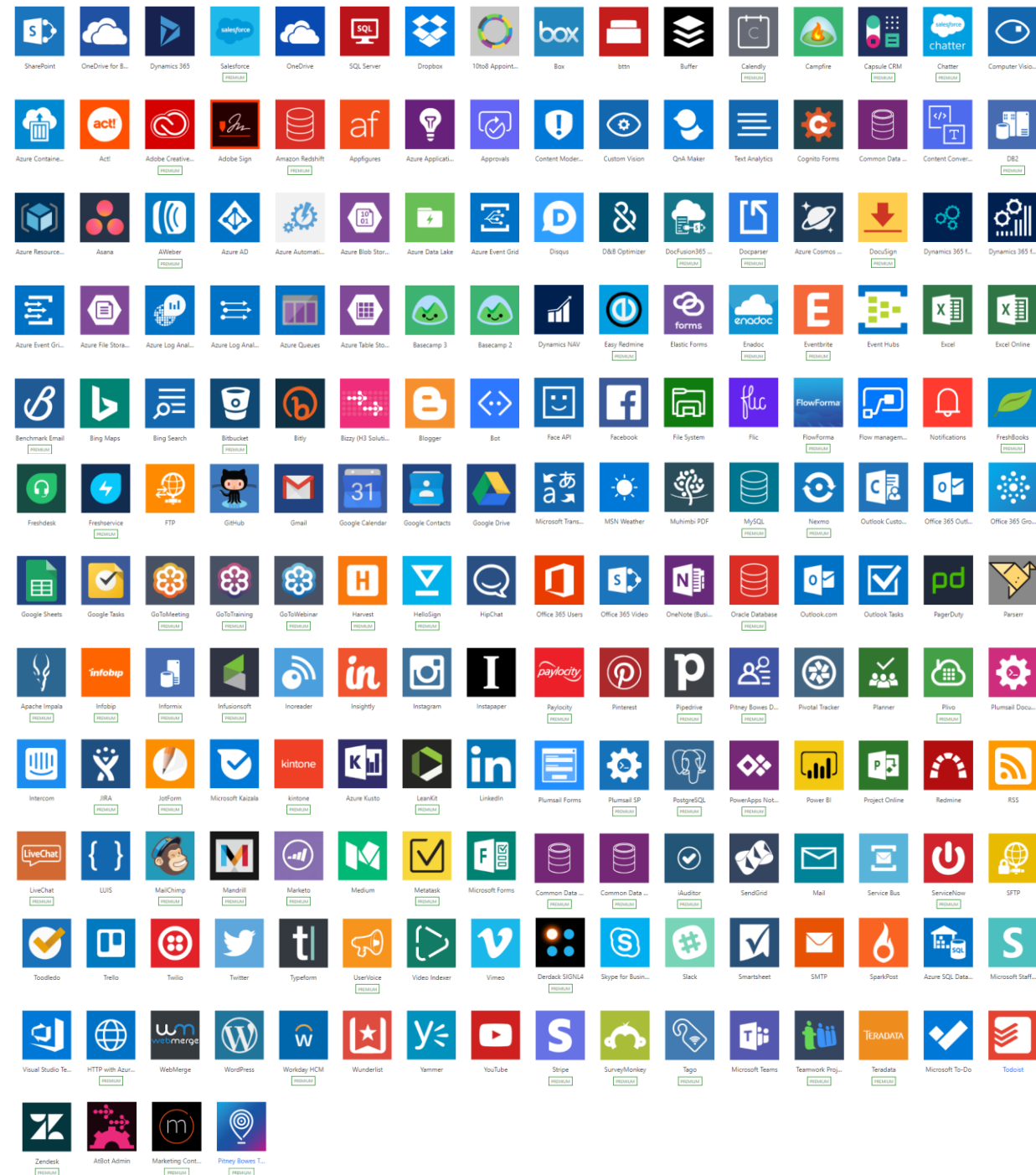


Integration + Connectivity

Built-in connectivity to 195+ SaaS cloud services, file providers, databases, web APIs, productivity apps, and more

Connect to on-premises systems via Data Gateway

Pluggable extensibility via Custom Connectors to integrate existing LOB systems into Flow



Building Flows










































































Components of flows

- ⚡ Starts with an event or trigger
- 📋 Performs any number of actions
- 🔹 Can have conditional logic
- 🔄 Can trigger other workflows



Templates help users to get started

	Create a flow from blank	 	Copy Dynamics CRM Accounts to Common Data Service customer organizations By Microsoft Used 227 times	 	Copy Dynamics CRM Accounts to customers in Dynamics 365 for Operations By Microsoft Used 197 times	  	When an object is created in Dynamics CRM, create a list item By Microsoft Used 194 times	   	Create Dynamics Leads based on Tweets with a button tap By Microsoft Used 31 times	  	Add a Dynamics Case after email approval By Microsoft Used 31 times	 	Copy new Dynamics CRM Cases to the Common Data Service By Microsoft Used 26 times	 	Create a Wunderlist Task for New CRM Leads By James Turner Used 26 times
 	When a new opportunity is created post to Yammer By Richard Bosse Used 133 times	  	Create Dynamics CRM Leads from an Excel table By Microsoft Used 121 times	  	Create Dynamics Leads based on Tweets By Microsoft Used 118 times	 	Create a new record in Dynamics CRM when a new list item is added By Microsoft Used 95 times	 	Send an mail from your SMTP server on new opportunities By Kerem Eser Used 26 times	 	Copy new Dynamics CRM Leads to the Common Data Service By Microsoft Used 25 times	 	Attach OneDrive files about Dynamics Contacts as notes By Microsoft	 	Create CRM Account for new Azure Queue Messages By Marius Pedersen
 	Copy new Dynamics CRM Contacts to the Common Data Service By Microsoft Used 91 times	 	Create a SharePoint item based on a Dynamics CRM record By Henry Scheinin Used 79 times	 	Create Dynamics notes for Emails By Microsoft Used 61 times	  	Move rows from and Excel table to Dynamics AX Online Vendors By Microsoft Used 56 times	 	Send a Push Notification for new Sales Orders By Isaac Dorgbefe	  	Copy Teams from the Common Data Service to Operations Customer Groups By Michael Berroth	 	Copy Salesforce Accounts to Dynamics AX Online Customers By Microsoft	 	When a new lead is created in Dynamics CRM, add it to a Smartsheet By Microsoft
 	Copy from Dynamics CRM to the Common Data Service and Operations By Microsoft Used 91 times	 	CRM Opportunity Win to Create a New Project By Microsoft Used 79 times	 	Create Dynamics CRM Leads from a Google Sheet By Microsoft Used 61 times	 	On approval create a Dynamics CRM entity for items in a SharePoint list By Microsoft Used 56 times	 	Create a case in Dynamics from Freshdesk By Microsoft Used 31 times	 	Low stock warning By Microsoft Used 26 times	 	Social Media Promotions By Microsoft Used 26 times	 	Add notes to a Dynamics CRM contact By Microsoft Used 26 times

What makes up a flow?

Example: Notification Flow on Dynamics 365

Trigger – the event that kicks off the flow

In this example When a record is created

Actions – what the flow does

Send an email

The screenshot displays a Microsoft Power Automate flow configuration for Dynamics 365. The flow is titled "When a record is created" and is configured to trigger when a record is created in Dynamics 365. The trigger is set to "Organization Name" as "PowerAppsMSITest1" and "Entity Name" as "Leads". The flow then proceeds to an action named "Send an email". The email action is configured with the "To" field set to "Owner", the "Subject" field set to "Follow up on Lead", and the "Email body" field set to "Don't forget to follow up with the lead: [Topic] . The last name is: [Last Name] .". The flow is shown in a light blue theme.

Triggers

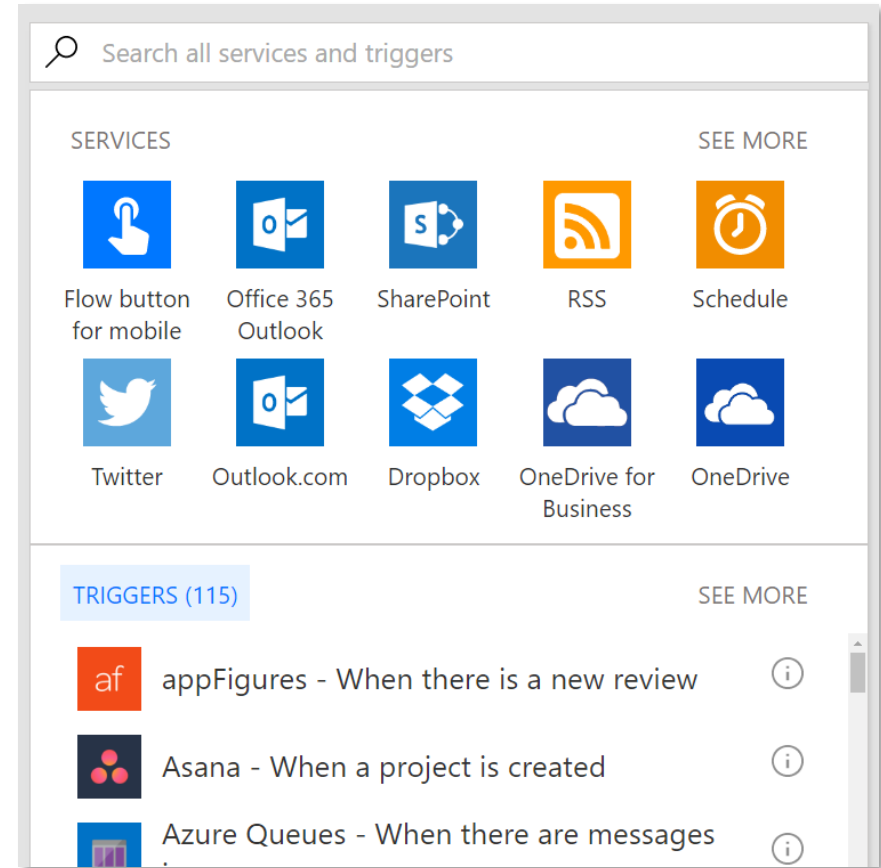
Run manually based on user action

- From dedicated Flow button
- From other apps – PowerApps, SharePoint...

Run on a schedule

- From every minute to 4am on Saturdays

Run based on an event that happens in a cloud or on-premises service



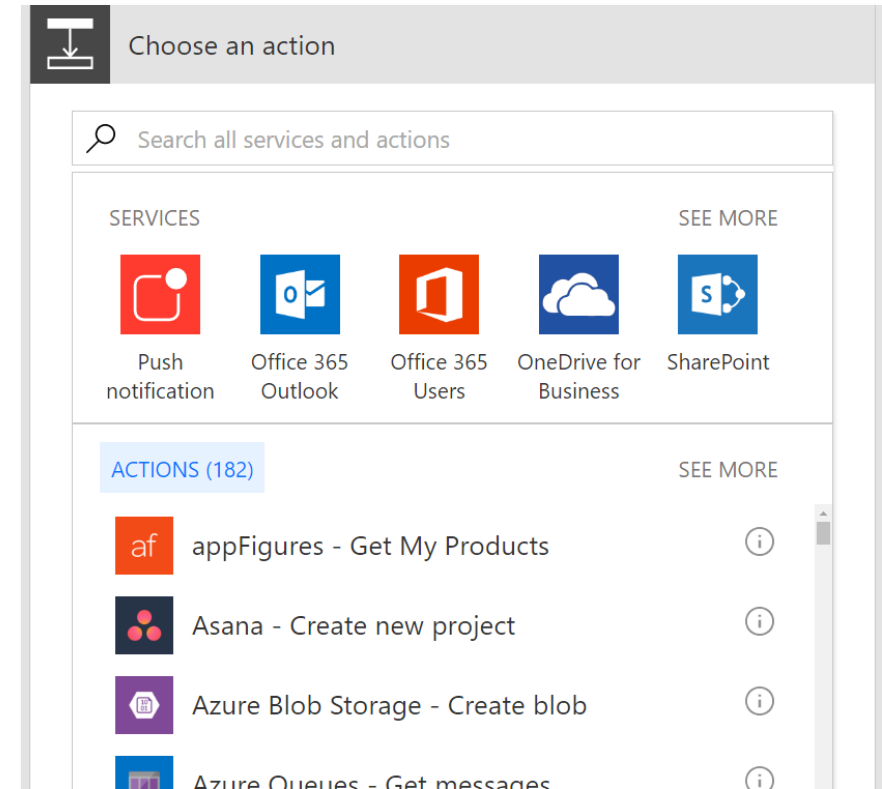
Actions

Any number of steps that run after the trigger

Connect to any cloud service or via the on-prem data gateway


Connect to any HTTP endpoints if there's no out-of-box connector

Some actions may not even use connections – just manipulate data locally



Flowing data

Data 'flows' from each step and is available for all later steps

Use  [Add Dynamic Content](#) to select outputs from previous steps

Certain outputs show up based on the types of the inputs and outputs

Trigger

Outputs:

File name

Size

File content

Action 1

A binary field would see:

File name

Size

File content

Outputs:

Title

Count

Action 2

A string field would see:

File name

Size

File content

Count

Title

A number field would only see:

Size

Count

Examples




Demonstration

Service Request



Service Request

Trigger when a new Service Request is created






When a record is created, updated or deleted

* Trigger condition	Create	▼
* The entity name	Service Requests	▼
* Scope	Organization	▼


Show advanced options ▼

Service Request



Retrieve the user info of the submitter

 Get User  

Entity name

Users 

* Item ID

 Requested By (... 


Select Query

systemuserid,parentsystemuserid,internalemailaddress

Expand Query




Related entries to include with requested entries (default = none).

Hide advanced options






Service Request

Retrieve the manager info from Office 365

Get manager (V2)




* User (UPN)








Primary Email 

Show advanced options 

Service Request



Start the approval process and wait for Approval


 Start and wait for an approval (V2)  


* Approval type	Approve/Reject - First to respond 
* Title	Approval Request
* Assigned to	 Mail  ;
Details	Markdown supported (see https://aka.ms/approvaldetails)
Item link	 body/@odata.id 
Item link description	Describe the link to the item
Requestor	 Primary Email  ;

Service Request



Check the results of the Approval

Condition

Outcome x

contains 

Approve

Add 

Service Request

Perform your Approval

✓

↶

* Se
fro

Database icon

Update a record

i

...

* Entity name

Service Requests

▼

* Item ID

Database icon

Service Request x

Request Type (Request Types)

Requested By (Users)

Title

Required name field

Actual End On

Actual Start On

Approval Notes

Checkmark icon

Responses Co... x

Approval Status

Approved

▼

Approved By (Users)

Approved On

fx

utcNow() x

...

Service Request

Perform your Rejection

Update a record 2

i

...

* Entity name

Service Requests

▼

* Item ID

Service Request x

Request Type (Request Types)

* S

Requested By (Users)

Title

Required name field

Actual End On

Actual Start On

Approval Notes

Approval Status

Rejected

▼

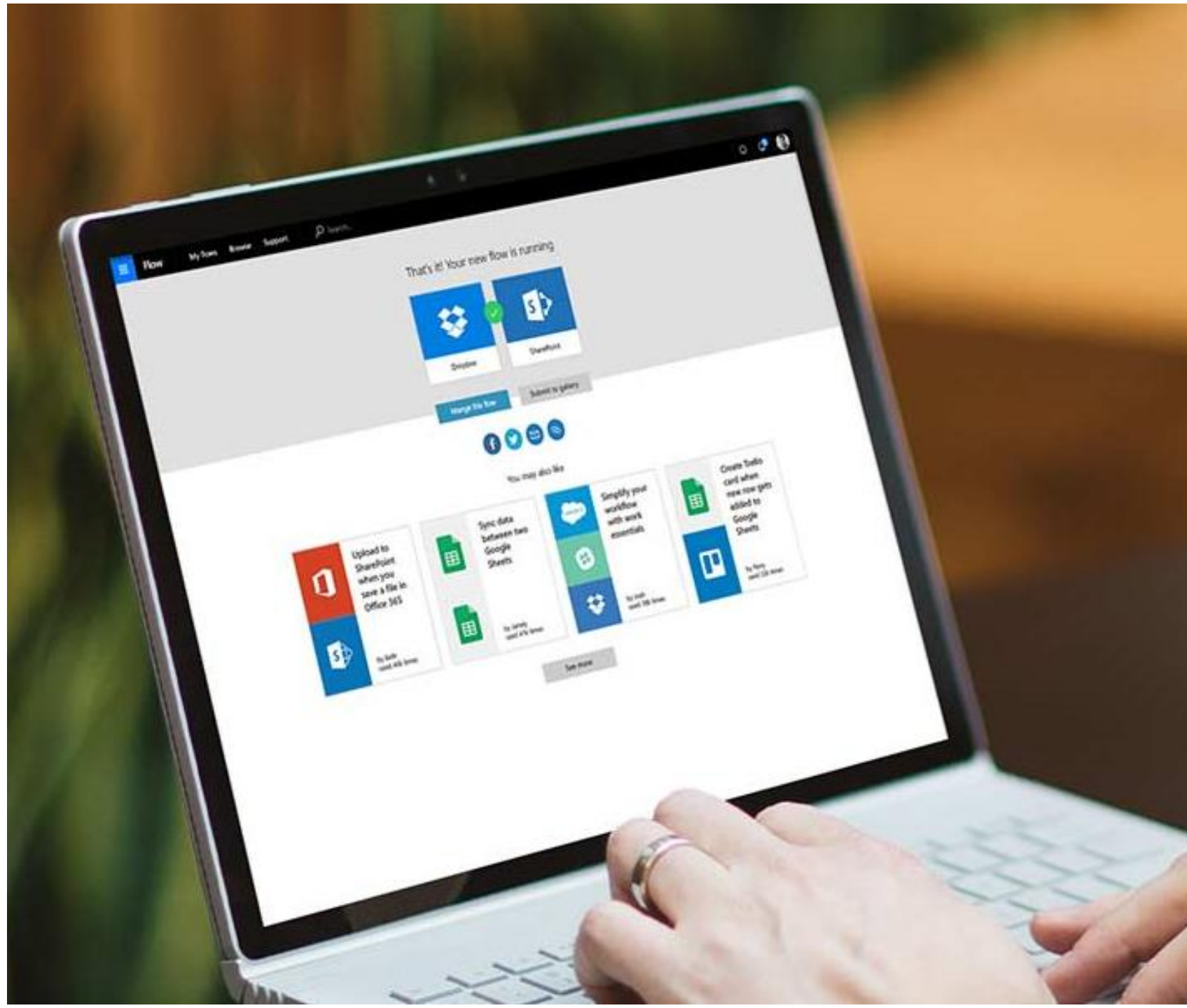
...

i

...


Demonstration

Document Generation




Document Generation

Create the document template






License Details



Product and License Details	
Click or tap here to enter text.	Click or tap here to enter text.
Product Name	License Type
Click or tap here to enter text.	Click or tap here to enter text.
License Number	Computer Name
Registration Information	
Click or tap here to enter text.	Click or tap here to enter text.
Registration Date	Expiration Date

Document Generation

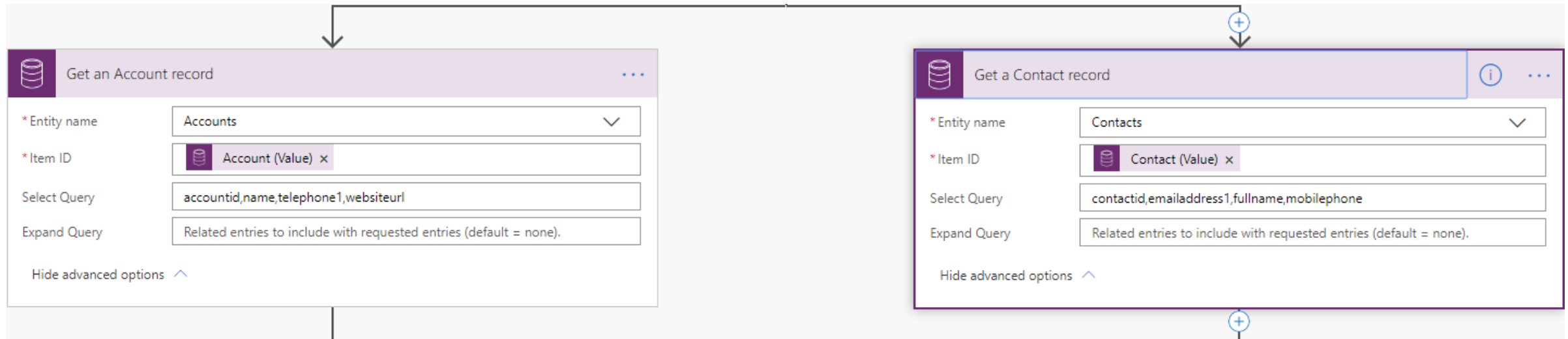
Add a trigger to your flow

 When a record is created, updated or deleted  

* Trigger condition	Create or Update	▼
* The entity name	Licenses	▼
* Scope	Organization	▼
Filtering attributes	bgx_expireson	
Hide advanced options ^		


Document Generation

Get simultaneous data from entities





Document Generation


Get your product data




Get the Product record




* Entity name

Products

* Item ID



Product (Value) 


Select Query

productid,productnumber,name,description

Expand Query


Related entries to include with requested entries (default = none).

Hide advanced options











Document Generation

Populate the data in your word template




Populate a Microsoft Word template





* Location	SharePoint Site	▼
* Document Library	Documents	▼
* File	/Business/Templates/LicenseDetails.docx	
ContactName	 Full Name	×
PrintDateYear	 convertTimeZo...	×
WebSiteUrl	 Website	×
BusinessPhone	 Main Phone	×
PrintDateDay	 convertTimeZo...	×

Document Generation


Create the file and convert to pdf (using OneDrive)




Create file on OneDrive


* Folder Path


/Attachments 

* File Name



LicenseDetails-  License Number x .docx

* File Content



 Microsoft Wor... x




Convert file to PDF

* File


 Id x 

Target type



PDF 

Document Generation

Save the file back to SharePoint




Create file




* Site Address

Team Site - [https://](https://sharepoint.com/)sharepoint.com/




* Folder Path

/Shared Documents/Business/Customers




* File Name

LicenseDetails-




License Number




.pdf

* File Content






File content




Document Generation


Send the file in email

 Send an email (V2)  









* To

 Email x ;


* Subject


Your license for  Name x is attached

* Body

Font ▼ 12 ▼ **B** *I* U        

</>

Thank you for purchasing  Name x .

Your license is attached, and valid until  Expires On x .

Please feel free to contact us if you have any questions about the product.

Thank you.

Document Generation

Receive the license in an email

 Reply  Reply All  Forward  IM

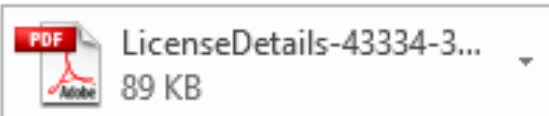
Sat 11/2/2019 11:45 PM

Aric Levin

Your license for CRM Exchange Sync Full is attached

To ☐ Aric Levin

 This message was sent with Low importance.




Thank you for purchasing CRM Exchange Sync Full.
Your license is attached, and valid until 2020-10-31.

Please feel free to contact us if you have any questions about the product.


Thank you.

Document Generation

View the attached license



License Details



Product and License Details

CRM Exchange Sync Full

Product Name

43334-34343-23434-25665-87945

License Number

3

License Type

comp11.contoso.com

Computer Name

Registration Information

2019-10-29

Registration Date


2020-10-31

Expiration Date


Debugging and Errors


A person wearing a blue denim shirt is sitting at a wooden desk, working on a silver laptop. The laptop has a black keyboard and a Windows logo on the lid. The person's right hand is on the mouse, and their left hand is holding a pen, ready to write on a piece of paper. The background is blurred, showing a warm, indoor setting.


Debugging : check previous runs (run History)




Hackathon Channel requests and flow bot

 Add a description















 See analytics

RUN HISTORY

See all >

 Succeeded	18 hours ago	2 seconds	>
 Succeeded	1 day ago	3 seconds	>
 Failed	2 days ago	0 seconds	>
 Succeeded	2 days ago	1 second	>
 Succeeded	2 days ago	1 second	>
 Succeeded	2 days ago	0 seconds	>
 Failed	2 days ago	3 seconds	>
 Succeeded	2 days ago	0 seconds	>
 Succeeded	2 days ago	1 second	>
 Test Succeeded	2 days ago	1 second	>

Debugging : check errors in flow runs

Flow run failed.

Recurrence 0s

{x} Initialize variable today date 0s

{x} Initialize variable tomorrow 0s

Get items 0s

BadRequest.

INPUTS

Site Address

Details

Start time
Jul 5, 8:14 PM (2 days ago)

Duration
00:00:00

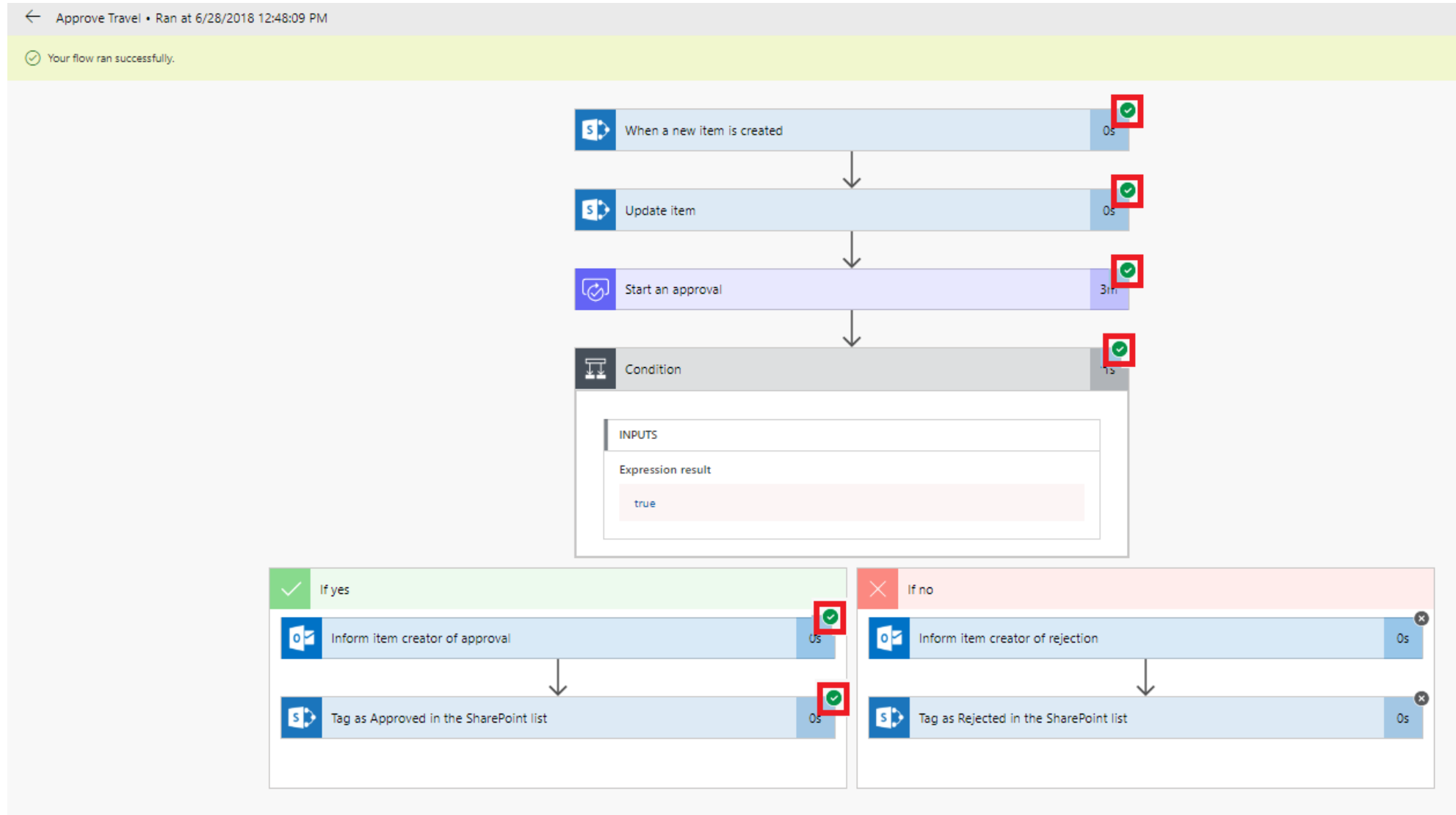
Status
Failed

Error
Action 'Get items' failed

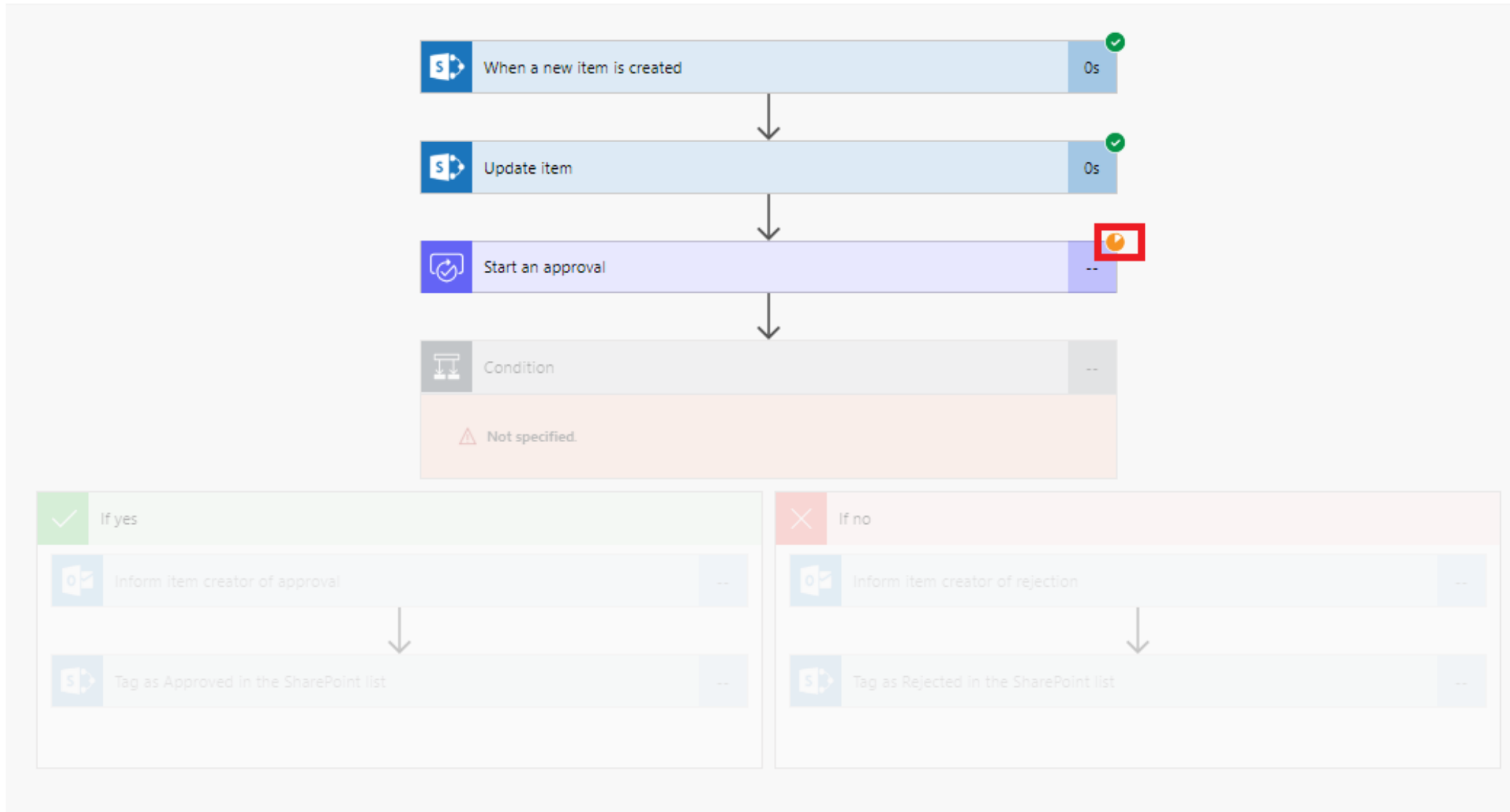
Error Details

The expression "When gt datetime '2018-07-06T00:00:00.0000000'" is not valid. client RequestId: eb5afbe8-e36a-44c9-a99a-179a022ac18f serviceRequestId: 3bdd779e-80f0-0000-1b55-9bac4c5d5bbb

Debugging : check previous runs



Debugging : live



Debugging : use the Test button

- For testing a flow, use the Test button

The screenshot shows the Microsoft Power Automate flow editor. At the top right, there are 'Save' and 'Test' buttons. The 'Test' button is highlighted with a red box. The flow is composed of the following steps:

- Manually trigger a flow
- Create file
- Predict tags from image (Preview)
- Apply to each (containing a Condition step)

Below the 'Apply to each' step, there is a dropdown menu to select an output from previous steps, currently showing 'Predictions'. At the bottom, there are buttons to 'Add an action', 'Add a condition', and a 'More' option.

Test Flow

☐ I'll perform the trigger action

☒ Using data from previous runs

Choose data from a list of previous runs:

<input type="radio"/>	✓ Succeeded	23 hours ago
<input type="radio"/>	✓ Succeeded	1 day ago
<input type="radio"/>	✓ Succeeded	1 day ago
<input type="radio"/>	✗ Failed	1 day ago
<input type="radio"/>	✓ Succeeded	1 day ago

Test

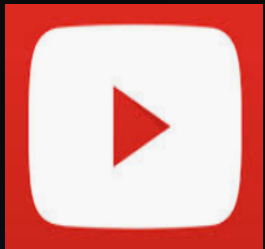
Cancel

Questions





www.ariclevin.com



www.youtube.com/channel/UCzdg6V5kkjiBufYnvJT4XWQ



github.com/ariclevin



www.linkedin.com/in/ariclevin

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<https://community.dynamics.com>



<https://community.powerbi.com>



<https://community.powerapps.com>



<https://community.flow.microsoft.com>