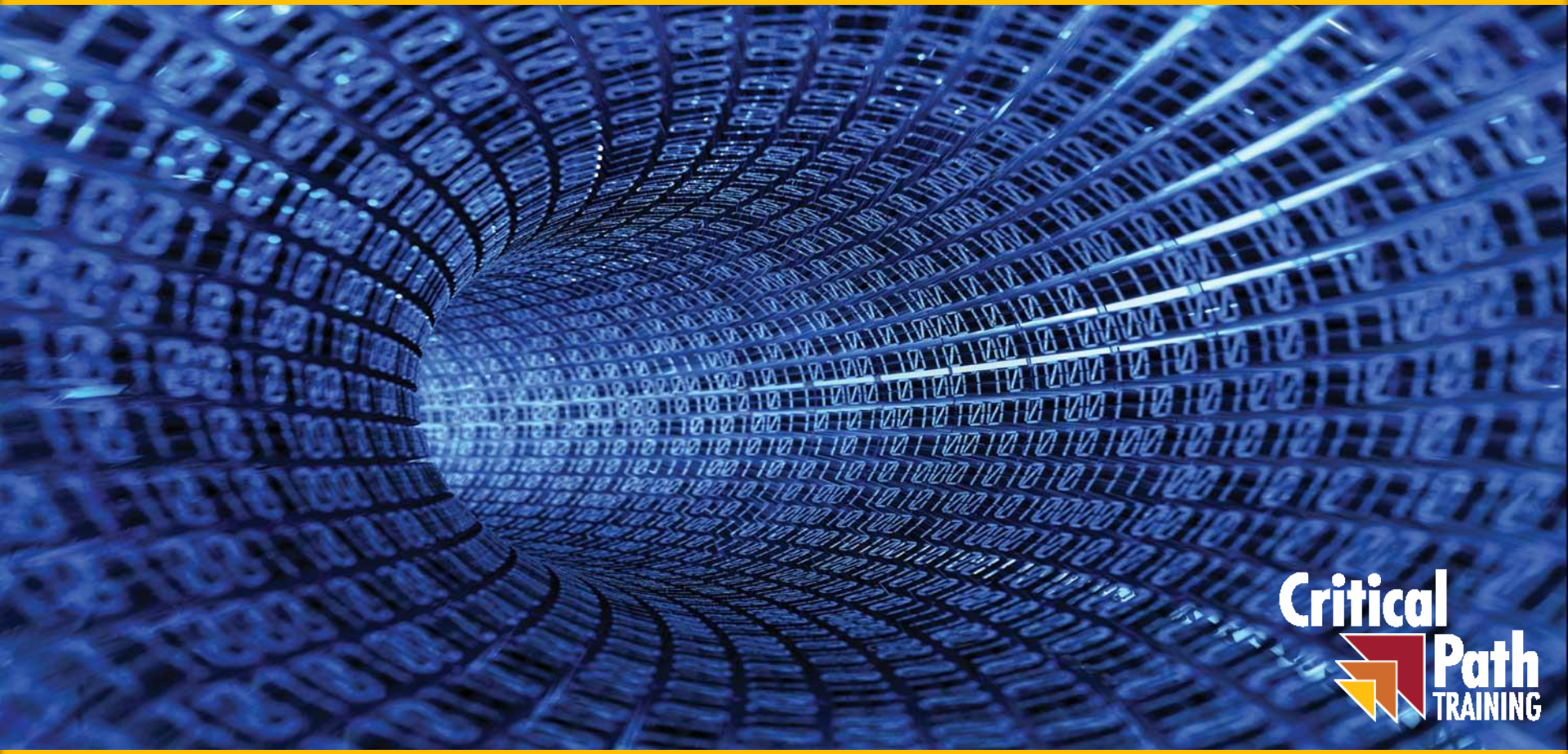
Building Flows to Manage Content and Approvals

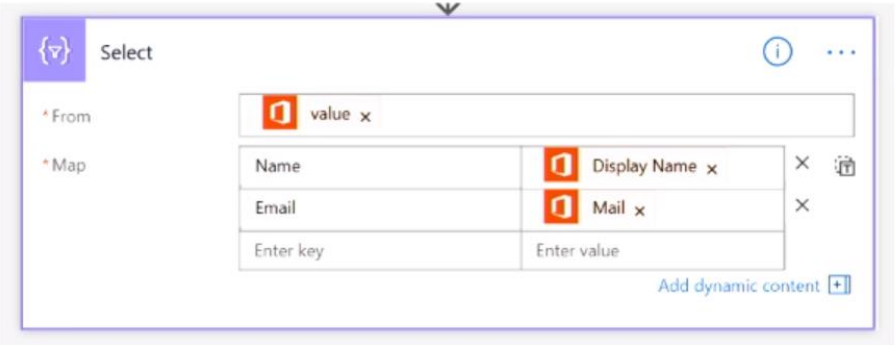


Agenda

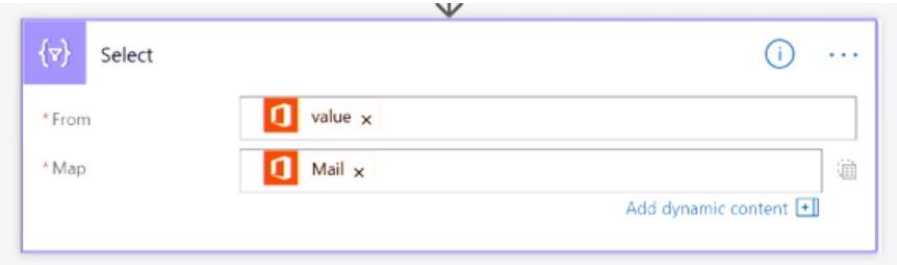
- Processing Documents and Images
- Using Flow to Generate Word and PDF Files
- Integrating Flow with Microsoft Forms
- Using Flow to Automate Approval Processes
- Managing Approvals using Approvals Center

Transforming Arrays

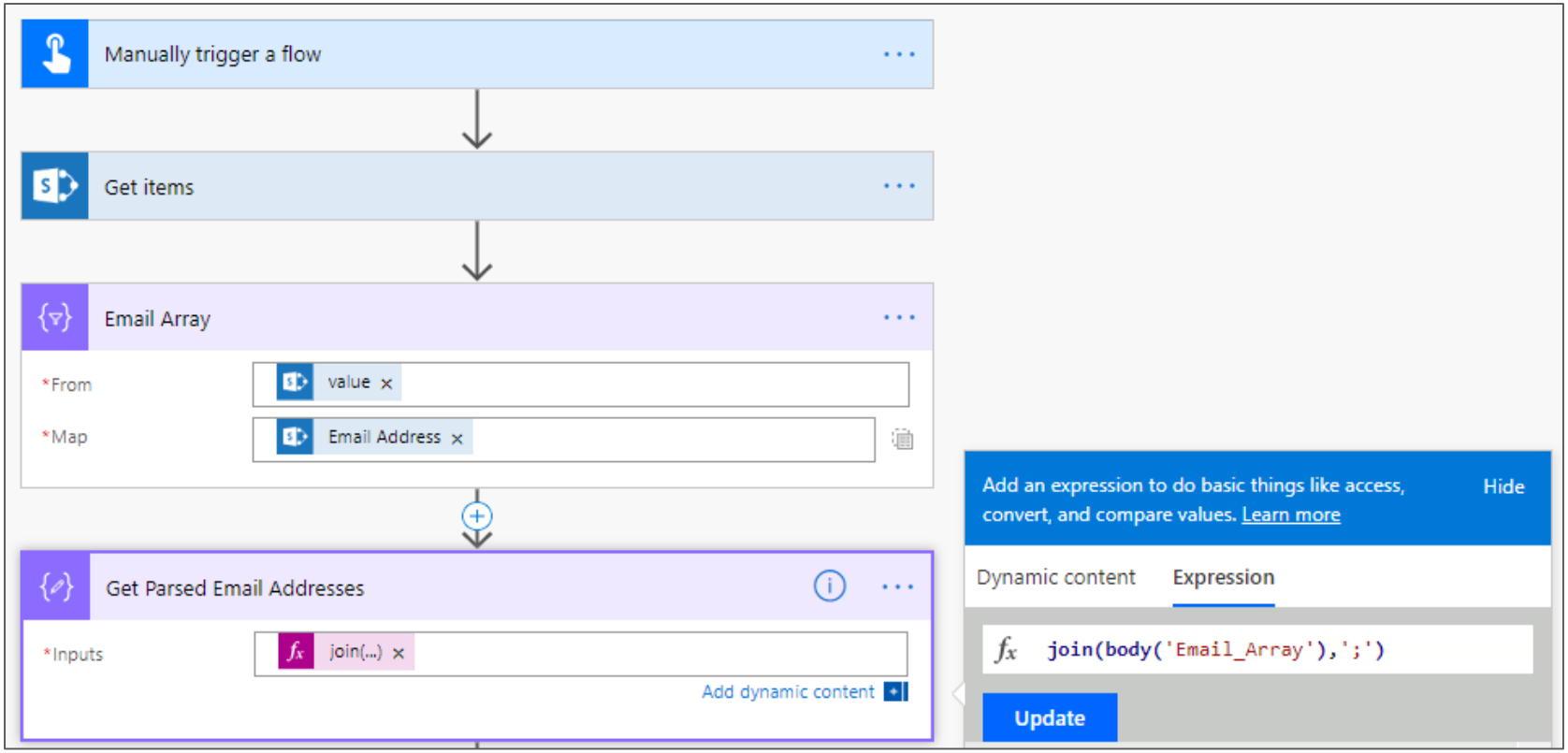
- Use Select action
  - Two input modes: fill key-value pairs or typing directly
- Create array object objects
  - Useful for passing array to another action



- Create a simple array of strings, numbers, Booleans, etc
  - Useful for creating simple list (e.g. email addresses)

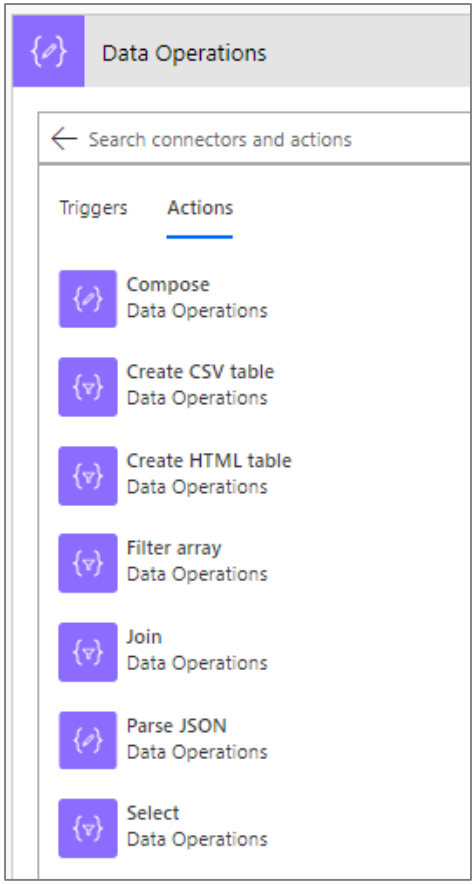


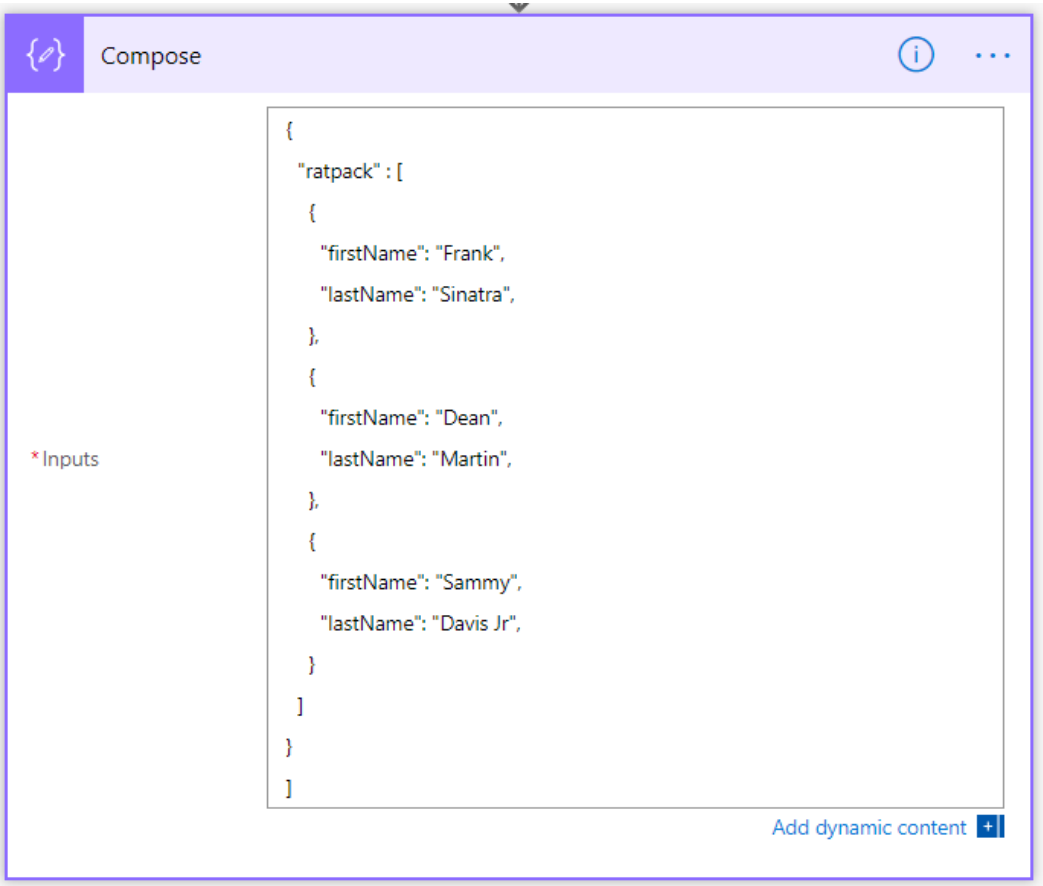
Converting an Array using Select



Data Operations

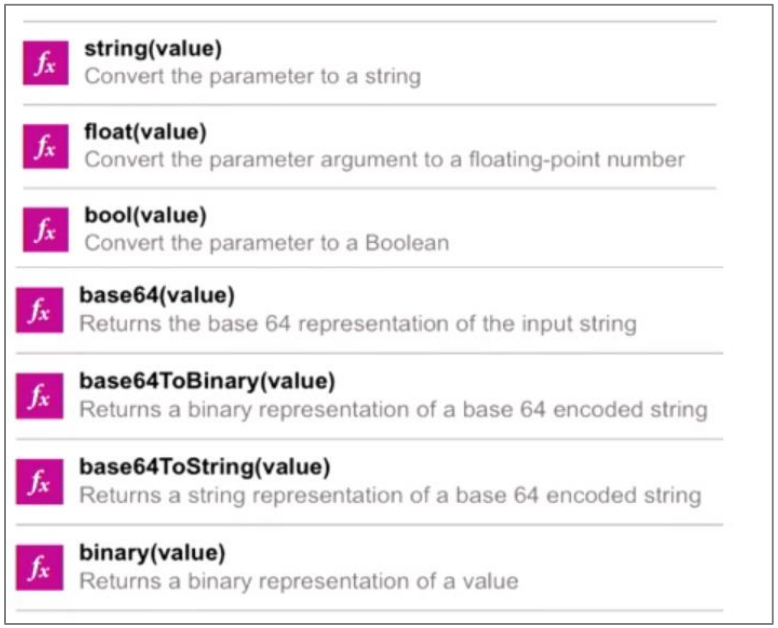
- Used to process data and prepare content

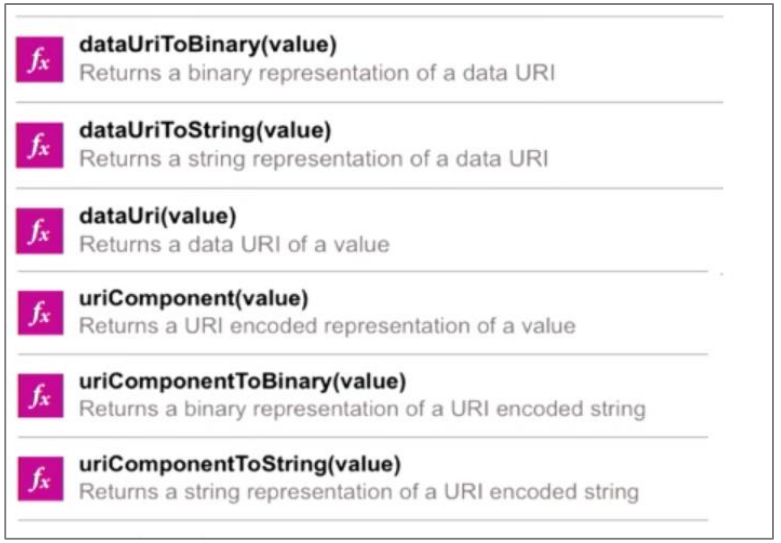




Handling Type Conversion

- Some conversion is automatic
  - Sometimes conversions are performed for you
  - In other cases, you must explicitly convert between types





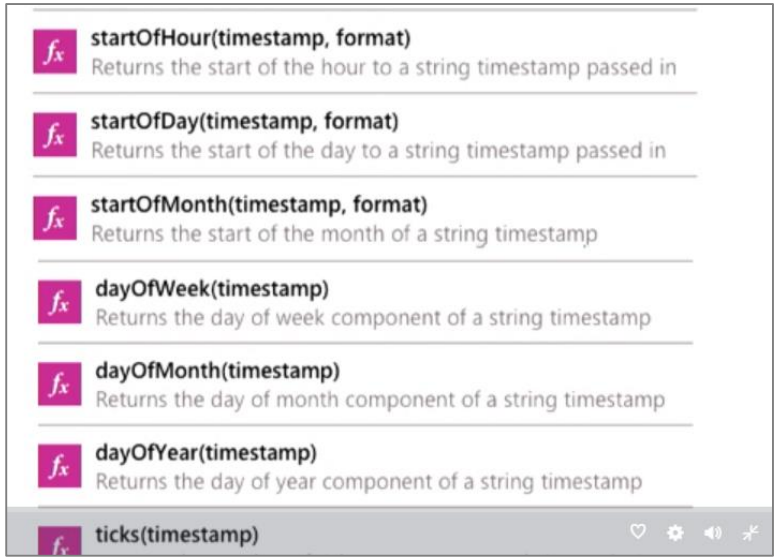
Flow Type Conversion Matrix

UI adds automatically

To → / From ↓	String	Base 64	Binary content	Data URI	URI comp.	Floating-point	Integer	Bool.	Array	JSON Object	XML content
String	Yes	base64()	binary()	dataUri()	uriComponent()	float()	int()	bool()	split() json()	json()	xml()
Base 64	base64ToString()	Yes	base64ToBinary()	*	*	*	*	*	*	*	*
Binary content	string()	base64()	Yes	dataUri()	uriComponent()	*	*	*	*	*	*
Data URI	dataUriToString()	*	dataUriToBinary()	Yes	*	*	*	*	*	*	*
URI comp.	uriComponentToString()	*	uriComponentToBinary()	*	Yes	*	*	*	*	*	*
Floating-point	Yes	base64()	binary()	dataUri()	uriComponent()	Yes	No	No	No	No	No
Integer	Yes	base64()	binary()	dataUri()	uriComponent()	Yes	Yes	No	No	No	No
Bool.	Yes	base64()	binary()	dataUri()	uriComponent()	No	No	Yes	No	No	No
Array	join() string()	*	*	*	*	No	No	No	Select Action	Select or Compose	xml()
JSON object	string()	*	*	*	*	No	No	No	Select or Compose	Compose Action	xml()
XML content	string()	*	*	*	*	No	No	No	xpath()	xpath()	Logic apps only

Working with Dates and Time

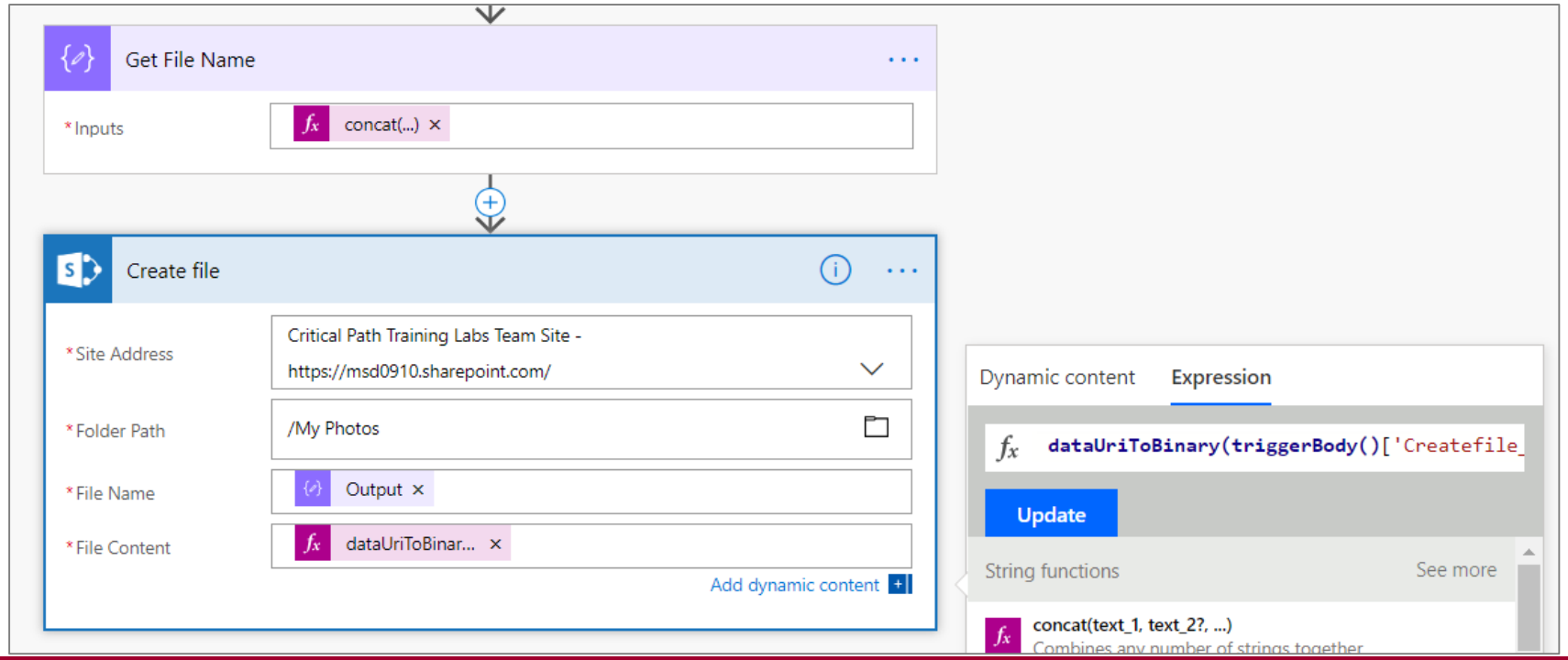
- Get Greenwich Meantime using **utcnow()**
- Use **add*()** functions to move time back/forward
- **convertTimeZone()** used to handle local times
- **formatDateTime()** used to format



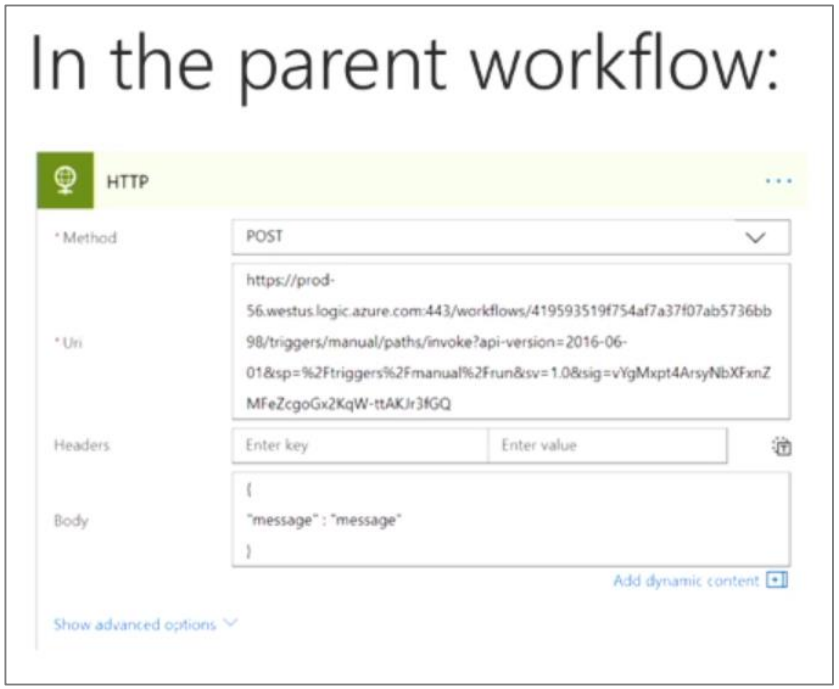
dataUriToBinary()

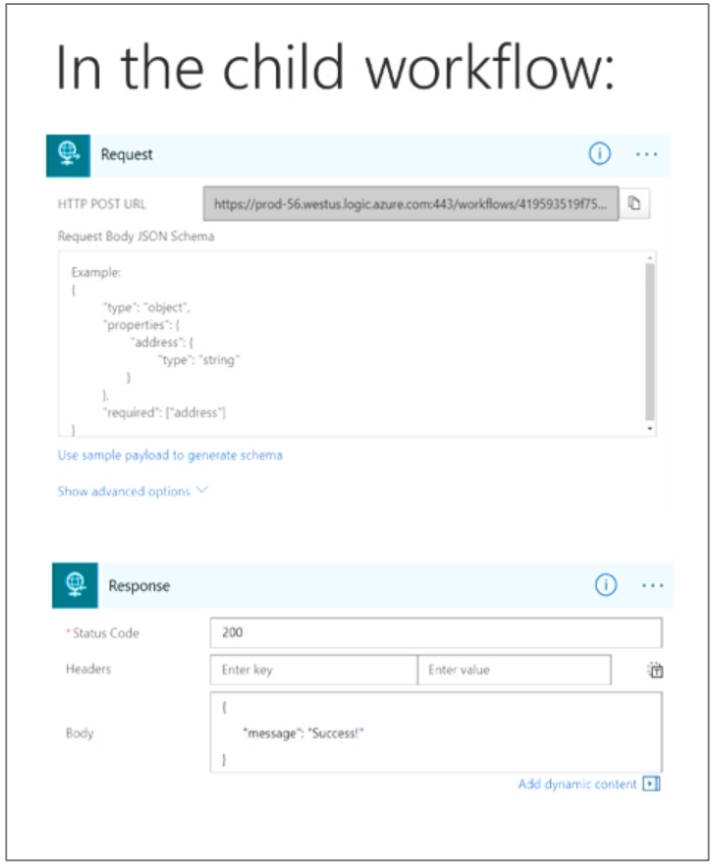
- PowerApps photos require conversion
  - Allows you to upload phots to SharePoint
  - Accomplished using **dataUriToBinary()** function

```
dataUriToBinary(triggerBody()['Createfile_FileContent'])
```



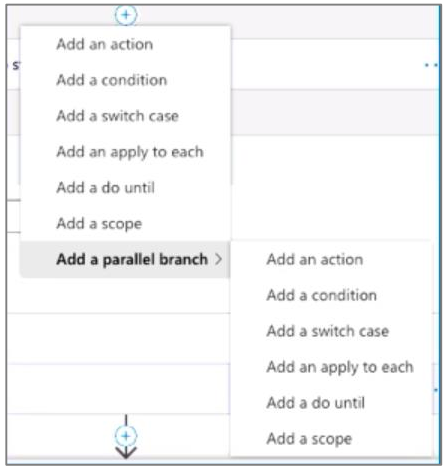
Calling Flows using the HTTP action

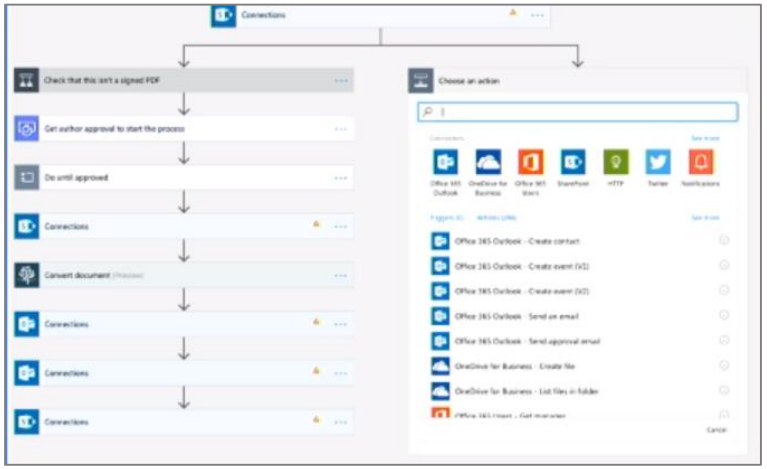




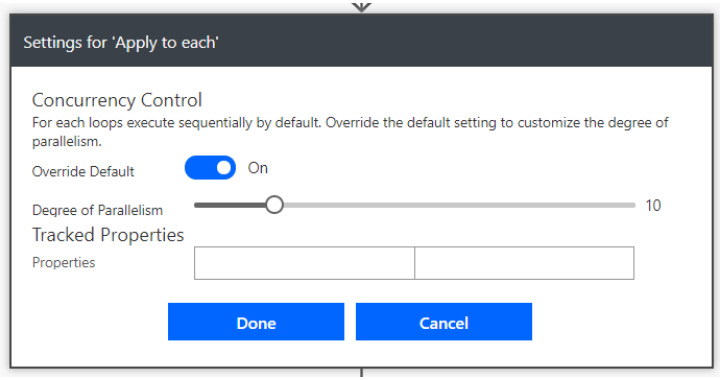
Parallel Execution

- Add parallel branch from above using ⊕





- Apply to each is sequential by default
  - Adding parallel execute to Apply to each



Agenda

- ✓ Processing Documents and Images
- ➢ Using Flow to Generate Word and PDF Files
- Integrating Flow with Microsoft Forms
- Using Flow to Automate Approval Processes
- Managing Approvals using Approvals Center


DEMO
Generating PDF Files with the Word Onine Connector

Agenda

- ✓ Processing Documents and Images
- ✓ Using Flow to Generate Word and PDF Files
- ➢ Integrating Flow with Microsoft Forms
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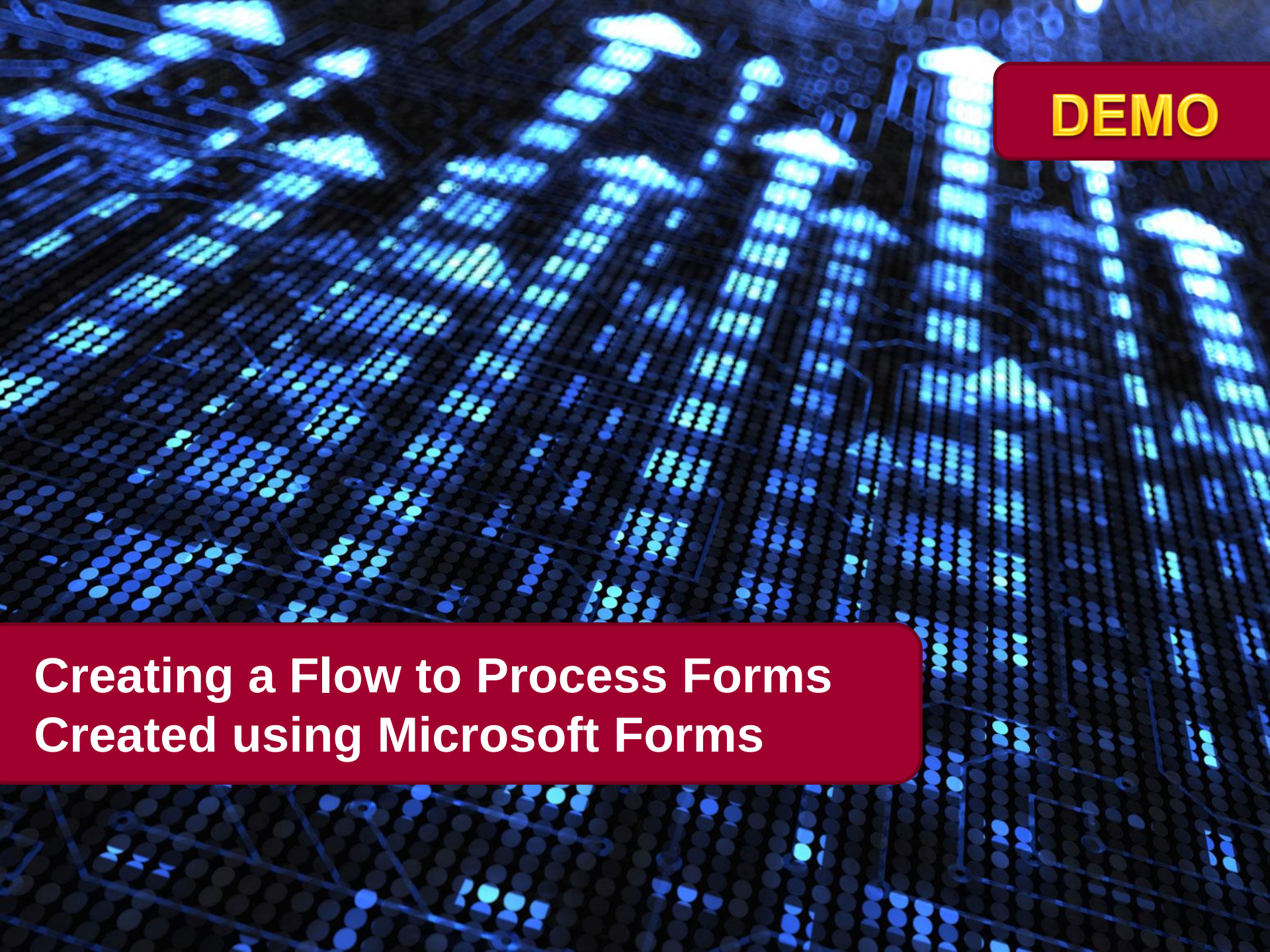
- Managing Approvals using Approvals Center


DEMO
Creating a Flow to Process Forms
Created using Microsoft Forms

Agenda

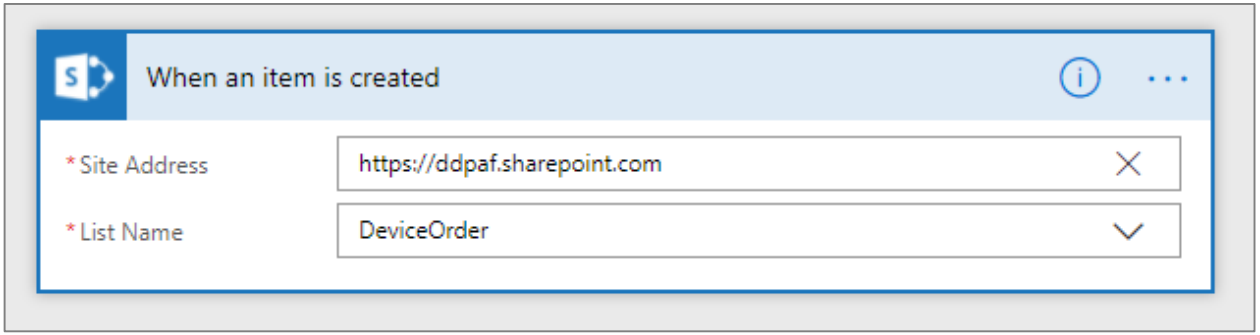
- ✓ Processing Documents and Images
- ✓ Using Flow to Generate Word and PDF Files
- ✓ Integrating Flow with Microsoft Forms
- ➢ Using Flow to Automate Approval Processes
- Managing Approvals using Approvals Center

Creating a Flow for Device Request Approval

- Create a flow from blank

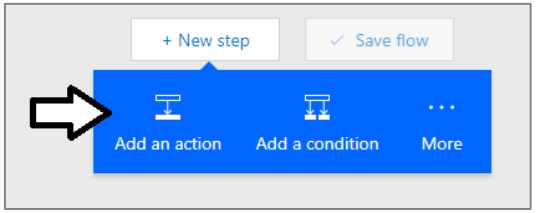
- Select a SharePoint trigger for **When an item is created**

- Configure the trigger to use the **DeviceOrder** list

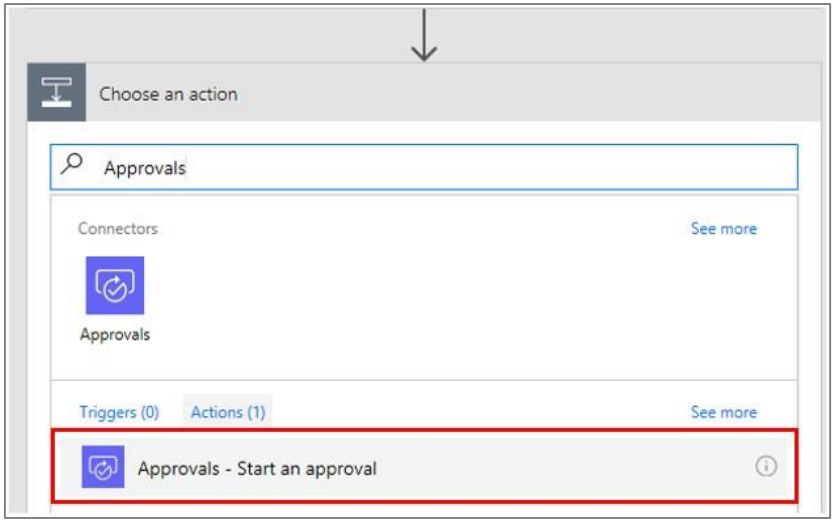


Add the Start an Approval Action

- An **Approval** process is added as an action

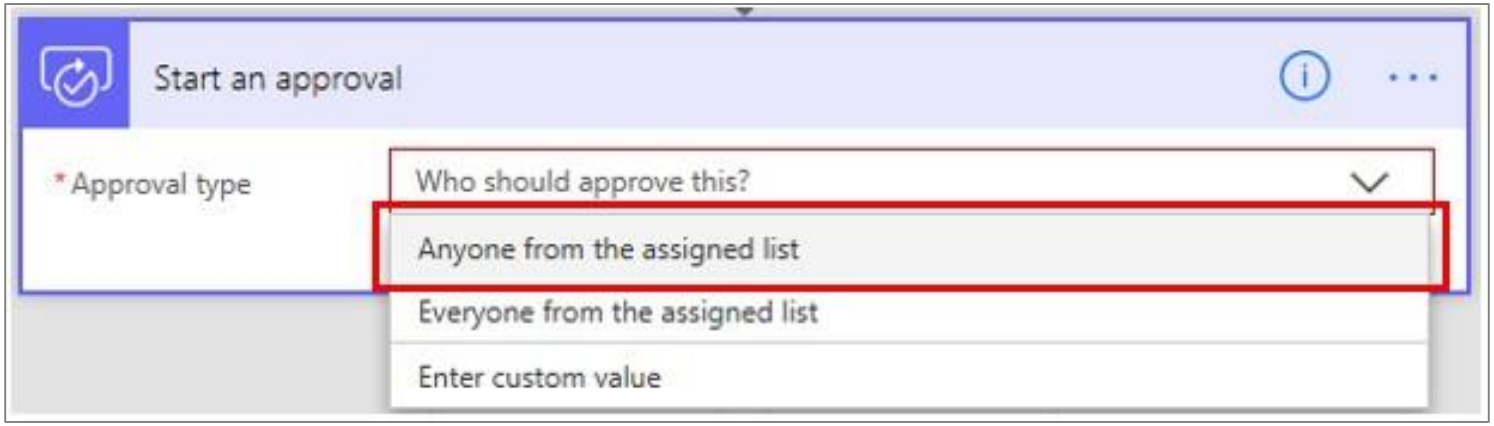


- Select the Approvals action named **Start an approval**



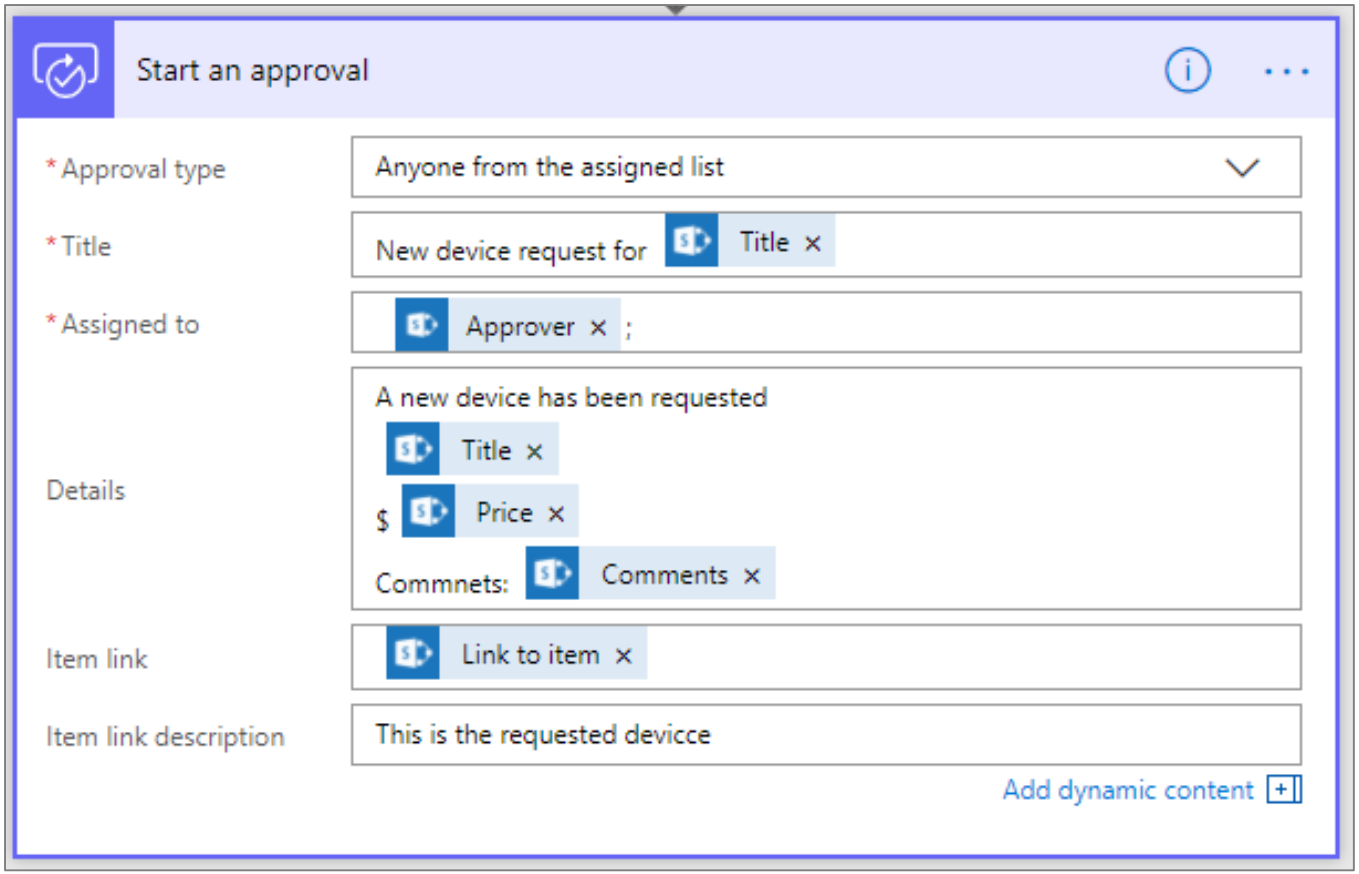
Approval Types

- There are two types of approvals
  - Determine behavior when there are two or more approvers
  - "Anyone" allows single approver to complete approval process
  - "Everyone" requires all approver to approve the request



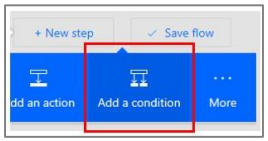
Building Out The Start an Approval Action

- You provide data which is sent to approver

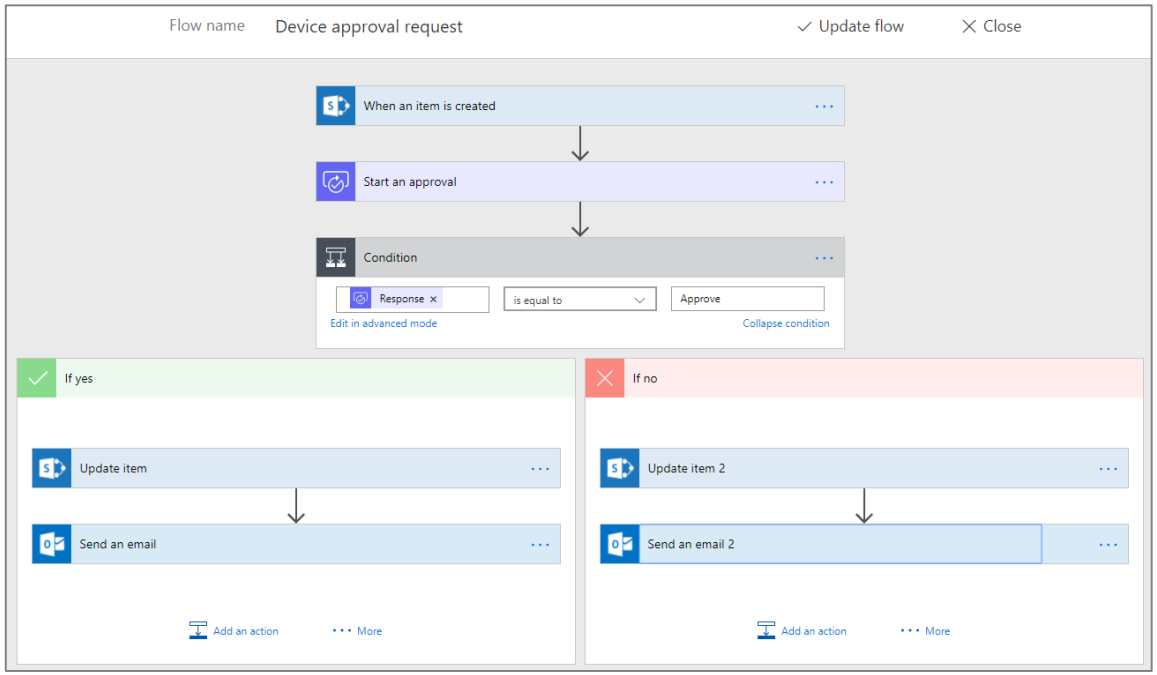


Responding to the Approval Response

- Start an Approval action followed by a condition
  - Allows flow to determine if approval was accepted or rejected

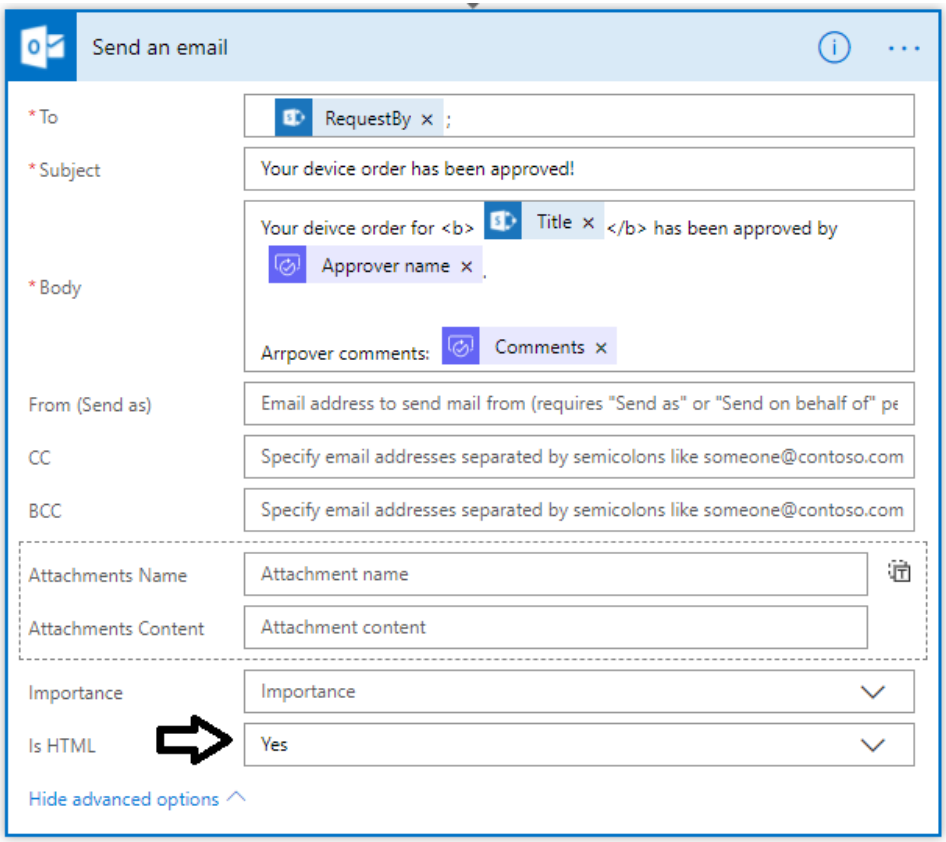


  - Condition has If yes branch and If no branch for both outcomes



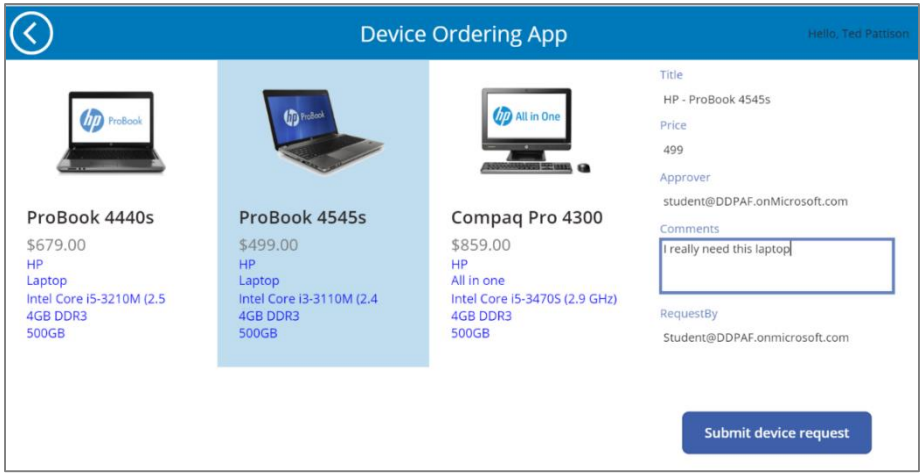
Implementing If yes Branch using Email

- If request is approved, send notification email to requestor

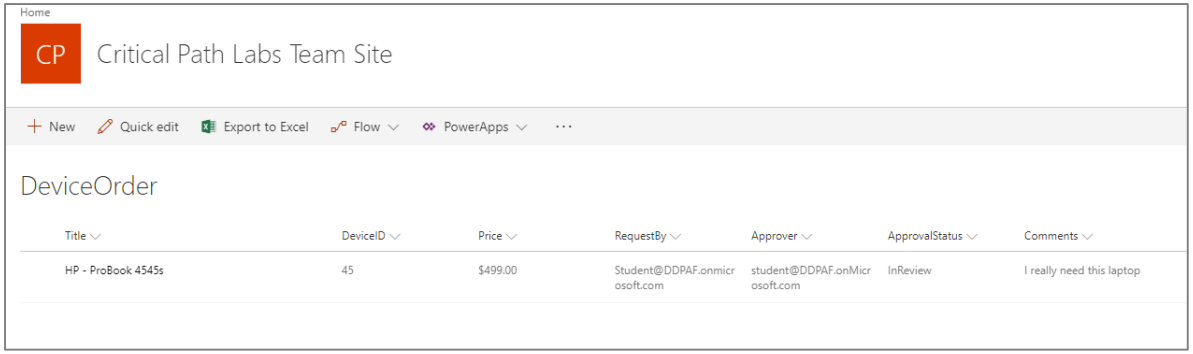


Testing the Approval Flow

- Start by creating a new device request

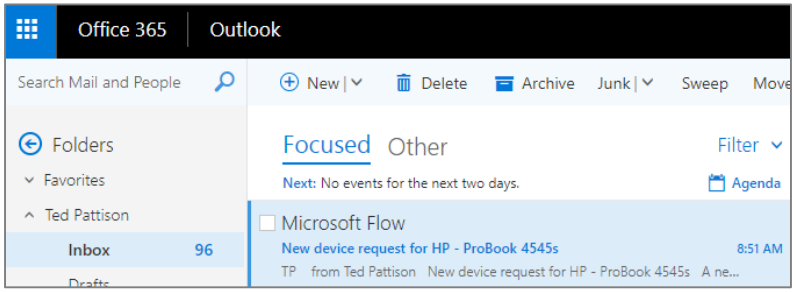


- Adding item to SharePoint list triggers approval process to start

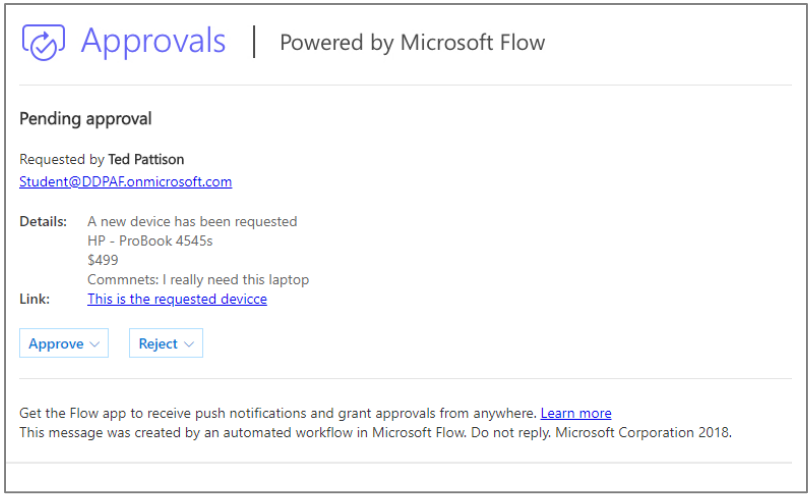


Sending Email Notification to an Approver

- The flow sends notification email to the approver
  - Flow execution currently paused inside **Start an Approval** action



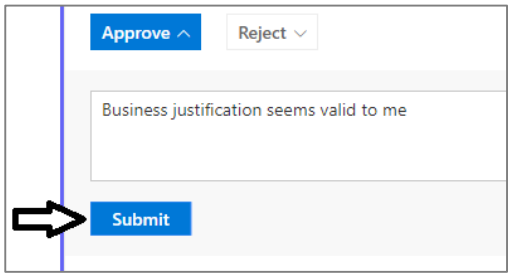
  - Email allows approver to approver or reject approval request



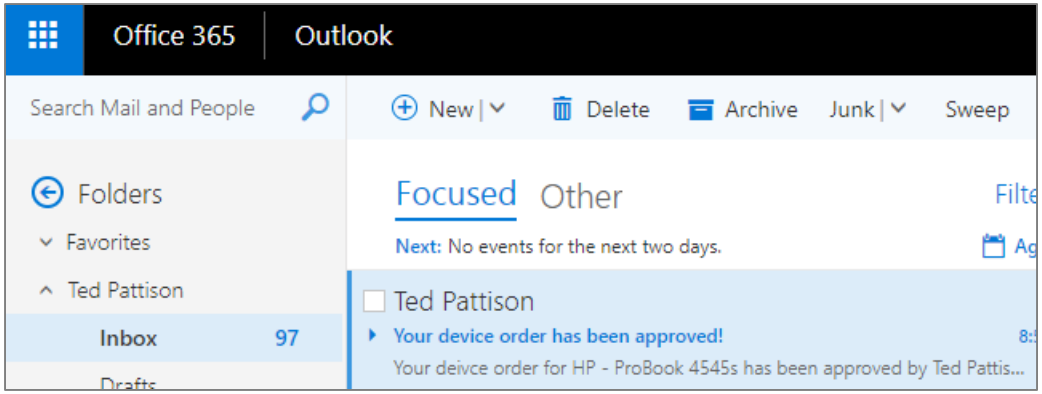
Approving an Approval Request

- Notification email provides button to approve or reject request

- Approver can enter comment and submit approval (or rejection)

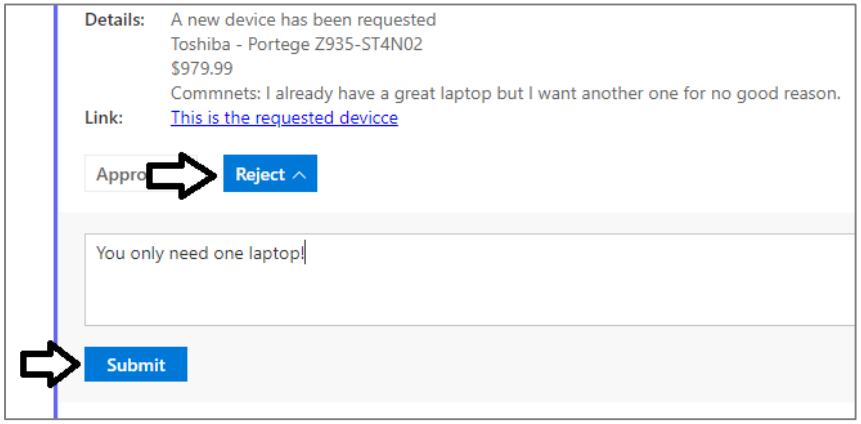


- Approval or rejection unblocks flow which continue down appropriate branch
  - Approval response determines whether to send approval email or rejection email

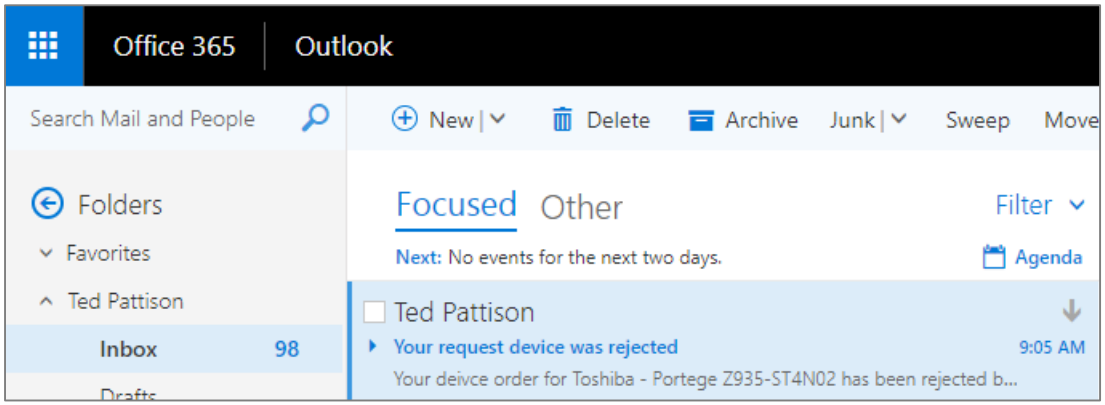


Rejecting an Approval Request

- In the case of a rejected request…

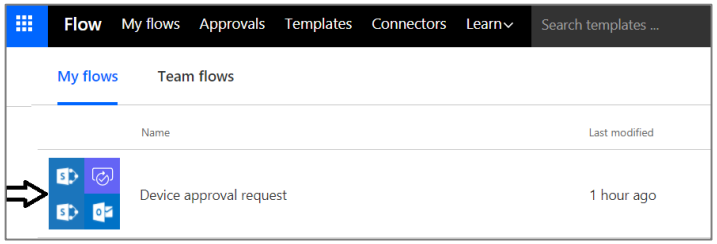


- Approval flow sends a notification about rejection

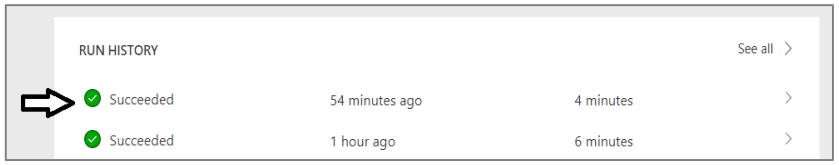


Run History

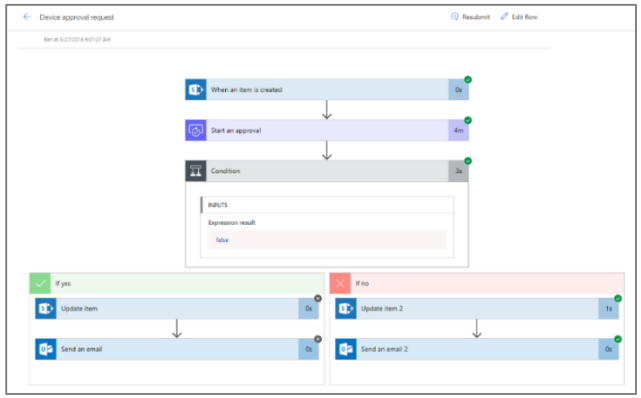
- Flow tracks run history of flow that have started
  - Click on a flow to see its RUN HISTORY list



  - RUN HISTORY list has entry for each flow that has started

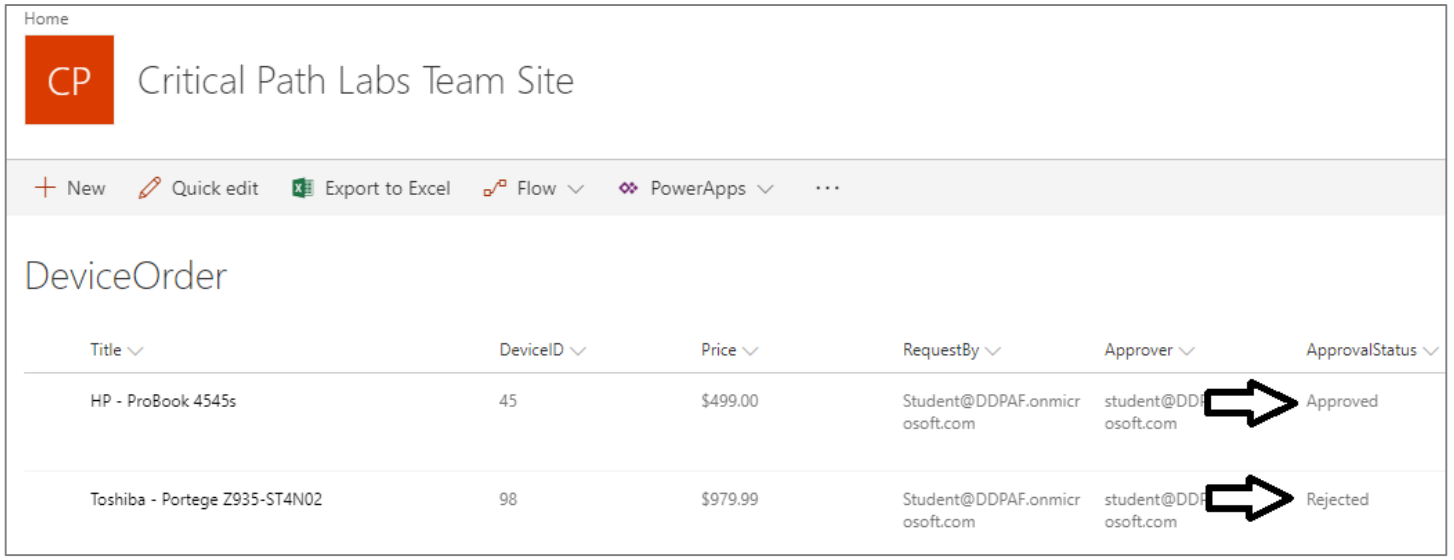


  - Drilling into flow run history shows execution path and data



Updating a SharePoint List Item

- Approval flow can update SharePoint list items
  - Used to show SharePoint users the outcome of approval process



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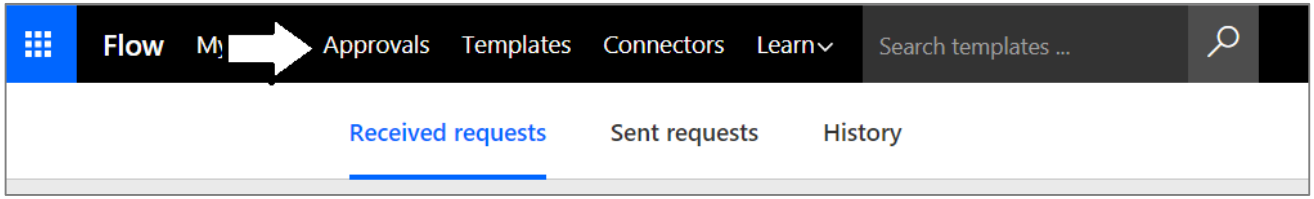
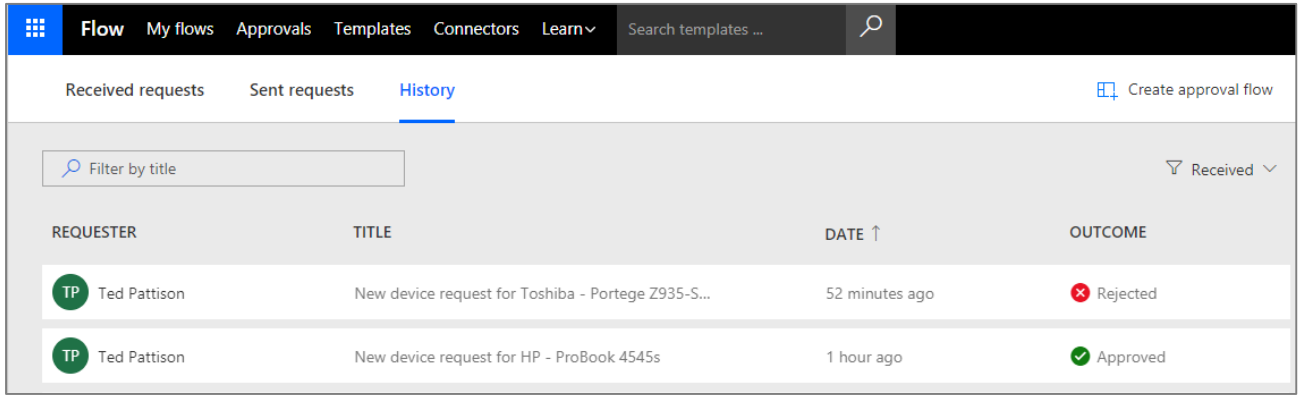
Approvals Center

- Microsoft Flow provides Approvals Center
  - Provides alternative to email for approve/reject processing
  - Accessible through browser

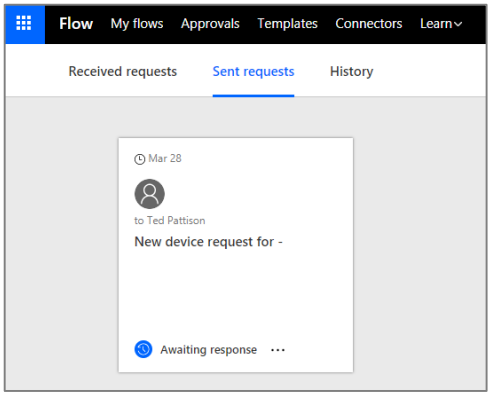


  - Provides monitoring of completed approvals and pending approvals

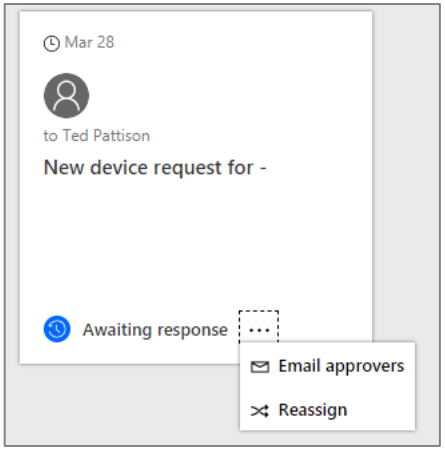


Examining Sent Request

- Requester can view requests he/she has submitted

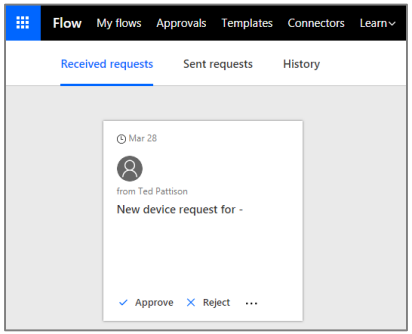


- Requester can email approver(s) or resign to different approver

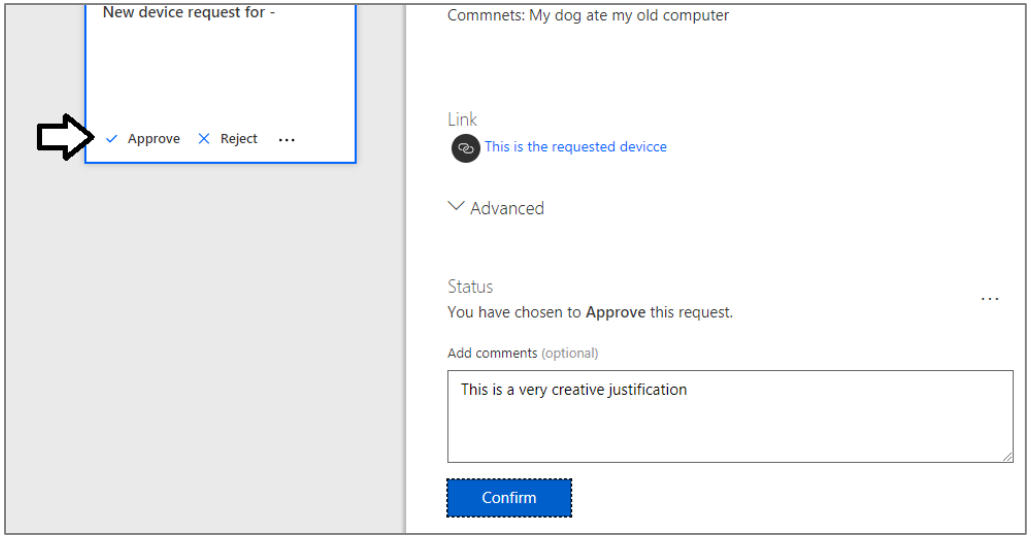


Examining Received Requests

- Approvers can see list of all their approval requests



- Approver can approve or reject approval request



Summary

- ✓ Processing Documents and Images
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