



Microsoft Flow and PowerShell combined to automate everything

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Agenda

Cloud Automation

What is Microsoft Flow

PowerShell & Flow

Demos

Questions

Cloud Automation



Microsoft Flow

Code

Events + data

Azure Functions



What is
Microsoft
Flow



Microsoft Flow

Connectors



Office 365 Outl...



OneDrive for B...



Office 365 Users



SharePoint



Twitter



Notifications



RSS



Outlook.com

Recently added connectors



AtBot Admin



Marketing Cont...



Pitney Bowes T...



Excel Online (B...




Excel Online (O...



Azure SQL Data...

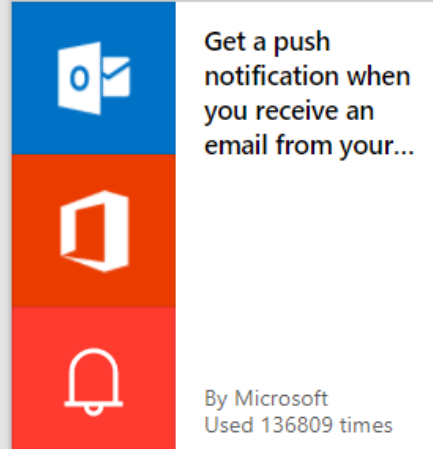
Flow Templates



Save Office 365 email attachments to OneDrive for Business

By Microsoft
Used 235650 times

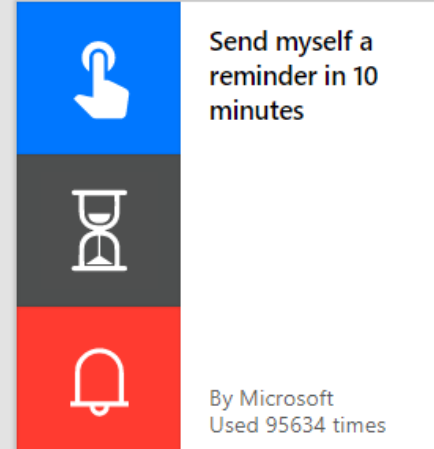
This flow template features a blue header with an Office 365 icon, a blue body with a cloud icon, and a blue footer with a bell icon.



Get a push notification when you receive an email from your...

By Microsoft
Used 136809 times

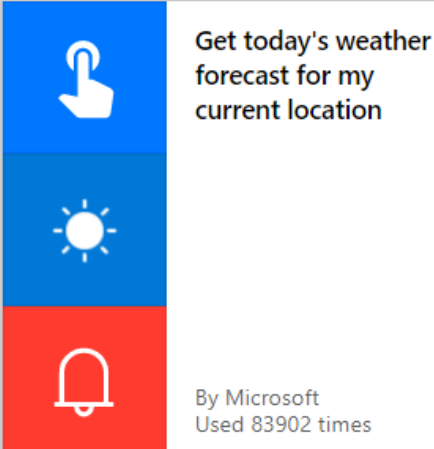
This flow template features a blue header with an Office 365 icon, an orange body with a OneDrive icon, and a red footer with a bell icon.



Send myself a reminder in 10 minutes

By Microsoft
Used 95634 times

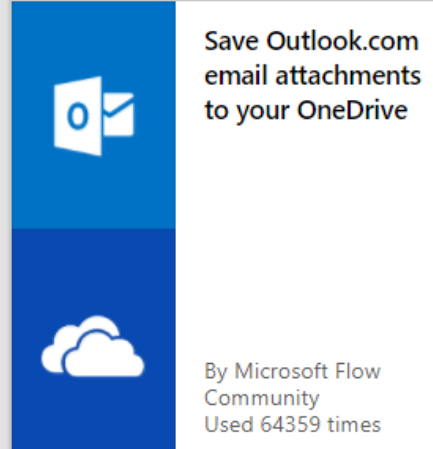
This flow template features a blue header with a hand icon, a grey body with a sand timer icon, and a red footer with a bell icon.



Get today's weather forecast for my current location

By Microsoft
Used 83902 times

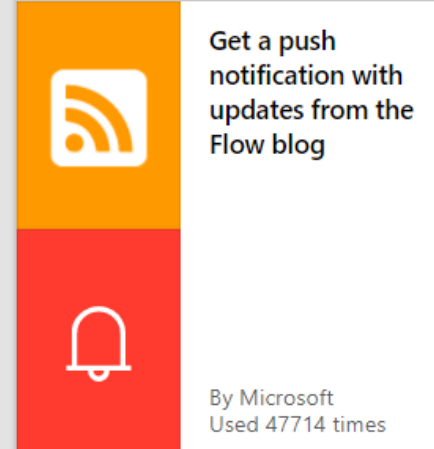
This flow template features a blue header with a hand icon, a blue body with a sun icon, and a red footer with a bell icon.



Save Outlook.com email attachments to your OneDrive

By Microsoft Flow Community
Used 64359 times

This flow template features a blue header with an Office 365 icon, a blue body with a cloud icon, and a blue footer with a bell icon.



Get a push notification with updates from the Flow blog

By Microsoft
Used 47714 times

This flow template features an orange header with a RSS icon, an orange body with a RSS icon, and a red footer with a bell icon.

Why Microsoft Flow?

Use connectors to get data

Create triggers based on this data

Build workflows

Integrate and combine different services

The background of the image is a dark blue gradient with a pattern of falling binary code (0s and 1s) in a lighter blue color, reminiscent of the 'Matrix' effect.

Demo

Create your first Flow



Demo Summary

- [Flow.Microsoft.com](https://flow.microsoft.com)
- Create and modify from template
- Create a custom flow



Demo

Microsoft Flow & Forms



Demo Summary

- Created a form in Forms
- Created a flow with a trigger
- Added advanced condition
- Take action based on condition

Advanced conditions

The screenshot shows a 'Condition' editor interface. At the top, there is a header bar with a tree icon, the word 'Condition', and a three-dot menu. Below this is a text input field containing the condition: `@or(equals(item()?['status'], 'unnecessary'), equals(item()?['status'], 'completed'))`. Below the input field are two buttons: 'Edit in basic mode' and 'Collapse condition'. Four callout boxes provide explanations: 1. 'Use the equals function to compare two values.' points to the `equals` function. 2. '"status" is the name of the column in the spreadsheet. This is the 1st value used by the equals function. The equals function determines if the value of the status column is set to "unnecessary".' points to the `['status']` property access. 3. 'The "or" function name.' points to the `@or` function name. 4. '"unnecessary" is the 2nd value used by the equals function.' points to the string `'unnecessary'`.

`($.status -eq 'unnecessary') -or ($.status -eq 'completed')`



Demo

Import and Export Flows



Demo Summary

- Export flow
- Zipped json files in package
- Import flow
- Select connectors upon Import

Flow packages

Packaged
as zip

Manifest files

APIs

Connections

Definition

What are webhooks

A webhook transfers data over HTTP(s)

Create triggers based on this data

Build workflows

Integrate and combine different services

Methods: **Get & Post**

The background of the slide is a dark blue/black gradient with a dense, vertical stream of white and light blue binary digits (0s and 1s) falling from the top, creating a 'Matrix' effect. The text is centered horizontally and vertically.

Demo

Webhooks and Flow

Encryption!



Bill Sempf

@sempf

Follow



Base64 is not encryption. Base64 is not encryption. Base64 is not encryption. Base64 is not encryption. Base64 is not encryption. Base64 is not encryption. Base64 is not encryption. Base64 is not encryption. Base64 is not encryption. Base64 is not encryption.

11:10 PM - 23 Apr 2018

363 Retweets 1,173 Likes







Demo Summary

- Created a Flow with webhook
- Write payload to disk
- Viewed what was delivered
- Transferred binary content
- Created binary file from content

Request Flow


 When a HTTP request is received ...



HTTP POST URL


https://prod-37.westeurope.logic.azure.com:443/workflows/f59a4e50... 

Request Body JSON Schema


```
{  "type": "object",  "properties": {    "Trigger": {      "type": "string"    }  }}
```

[Use sample payload to generate schema](#)
[Show advanced options](#) 






 Create file i ...



* Folder Path

/1FlowDemo 

* File Name

ReceivedRequest  utcNow()  .json

* File Content

 Body 

Request Limits

Request limits

These are limits for a single outgoing request.

Timeout

Name	Limit
Request Timeout	120 Seconds

Message size

Name	Limit	Notes
Message size	100 MB	Not all APIs support the full 100MB.
Expression evaluation limit	131,072 characters	<code>@concat()</code> , <code>@base64()</code> , <code>string</code> can't exceed this limit.

Runtime Limits

Run duration and retention

These are the limits for a single flow run.

Name	Limit	Notes
Run duration	30 days	Includes workflows with pending steps like approvals. After 30 days, any pending steps time-out. Timed-out approvals are removed from the approvals center. If someone attempts to approve a timed-out request, they'll receive an error message.
Storage retention	30 days	This is from the run start time.
Min recurrence interval	1 minute	
Max recurrence interval	500 days	

The background of the image is a dark blue gradient with a pattern of vertical columns of binary code (0s and 1s) in a lighter blue color, creating a 'Matrix' effect. The text is centered horizontally and vertically.

Demo

Run PowerShell with Flow



Demo Summary

- Install Data gateway
- Create connection online
- Run a watcher locally
- Create button enabled flow

Data Gateway sources

SQL Server

SharePoint

Oracle

Informix

Filesystem

DB2

Configure ports

The gateway creates an outbound connection to Azure Service Bus. It communicates on outbound ports: TCP 5672, 9350 thru 9354. The gateway doesn't require inbound ports.

Learn more about [hybrid solutions](#).

Domain names	Outbound ports	Description
*.analysis.windows.net	443	HTTPS
*.login.windows.net	443	HTTPS
*.servicebus.windows.net	5671-5672	Advanced Message Queuing Protocol (AMQP)
*.servicebus.windows.net	443, 9350-9354	Listeners on Service Bus Relay over TCP (requires 443 for Access Co
*.frontend.clouddatahub.net	443	HTTPS



Summary

Use cases of Microsoft Flow

Microsoft Flow templates

Took a look at connectors

Created workflows

Ran PowerShell triggered by Flow

Questions?



References

- <https://docs.microsoft.com/en-us/flow/gateway-reference>
- <https://docs.microsoft.com/en-us/flow/guided-learning/>
- <https://docs.microsoft.com/en-us/flow/use-expressions-in-conditions>
- <https://github.com/jaapbrasser/events>
- <https://www.jaapbrasser.com>