Logic Apps – unleash your productivity

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Configuration first integration services

Zapier, IFTTT, Microsoft Flow and many more
Abby Fuller @abbyfuller

Carl @Subzidion · 19h
Replying to @abbyfuller

*Shockingly drops punch card on the floor.*

orchestrators

make things easier.

It's all ok.

2018-11-15, 16:14 from Brooklyn, NY
When an item is created

Send an email from a shared mailbox (Preview)

+ New step
Send an email from a shared mailbox (Preview)

Mailbox Address: admin@buildstuff.com
To: atendee@contoso.com
Subject: Thank you for registering for our event!

Lorem ipsum and so forth!

Show advanced options

Connected to karl-henrik@mean.se. Change connection.

Add dynamic content

+ New step
<table>
<thead>
<tr>
<th>Triggers</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>When a new email arrives</td>
<td>Office 365 Outlook</td>
</tr>
<tr>
<td>When a new email arrives (webhook)</td>
<td>Office 365 Outlook</td>
</tr>
<tr>
<td>When a new email arrives in a shared mailbox (preview)</td>
<td>Office 365 Outlook</td>
</tr>
<tr>
<td>When a new email mentioning me arrives (preview)</td>
<td>Office 365 Outlook</td>
</tr>
<tr>
<td>When a new event is created (V2)</td>
<td>Office 365 Outlook</td>
</tr>
<tr>
<td>When an email is flagged (preview)</td>
<td>Office 365 Outlook</td>
</tr>
<tr>
<td>When an event is added, updated or deleted</td>
<td>Office 365 Outlook</td>
</tr>
<tr>
<td>When an event is modified (V2)</td>
<td>Office 365 Outlook</td>
</tr>
<tr>
<td>When an upcoming event is starting soon</td>
<td></td>
</tr>
</tbody>
</table>
Triggers

Create contact
Office 365 Outlook

Create event (V2)
Office 365 Outlook

Delete contact
Office 365 Outlook

Delete email
Office 365 Outlook

Delete event
Office 365 Outlook

Export email (preview)
Office 365 Outlook

Find meeting times (preview)
Office 365 Outlook

Flag email (preview)
Office 365 Outlook

Forward an email (preview)
Connector (Office 365, Gmail, Todo, Slack..)

- Create event (V2)
  - Office 365 Outlook

- When a new email arrives (webhook)
  - Office 365 Outlook
Web APIs that use REST for pluggable interfaces, Swagger metadata format for documentation, and JSON as their data exchange format.

Use TRex so that your Swagger file works well with logic apps.
QuickLearn’s T-Rex Metadata Library for API Apps - http://www.quicklearn.com/blog

T-Rex Metadata Library

QuickLearn’s T-Rex Metadata Library enables you to quickly write Web API applications that are readily consumable from the Logic App Designer. It is implemented as a set of .NET Attributes that you can use to decorate methods, parameters, models and properties, and a set of filters for [Swashbuckle](https://github.com/domaindrivendev/Swashbuckle) (https://github.com/domaindrivendev/Swashbuckle) that use those attributes to override the [swagger](https://swagger.io/) metadata generation.

So let’s go ahead and get started!

Getting Started

To get started, you will need to install the TReX NuGet package. From there, follow the instructions in the Enabling T-Rex Metadata Generation section, and then whichever other sections are applicable below. If you want to get straight to some working code, you can also look through the sample application which implements an API that demonstrates each of the core features of the T-Rex library.

Enabling T-Rex Metadata Generation
https://portal.azure.com

https://flow.microsoft.com
Manually trigger a flow

Add an input

Create event

* Calendar id: Calendar
* Subject: Meeting
* Start time: utcnow() ×
* End time: addhours(...) ×
Dynamic content and Expressions
When a new email arrives

Folder: Inbox
Show advanced options
How often do you want to check for items?
* Interval: 3
* Frequency: Minute

Connected to karl-henrik@mean.se. Change connection.

Compose

* Inputs: Inputs.

+ New step
Dynamic content

Expression

When a new email arrives

- **Attachments**
  The file attachments for the message

- **Attachments Attachment Id**
  Attachment id

- **Attachments Content**
  Attachment content

- **Attachments Content-Type**
  Attachment content type

- **Attachments Name**
  Attachment name

- **BCC**
  The Bcc recipients for the message

- **Body**
  The body of the message

- **Body Preview**
  The preview of the message
Dynamic content  Expression

\[ f_x \]

**OK**

String functions

- `concat(text_1, text_2?, ...)`
  Combines any number of strings together

Collection

- `contains(collection, value)`
  Returns true if a dictionary contains a key, if an array contains an element

- `length(collection)`
  Returns the number of elements in an array or string

Logical functions

- `if(expression, valueIfTrue, valueIfFalse)`
  Returns a specified value based on whether the expression is true

- `equals(object1, object2)`
  Returns true if two values are equal

- `and(expression1, expression2)`
  Returns true if both parameters are true
$f_x \quad \text{if} (\text{triggerBody}())?['Body'].}$
$f_x \text{ if}(\text{triggerBody}())?['\text{Body}'].)
if(contains(triggerBody()?'Body','test'),1,0)
if(contains(triggerBody()?["Body"],"test"),1,0)
if(contains(
	triggerBody

	()?

	"Body"

	, "test"

	)

	1, 0

)
"$connections": {
  "value": {
    "office365": {
      "connectionId": "/subscriptions/984d4813-0ba8-5af7-8364-4b0efc7ce75a/resourceGroups/automations/providers/Microsoft.Web/connections/office365-1",
      "connectionName": "office365-1",
      "id": "/subscriptions/984d4813-0ba8-5af7-8364-4b0efc7ce75a/providers/Microsoft.Web/locations/westEurope/managedApis/office365"
    }
  }
},
"definition": {
  "$schema": "https://schema.management.azure.com/providers/Microsoft.Logic/schemas/2016-06-01/workflowdefinition.json#",
  "actions": {
    "Compose": {
      "inputs": "@if(contains(triggerBody()?['Body']),'test'),1,0)",
      "runAfter": {},
      "type": "Compose"
    }
  },
  "contentVersion": "1.0.0.0",
  "outputs": {},
  "parameters": {
    "$connections": {
      "defaultValue": {},
      "type": "Object"
    }
  },
  "triggers": {
    "When_a_new_email_arrives": {
      "inputs": {
        "host": {
          "connection": {
            "name": "@parameters('$connections')[$office365][connectionId]"
          }
        },
        "method": "get",
        "path": "/Mail/OnNewEmail",
        "queries": {
          "$testKey":"false"}
      }
    }
  }
}
Handling errors
'Scope' should run after:

Compose
Succeeded

- [ ] is successful
- [ ] has failed
- [ ] is skipped
- [ ] has timed out

[Done] [Cancel]
<table>
<thead>
<tr>
<th><strong>Status</strong></th>
<th>Failed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Code</strong></td>
<td>Enter error code</td>
</tr>
<tr>
<td><strong>Message</strong></td>
<td>Enter error message</td>
</tr>
<tr>
<td>STATUS</td>
<td>START TIME</td>
</tr>
<tr>
<td>------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Succeeded</td>
<td>11/16/2018 8:49 AM</td>
</tr>
</tbody>
</table>
When a new email arrives

Compose

Condition

INPUTS

Expression result

true

If true

If false
Control flows

Choices, loops, exceptions
Case
* Equals
admin@microsoft.com

Default
If no case contains a matching value

Add an action
Add an action

+ New step
Output x contains basketball

Edit in advanced mode

Change limits

Add an action

+ New step
Custom connectors
How do you want to create your connector?

1. API Endpoint:
   - REST
   - SOAP
   - Upload an OpenAPI file
   - Use an OpenAPI URL
   - Upload Postman collection V1

2. SentimentDemo.openapi_definition.json
Allow your customers to do their own integrations!
On-prem connectors
BizTalk Server 2016
File System
IBM DB2
IBM Informix
IBM MQ
MySQL
Oracle Database
PostgreSQL
SAP Application Server
SAP Message Server
SharePoint Server
SQL Server
Teradata

https://aka.ms/on-premises-data-gateway-installer
When an item is created

- **Connection Name**: contoso-sql-server-connection
- **SQL server name**: contoso-accounts-server
- **SQL database name**: contoso-customers-db
- **Username**: <your-user-name>
- **Password**: **************
- **Connect via on-premise data gateway**: checked
  - **Authentication Type**: Authentication type to connect to your database
  - **Gateways**: contoso-data-gateway-resource

Create
Three great workflows you can start using today!
On new event in calendar, that has a location of more than 150 KM away from home, add event to family calendar.
If 3 PM, List all resource groups in Azure and remove all groups named Demo that have a date tag that have expired.
When I flag an email, add that email to my To-Do app.
Thanks for listening!

https://docs.microsoft.com/en-us/azure/logic-apps/

https://docs.microsoft.com/sv-se/azure/logic-apps/logic-apps-limits-and-config

https://docs.microsoft.com/sv-se/flow/limits-and-config