Microsoft Flow and Azure Logic Apps

Penelope Coventry
Penny Coventry

• MVP: 10 years
• Author/Co-author 10+ SharePoint Books
• Independent Consultant & Trainer
• Used SharePoint since 2001
• Based in UK, work in Europe & US
Agenda

• Why are you here? And why should you care?
• Cloud automation overview
• Microsoft Flow
• Logic Apps
• How much does it cost?
• The Future
Why should you care?
Last versions

- SharePoint Foundation 2013
- SharePoint Designer 2013 and InfoPath 2013
  - SPD 2013 and InfoPath 2013 work with SharePoint 2016
  - Same support cycle as SP2016 -> 2026!!

“A new commitment to Microsoft SharePoint”, Mark Rackley, 26/5/16
http://Interlink.com/blog/entry/a-new-commitment-to

“When asked about the future of SharePoint Designer and InfoPath, Jeff [Teper] stated that he sees PowerApps and Microsoft Flow replacing these technologies within a couple of years. He was very clear to state that they do not replace them today and that these tools have a way to go before they have the functionality of their predecessors.”
Message from Ignite 2016

• New workflows being created should use Flow + connectors - and use a rich library of connectors

• We are working on covering document libraries in addition to lists, as well as full range of SharePoint field types (attachments, pictures, and more)

• Flow will have further governance capabilities by its official release

What does this mean for On-Premises?
What we are currently used to
Cloud automation overview

Cloud based workflows
Integration problems & automation

- Azure Services
  - Microsoft Flow
  - Azure Logic Apps
  - Azure Functions
  - Azure App Service: WebJobs
    - Combination Azure services is often the best way

- Gluing together disparate systems

- Inputs, actions, conditions, branches, loops, output

- Schedule or trigger
Flow is powered by Logic apps

• Built on top of Logic Apps:
  • uses the public APIs and standard runtime
  • Workflows defined using JSON formatted models

• Due to #1:
  • Leverages same visual designer / editor
  • Logic Apps can always do everything that Flow can do
  • Pro tip:
    • the "advanced" mode for conditions uses the same language

• Flow has additional UX / experiences
  • Simplified experience for typical office worker
Architectural Overview

- Resource CRUD
- Definition validation
- Tracking info

- Instance activation
- Action scheduling
- Built-in action and expression execution
- Connector invocation

- Connection management
- Connector execution

https://management.azure.com/subscriptions/...
https://{stamp}.{location}.logic.azure.com:443/workflows/{id}/triggers/manual/run?api-version=2015-08-01-preview$sp={key}
Templates / Connectors

• Over a hundred useful templates
• Connected data across apps
  • Connectors & Gateways
  • Custom APIs
  • Built on Common Data Model
    or integrated with existing systems
Orchestrate anything

- Connect on-premises, hybrid and cloud applications
- Run mission-critical, complex integration scenarios with ease
- Enhance business productivity by automating business processes

Both Flow and Logic Apps use the same easy to use visual designer

Sending an Exchange email when a new file is added in Dropbox

Authenticate to your Dropbox account.
Select folder to monitor

Authenticate to your O365 account.
Build email Subject and Body

Choose to include properties from previous step (Dropbox file) to improve relevance

Specify Send To email address and additional properties (optional): From, CC, BCC and Importance
Microsoft Flow Preview

https://flow.microsoft.com

GA this quarter!
Microsoft Flow Preview
https://flow.microsoft.com

• Aimed at Information Worker
• Self service
• Browser only
• Configuration first
• One of the three components that make: “Business Application Platform”
  • PowerApps
  • Power BI
SharePoint Online Connector

- **Triggers**

- **Actions**

Demo

Flow
Rename
Delete

Loops: Do until, Foreach, Simulated For loops using @range expression
Expressions: https://aka.ms/logicexpressions
Flow is the successor to SharePoint Designer workflows for basic automation, with a grow-up story to Logic Apps, API Management, BizTalk.
Azure Logic Apps  GA July 2016

• Aimed at IT Pros & developers
• Browser – Azure Portal
• Visual Studio
  • Designer
  • Code view – view Workflow Definition Language
• Extensible
• Source control, testing, support, and automation
• Manageability in Azure Resource Management (ARM)
Setting up a dev environment

- VM
  - Visual Studio 2015 Community + Azure SDK
  - Azure Logic Apps Tools for Visual Studio
  - Enterprise Integration Pack SDK?
  - PowerShell modules

- Azure (development / test / production)
  - Web Apps
  - Integration Accounts ~ repository
  - Logic Apps / Service Bus / Azure Functions
Logic apps and Flow interaction

- HTTP cards in Logic apps and Flow let you call from one to another
Demo

Logic Apps
runAfter
- Parallel actions
- Scopes
How much does it cost?
Logic Apps pricing

- All action executions performed are metered.
  - Includes triggers and any action executed as part of a workflow

- Example:
  - Region: North Europe
  - Currency: British Pound (£)
  - Actions executed / month | Price per action execution
    - First 250K actions | £0.0005 / action
    - 251K-1M actions | £0.0002 / action
    - 1M-50M actions | £0.00009 / action
    - 50M-100M actions | £0.00005 / action
    - 100M+ actions | £0.000033 / action

# How to get Flow?

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Anyone can sign up for free with their personal, work or school email</td>
<td>Included for free with most* Office 365 and Dynamics 365 application SKUs</td>
<td></td>
<td>Can be purchased by an individual or an admin</td>
<td>90 free trial available</td>
</tr>
<tr>
<td>750 flow runs per month included</td>
<td>2,000 flow runs per month included</td>
<td></td>
<td>4,500 flow runs per month included</td>
<td>15,000 flow runs per month included</td>
</tr>
<tr>
<td>Limited to connect to “standard” services</td>
<td>Limited to connect to “standard” services</td>
<td></td>
<td>Full “premium” connectivity to cloud and on-premises</td>
<td>Full “premium” connectivity to cloud and on-premises</td>
</tr>
<tr>
<td>No on-premises connectivity</td>
<td>On-premises connectivity to Office, Dynamics services*</td>
<td>(Post-GA) Includes co-authoring or sharing within an organization</td>
<td>(Post-GA) Includes co-authoring or sharing within an organization</td>
<td>(Post-GA) Includes co-authoring or sharing within an organization</td>
</tr>
<tr>
<td>(Post-GA) No co-authoring or sharing within an organization</td>
<td>No SLA</td>
<td>No governance or management features</td>
<td>No governance or management features</td>
<td>Full governance and management features</td>
</tr>
</tbody>
</table>

*Includes most Office 365 and Dynamics 365 application SKUs.

Source: Ignite 2016 BRK3311
Flow runs

• Accruing at the tenant level
  • The flow runs usage quota is summed across all users up to the tenant
  • For example, if you have 1,000 users with Flow for Office 365 and 200 users with Flow Plan 2, the tenant can have:
    • $1000 \times 2000 + 15000 \times 200 = 5M$ flow runs / month

• Purchasing additional runs
  • The tenant can purchase in additional chunks of 50k runs / month

Source: Ignite 2016 BRK3311
Roadmap

Q3 Calendar 2016
- Android Mobile App
- On-premise data Gateway
- In-context in SharePoint Online
- Flow SDK for Embedding
- Advanced control-flow logic
- Microsoft Common Data Model support

Q4 Calendar 2016
- **General availability**, 42 languages, 7 geographies
- AppSource integration
- In-context in Dynamics 365
- Leverage device signals (e.g. Location)
- Data Loss Protection Policies / Admin management
- Co-Authoring

H1 Calendar 2017
- Sovereign cloud availability (Government Cloud, Germany Cloud)
- Seamless grow-up from Microsoft Flow to Azure Logic Apps
- ALM: Move solutions across environments
- Azure functions integration

Source: Ignite 2016 BRK3311
Thank You!
Feedback
http://spsbe.be
Resources: Microsoft Flow

- Twitter: @microsoftflow #MicrosoftFlow
- Webinar: Getting started with Microsoft Flow https://aka.ms/flowwebinar
- Early October updates https://flow.microsoft.com/en-us/blog/early-october-updates/
- Some of the team: Merwan Hade, Stephen Siciliano
Resources – Ignite 2016, September 26-30, Atlanta: Microsoft Flow


• BRK2029: Discover what's new and what's coming to the SharePoint Mobile and Intelligent Intranet [https://myignite.microsoft.com/videos/1302](https://myignite.microsoft.com/videos/1302)


• BRK2271: Review business application platform roadmap, strategy and packaging [https://myignite.microsoft.com/videos/22170](https://myignite.microsoft.com/videos/22170)

• BRK3311: Dive into Microsoft Flow, create automated workflows between your favorite apps and services [https://myignite.microsoft.com/videos/4976](https://myignite.microsoft.com/videos/4976)

• THR3004: Convert InfoPath/Designer workflow processes to PowerApps [https://myignite.microsoft.com/videos/39776](https://myignite.microsoft.com/videos/39776)
Resources – Logic Apps

- How to get started:
  - http://aka.ms/logicapps-try
  - http://aka.ms/logicapps-tutorial
  - http://aka.ms/logicappslive
- Logic Apps GitHub: http://github.com/logicappsio
- Logic Apps Blog: http://aka.ms/logicappsblog
- Twitter: @logicappsio @AzureFunctions
- Logic Apps Live Webcast: http://aka.ms/logicappslive
- Export ARM template from an existing Logic App using Windows PowerShell: https://github.com/jeffhollan/LogicAppTemplateCreator
- Some of the team: Jon Fancey, Kevin Lam, Jeff Hollan, @jeffhollan, Josh Twist, @joshtwist, Jim Harrer
Resources – Ignite 2016, September 26-30, Atlanta: Logic Apps

- BRK2250: Go serverless for the enterprise with Microsoft Azure Functions [https://myignite.microsoft.com/videos/3174](https://myignite.microsoft.com/videos/3174)
- BRK2308: Enable agile enterprise connectivity anywhere using Microsoft Integration [https://myignite.microsoft.com/videos/7853](https://myignite.microsoft.com/videos/7853)
- THR2040: Extend your BizTalk Server integration platform to the cloud [https://myignite.microsoft.com/videos/20533](https://myignite.microsoft.com/videos/20533)
Resources – Azure Functions

• Microsoft Cloud Show: Episode 153 | Ignite Wire - Azure Functions & Azure App Service with Jeremy Thake

• Get some hands-on time with Serverless development right now, for free

• Extending Azure Logic Apps Using Azure Functions

• Creating a Serverless Backend for Mobile Apps
  [Link](https://blog.xamarin.com/creating-a-serverless-backend-for-mobile-apps/?utm_content=buffer0ab00&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer)