

Logic Apps for the SharePoint Developer

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One Commercial
Partner




Serverless application platform components

Development

 IDE support

 Visual debug history

 Local development

 Verbose debugging

Platform

 Functions

- Developer tooling
- Bindings and triggers
- Open source

 Logic apps

- Visual designer
- 100+ connectors
- Functions orchestration

Data/storage



Messaging



Gateway
Connectors



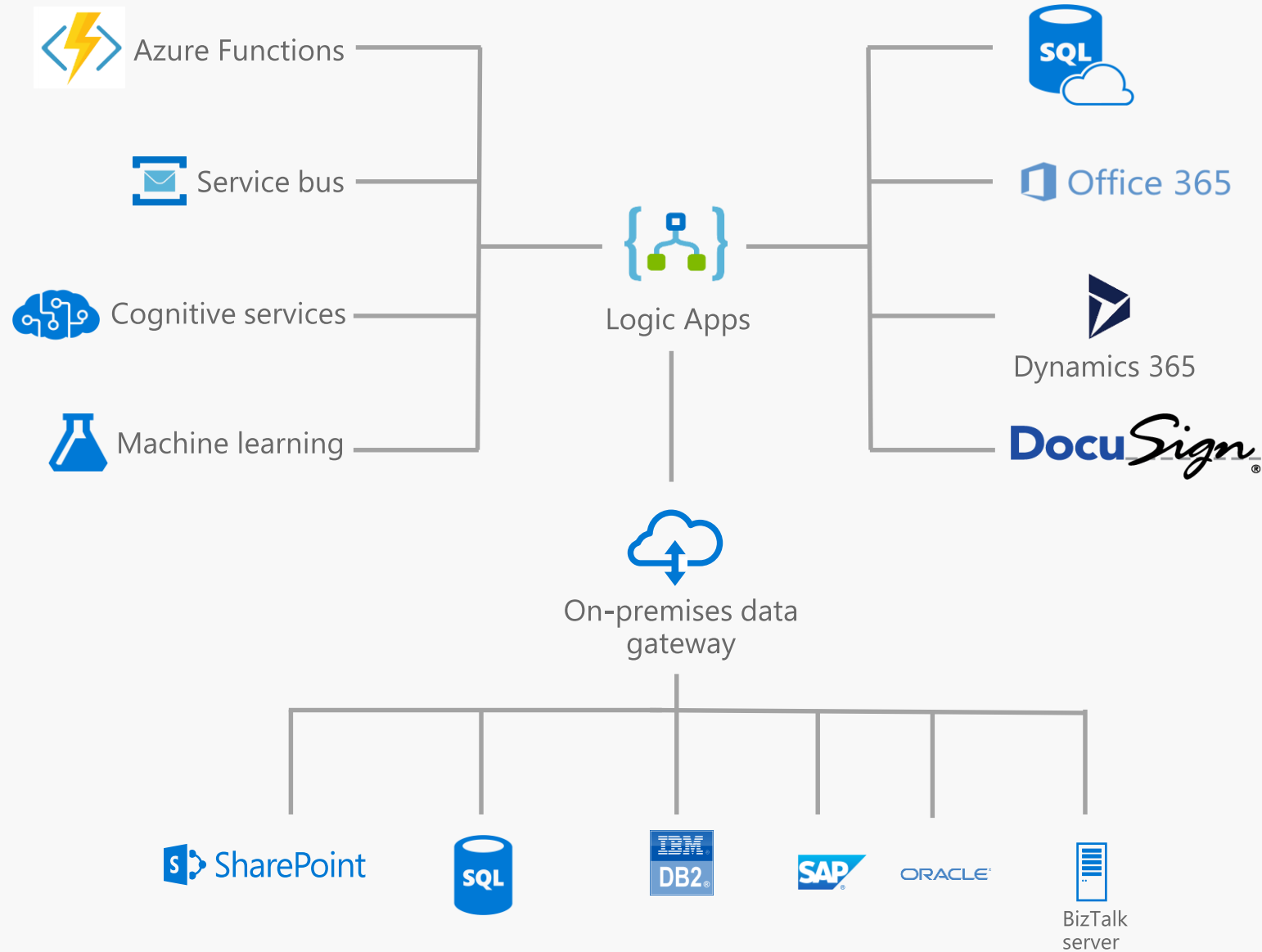
Intelligence



Bots

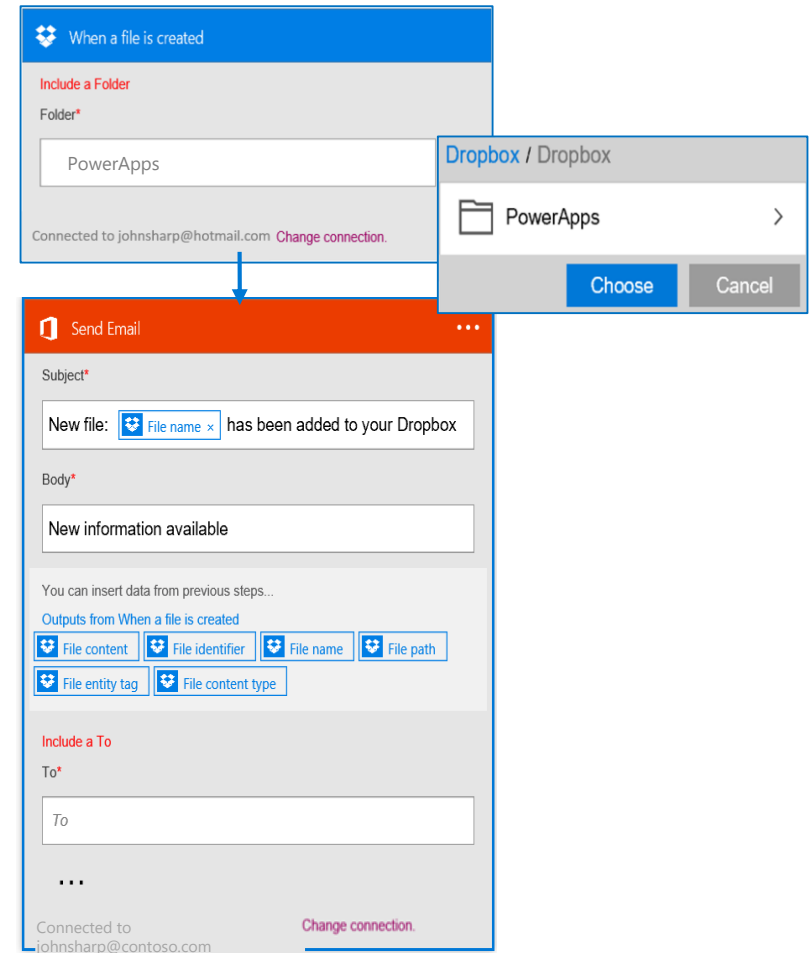


Logic Apps Connect Everything



Flow is built on Logic Apps

- Common visual workflow designer
- Common connector model
- Common underlying language ("advanced" mode conditions)



Logic Apps Workflow Designer

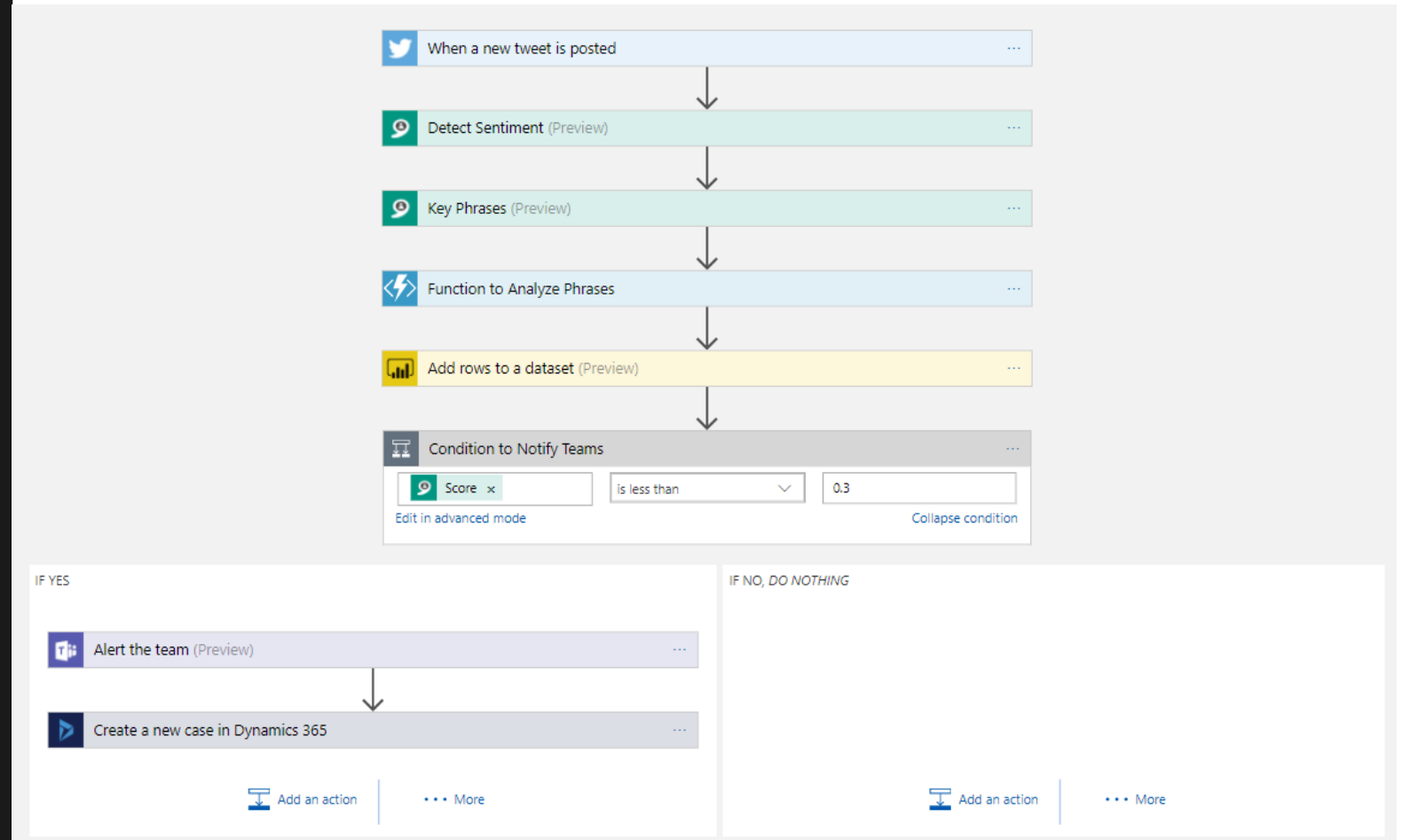
Workflow in the cloud

Powerful control flow

Connect disparate
applications

No code designer for
rapid creation

Also works within Visual
Studio for added CI/CD



Logic Apps

Cloud APIs and platform functionality

Over 165 built-in connectors

Hosted and managed within the platform

Scales to meet your needs

First class designer experience

API connections

Authenticate once and reuse

SaaS

- appFigures
- Asana
- Azure API Management
- Azure App Services
- Azure Automation
- Azure Cognitive Face API
- Azure Cognitive LUIS
- Azure Cognitive Text Analytics
- Azure Cognitive Vision
- Azure Data Lake Store
- Azure Document DB
- Azure Event Hub
- Azure Functions
- Azure Machine Learning
- Azure Resource Manager
- Azure Service Bus
- Azure SQL
- Azure Storage Blob
- Azure Storage Queues
- Basecamp
- Bing Search
- BitBucket
- Bitly
- Blogger
- Box
- Buffer
- Campfire
- Chatter
- Common Data Service
- Disqus
- DocuSign
- Dropbox
- Dynamics AX Online
- Dynamics CRM Online
- Dynamics CRM Service Bus
- Dynamics Financials
- Dynamics Operations
- Easy Redmine
- Eventbrite
- Facebook
- FreshBooks
- Freshdesk
- GitHub
- Gmail
- Google Calendar
- Google Contacts
- Google Drive
- Google Sheets
- Google Tasks
- GoTo Meeting
- GoTo Training
- GoTo Webinar
- Harvest
- HelloSign
- Infusionsoft
- JIRA
- Insightly
- Instagram
- Instapaper
- MailChimp
- Mandrill
- Medium
- Microsoft Project Online
- Microsoft Translator
- MSN Weather
- Muhimbi PDF
- Office 365
- Office 365 Users
- Office 365 Video
- OneDrive

- OneDrive for Business
- OneNote
- Outlook.com
- Outlook Tasks
- PagerDuty
- Pinterest
- Pipedrive
- Pivotal Tracker
- Power BI
- Project Online
- Redmine
- Salesforce
- Salesforce Chatter
- SendGrid
- SharePoint Online
- Slack
- SmartSheet
- SparkPost
- Stripe
- Survey Monkey
- Todoist
- Toodledo
- Trello
- Twilio
- Twitter
- Typeform
- UserVoice
- VS Team Services
- Webmerge
- Wordpress
- Wunderlist
- Yammer
- YouTube
- Zendesk

Protocols/Native

- HTTP, HTTPS
- HTTP Webhook
- FTP, SFTP
- SMTP
- RSS
- Compose, Query, Parse JSON
- Wait
- Terminate
- Workflow

XML and EDI

- XML Validation
- Transform XML (+Mapper)
- Flat File Encode
- Flat File Decode
- X12
- EDIFACT
- AS2
- Integration Account Artifact Lookup

Hybrid

- BizTalk Server
- File System
- IBM DB2
- Informix
- Oracle DB
- SharePoint Server
- SQL Server
- SAP
- Websphere MQ

Flow vs. Logic Apps

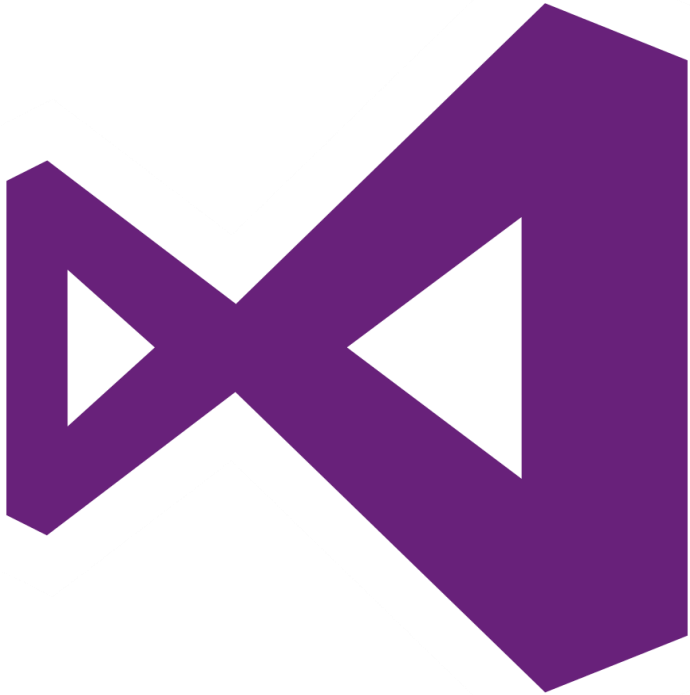
Flow: Self Service integration
(compare with If This Then That)

- Declarative, design-first
- Targets power users/"citizen developers"
- Design in browser and mobile app
- Import/export between Dev, Test, Prod ???CHECK???
- Run in context of Flow Environments
- Complex pricing plans based on # of users and runs

Logic Apps: Advanced Integration
(compare with BizTalk server)

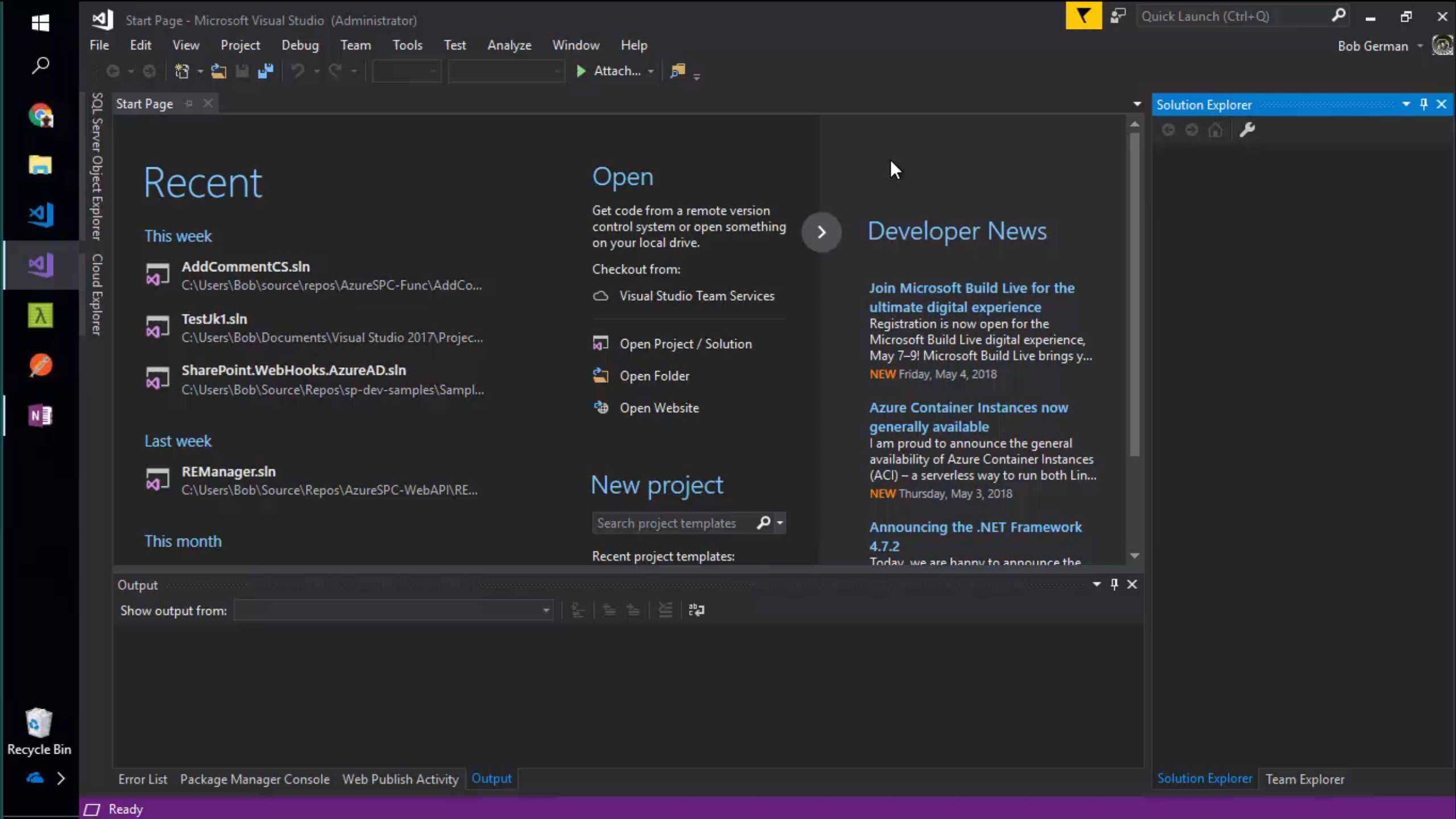
- Declarative, design-first
- Targets developers, integrators, IT pros
- Design in browser and Visual Studio, code view available
- Full DevOps/RM
- Run in context of Azure Resource Groups
- Usage based pricing (.0125cents/use std connector
.0025cents/action)

Logic Apps tools for Visual Studio



- Hosted Logic Apps designer
- Persist using deployment templates
- Source Control & CI/CD
- Cloud Explorer extension
- Integration Account configurability

DEMO:
Setting up Logic Apps for Visual
Studio 2017






Start Page


Solution Explorer

Recent

This week

-  **AddCommentCS.sln**
C:\Users\Bob\source\repos\AzureSPC-Func\AddCo...
-  **TestJk1.sln**
C:\Users\Bob\Documents\Visual Studio 2017\Projec...
-  **SharePoint.WebHooks.AzureAD.sln**
C:\Users\Bob\Source\Repos\sp-dev-samples\Sampl...

Last week


-  **REManager.sln**
C:\Users\Bob\Source\Repos\AzureSPC-WebAPI\RE...




This month

Open

Get code from a remote version control system or open something on your local drive.

Checkout from:

 Visual Studio Team Services

-  Open Project / Solution
-  Open Folder
-  Open Website

New project

Search project templates

Recent project templates:

Developer News

Join Microsoft Build Live for the ultimate digital experience

Registration is now open for the Microsoft Build Live digital experience, May 7-9! Microsoft Build Live brings y...
NEW Friday, May 4, 2018

Azure Container Instances now generally available

I am proud to announce the general availability of Azure Container Instances (ACI) – a serverless way to run both Lin...
NEW Thursday, May 3, 2018

Announcing the .NET Framework 4.7.2






Today, we are happy to announce the

Output

Show output from:

Error List Package Manager Console Web Publish Activity **Output**

Solution Explorer Team Explorer

 Vision	 Speech	 Language	 Knowledge	 Search
Computer Vision	Custom Recognition	Bing Spell Check	Academic Knowledge	Bing Web Search
Emotion	Speaker Recognition	Linguistic Analysis	Entity Linking	Bing Image Search
Face	Speech	Language Understanding	Knowledge Exploration	Bing Video Search
Video	Translator	Text Analytics	Recommendations	Bing News Search
		WebLM		Bing Autosuggest

DEMO:
Apply Computer Vision to
pictures in SharePoint
Explain relationship w/Resource
Manager Templates and Groups

Accessing Cognitive Services

Request / Response Logic Apps

- Logic runs synchronously or asynchronously
- Use Response action when synchronous work is done
- Allows you to create a web service using any and all connectors!

DEMO:

Elevate permissions from SPFx
with Flow

Add sentiment analysis

Call from SPFx

Integration Scenario

- Drop a spreadsheet in OneDrive for Business
- Act on data within the spreadsheet
 - Geocode with Bing Maps
 - Add to a SharePoint list for intake processing



DEMO:
Storing secrets in Key Vault



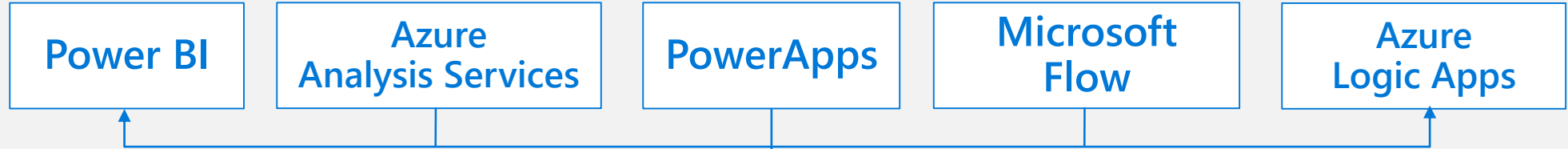
DEMO:
Parallelism in ForEach

The screenshot displays the Microsoft Visual Studio environment with the Logic App Designer open. The workflow, named 'LogicApp.json', is shown in the Design view. It begins with a trigger 'When a file is created', followed by an action 'Copy file to SharePoint'. This is followed by another action 'List rows present in a table (Preview)'. A 'For each' loop then iterates over the output of the previous step, selecting 'value x'. Inside the loop, there is an action 'Get location by address (Preview)', which leads to the final action 'Add to Intake list in SharePoint'. The Solution Explorer on the right shows the project 'NewREProperties' with files 'LogicApp.json' and 'LogicApp.parameters.json'. The Properties window at the bottom right shows the 'LogicApp' properties, including the 'Integration Account (none)'. The status bar at the bottom indicates 'Item(s) Saved'.

On-premises data gateway

One gateway for multiple cloud services and experiences

Cloud services



The gateway is *not* a VPN



Gateway Cloud Service
Data source connection credentials are encrypted



Azure Service Bus



Application Gateway
Data source connection credentials can only be decrypted by the gateway

On-premises data sources



SQL Server



SQL Server
Analysis Services



Other
data sources



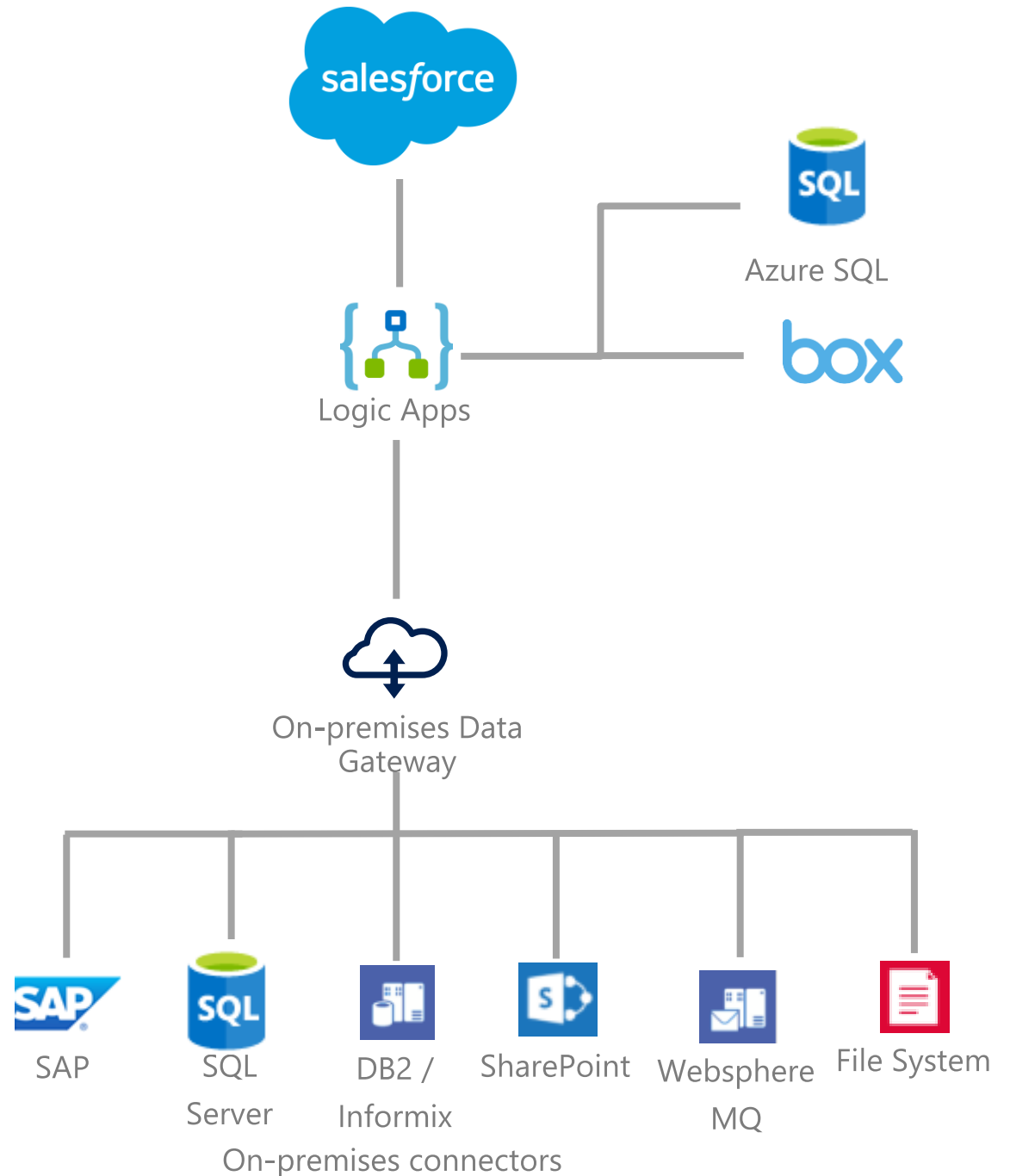
Files, SharePoint

Using On-Premises Data Gateway from Logic Apps

Secure gateway to assets

Manage connections from cloud

Reuse across logic apps



What is an On-premises Data Gateway?

- Secured, and optimized communication channel to use with your cloud services (Power BI, PowerApps, Microsoft Flow, Logic Apps, and Azure Analysis Services)
 - The gateway is not a general purpose VPN
- The gateway installs on any domain-joined machine
 - You don't have to install it on a DMZ or open your firewall for **inbound** traffic
- The gateway enables connectivity
 - It's orthogonal to how you consume reports, Flows or Apps on top of these connections

Where to install the gateway

- Recommendation:
 - Start with an 8 core machine
 - Keep an eye on your performance counters
<https://powerbi.microsoft.com/en-us/documentation/powerbi-gateway-onprem-tshoot/#performance>
 - Depending on your usage, you can decide to scale up or down
- Gateway doesn't have to run on the same machine as the data source
Just can't run on a domain controller
- Hardware needs depend on the usage scenarios for the gateway:
 - Frequency and data volume of data model refreshes in Power BI
 - DirectQuery: number of concurrent users, types of visualizations for interactive querying, whether RLS is used with SSAS, number of pinned dashboard tiles over DirectQuery/LiveConnect keep updating in the background.

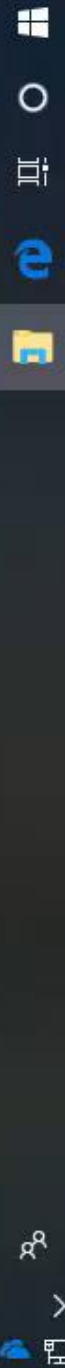
Security in Gateway

- Encryption key based on recovery key never leaves On-Prem infrastructure
 - **Symmetric key is what encrypts all creds and never leaves the gateway**
- The Gateway cloud service never knows the on-prem credential values encrypted / cannot intercept credentials
 - **Web** client encrypts the credential with a public key associated with the specific gateway it is communicating with)

Tips and Best practices

- Monthly updates: Always update to the latest version
- Keep it always on and credentials up-to-date
- Can be installed on Windows Server or Client OS
- Outbound ports to be opened on the gateway computer (only if needed)
 - 9350-9353 (when gateway in TCP-mode)
 - 443
 - 80 (only used at install time to dynamically download latest installer bits)

DEMO:
Installing the On-Premises Data
Gateway
Connecting Logic App to
SharePoint 2013 On-Premises



Recycle Bin

Downloads

File Home Share View

This PC > Local Disk (C:) > Users > bob.CORP > Downloads

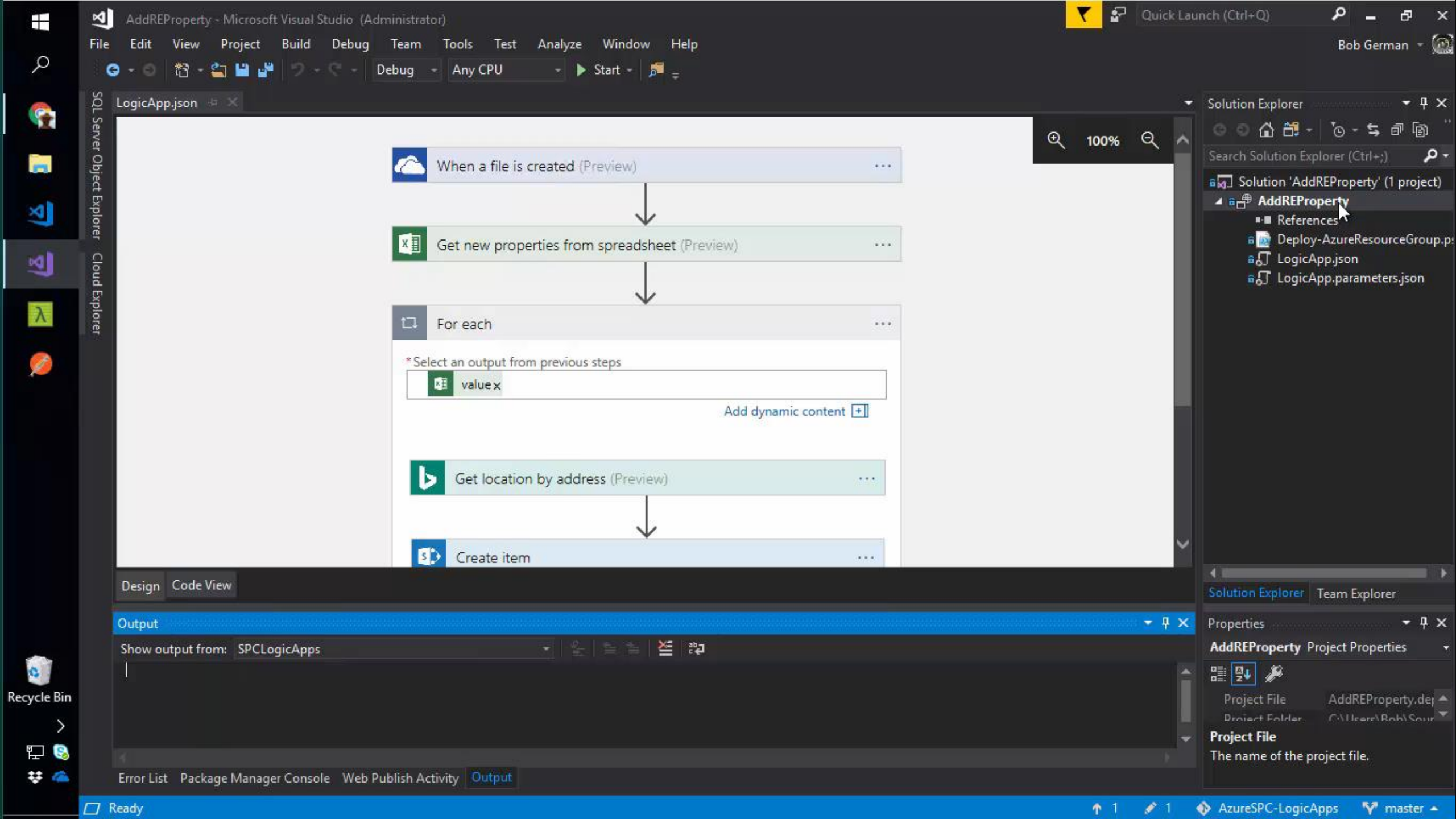
Search Downloads

Name	Date modified	Type	Size
GatewayInstall	5/8/2018 6:31 PM	Application	69,641 KB

Documents Pictures Child O:\ Share1 Share2 OneDrive OneDrive - MSLab This PC 3D Objects Desktop Documents Downloads Music Pictures Videos Local Disk (C:) DVD Drive (D:) C Network

1 item





Introduction to Custom APIs

- Connect Flow, PowerApps, Logic Apps to Azure Functions (or any API)
- Express API in Swagger format – or
 - Describe via connector UI
 - Import from Postman
- Authentication options
 - No authentication
 - Basic authentication
 - OAuth 2.0 Authentication (AAD, Facebook, Google)
 - API Key

DEMO:
Connect to Azure Function from
Logic Apps



<http://bit.ly/AzureSPC-LogicApps>

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