

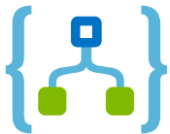
## Integration and Automation Services, aka Robotic Process Automation (RPA)

All of these services can solve integration problems and automate business processes. They can all define input, actions, conditions, and output. You can run each of them on a schedule or trigger.

### Microsoft



Power Automate



Azure Logic App



Azure Functions

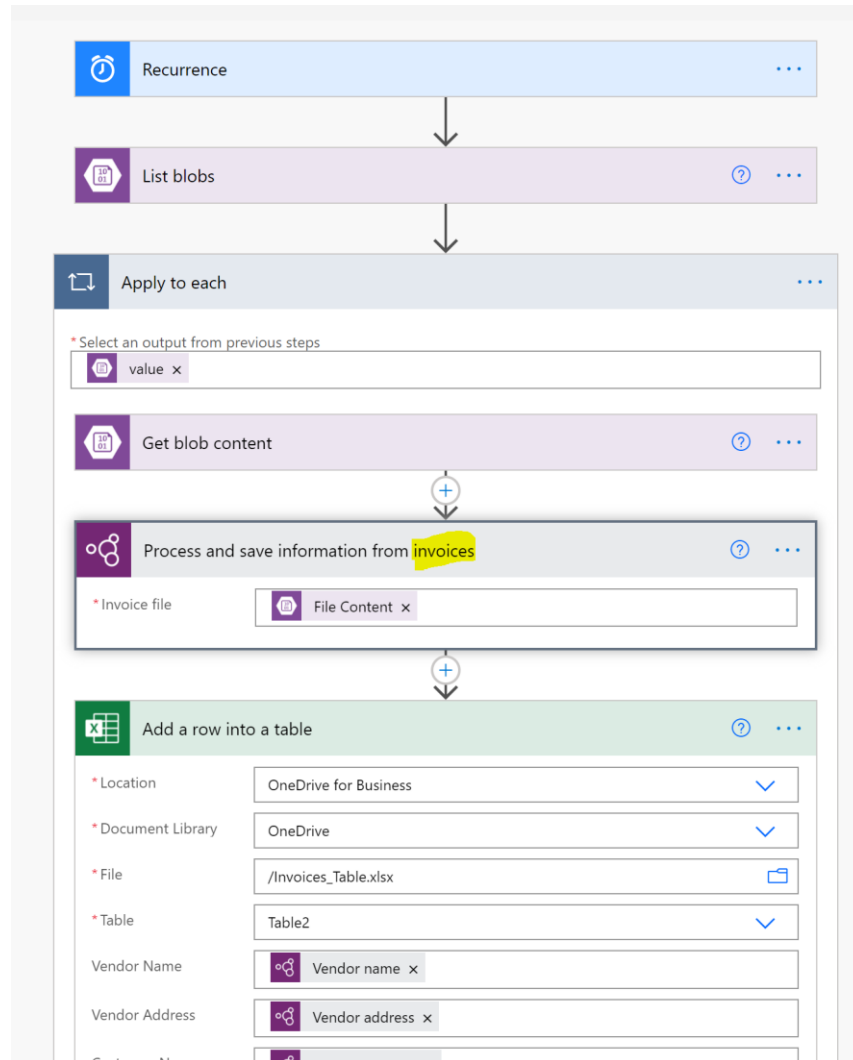
### Competition



# Power Automate + Form Recognizer Actions - Analyze Invoice with Pre-built Invoice Model



- Workflow solution on the Power Platform



Pros	Cons
Supports the latest version of Form Recognizer APIs	<ul style="list-style-type: none"><li>Unable to specify Azure Subscription, the licensing is independent of Azure resource definition</li><li>Unable to reference custom models built with Azure Form Recognizer, everything must be done within the Power Automate platform</li></ul>
Ease of integration to other Azure services, e.g., Blob storage	

## Note:

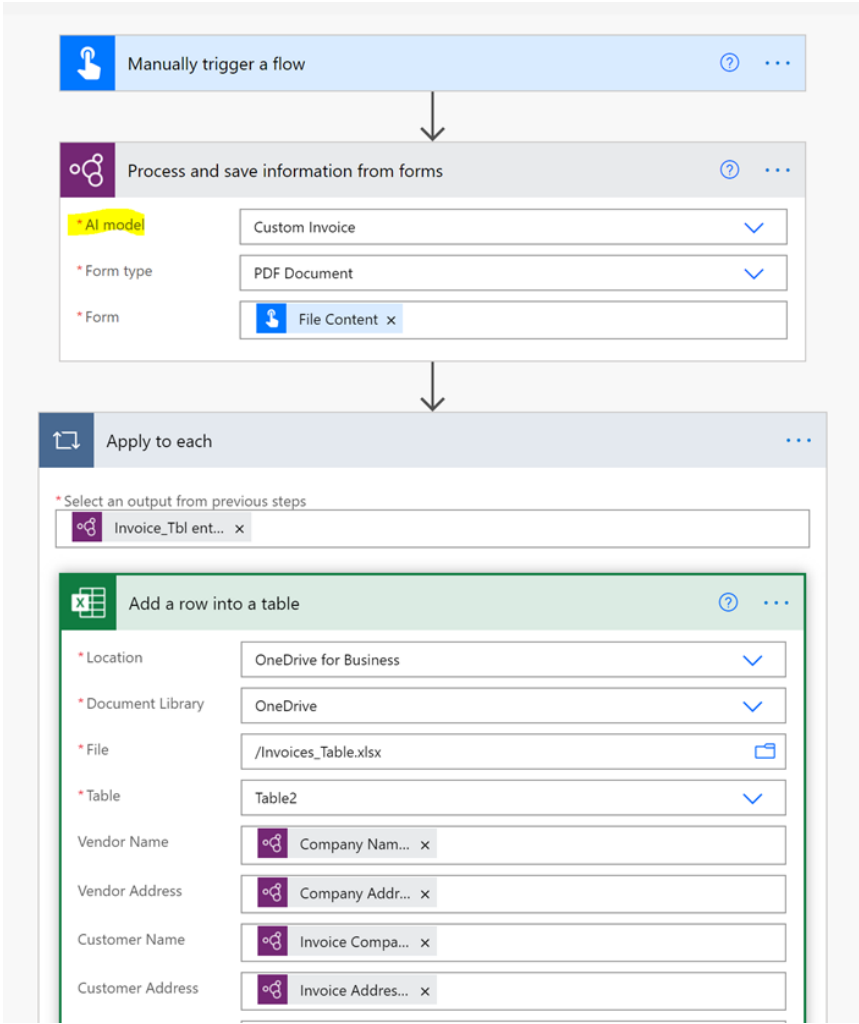
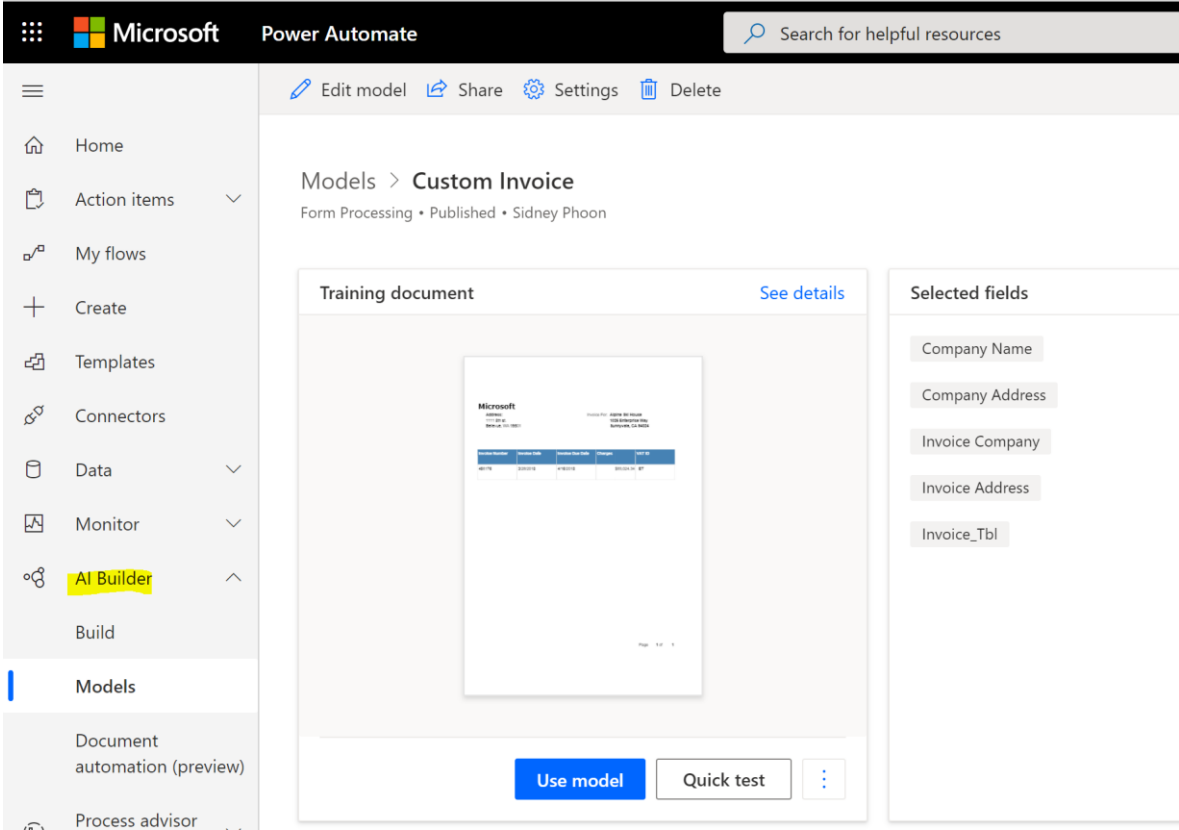
- Power Automate and Logic Apps are both *designer-first* integration workflow solutions.
- Power Automate is built on top of Logic Apps. They share the same workflow designer and the same [connectors](#).

# Power Automate - AI Builder – Build Form Recognizer Custom Model



1 Build Form Recognizer Custom Model within the Power Automate AI Builder interface

2 Analyze form with Custom Model within the Power Automate interface

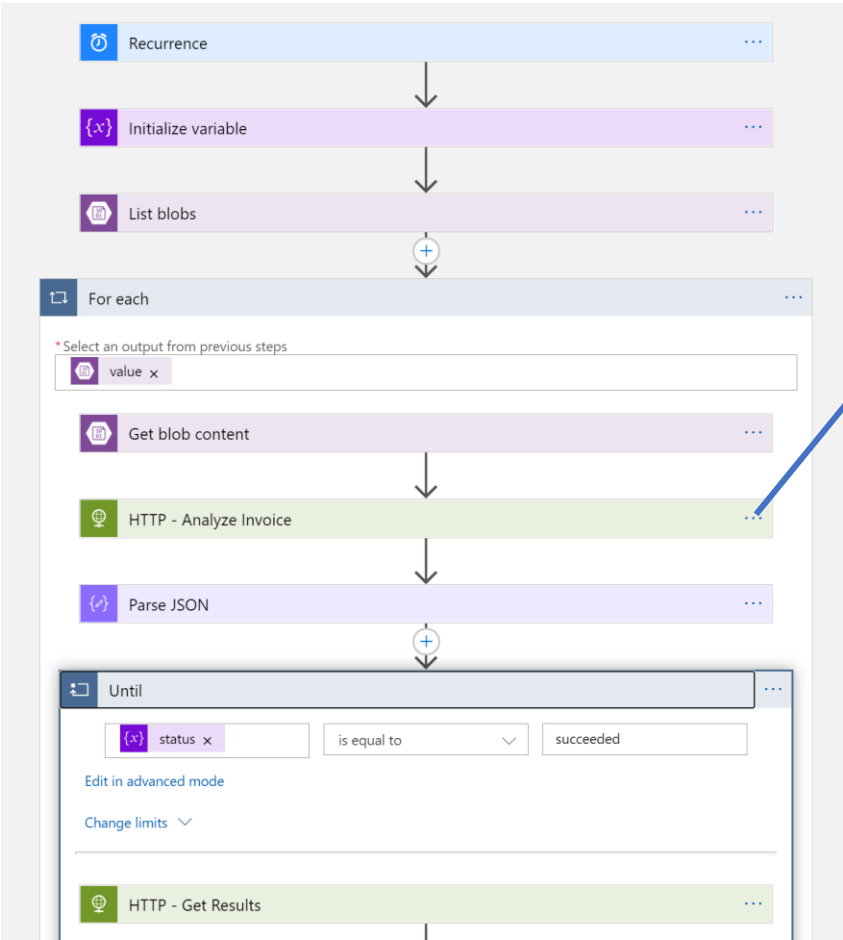


**Con:** Unable to reference models built with Azure Form Recognizer, vice versa.

# Azure Logic Apps + Azure Form Recognizer REST API – Analyze Invoice with Pre-built Invoice Model



Azure Logic Apps is an Azure Workflow solution



HTTP - Analyze Invoice

\* Method: POST

\* URI: https://form-recognizer-  
cognitiveservices.azure.com/formrecognizer/v2.1-preview.3/prebuilt/invoice/analyze

Headers:

Ocp-Apim-Subscription-Key	70e4d
Enter key	Enter value

Queries:

Enter key	Enter value
-----------	-------------

Body: File Content

Pros	Cons
Flexibility – specify the desired version of REST API	<b>HTTP Action</b> - REST API call is stateless, must monitor the status of the analysis until it is “succeeded” to retrieve the result and the write to data source
Ease of integration with other Azure services	



For each - document result

Select an output from previous steps

documentResu... x

For each

Select an output from previous steps

valueArray x

Add a row into a table

LocationOneDrive for Business

Document LibraryOneDrive

File/Invoices\_Table.xlsx

TableTable2

Vendor NamevalueString x

Vendor AddressvalueString x

Customer NamevalueString x

Customer AddressvalueString x

Customer Address RecipientvalueString x

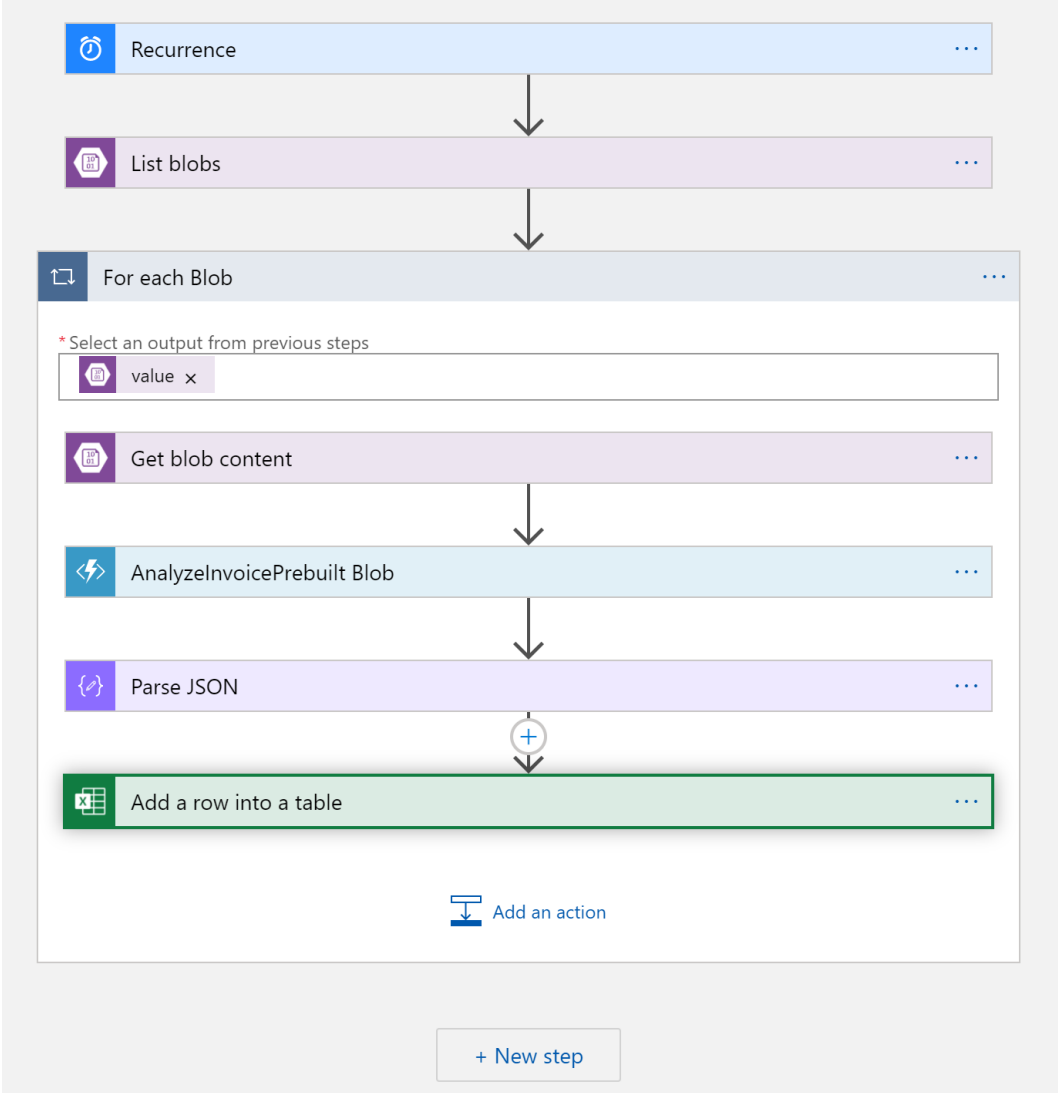
Invoice IdvalueString x

Invoice TotalvalueNumber x

Due Date

A	B	C	D	E	F	G	H	I
Vendor Name	Vendor Address	Customer Name	Customer Address	Customer Address Recipient	Invoice Id	Invoice Date	Invoice Total	Due Date
Contoso Suites	14564 Main St. Saratoga	First Up Consultants	1234 King St Redmond, WA 97	First Up Consultants	7689302	3/9/2015	\$22,123.24	6/29/2016
Margie's Travel	134 El Camino Real	New The Phone Company	5506 Main St Redmond, WA 7	The Phone Company	AC-32322	None	\$110,153.22	11/6/2019
Contoso Suites	14564 Main St. Saratoga	First Up Consultants	1234 King St Redmond, WA 97	First Up Consultants	7689302		\$22,123.24	6/29/2016
Margie's Travel	134 El Camino Real	New The Phone Company	5506 Main St Redmond, WA 7	The Phone Company	AC-32322		\$110,153.22	11/6/2019
Margie's Travel	134 El Camino Real	New The Phone Company	5506 Main St Redmond, WA 7	The Phone Company	AC-32322	None	\$110,153.22	11/6/2019
Microsoft	1020 Enterpirse Way. Su	Wingtip Toys	1010 El Camino Real	CupertincWingtip Toys	332376	4/25/2017	\$10,023.34	7/8/2017
Microsoft	1111 8th st. Bellevue, W	Southridge Video	1060 Main St. Atlanta, GA 650	Southridge Video	454376	1/22/2017	\$210,023.34	4/5/2017
Microsoft	1020 Enterpirse Way. Su	Wingtip Toys	1010 El Camino Real	CupertincWingtip Toys	332376	4/25/2017	\$10,023.34	7/8/2017
Microsoft	1111 8th st. Bellevue, W	Southridge Video	1060 Main St. Atlanta, GA 650	Southridge Video	454376	1/22/2017	\$210,023.34	4/5/2017
Margie's Travel	134 El Camino Real	New The Phone Company	5506 Main St Redmond, WA 7	The Phone Company	AC-32322	None	\$110,153.22	11/6/2019

# Azure Logic Apps + Azure Function + Azure Form Recognizer SDK – Analyze Invoice with Pre-built Invoice Model



This is the **ideal solution**.

Pros	Cons
Flexibility – Ability to specify version of the SDK to use in Function App	
Stateful solution – returns results when analysis is complete, simplifies workflow	
Azure Function – hides credentials and implementation	
Ease of integration with other Azure services	

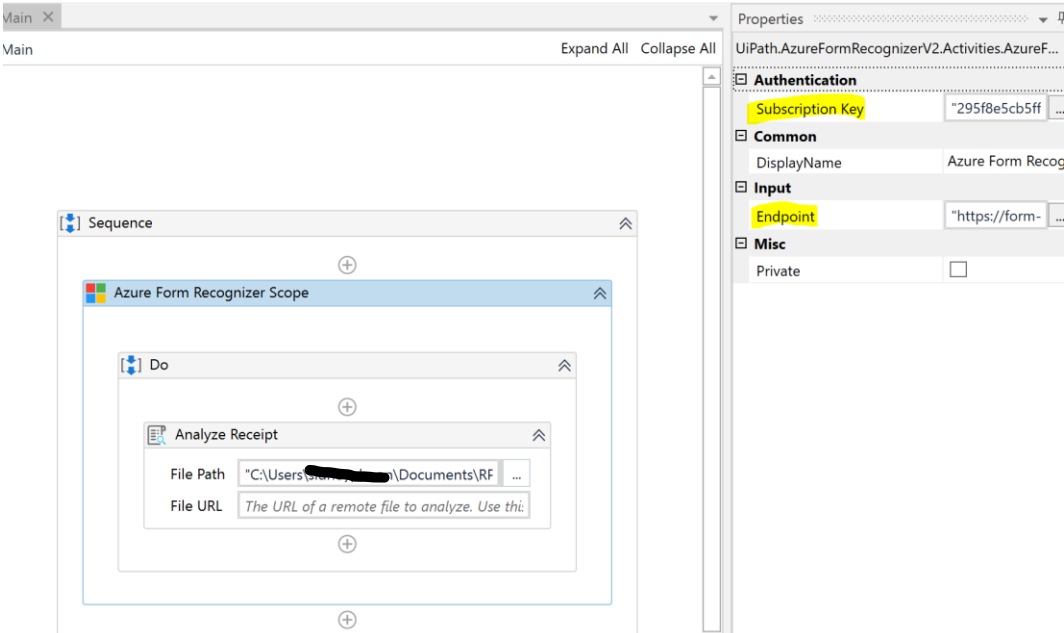
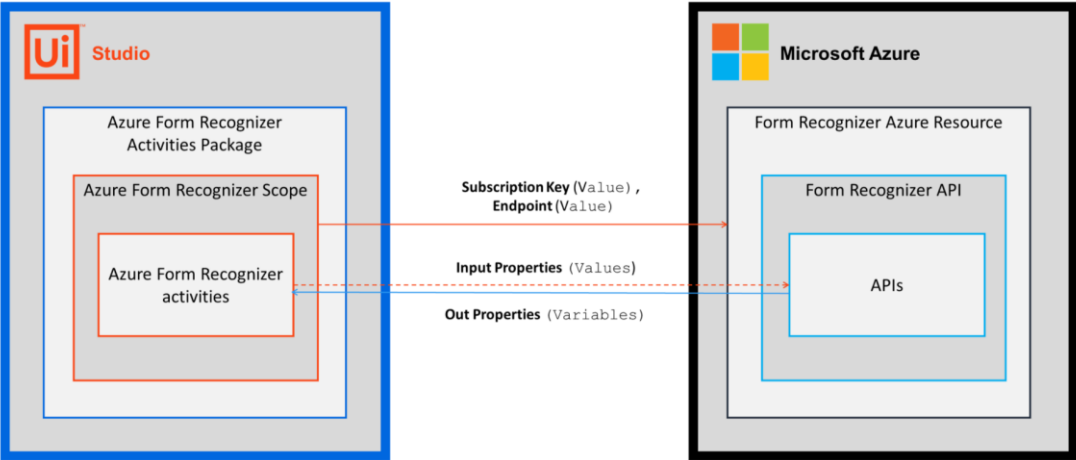
```
form_recognizer_client = FormRecognizerClient(endpoint, AzureKeyCredential(key))  
  
poller = form_recognizer_client.begin_recognize_invoices(body)  
  
invoices = poller.result()
```

# UiPath Marketplace – Azure Form Recognizer Activities



This is similar to Power Automate. Requires installation of UiPath Studio as the visual IDE

Ref: [Microsoft Azure Form Recognizer \(uipath.com\)](https://uipath.com/marketplace/activities/azure-form-recognizer)



Pros	Cons
Ability to specify Azure subscription key and endpoint	Does not support the latest version of Form Recognizer API => no support for analyzing invoices with pre-built model
	No ability to specify the version of the REST API to call
	Not clear how to integrate with Azure Blob Storage

## UiPath HTTP Request – API Call to Form Recognizer APIs



- This is like Azure Logic App, calling the Form Recognizer REST API through a HTTP Action

The screenshot shows the 'Request Builder' tab of the 'HTTP Request Wizard' dialog. The 'Response' sub-tab is selected. The 'End point' is set to 'https://client.badssl.com'. The 'Preview URL' is also 'https://client.badssl.com'. The 'Timeout' is set to '6000'. The 'Client Certificate' is 's\badssl.com-client.p12' and the 'Client Certificate Password' is 'badssl.com'. The 'Request Method' is set to 'GET'. The 'Accept response as' is set to 'ANY'. The 'Parameters' and 'Attachments' sections are collapsed. The 'Authentication' is set to 'None'. At the bottom, there are 'Preview' and 'Ok' buttons.

The screenshot shows the 'Response' sub-tab of the 'HTTP Request Wizard' dialog. The 'Request Info' section displays: 'Request URL: https://jsonplaceholder.typicode.com/posts', 'Request Method: GET', and 'Status Code: 200'. The 'Preview Response' section shows a JSON array of five blog posts. The 'Raw Body' and 'Response Info' tabs are also visible. At the bottom, there is a 'Download Resource' checkbox, a text field, and a button with three dots. The 'Refresh' and 'Ok' buttons are at the bottom right.

```
197  "title": "qui explicabo molestiae dolorem",
198  "body": "rerum ut et numquam laborum odit est sit\nid qui sint in\n",
199  },
200  {
201    "userId": 4,
202    "id": 34,
203    "title": "magnam ut rerum iure",
204    "body": "ea velit perferendis earum ut voluptatem voluptate itaque
205  },
206  {
207    "userId": 4,
208    "id": 35,
209    "title": "id nihil consequatur molestias animi provident",
210    "body": "nisi error delectus possimus ut eligendi vitae\nplaceat eo
211  },
212  {
213    "userId": 4,
214    "id": 36,
215    "title": "fuga nam accusamus voluptas reiciendis itaque",
216    "body": "ad mollitia et omnis minus architecto odit\nvoluptas dolor
217  },
218  {
219    "userId": 4,
220    "id": 37,
221    "title": "provident vel ut sit ratione est",
222    "body": "deb
```