POST a CSV file using REST API in Azure Synapse

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Introduction



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I help Fortune 500 companies to build their Data & AI strategy
Hobby project – https://chatwithaurora.com
Blog – https://nanda-nainadurai.com

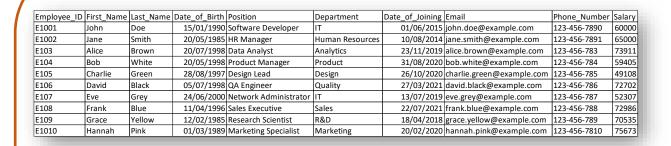
Agenda

Scenario & Challenges

• Demo

Other Considerations

Example Scenario







A sample csv file

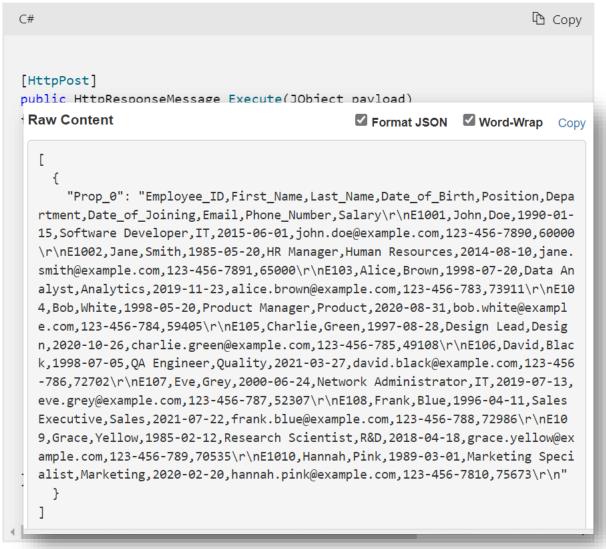
A web server

ADF or Synapse Pipeline

Challenges

- Copy Activity with REST API as the destination does not work with the REST endpoint expecting a file
- Sending an attachment using Web Activity is not straightforward in ADF/Synapse
- Official Microsoft documentation and examples are ambiguous

Web service endpoint code



Source: https://learn.microsoft.com/en-us/azure/data-factory/control-flow-web-activity#web-service-endpoint-code

 MIME – Multipurpose Internet Mail Extensions

The form data is sent as a series of parts

Example

POST /upload HTTP/1.1

Host: example.com

Content-Type: multipart/form-data; boundary=49kg16ljr9lnwf92ro15gxegyjtm5tpo

--49kg16ljr9lnwf92ro15gxegyjtm5tpo

Content-Disposition: form-data; name="text"

hello

--49kg16ljr9lnwf92ro15gxegyjtm5tpo

Content-Disposition: form-data; name="file"; filename="sample-file.csv"

Content-Type: text/csv

- ... contents of sample-file.csv...
- --49kg16ljr9lnwf92ro15gxegyjtm5tpo--

Content-Type header with boundary

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- Content-Type header with boundary
- Different parts of the form

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Content-Type: text/csv

... contents of sample-file.csv...

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- Content-Type header with boundary
- Different parts of the form
- End of the parts

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... contents of sample-file.csv...

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DEMO

Other Considerations

- This approach works for most web servers, but some web serves behave weirdly on how new lines are formed in the body
- Uploading larger files is with the assumption that the ADF variable can hold the entire content
- Other file types can be uploaded using a similar approach

Thank you!