**OpenAPI Connector Factory**

**Problem**: Customers want to integrate with a **diverse** set of endpoints and want **deeper** integration capabilities that are not available in Boomi’s generic technology connectors.

**Solution**: To address the customer pain point, one approach we could take is to create connectors using the OpenAPI libraries. The development cycle for OpenAPI connectors is expected to be 100x shorter, compared to the traditional connector development of 8-16 weeks.

**Approach**: This will be a 6 month POC and the metrics called out in this document will be measured and monitored to make an informed decision on the future plan for Swagger connector factory.

Start date (planned): June 1, 2021

End date (planned): Dec 1, 2021

Here is a customer's wish list of new connectors and the good news is that many of these applications support the OpenAPI specification.

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| id | Connector | Swagger Available |
| 1 | Azure Data Lake Storage | <https://app.swaggerhub.com/apis/gauravm043/azure-data_lake_storage_rest_api/2019-10-10> |
| 2 | Bamboohr | <https://cloud-elements.github.io/docs/elements/bamboohr/ko/api-documentation.html?elementId=6315> |
| 3 | Bim360 | <https://forge.autodesk.com/blog/postman-collections-model-coordination-api?_ga=2.104987595.939091167.1619793865-534652311.1619793865> |
| 4 | BitBucket | <https://api.bitbucket.org/swagger.json> |
| 5 | DataDog Events Connector | <https://docs.datadoghq.com/api/latest/> |
| 6 | Eventbrite | [https://www.eventbrite.com/platform/api#/reference/discount](https://github.com/okta/okta-sdk-java/blob/master/src/swagger/api.yaml) |
| 7 | Firecracker | <https://github.com/firecracker-microvm/firecracker> |
| 8 | GitHub Enterprise Connector | <https://github.com/github/rest-api-description/tree/main/descriptions/ghes-3.0> |
| 9 | Insightly | <https://api.na1.insightly.com/v3.1/swagger/docs/v3.1> |
| 10 | Instagram | <https://app.swaggerhub.com/apis/saketthakare/instagram/1.0.0> |
| 11 | Pokemon | <https://app.swaggerhub.com/apis/cristiangarciav/PokemonAPI/1.0.0> |
| 12 | Quickbase | <https://developer.quickbase.com/> |
| 13 | Thomson-Reuters Connector | <https://app.swaggerhub.com/apis/tjx22/thomson-reuters_world_check_one_api/1.2.0> |
| 14 | Twitter | <https://api.twitter.com/labs/2/openapi.json> |
| 15 | Wrike | <https://app.swaggerhub.com/apis/slavik/wrike-api/1.0.0> |
| 16 | Apache Pulsar | <https://pulsar.apache.org/functions-rest-api/> |
| 17 | Canvas API | <https://community.canvaslms.com/t5/Idea-Conversations/API-in-OpenAPI-format/idi-p/301700> |
| 18 | GraphQL |  |
| 19 | Amdocs | <https://api.swaggerhub.com/apis/Amdocs_Media/MarketONE/2021.02.Released> |
| 20 | Aquarius - Aquarius provides an off-chain database cache for metadata that is published on-chain. This enables faster query operations on datasets metadata. <https://github.com/oceanprotocol/aquarius> |  |
| 21 | [Blackboard](https://www.blackboard.com/) | <https://developer.blackboard.com/portal/docs/apis/learn-swagger.json> |
| 22 | Boomi Data Catalog and Prep (DCP) |  |
| 23 | Boomi Flow | <https://manywho.github.io/docs-api/> |
| 24 | Brizo - a component providing capabilities for Publishers to interact with their cloud or on-premise infrastructure. <https://docs.oceanprotocol.com/concepts/architecture> | <https://sandbox.safaricom.co.ke/mpesa> |
| 25 | [Cybersource - a Visa solution](https://www.cybersource.com/) - payment acceptance | [https://api.cybersource.com](https://api.cybersource.com/) |
| 26 | Dell PowerStore |  |
| 27 | Docusign - document and signature management | https://github.com/docusign/OpenAPI-Specifications/blob/master/esignature.rest.swagger-v2.1.json |
| 28 | Dropbox - content management |  |
| 29 | Experian - Customer contact verification |  |
| 30 | Facebook Marketing API (Need more swaggers) |  |
| 31 | Flexport - logistics |  |
| 32 | [Intapp](https://www.intapp.com/) |  |
| 33 | JD Edwards - ERP |  |
| 34 | Adobe Magento - ecommerce platform |  |
| 35 | Marketo - email marketing |  |
| 36 | M-Pesa: M-Pesa is a mobile phone-based money transfer service, payments and micro-financing service, launched in 2007 by Vodafone Group plc and Safaricom, the largest mobile network operator in Kenya. <https://www.vodafone.com/what-we-do/services/m-pesa> |  |
| 37 | [Okta](https://www.okta.com/) - Identity Management |  |
| 38 | [Open Bank](https://www.openbankproject.com/) - The leading Open API middleware for banking |  |
| 39 | Oracle Cloud/Fusion Apps (HCM, Finance, Supply Chain, Service...) |  |
| 40 | [PagerDuty](https://www.pagerduty.com/) - IT Response Management | https://github.com/PagerDuty/api-schema/blob/main/reference/REST/openapiv3.json |
| 41 | Petstore - A connector built on top of the Open API reference API implemented with no code using the framework. | https://petstore3.swagger.io/api/v3/openapi.json |
| 42 | Salesforce IOT API |  |
| 43 | SAP Concur | <https://www.concursolutions.com/api/v3.0> |
| 44 | Shopify - ecommerce platform |  |
| 45 | Stripe - payment solutions |  |
| 46 | Workday - HCM |  |
| 47 | Worldpay - payment solutions |  |
| 48 | Bullhorn | <https://bullhorn.github.io/rest-api-docs/> |
| 49 | xero | https://raw.githubusercontent.com/XeroAPI/Xero-OpenAPI/master/xero\_accounting.yaml |
| 50 | 3scale |  |
| 51 | 42Crunch |  |
| 52 | Bloomberg |  |
| 53 | BetterCloud |  |
| 54 | Ably |  |
| 55 | Accumatica |  |
| 56 | API Metrics |  |
| 57 | API Platform |  |
| 58 | Band Protocol |  |
| 59 | eBay |  |
| 60 | Google |  |
| 61 | Intento |  |
| 62 | Interzoid |  |
| 63 | kubeshop |  |
| 64 | Level250 |  |
| 65 | Osaango |  |
| 66 | Postman |  |
| 67 | RapidAPI |  |
| 68 | SmartBear |  |
| 69 | SAP |  |
| 70 | Stoplight |  |
| 71 | Timewarp |  |
| 72 | Toro |  |
| 73 | Tyk |  |
| 74 | Vonage |  |
| 75 | Zoom | https://github.com/zoom/api/blob/master/openapi.v2.json |
| 76 | Guru | * [Link [api.getguru.com]](https://urldefense.com/v3/__https:/api.getguru.com/api/v1/swagger.json__;!!LpKI!0zyKyfoEtgsC3FivmleNVW3OZxnRdGKvWeP-1sEgP5SpkL-a5OM_2SvQH-esgoA$) to Guru's Swagger File * [Link [developer.getguru.com]](https://urldefense.com/v3/__https:/developer.getguru.com/docs__;!!LpKI!0zyKyfoEtgsC3FivmleNVW3OZxnRdGKvWeP-1sEgP5SpkL-a5OM_2SvQ0dcoNSQ$) to Guru's API Documentation * [Link [app.getguru.com]](https://urldefense.com/v3/__https:/app.getguru.com/signin/new-user?edition=developer__;!!LpKI!0zyKyfoEtgsC3FivmleNVW3OZxnRdGKvWeP-1sEgP5SpkL-a5OM_2SvQWQfLpJA$) to Guru Developer Edition |
| 77 | QuickBooks Online | <https://help.developer.intuit.com/s/article/Open-API-docs-Swagger-docs> |
| 78 | CircleCI | <https://circleci.com/docs/api/v2/> |

**Timeline**

We can run the OpenAPI Connector Factory project as a POC with the following goals in mind, understand by analyzing data from launching a small list of these connectors (the ones in that order that have swagger definitions) and getting customers to use them, ask support questions, provide feedback on functionality and usability -

1. **Metric1** [dev+qa time] On average, how long does it take to launch these connectors?
2. **Metric2** [# of customer requests] How many customers are requesting early access?
3. **Metric3** [# of deployments] How many customers are deploying these connectors?
4. **Metric4** [qualitative] Are the auto-generated user guides adequate?

**FAQs**

1. **Will these connectors be available on the platform for all customers?**
   1. No. In the MVP phase, they will be available in OSS and Early Access forums.
2. **How are the connectors going to be supported?**
   1. Not in the MVP.
3. **User guides available on help.boomi.com?**
   1. Not in the MVP
4. **Are the connectors going to be code reviewed by Engineering?**
   1. No
5. **Will these connectors be scanned for security issues?**
   1. Yes
6. **Will these connectors be available in OSS?**
   1. Yes
7. **Will these connectors automatically support any updates to the published OpenAPI specification?**
   1. No, they will need to be updated.
8. **Will these connectors be available in Early Access?**
   1. Yes
9. **Who is testing, is there regression testing?**
   1. Developer and unit testing and high level functional testing.
10. **How do we get data on swagger usage?**
    1. Google analytics from bitbucket and early access forum.

**Note**: Swagger early access connectors should be auto-provisioned, auto-notifications through Flow app, otherwise this is not going to work given the volume of connectors and customer requests we anticipate.

Customers will be communicated through various channels on the availability of these Early Access connectors to get visibility and usage.

Early Access will be provisioned through Boomi Sub-master. That will give us more visibility into customer usage.

* Create a community and a flow app to allow for requests. With an email or Slack integration to send the account ID.
* Have a way to easily add or remove a connector. Repository for icons, and JSON file to add the name.
* Marketing: Pop up, Release Notes, to direct customers to the new connectors

Customer Wishlist backlog, need to find OpenAPI specs!!

|  |
| --- |
| **Connector** |
| Active Directory Connector |
| ADP EV5 Connector (?) |
| Amazon |
| Amazon Keyspaces |
| Amazon S3 V2: Allow Metadata Headers to Be Added |
| Amazon Secrets Manager Connector |
| Amazon Simple Email Service Connector |
| Apache Cassandra |
| Aurora |
| Azure Data Lake Storage |
| Bamboohr |
| Bim360 |
| BitBucket |
| Cloudflare Connector |
| DataDog Events Connector |
| Eventbrite |
| Excel |
| Firecracker |
| FlexPLM Connector |
| GitHub Enterprise Connector |
| Insightly |
| Instagram |
| Jobvite |
| Kronos WorkForceCentral Connector |
| Okta Connector |
| PagerDuty Connector |
| PGP |
| Plangrid |
| Pokemon |
| Quickbase |
| Remote Sync Connector — rsync4j |
| SmartRecruiters Connector |
| Splunk Connector |
| Thomson-Reuters Connector |
| Twitter |
| Workforcenow |
| Wrike |
| Youcanbookme |
| Zenefits |
| Zoho |
| Apache Pulsar |